LOS ANGELES RIVER ECOSYSTEM RESTORATION INTEGRATED FEASIBILITY REPORT: FINAL FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

COMMUNICATION

FROM

THE ASSISTANT SECRETARY OF THE ARMY, CIVIL WORKS, THE DEPARTMENT OF DEFENSE

TRANSMITTING

THE CORPS' LOS ANGELES RIVER ECOSYSTEM RESTORATION INTEGRATED FEASIBILITY REPORT: FINAL FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT FOR SEPTEMBER 2015

PART 2 OF 2

APRIL 6, 2017.—Referred to the Committee on Transportation and Infrastructure and ordered to be printed

---

U.S. GOVERNMENT PUBLISHING OFFICE

24–926 WASHINGTON : 2017

AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

CHAP Appendix
Appendix H
Gross & Net HUs
by Reach by Alternative

Gross Benefits by Reach		Baseline	Alternative 1: Comprehensive	Alternative 2: City: Atwater to Cornfields	Alternative 3: Banks and Tribs Only	Alternative 4: Highest Scoring Objectives (over 3)	Alternative 5: City: Los Feliz to Arroyo Seco	Alternative 6: Corps Team	Alternative 7: Highest Scoring Objectives (over 5)	Alternative 8: Charette Team 1	Alternative 9: Soft Bottom Channel and Associated Banks	Alternative 10: Highest Other Criteria (over 11)	Alternative 11: Charette Team 4	Alternative 12: Charette Team 3	Alternative 13: Charette Team 6	Alternative 14: Charette Team 5	Alternative 15: Charette Team 2	Alternative 16: Side Channels Only	Alternative 17: Charette Team 7	Alternative 18: Alternative 18: Comprehensive Pockets	Alternative 19: Taylor Yard
Reach 1	Initial (HUs)	901.86	1,939.13	901.86	1,904.93	1,817.34	901.86	1,820.24	907.33	1,845.32	1,711.96	1,904.93	1,615.61	1,786.86	1,821.07	1,871.93	1,808.59	1,648.99	1,871.55	1,615.61	901.86
155.81	25 year (HUs)	761.22	1,974.53	761.22	1,936.04	1,858.72	761.22	1,827.05	766.69	1,855.08	1,716.79	1,936.04	1,629.78	1,812.45	1,850.94	1,922.21	1,849.03	1,644.39	1,921.43	1,629.78	761.22
Acres	50 year (HUs)	618.23	1,980.58	618.23	1,938.46	1,857.86	618.23	1,825.17	623.70	1,856.66	1,714.91	1,938.46	1,624.45	1,815.74	1,857.87	1,929.81	1,848.00	1,633.87	1,929.03	1,624.45	618.23
Reach 2	Initial (HUs)	432.76	798.41	432.76	742.37	774.55	432.76	767.35	774.55	798.42	767.35	767.35	735.55	760.52	779.11	735.55	735.55	742.38	519.69	432.76	432.76
48.00	25 year (HUs)	392.01	856.32	392.01	791.02	827.16	392.01	821.16	827.16	856.32	821.16	821.16	788.16	818.30	839.33	788.16	788.16	791.02	506.65	392.01	392.01
Acres	50 year (HUs)	361.62	905.96	361.62	833.04	871.51	361.62	866.57	871.52	905.96	866.57	866.57	832.52	866.06	905.44	832.52	832.52	833.04	500.68	361.62	361.62
Reach 3	Initial (HUs)	613.67	1,038.07	927.86	1,064.28	916.25	613.67	913.45	782.06	981.51	952.23	896.48	949.51	846.07	1,035.65	789.49	712.92	776.98	642.28	890.77	613.67
101.15	25 year (HUs)	585.23	1,085.32	950.50	1,129.73	947.88	585.23	932.87	780.61	1,013.24	994.35	928.11	991.29	851.63	1,093.42	786.11	694.23	784.30	626.67	916.28	585.23
Acres	50 year (HUs)	510.27	1,106.16	960.21	1,179.83	970.27	510.27	940.46	767.89	1,037.04	984.42	950.51	982.55	817.69	1,133.61	734.47	629.71	745.65	559.87	889.12	510.27
Reach 4	Initial (HUs)	937.93	1,657.21	1,657.21	1,574.76	1,657.21	1,500.94	1,657.21	1,657.21	1,529.90	1,341.77	1,574.76	1,386.36	1,330.53	1,500.84	1,303.91	1,029.24	1,344.67	1,029.24	937.93	937.93
93.16	25 year (HUs)	890.93	1,741.15	1,741.15	1,642.86	1,741.15	1,564.35	1,741.15	1,741.15	1,589.63	1,365.59	1,642.86	1,419.78	1,353.32	1,556.15	1,321.50	1,011.99	1,387.55	1,011.99	890.93	890.93
Acres	50 year (HUs)	860.53	1,821.73	1,821.73	1,711.55	1,821.73	1,623.66	1,821.73	1,821.73	1,652.06	1,401.05	1,711.55	1,465.59	1,376.28	1,617.53	1,355.41	1,004.91	1,425.59	1,004.91	860.53	860.53
Reach 5	Initial (HUs)	811.23	1,083.85	1,083.85	984.26	978.05	1,083.85	970.54	977.96	1,017.04	860.73	811.23	1,094.07	811.23	1,017.04	811.23	811.23	860.73	811.23	811.23	811.23
67.71	25 year (HUs)	754.59	1,113.52	1,113.52	985.24	978.05	1,113.52	970.91	977.96	1,038.01	845.40	754.59	1,110.74	754.59	1,038.01	754.59	754.59	845.40	754.59	754.59	754.59
Acres	50 year (HUs)	729.35	1,143.96	1,143.96	1,002.51	978.05	1,143.96	970.97	977.96	1,059.75	845.46	729.35	1,128.01	729.35	1,059.75	729.35	729.35	845.46	729.35	729.35	729.35
Reach 6	Initial (HUs)	1,623.73	2,892.08	2,892.07	2,879.59	2,696.25	2,892.07	2,739.04	2,740.28	2,926.65	2,739.04	2,870.14	2,923.61	2,879.59	2,854.73	2,686.92	2,739.04	2,094.06	2,173.79	2,879.59	2,712.87
164.33	25 year (HUs)	1,534.70	3,041.53	3,041.53	3,027.83	2,818.04	3,041.53	2,868.82	2,883.89	3,096.69	2,868.82	3,017.13	3,093.68	3,027.83	2,999.28	2,808.70	2,868.82	2,119.24	2,209.45	3,027.83	2,839.23
Acres	50 year (HUs)	1,484.72	3,153.51	3,153.51	3,138.55	2,901.35	3,153.51	2,960.41	3,000.84	3,241.02	2,960.41	3,126.57	3,238.04	3,138.55	3,106.18	2,892.01	2,960.41	2,123.70	2,224.76	3,138.55	2,928.05
Reach 7	Initial (HUs)	367.49	923.89	923.89	897.37	846.09	819.08	872.61	649.14	896.70	394.01	896.70	896.70	588.80	897.37	536.04	846.09	671.68	677.54	897.37	367.49
58.90	25 year (HUs)	346.46	998.25	998.25	968.19	910.78	883.09	940.85	677.24	967.90	376.52	967.90	967.90	607.23	968.19	547.68	910.78	697.68	709.56	968.19	346.46
Acres	50 year (HUs)	311.25	1,035.60	1,035.60	1,004.70	940.63	917.27	971.53	699.25	1,004.50	342.15	1,004.50	1,004.50	603.36	1,004.70	536.76	940.63	690.86	715.11	1,004.70	311.25
Reach 8	Initial (HUs)	430.71	2,588.27	430.71	2,664.22	2,555.66	430.71	2,528.23	2,089.10	2,369.54	448.95	2,162.68	2,448.70	2,370.63	1,103.82	2,162.68	2,340.14	2,302.25	1,074.41	430.71	430.71
153.31	25 year (HUs)	425.58	2,846.53	425.58	2,930.99	2,809.65	425.58	2,769.79	2,274.19	2,625.92	445.47	2,374.01	2,715.58	2,608.07	1,158.78	2,374.01	2,592.65	2,510.32	1,125.51	425.58	425.58
Acres	50 year (HUs)	415.36	3,069.37	415.36	3,164.50	3,028.42	415.36	2,981.49	2,424.22	2,834.58	435.50	2,545.29	2,935.12	2,781.84	1,211.05	2,545.29	2,797.32	2,685.56	1,173.78	415.36	415.36
Total	Initial (HUs)	6,119.38	12,920.89	9,250.21	12,711.76	12,241.40	8,674.95	12,268.67	10,577.63	12,365.07	9,216.04	11,884.26	12,050.11	11,374.23	11,009.63	10,897.76	11,022.81	10,441.76	8,799.73	8,895.97	7,208.52
842.36	25 year (HUs)	5,690.71	13,657.14	9,423.75	13,411.89	12,891.43	8,766.52	12,872.59	10,928.89	13,042.78	9,434.10	12,441.81	12,716.93	11,833.42	11,504.09	11,302.94	11,470.26	10,779.91	8,865.86	9,005.18	6,995.24
Acres	50 year (HUs)	5,291.32	14,216.86	9,510.22	13,973.13	13,369.83	8,743.87	13,338.28	11,187.12	13,591.57	9,550.47	12,872.80	13,210.78	12,128.88	11,896.13	11,555.62	11,742.84	10,983.74	8,837.49	9,023.68	6,734.65

Net Benefits by Reach

		Baseline	Alternative 1: Comprehensive	Alternative 2: City: Alwater to Cornfields	Alternative 3: Banks and Tribs Only	Alternative 4: Highest Scoring Objectives (over 3)	Alternative 5: City: Los Feliz to Arroyo Seco	Alternative 6: Corps Team	Alternative 7: Highest Scoring Objectives (over 5)	Alternative 8: Charette Team 1	Alternative 9: Soft Bottom Channel and Associated Banks	Alternative 10: Highest Other Criteria (over 11)	Alternative 11: Charette Team 4	Alternative 12: Charette Team 3	Alternative 13: Charette Team 6	Alternative 14: Charette Team 5	Alternative 15: Charette Team 2	Alternative 16: Side Channels Only	Alternative 17: Charette Team 7	Alternative 18: Comprehensive Pockets	Alternative 19: Taylor Yard
Reach 1	Initial (HUs)	0.00	1,037.27	0.00	1,003.07	915.48	0.00	918.38	5.48	943.46	810.10	1,003.07	713.76	885.01	919.21	970.08	906.73	747.13	969.69	713.76	0.00
	25 year (HUs)	0.00	1,213.31	0.00	1,174.82	1,097.51	0.00	1,065.84	5.48	1,093.86	955.58	1,174.82	868.57	1,051.23	1,089.72	1,160.99	1,087.81	883.18	1,160.22	868.57	0.00
155.81	Acres 50 year (HUs)	0.00	1,362.35	0.00	1,320.23	1,239.63	0.00	1,206.94	5.48	1,238.43	1,096.68	1,320.23	1,006.22	1,197.52	1,239.64	1,311.58	1,229.77	1,015.65	1,310.80	1,006.22	0.00
Reach 2	Initial (HUs)	0.00	365.65	0.00	309.61	341.79	0.00	334.59	341.79	365.66	334.59	334.59	302.79	327.76	346.35	302.79	302.79	309.62	86.93	0.00	0.00
	25 year (HUs)	0.00	464.31	0.00	399.01	435.15	0.00	429.15	435.15	464.31	429.15	429.15	396.15	426.29	447.32	396.15	396.15	399.01	114.65	0.00	0.00
48.00	Acres 50 year (HUs)	0.00	544.34	0.00	471.43	509.90	0.00	504.96	509.90	544.34	504.96	504.96	470.90	504.44	543.83	470.90	470.90	471.42	139.07	0.00	0.00
Reach 3	Initial (HUs)	0.00	424.40	314.19	450.60	302.58	0.00	299.78	168.39	367.84	338.56	282.81	335.84	232.40	421.98	175.82	99.25	163.31	28.61	277.10	0.00
	25 year (HUs)	0.00	500.09	365.27	544.51	362.65	0.00	347.64	195.38	428.01	409.12	342.88	406.06	266.40	508.19	200.88	109.01	199.07	41.44	331.05	0.00
101.15	Acres 50 year (HUs)	0.00	595.89	449.95	669.56	460.01	0.00	430.19	257.63	526.77	474.16	440.24	472.28	307.43	623.34	224.20	119.45	235.39	49.60	378.86	0.00
Reach 4	Initial (HUs)	0.00	719.28	719.28	636.83	719.28	563.01	719.28	719.28	591.97	403.84	636.83	448.43	392.60	562.91	365.98	91.31	406.75	91.31	0.00	0.00
	25 year (HUs)	0.00	850.22	850.22	751.93	850.22	673.42	850.22	850.22	698.70	474.66	751.93	528.85	462.39	665.22	430.57	121.06	496.62	121.06	0.00	0.00
93.16	Acres 50 year (HUs)	0.00	961.20	961.20	851.03	961.20	763.13	961.20	961.20	791.53	540.52	851.02	605.07	515.76	757.01	494.89	144.38	565.06	144.38	0.00	0.00
Reach 5	Initial (HUs)	0.00	272.62	272.62	173.03	166.82	272.62	159.31	166.73	205.80	49.50	0.00	282.84	0.00	205.80	0.00	0.00	49.50	0.00	0.00	0.00
	25 year (HUs)	0.00	358.93	358.93	230.64	223.46	358.93	216.31	223.37	283.42	90.81	0.00	356.15	0.00	283.42	0.00	0.00	90.81	0.00	0.00	0.00
67.71	Acres 50 year (HUs)	0.00	414.60	414.60	273.16	248.70	414.60	241.61	248.61	330.39	116.11	0.00	398.66	0.00	330.39	0.00	0.00	116.11	0.00	0.00	0.00
Reach 6	Initial (HUs)	0.00	1,268.34	1,268.34	1,255.86	1,072.52	1,268.34	1,115.31	1,116.55	1,302.92	1,115.31	1,246.41	1,299.88	1,255.86	1,231.00	1,063.18	1,115.31	470.33	550.06	1,255.86	1,089.14
	25 year (HUs)	0.00	1,506.83	1,493.13	1,283.33	1,239.63	1,506.83	1,334.12	1,349.19	1,561.98	1,334.12	1,482.43	1,558.98	1,493.13	1,464.58	1,274.00	1,334.12	584.54	674.74	1,493.13	1,304.53
164.33	Acres 50 year (HUs)	0.00	1,668.80	1,668.80	1,469.83	1,416.63	1,668.80	1,475.69	1,516.12	1,756.31	1,475.69	1,641.95	1,753.32	1,653.83	1,621.46	1,407.29	1,475.69	638.99	740.04	1,653.83	1,443.34
Reach 7	Initial (HUs)	0.00	556.40	556.40	529.88	478.60	451.60	505.13	281.65	529.21	265.2	529.21	529.21	221.31	529.88	168.55	478.60	304.19	310.05	529.88	0.00
	25 year (HUs)	0.00	651.79	651.79	621.73	564.33	536.63	594.39	330.78	621.45	30.06	621.45	621.45	260.78	621.73	201.22	564.33	351.22	363.11	621.73	0.00
58.90	Acres 50 year (HUs)	0.00	724.35	724.35	693.45	629.38	606.02	660.28	388.00	693.25	30.90	693.25	693.25	292.11	693.45	225.51	629.38	378.61	403.87	693.45	0.00
Reach 8	Initial (HUs)	0.00	2,157.55	0.00	2,233.51	2,124.95	0.00	2,097.52	1,658.98	1,938.83	18.24	1,731.97	2,017.99	1,939.91	673.10	1,731.97	1,603.43	1,871.54	643.70	0.00	0.00
	25 year (HUs)	0.00	2,420.95	0.00	2,505.41	2,384.07	0.00	2,344.23	1,848.62	2,200.34	19.89	1,948.43	2,290.01	2,182.49	733.20	1,948.43	2,167.07	2,084.74	699.93	0.00	0.00
153.31	Acres 50 year (HUs)	0.00	2,654.00	0.00	2,749.14	2,613.05	0.00	2,566.09	2,008.86	2,419.22	20.13	2,129.93	2,519.76	2,366.47	795.68	2,129.93	2,381.95	2,270.20	758.41	0.00	0.00
Total	Initial (HUs)	0.00	6,801.51	3,130.87	6,592.38	6,122.02	2,555.57	6,149.29	4,458.25	6,245.69	3,096.66	5,764.88	5,930.73	5,254.85	4,890.24	4,778.38	4,903.43	4,322.38	2,680.35	2,776.59	1,089.14
	25 year (HUs)	0.00	7,966.43	3,733.04	7,721.18	7,200.71	3,075.81	7,181.88	5,238.18	7,352.07	3,743.39	6,751.10	7,026.21	6,142.71	5,813.38	5,611.23	5,779.55	5,089.19	3,175.15	3,314.47	1,304.53
842.36	Acres 50 year (HUs)	0.00	8,925.59	4,218.90	8,681.81	8,078.49	3,452.55	8,046.97	5,895.80	8,300.25	4,259.15	7,581.48	7,919.46	6,837.56	6,604.81	6,264.30	6,451.52	5,692.42	3,546.17	3,732.36	1,443.34

CHAP Appendix
Appendix I
Net HUs by Reach
for Final Array of Alternatives

Final Array: Net HUs by Reach

River Reach		Future Without Project			Alternative 10 (ART)			Alternative 13 Alt 13 (ACE)		
	Acres	Base HUs	25 yr HUs	50 yr HUs	Base Net HUs	25 yr Net HUs	50 yr Net HUs	Base Net HUs	25 yr Net HUs	50 yr Net HUs
1	155.81	901.86	761.22	618.23	713.76	868.57	1,006.22	713.76	868.57	1,006.22
2	48.00	432.76	392.01	361.62	302.79	396.15	470.90	302.79	396.15	470.90
3	101.14	613.67	585.23	510.27	28.61	41.44	49.60	163.31	199.07	235.39
4	93.16	937.93	890.93	860.53	406.75	496.62	565.06	406.75	496.62	565.06
5	67.71	811.23	754.59	729.35	49.50	90.81	116.11	49.50	90.81	116.11
6	164.33	1623.73	1534.70	1484.72	1,063.18	1,274.00	1,407.29	1,231.00	1,464.58	1,621.46
7	58.90	367.49	346.46	311.25	26.52	30.06	30.90	221.31	260.78	292.11
8	153.32	430.71	425.58	415.36	1,909.43	2,167.07	2,381.95	1,909.43	2,167.07	2,381.95
	842.37	6119.38	5690.71	5291.32	4,500.54	5,364.72	6,028.03	4,997.85	5,943.65	6,689.20

River Reach	Alternative 13v			Alternative 16 (AND)			Alternative 20 (RIVER)		
	Base Net HUs	25 yr Net HUs	50 yr Net HUs	Base Net HUs	25 yr Net HUs	50 yr Net HUs	Base Net HUs	25 yr Net HUs	50 yr Net HUs
1	713.76	868.57	1,006.22	713.76	868.57	1,006.22	713.76	868.57	1,006.22
2	302.79	396.15	470.90	302.79	396.15	470.90	346.35	447.32	543.83
3	163.31	199.07	235.39	163.31	199.07	235.39	277.10	331.05	378.86
4	406.75	496.62	565.06	406.75	496.62	565.06	406.75	496.62	565.06
5	49.50	90.81	116.11	272.62	358.93	414.60	272.62	358.93	414.60
6	1,231.00	1,464.58	1,621.46	1,231.00	1,464.58	1,621.46	1,231.00	1,464.58	1,621.46
7	304.19	351.22	379.61	221.31	260.78	292.11	304.19	351.22	379.61
8	1,909.43	2,167.07	2,381.95	2,233.51	2,505.41	2,749.14	2,233.51	2,505.41	2,749.14
	5,080.73	6,034.09	6,776.70	5,545.05	6,550.11	7,354.88	5,785.28	6,823.70	7,658.78

Alternative 10 (ART) [R1A11; R2A11; R3A17; R4A16; R5A16; R6A14; R7A9; R8A15]*
Alternative 13 Alt 13 (ACE) [R1A11; R2A11; R3A16; R4A16; R5A16; R6A13; R7A12; R8A15]*
Alternative 13v [R1A11; R2A11; R3A16; R4A16; R5A16; R6A13; R7A16; R8A15]*
Alternative 16 (AND) [R1A11; R2A11; R3A16; R4A16; R5A5; R6A13; R7A12; R8A3]*
Alternative 20 (RIVER) [R1A11; R2A13; R3A18; R4A16; R5A5; R6A13; R7A16; R8A3]*

*R#A#: This represents which of the original 19 alternatives each reach is derived from. For example, R1A11 means that Reach 1 of that final array alternative was derived from the original alternative 11.

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX H
Supplemental Environmental Information

Part 1- Supplemental Information

Part 2- Monitoring and Adaptive Management Plan

Part 3- Mitigation Monitoring and Reporting Program

September 2015

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX H, Part 1
Supplemental Environmental Information

April 2015

Appendix H Supplemental Environmental Information

TABLE OF CONTENTS

1.0 Special Status and Sensitive Species 3

2.0 Recreational Resouces in the Study Area 9

3.0 Lands Screened from the Project Area 11

4.0 References Cited 15

Table 1-1. Special Status Plant Species in the Greater Los Angeles Basin 3
Table 1-2. Special Status Animal Species in the Greater Los Angeles Basin 6
Table 1-3. Recreational Resources in the Study Area 9
Table 1-4. Lands Screened from the Project Area 11

1.0 Special Status and Sensitive Species

The greater Los Angeles Basin includes portions of the Angeles National Forest, the Santa Monica Mountains, and coastal areas where a number of sensitive plants and animals may occur. Sensitive species include plants or wildlife listed as threatened or endangered under the Federal Endangered Species Act (ESA) or as threatened, endangered, fully protected, or a species of concern under the state Endangered Species Act (CESA). Special status species also include plant species designated by the California Native Plant Society (CNPS) as presumed extinct in California (List 1A); plants designated as rare, threatened, or endangered in California and elsewhere (List 1B); and plants designated as being rare, threatened, or endangered in California but more common elsewhere (List 2).

The complete list of species that may occur in the study area was compiled by reviewing Federal, state, and other databases and comparing the habitat requirements of the species found in these lists to the types of habitat that occur in riparian areas of southern California waterways. These databases include the California Natural Diversity Database (CNDDB), which reports verifiable occurrences of sensitive species by USGS topographic quadrant (CNDDB 2012); U.S. Fish and Wildlife and California Department of Fish and Wildlife sensitive species lists for Los Angeles County (USFWS 2012a, and CDFW, 2012, respectively); and sensitive plant species lists developed by the California Native Plant Society (CNPS 2012).

From this initial list, those species that could occur in habitats that were identified in the CHAP appendix (Appendix G) were considered in greater detail. Although focused surveys for the species below were not performed, it was still determined that the potential for most of the species to exist there was low, for the following reasons: 1) Habitat patch size was very small, and although suitable habitat characteristics may occur, the size of the habitat patch may be too small or of insufficient quality to support the species, or 2) suitable habitat characteristics may occur, but the habitat patch itself is surrounded by highly unsuitable habitat such as developed areas, streets or freeways, golf courses, or other features that would act as barriers to passage into or out of the habitat patch. Species for which suitable habitat occurs in the study area are discussed in the EIS. All others were identified as "not likely to occur" and are listed below.

Table 1-1. Special Status Plant Species in the Greater Los Angeles Basin

Scientific Name	Common Name	Status Fed/State/ CNPS[1]	Habitat Requirements and Probability of Occurrence in Study Area[2]
Acmispon argophyllus var. adsurgens	San Clemente Island bird's-foot trefoil	NA/CE/ CNPS 1B	Coastal bluff scrub, coastal scrub. **Not expected**. Minimal suitable habitat onsite.
Acmispon dendroideus var. traskiae	San Clemente Island lotus	FE/CE/ CNPS 1B	Coastal bluff scrub, coastal scrub, valley and foothill grassland. **Not expected**. Some suitable habitat onsite.
Arenaria paludicola	Marsh sandwort	FE/CE/ CNPS 1B	Freshwater marsh, marsh and swamp, wetland. **Not expected**. Some suitable habitat onsite.
Astragalus brauntonii	Braunton's milk-vetch	FE/NA/ CNPS 1B	Coniferous forest, chaparral, coastal scrub, valley and foothill grasslands. **Not expected**. Some suitable habitat onsite.

Scientific Name	Common Name	Status Fed/State/ CNPS[1]	Habitat Requirements and Probability of Occurrence in Study Area[2]
Astragalus pycnostachyus var. lanosissimus	Ventura Marsh milk-vetch	FE/CE/ CNPS 1B	Marsh and swamp, salt marsh, wetland. **Not expected**. Some suitable habitat onsite.
Astragalus tener var. titi	Coastal dunes milk-vetch	FE/CE/ CNPS 1B	Coastal bluff scrub, coastal dunes. **Not expected**. Minimal suitable habitat ousite.
Berberis nevinii	Nevin's barberry	FE/CE/ CNPS 1B	Chaparral, cismontane woodland, coastal scrub, riparian scrub. **Not expected**. Some suitable habitat onsite.
Brodiaea filifolia	Thread-leaved brodiaea	FT/CE/ CNPS 1B	Vernal pools. **Not expected.** No suitable habitat onsite.
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	FC/CE/ CNPS 1B	Coastal scrub, sandy soils. Elevation 3 – 1035 meters. **Not expected**. Minimal snitable habitat onsite.
Delphinium variegatum ssp. kinkiense	San Clemente Island larkspur	FE/CE/ CNPS 1B	Valley and foothill grassland. **Not expected**. Some suitable habitat onsite.
Dithyrea maritima	Beach spectaclepod	NA/CT/ CNPS 1B	Coastal dunes, coastal scrub. **Not expected**. Minimal suitable habitat onsite.
Dodecahema leptoceras	Slender-horned spineflower	FE/CE/ CNPS 1B	Chaparral, coastal scrub, alluvial sage scrub. **Not expected**. Minimal suitable habitat onsite.
Dudleya cymosa ssp. agourensis	Agoura Hills dudleya	FT/NA/ CNPS 1B	Chaparral, cismontane woodland. **Not expected**. No suitable habitat onsite.
Dudleya cymosa ssp. marcescens	Marcescent dudleya	FT/CR/ CNPS 1B	Chaparral. **Not expected**. No suitable habitat ousite.
Dudleya cymosa ssp. ovatifolia	Santa Monica dudleya	FT/NA/ CNPS 1B	Chaparral, coastal scrub. **Not expected**. Minimal degraded habitat onsite.
Dudleya verityi	Verity's dudleya	FT/NA/NA	Chaparral, Foothill Woodland, Coastal Sage Scrub. **Not expected**. Some degraded habitat onsite.
Galium catalinense ssp. acrispum	San Clemente Island bedstraw	NA/CE/ CNPS 1B	Valley and foothill grassland. **Not expected**. Some degraded habitat onsite.
Helianthemum greenei	Island rush-rose	FT/NA/ CNPS 1B	Chaparral. **Not expected**. No suitable habitat onsite.
Malacothamnus clementinus	San Clemente Island bush-mallow	FE/CE/ CNPS 1B	Valley and foothill grasslaud. **Not expected**. Some degraded habitat onsite.
Nasturtium (Rorippa) gambelii	Gambel's water cress	FE/CT/ CNPS 1B	Braekish marsh, freshwater marsh, marsh and swamp, vernal pool, wetland. **Not expected**. Some suitable habitat onsite.
Navarretia fossalis	Spreading navarretia	FT/NA/ CNPS 1B	Vernal pools, chenopod scrub, marshes and swamps, wetland, playa. **Not expected**. Some suitable onsite.

Scientific Name	Common Name	Status Fed/State/ CNPS[1]	Habitat Requirements and Probability of Occurrence in Study Area[2]
Orcuttia californica	California Orcutt grass	FE/CE/ CNPS 1B	Vernal pool, wetland. **Not expected.** Some suitable habitat onsite.
Pentachaeta lyonii	Lyon's pentachaeta	FE/CE/ CNPS 1B	Chaparral, valley and foothill grassland. **Not expected**. Some degraded habitat onsite.
Phacelia stellaris	Brand's star phacelia	FC/NA/ CNPS 1B	Coastal dunes, coastal scrub. **Not expected**. Minimal degraded habitat onsite.

1 Status: USFWS: FE – Federal Endangered, FT – Federal Threatened, FC- Federal Species of Concern, NA – Not Applicable CDFG: CE – California Endangered, CT – California Threatened, CC – California Species of Special Concern, CR – California Rare, NA – Not Applicable. CNPS: 1A – Plants presumed extinct in California, 1B – Plants rare, threatened, or endangered in California, and elsewhere, NA – Non Applicable.

2 Probability to Occur Onsite: High – Observed in similar habitat in region, or habitat on the site is a type often utilized by the species and the site is within the known range of the species. Moderate – Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species. Low – Site is within the known range of the species but habitat on the site is rarely used by the species. Not Expected – A focused study failed to detect the species, or, no suitable habitat present.

Table 1-2. Special Status Animal Species in the Greater Los Angeles Basin

Scientific Name	Common Name	Status Federal/ State[1]	Habitat Requirements Probability of Occurrence in Study Area[2]
Ammospermophilus nelsoni	Nelson's antelope squirrel	NA/CT	Chenopod scrub. **Not expected.** No suitable habitat onsite.
Amphispiza belli clementeae	San Clemente sage sparrow	FT/NA	Coastal scrub. **Not expected**. Minimal degraded habitat ousite.
Anaxyrus (Bufo) californicus	Arroyo toad	FE/NA	Desert wash, riparian scrub, riparian woodland, south coast flowing waters, south coast standing waters. **Not expected**. Some suitable habitat onsite.
Anniella pulchra pulchra	Silvery legless lizard	NA/CC	Loose soils in chapparal or pine-oak woodlands. **Not expected.** No suitable habitat onsite.
Anniella stebbinsii	Southern CA legless lizard	NA/CC	Loose soils found under sparse vegetation of beaches, chaparral, sandy washes and stream terraces. **May occur.** Some suitable habitat onsite.
Athene cunicularia	Burrowing owl	NA/CC	Grasslands with friable soils. **Not expected.** No suitable habitat onsite.
Branchinecta lynchi	Vernal pond fairy shrimp	FT/NA	Vernal pools. **Not expected**. No suitable habitat onsite.
Buteo swainsoni	Swainson's hawk	NA/CT	Great Basin grassland, riparian forest, riparian woodland, valley and foothill grassland. **Not expected.** Some degraded habitat onsite
Catostomus santaanae	Santa Ana sucker	FT/NA	South coast flowing waters. **Not expected**. Some degraded habitat onsite.
Charadrius alexandrinus nivosus	Western snowy plover	FT/NA	Great Basin standing waters, sand shore, wetland **Not expected.** Some suitable habitat onsite.
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	FC/CE	Riparian woodlands. **Not expected**. Some suitable habitat onsite.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/NA	Coastal scrub. **Not expected.** Minimal degraded habitat onsite.
Empidonax traillii extimus	Southwestern willow flycatcher	FE/CE	Riparian woodlands. **Moderate**. Low quality suitable habitat onsite.
Eumops perotis californicus	Western mastiff bat	NA/CC	Chaparral, coastal scrub, forest and woodland. Roosts in rocky canyons and cliffs. **Not expected.** Minimal degraded habitat onsite.
Euphilotes battoides allyni	El Segundo blue butterfly	FE/NA	Coastal dunes. **Not expected.** Minimal degraded habitat onsite.
Euphydryas editha quino	Quino checkerspot butterfly	FE/NA	Coastal scrub. **Not expected**. Minimal degraded habitat onsite.

Scientific Name	Common Name	Status Federal/ State[1]	Habitat Requirements Probability of Occurrence in Study Area[2]
Gasterosteus aculeatus williamsoni	Unarmored threespine stickleback	FE/CE	South coast flowing waters. **Not expected.** Some degraded habitat onsite.
Glaucopsyche lygdamus palosverdesensis	Palos Verdes blue butterfly	FE/NA	Coastal scrub. **Not expected**. Minimal degraded habitat onsite.
Gymnogyps californianus	California condor	FE/CE	Valley and foothill grassland. **Not expected**. Some degraded habitat onsite.
Lanius ludovicianus mearnsi	San Clemente loggerhead shrike	FE/NA	Coastal scrub. **Not expected.** Minimal degraded habitat onsite.
Laterallus jamaicensis coturniculus	California black rail	NA/CT	Brackish marsh, freshwater marsh, marsh and swamp, salt marsh, wetland. **Not expected.** Some degraded habitat onsite.
Neotoma lepida intermedia	San Diego desert woodrat	NA/CC	Sagebrush scrub, chaparral. **Not expected.** Minimal habitat onsite.
Oncorhynchus mykiss irideus	Southern steelhead - southern California DPS	FE/NA	Aquatic, south coast flowing waters. **Not expected.** Some degraded habitat onsite.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	NA/CE	Marsh and swamp, wetland. **Not expected.** Some degraded habitat onsite.
Perognathus longimembris pacificus	Pacific pocket mouse	FE/NA	Coastal scrub. **Not expected**. Minimal degraded habitat onsite.
Phrynosoma blainvilli	Coast horned lizard	NA/CC	Loose soils in grasslands, woodlands, and chaparral. **Not expected.** Minimal degraded habitat onsite.
Polioptila californica californica	Coastal California gnatcatcher	FT/NA	Coastal bluff scrub, coastal scrub. **Low**. Minimal degraded habitat onsite.
Rana draytonii	California red-legged frog	FT/NA	Aquatic, artificial flowing waters, artificial standing waters, freshwater marsh, riparian forest or scrub, riparian woodland, south coast flowing water, south coast standing waters, wetland. **Not expected.** Some degraded habitat onsite.
Rana muscosa	Sierra Madre yellow-legged frog	FE/CC	Aquatic. **Not expected**. Some degraded habitat onsite.
Riparia riparia	Bank swallow	NA/CT	Riparian scrub, riparian woodland. **Not expected**. Some suitable habitat onsite.
Sternula antillarum browni	California least tern	FE/CE	Wetland. **Not expected**. Some degraded habitat onsite.

Scientific Name	Common Name	Status Federal/ State[1]	Habitat Requirements Probability of Occurrence in Study Area[2]
Streptocephalus woottoni	Riverside fairy shrimp	FE/NA	Vernal pools, ponds, and other ephemeral pool-like bodies of water. **Not expected**. No suitable habitat onsite.
Thamnophis hammondii	Two-striped garter snake	NA/CC	Pools, creeks with nearby oak woodlands, chaparral, scrub-shrub. **Not expected.** Minimal viable habitat.
Vireo bellii pusillus	Least Bell's vireo	FE/CE	Riparian forest, riparian scrub, riparian woodland. **LOW**. Marginal habitat onsite.
Xerospermophilus mohavensis	Mohave ground squirrel	NA/CT	Chenopod scrub. **Not expected**. No suitable habitat onsite.

1 Status Designation: USFWS: FE – Federal Endangered, FT – Federal Threatened, FC- Federal Species of Concern, NA – Not Applicable. CDFG: CE – California Endangered, CT – California Threatened, CC – California Species of Special Concern, NA – Not Applicable.

2 Probability to Occur Onsite: High – Observed in similar habitat in region, or habitat on the site is a type often utilized by the species and the site is within the known range of the species. Moderate – Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species. Low – Site is within the known range of the species but habitat on the site is rarely used by the species. Not Expected – A focused study failed to detect the species, or, no suitable habitat present.

2.0 Recreational Resouces in the Study Area

Table 1-3 includes a listing of recreational resources in the Study Area including name, type, and amenities included. This supplements information found in Section 3.9.2 of the main report.

Table 2-1. Recreational Resources in the Study Area

Name	Type, Location	Amenities
Bette Davis Picnic Area	Public, Los Angeles	Picnicking, walking, jogging, viewing
Chevy Chase Park and Recreation Center	Public, Los Angeles	Playground, basketball, handball, gym, picnicking, auditorium, pool
Crystal Springs Picnic Area	Public, Los Angeles	Picnicking
Ferraro Soccer Fields	Public, Los Angeles	Soccer fields
Griffith Park	Public, Los Angeles	Amphitheatre, bird sanctuary, camping, educational programming, equestrian, golf, hiking, jogging, museum, observatory, picnicking, soccer, swimming, tennis
Harding Golf Course	Public, Los Angeles	18-hole golf course
Lincoln Park	Public, Burbank	Playground, picnicking
Los Angeles Equestrian Center	Private, Los Angeles	Boarding stalls, training rings, indoor/outdoor show arenas, grass fields, riding academy, professional trainers, equestrian trails
Los Angeles Zoo	Public, Los Angeles	Municipal zoo and botanical gardens
Los Feliz Golf Course	Public, Los Angeles	9-hole golf course
Milford Mini Park	Public, Glendale	Playground, picnicking
Mountain View Park	Public, Burbank	Playground, restrooms, picnicking, tennis, basketball, horseshoe
North Atwater Park	Public, Los Angeles	Baseball, basketball, playground, volleyball, restrooms
Pelanconi Park	Public, Glendale	Ballfield, basketball, playground, picnicking, special facilities
Roosevelt Municipal Golf Course	Public, Los Angeles	9-hole golf course
Wilson Golf Course	Public, Los Angeles	18-hole golf course
Chavez Ravine Arboretum	Public, Los Angeles	Picnicking, playground, restrooms
Egret Park	Public, Los Angeles	Viewpoint, plantings, interpretive signage
Elysian Park	Public, Los Angeles	Walking, hiking, jogging, restrooms, picnicking, horseshoe, arboretum, baseball, sports field, therapeutic center, lodge, art exhibits, historical monument, community garden, playground
Elysian Valley Gateway Park	Public, Los Angeles	Plantings, benches, River access, picnicking
Elysian Valley Recreation Center	Los Angeles	Community rooms, auditorium, baseball, basketball, playground, handball
Glenhurst Park	Public, Los Angeles	Playground
Oso Park	Public, Los Angeles	Plantings, art, interpretive signage
Marsh Park	Public, Los Angeles	River access, viewing, picnicking, grass field, playground, infiltration area
Rattlesnake Park	Public, Los Angeles	Art exhibit, plantings, benches
Rio De Los Angeles State Park	Public, Los Angeles	Natural wetlands, hiking trails, sports fields, playground, recreation building
River Garden Park	Public, Los Angeles	Fountain, benches, picnicking, lawn area, restrooms
Silver Lake Recreation Center	Public, Los Angeles	Playground, community room, gym, picnicking, sports field, walking, jogging trails, classes, summer camps

Steelhead Park	Public, Los Angeles	Plantings, outdoor amphitheater
Sunnynook Park (under construction)	Public, Los Angeles	Plantings, walking paths, outdoor classroom
William Mulholland Memorial	Public, Los Angeles	Memorial fountain, seating, grass area
Chavez Ridge Disc Golf Course	Public, Los Angeles	18-hole course, restrooms
Confluence Park	Public, Los Angeles	Fountain, benches, plantings,
Dodger Stadium	Private, Los Angeles	Professional baseball stadium
Downey Recreation Center	Public, Los Angeles	Auditorium, baseball, playground, picnicking
Lacey Street Neighborhood Park	Public, Los Angeles	Picnicking, parking lot
Los Angeles Historic State Park	Public, Los Angeles	Walking, jogging, cycling paths, picnicking, natural and urban viewing, multipurpose field, restrooms, telescopes
Pecan Recreation Center	Public, Los Angeles	Baseball, playground, community room, handball, gym, picnicking, restrooms, seasonal pool, volleyball
Radio Hill Gardens	Public, Los Angeles	Trails, plantings, viewing
Solano Canyon Community Garden	Public, Los Angeles	Community gardening, picnicking

Sources: LARRC 2011c. City of Los Angeles 2012c, 2012d, 2012e. CDPR 2012a, 2012b, Linton 2012, PDGA 2012. Sources: SMMC & MRCA 2007. LARRC 2011c. City of Los Angeles 2012c, 2012d, 2012e, CDPR 2012a, 2012b, Linton 2012. Sources: City of Burbank 2012c, City of Glendale 2012c, 2012d, City of Los Angeles 2012c, 2012d, and 2012e.

3.0 Lands Screened from the Project Area

Table 1-4 supplements section 4.5.2 of the main report and lists lands that were screened from the project area.

Table 3-1. Lands Screened from the Project Area

Name	Description
Equestrian Center	The current uses of the 75-acre world class horse show complex and equestrian center along the river are an important recreational activity in the local community that, because of various urban land use constraints, cannot occur elsewhere. In addition to hosting shows at least 45 days a year, the center is a location frequently used for local community meetings, banquets, and weddings. Its over 500 boarding stalls, 17 trainers, tack shop, and equestrian gift shop are heavily used. The site is often used as a movie location as well. Many of those who use the facility have chosen to live in that area because of the center's location. Relocation to an area with equal access to Griffith Park and the Santa Monica Mountains is not possible. This nexus is important because of the intense urbanization of the Los Angeles area which is not conducive to horseback riding activities. Conversion of the Equestrian Center parcel to include a riparian area or detention basin was considered publicly unacceptable because it would be obtained at the expense of the long-standing equestrian community use that is virtually irreplaceable. A thin strip in the current right-of-way may be available for a riparian corridor. The preliminary cost-benefit analysis confirmed that the costs associated with moving/ relocating/ cleaning/ preparing/ redeveloping the site for use as an underground basin would not provide substantial local benefits and could not accommodate the retention of enough peak flows (in isolation or combination with other river-adjacent sites) to facilitate meaningful restoration downstream.
Bette Davis Park Restoration to River Level	Measures, such as bringing the entire park down to river level, reestablishing geomorphology through the park area, establishing open water areas, creating side channels through the park with freshwater marsh wetlands and habitat corridors, lowering channel banks and protecting them with setback levees, were screened out for implementation on the entire site. The park currently has relatively dense tree cover and provides functioning habitat for avian and small-scale terrestrial species. Given that it could be relatively easily connected to the restored riparian corridor as envisioned in the Study with minimal disruption to the existing park, the decision was made to preserve much of this scarce resource while including a portion for restoration along the river's edge.
Ferraro Fields	The current use of Ferraro Fields for soccer is an important recreational activity in the local community. The community fought for years to locate the facility in the area. The present use of the site is important because of a lack of open space options that could/can be used for more intensive recreation (additional soccer fields were and are not supported within Griffith Park and the proximity to freeway access was and is deemed critical). While conversion of all of the parcel to a riparian area, lowering it to become a part of the riverbed, or conversion to a detention basin with riparian habitat is considered publicly–unacceptable, a strip in the current right-of-way may be available for a riparian corridor and a side channel with a riparian fringe along the outer edge may be possible and will continue to be considered in the alternatives. Because of the importance of soccer facilities to residents of communities that are considered to have been historically-underserved from a lack of access to such recreational amenities, retention of this area for soccer use is considered an environmental justice issue. A portion of Ferraro Fields would be used in project alternatives, but use of the entire parcel is not feasible. Throughout the two-year development and implementation of the City's LA River Revitalization Master Plan, numerous groups expressed interest in creating new soccer facilities at/near the river, including Anahuak Youth Soccer Association, The City Project, and the Alianza de los Pueblos del Rio. In general soccer playing is

Name	Description
	discouraged in open spaces because of the damage to grass and potential conflicts with other uses—such as habitat establishment/restoration. Soccer is also a very popular activity for populations that have been historically underserved in terms of access to natural and recreational spaces in LA, so there is an environmental justice component. Therefore, it is important to balance the availability of resources and accommodate established soccer-playing facilities in close proximity to the river and multiple modes of transportation in a way that also facilities connections to natural open space resources—reducing negative interaction effects as much as is possible. Given the established use of Ferraro Fields for soccer and the ability of the river's ecosystem restoration to benefit from an off-stream channel near the Fields, the compatible use scenario was chosen so as not to displace/disrupt an established recreational use that could not be replaced as part of the ecosystem project. However, a portion of this site would be available to use for the restoration project without impacting the soccer fields.
Zoo Parking Lot Habitat Corridor	This real estate was determined to be unavailable to the project because an extensive City-sponsored storm water/water quality project was recently completed in the same area and the parking itself is necessary to support activity at the zoo, the Autry Museum of Western Heritage, and other nearby uses in Griffith Park. Disruption of the parking was not considered to be feasible given the high demand for use by visitors to these important regional amenities. Moreover, the site is separated from the river by the I-5 freeway and any diversions would require costly infrastructure, including tunnels, and extensive, expensive channel modifications at the access point/s. The site remains potentially useful as a shared parking facility to accommodate future visitors to the Study area.
Griffith Park Golf Course	This real estate was determined to be unavailable to the project because of the overall cost of the extensive infrastructure that would be required to bring off-channel flows to the course from the river, the considerable modifications that would be made to the I-5 Freeway, and the substantial disruption of use at a heavily-used facility. Preliminary analysis indicated that the peak flow reduction accommodated by the off stream flows and use as an underground basin would be negligible in accommodating additional habitat in the downstream channel even though the local habitat connection could be meaningful. This area has been designated a Significant Ecological Area (SEA) for the City of Los Angeles and the open space has extensive tree cover. It remains important for avian species and is a reservoir for native species, but near term hydrologic/hydraulic connections were deemed too expensive and extensive given the freeway and utility infrastructure barriers and opportunity costs associated with the disrupted nse. However, a side channel nsing existing tunnels/culverts under the freeway was feasible at this site and is included in the remaining measures.
Department of Recreation and Parks Central Service Yard	The Central Service Yard (CSY) is a 24.6 acre site owned by the City of Los Angeles Department of Recreation and Parks (RAP) located on the eastern bank of the Los Angeles (LA) River. It is sitnated across from Griffith Park and upstream of North Atwater Park. It was considered as a potentially-available property in initial plan formulation of the Los Angeles River Ecosystem Restoration Feasibility Study (Study), but the CSY was subsequently deemed infeasible for inclusion in the Stndy because of the prohibitive costs associated with relocating and replicating its current uses elsewhere. The CSY is the primary support facility and service yard for RAP and services the entire recreation and park system of the City of Los Angeles (City). The CSY houses irreplaceable nses of vital uecessity to the operation and maintenance of all parks and recreation facilities in the City. The CSY is centrally located within the City and provides RAP with quick, trouble-free access to the region's major north-south and east-west highways. The centralized location of the CSY pennits RAP a number of positive operational and budgetary efficiencies, which are of increasing benefit to the

Name	Description
	City given the ongoing fiscal and budgetary challenges it continues to face. In December 2012, the City conducted an initial analysis of the cost and feasibility of relocating the functions of the CSY to other parcels currently for sale in Los Angeles County. From this investigation, the City estimates that the cost of purchasing new land would be approximately $70-110 million, and the cost to construct new facilities and relocate the existing uses would be approximately $130-140 million, yielding a total cost of approximately $200-250 million. Moreover, no available parcel was identified that is large enough to accommodate the existing uses in one place, and the largest available parcels are not located in areas of the City that are as advantageously located as CSY. Until a location of acceptable size and proximity is identified to facilitate the relocation of the CSY's functions, it must continue to support its current uses. In the near-term, a linear habitat corridor along the river's edge that does not encroach upon the site remains a feasible option for inclusion in the Study.
Albion Dairy	This location was eliminated because of current plans and agreements already in place to use this site for storm water quality treatment, which would preclude bringing river water into the site. This site was purchased under agreements for this specific use. Moreover, hydrologic/hydraulic connections between the site and the river are complicated by existing at-grade railroad tracks. Whereas connections at/under rail tracks remain desirable in other locations, such as the Cornfield/LA State Historic Park and the Piggyback Yard, the connection at this site is less feasible given the much smaller amount of ecosystem restoration that would be accomplished at/near/on the Albion site.
DWP/Main Street Facility	This real estate was determined to be unavailable to the project because of the costs associated with moving/relocating/cleaning/preparing/redeveloping the site for the ecosystem use. New use of the entire site would drastically impact existing City service provision and current rail uses and would require an extremely expensive and logistically undesirable relocation of a power transmission station. The approximately 3-acre parking lot on the river-side of the rail tracks could function as a linear habitat corridor and buffer along the river's edge next to the site and therefore this remains a viable option.
Metro Union Bus Service Yard (Division 13 Bus Maintenance Facility)	Along the river's western bank near Union Station across from Piggyback Yard was not considered because it is a property belonging to the Los Angeles County. The County recently invested over $1 million to renovate and expand the facility for bus maintenance and storage. The County has been clear that it is unwilling due to economic considerations to consider selling the property for expansion of Union Station, high speed rail, or ecosystem restoration purposes, because of the costs associated with moving and relocating the recently upgraded facilities. The site is under the ownership/control of others, therefore, it was considered unavailable.
Area with Restoration Benefits and Opportunities for Revitalization (ARBOR) Outlet	Terrace, Remove Concrete, and Create Habitat Corridor. This reach is constrained by a series of active and parallel rail lines along both sides of the river. The bridges are critical locations for conveying flow through this area. Removal of concrete requires alternate measures to offset the loss in conveyance. Modifications to this area of the river were determined to be infeasible because of extensive rail and roadway infrastructure and because it may need to be used as a transition between any restoration and the downstream flood risk management project.
Consolidated North Central District Yard.	The Consolidated North Central District Yard (CNCDY) is a 10 acre site owned by the City of Los Angeles. It is located on the south bank of the Arroyo Seco and upstream of the confluence with the LA River. It was considered as a potentially-available property in initial plan formulation of the Study but was subsequently deemed infeasible for inclusion in the Study because of the prohibitive costs associated with relocating and replicating its current uses elsewhere. Past investigations have yielded a

Name	Description
	necessity to locate the uses of the CSY near Griffith Park because they serve Park operations and maintenance functions. To preserve the natural open space value of the Park, the Griffith Park Master Plan working group has discouraged the location of any new maintenance yards in the park itself. Given this, a comparable site of considerable size would need to be identified at/near the Park to accommodate the CSY uses. This has not yet been accomplished and does not seem likely in the near-term. The CNCDY provides for the storage and maintenance of Bureau of Sanitation and Bureau of Street Services vehicles, including refuse trucks serving a large portion of the City. Its location offers fast and efficient access to major roads and freeways. In 2007, the City conducted an initial analysis of the cost and feasibility of relocating the functions of the site to other parcels currently for sale in Los Angeles County. From this investigation, the City estimates that the cost of purchasing new land would be approximately $70-75 million, and the cost to construct new facilities and relocate the existing uses would be approximately $130-170 million, yielding a total cost of approximately $200-245 million.
LACDA Footprint Only	The District also examined whether an alternative wholly within the existing LACDA footprint in the study area was feasible. The LACDA boundary includes the channel bottom and sides with very limited rights of way on either side, much of which is occupied by bicycle paths on the west/south side of the river. The team concluded after consideration that a LACDA-footprint-limited alternative would not meet objectives because it would not meet the objective for restoring regional connectivity, and it would also be likely to fail the objective for restoring habitat because flow velocities would not be reduced sufficient to support restored habitat. Lands within the LACDA boundary are included in the alternatives including the TSP, but the lands within the boundary are not sufficient in themselves to support restoration objectives.

4.0 References Cited

California Department of Fish and Wildlife (CDFW). 2012. Enadangered, Threatened, and Rare Plant and Animal lists. Internet wbpages located at: http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/. Accessed in Jul, 2012.

California Native Plant Society (CNPS). 2012. CNPS Rare Plant Ranking System. Internet webpage located at http://www.cnps.org/cnps/rareplants/ranking.php. Accessed August 2012.

California Natural Diversity Database (CNDDB). 2012. Subscriber-limited access on-line database for Burbank, Hollywood, Pasadena, and Los Angeles topographic quadrangles.

U.S. Fish and Wildlife Service (USFWS). 2012a. Carlsbad Fish and Wildlife Office Species Status List. Internet website located at http://www.fws.gov/carlsbad/TEspecies.html. Accessed August 2012.

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX H, Part 2
Monitoring and Adaptive Management Plan

September 2015

Table of Contents

1.0 INTRODUCTION 3
1.1 Statutory Basis for Monitoring and Adaptive Management 3
1.2 Adaptive Management Team 4
1.2.1 Team Structure 5
2.0 MONITORING 6
2.1 Project Objectives 6
2.2 Rationale for Monitoring 6
2.3 Monitoring Plan 6
2.3.1 Monitoring Period 7
2.3.2 Performance Measures and Monitoring Design 7
2.3.3 Monitoring Procedures 10
2.3.4 Use of Monitoring Results and Analysis 11
3.0 PROJECT ADAPTIVE MANAGEMENT PLANNING 12
3.1 Management and Restoration Actions 12
3.2 Sources of Uncertainty 13
4.0 RATIONALE FOR ADAPTIVE MANAGEMENT 13
5.0 ASSESSMENT 14
5.1 Database Management 14
5.2 Documentation and Reporting 14
6.0 DECISION-MAKING 14
6.1 Decision Criteria 15
6.1.1 Vegetative community, cover, and structure triggers: 15
6.1.2 Stream channel native fish habitat triggers: 16
6.2 Potential Adaptive Management Measures 16
6.3 Conclusion of Monitoring for Project Features 17
7.0 COSTS FOR IMPLEMENTATION OF MONITORING AND ADAPTIVE MANAGEMENT PROGRAMS 18
7.1 Costs for Implementation of Monitoring Program 18
7.2 Costs for Implementation of Adaptive Management Program 18

7.3 Total Costs for Monitoring and Adaptive Management....18

8.0 REFERENCES....19

TABLE 1: PRELIMINARY COST ESTIMATES FOR MONITORING AND ADAPTIVE MANAGEMENT....20

1.0 INTRODUCTION

This document outlines the feasibility level Monitoring and Adaptive Management Plan (MAMP) for the Los Angeles River Ecosystem Restoration Project (LARERP) in Los Angeles, California. The U.S. Army Corps of Engineers, Los Angeles District (USACE) in partnership with the City of Los Angeles (City), has developed feasibility level plans to restore approximately 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles, identified as the Area with Restoration Benefits and Opportunities for Revitalization (ARBOR) reach. This plan identifies and describes the monitoring and adaptive management activities proposed and estimates their cost and duration.

The general purpose of the MAMP is to provide a systematic approach for improving resource management outcomes and a structured process for recommending decisions, with an emphasis on uncertainty about resources response to management actions and the value of reducing that uncertainty to improve management.

More specifically, the MAMP will:

- Establish the framework for effective monitoring, assessment of monitoring data, and decision making for implementation of adaptive management activities in the project area.
- Provide the process for identifying adaptive management actions in the project area.
- Establish decision criteria for vegetation and wildlife evaluation and modification of adaptive management activities.

This plan will be reviewed and revised as needed during the Preconstruction, Engineering, and Design (PED) phase as specific design details are made available.

1.1 Statutory Basis for Monitoring and Adaptive Management

Section 2039 of Water Resources Development Act (WRDA) 2007 directs the Secretary of the Army to ensure that, when conducting a feasibility study for a project (or component of a project) for ecosystem restoration, the recommended project includes a plan for monitoring the success of the ecosystem restoration.

Section 2039 of WRDA 2007 requires that the monitoring plan include a description of the monitoring activities, the criteria for success, and the estimated cost and duration of the monitoring, and specifies that monitoring will be performed until restoration success is achieved.

The Corps' implementation guidance for Section 2039, in the form of a memo dated 31 August 2009, also requires that an adaptive management plan (i.e., contingency plan) be developed for all ecosystem restoration projects.

This MAMP includes all elements required by the WRDA 2007 implementation guidance for section 2039, including:

- the rationale for monitoring (Section 2.2), including:
    - key project specific parameters to be measured (Section 2.3.2)
    - how the parameters relate to achieving the desired outcomes or making a decision about the next phase of the project (Sections 2.3.2, 6.1),
- the intended use(s) of the information obtained (Section 2.3.4)
- the nature of the monitoring including duration and/or periodicity (Sections 2.3.2, 2.3.3),
- the disposition of the information and analysis (Sections 2.3, 5.0)
- the cost of the monitoring plan (Section 7.0)
- the party responsible for carrying out the monitoring plan (Section 1.2)
- a project closeout plan (Section 6.3).

1.2 Adaptive Management Team

The MAMP provides the framework and guidance for an Adaptive Management Team (AMT) to review and assess monitoring results and consider and recommend adaptive management actions when ecological success is not achieved and decision criteria are triggered. The AMT members shall work together to make recommendations relevant to implementing the MAMP. The AMT is composed of the Corps, the City of Los Angeles (City), and interested resource agencies. Although the Corps and City have coordinated with the entities that will comprise the AMT in development of this Integrated Feasibility Report (IFR), the AMT will be officially established during PED.

The AMT focuses on the ecological function of the habitats through related management actions to maintain and provide functional riverine habitat for general species and special status (threatened and endangered species) within the project area. This MAMP provides a monitoring plan and identifies triggers upon which an adaptive management action may be implemented. The AMT shall review the monitoring results and advise on and recommend actions that are consistent with the project goals and reflect the current and future needs of the habitat and the species they support within the project area. The Corps shall have final determination on all adaptive management actions recommended.

The Corps is responsible for ensuring that monitoring data and assessments are properly used in the adaptive management decision-making process. If the Corps determines that adaptive management actions are needed, it will coordinate with the AMT on implementation of those actions. The Corps is also responsible for project documentation, reporting, and external communication.

The AMT shall meet at a minimum of once per year, as scheduled by the Corps during the monitoring period, to review the results of monitoring and assess whether project objectives are being met. If objectives are not being met, the AMT may recommend that adaptive management actions be taken in response to monitoring results as compared to decision-making triggers.

The AMT may also consider other related projects along the River and its tributaries in determining the appropriate adaptive management actions, and may consult with other recognized experts or stakeholders as appropriate, to achieve project goals.

Recommendations for adaptive management should be based on:

- Monitoring data from previous years
- Consideration of current habitat conditions
- Consideration of current and potential threats to habitat establishment success
- Past and predicted response by target species

1.2.1 Team Structure

The Management Team shall include representatives from the U.S. Army, Corps of Engineers, Los Angeles District and the non-Federal sponsor, City of Los Angeles,.

U.S. Army Corps of Engineers

The Corps may be represented by the Project Ecologist as well as the Project Hydrology and Hydraulics (H&H) representative and the Project Geotechnical representative as needed. Other Corps attendees may include the Project Manager, the Project Environmental Coordinator, and/or Operations and Maintenance designees, as needed.

City of Los Angeles

The City, as the non-Federal sponsor for the project, will ultimately be responsible for all OMRRR activities once the Corps notifies the City of project completion. Prior to final project completion, the Corps will transfer responsibility of functional elements of the project to the City as they are completed. The City may be represented by its Bureau of Engineering designee. Other City participants may include the City Manager, Director of Planning, City Engineer, and Public Works Division Manager, or their designees.

The AMT shall also include representatives from resource agencies who would serve in an advisory capacity, to assist in evaluation of monitoring data and assessment of adaptive management needs. The agencies shall include, upon their acceptance:

- U.S. Fish and Wildlife Service, Carlsbad Field Office
- California Department of Fish and Wildlife, South Coast Region 5
- California Regional Water Quality Control Board, Los Angeles Region
- United States Geological Survey (USGS), Western Ecological Research Center (WERC)

Additional expertise may be provided by other entities and stakeholders with knowledge of the Los

Angeles River ecosystem, hydrology, and wildlife species, at the discretion of the primary AMT participants.

2.0 MONITORING

An effective monitoring program will be required to determine if the project outcomes are consistent with original project goals and objectives. The power of a monitoring program developed to support adaptive management lies in the establishment of feedback between continued project monitoring and corresponding project management. A carefully designed monitoring program is the central component of the project adaptive management program as it supplies the information to assess whether the project is functioning as planned.

2.1 Project Objectives

The specific restoration objectives of the LARERP are to:

1) Restore Valley Foothill Riparian Strand and Freshwater Marsh Habitat: Restore Valley Foothill Riparian wildlife habitat types, aquatic freshwater marsh communities, and native fish habitat within the ARBOR reach throughout the period of analysis, including restoration of supporting ecological processes and biological diversity, and a more natural hydrologic and hydraulic regime that reconnects the river to historic floodplains and tributaries, reduces velocities, increases infiltration, and improves natural sediment processes.

2) Increase Habitat Connectivity: Increase habitat connectivity between the river and the historic floodplain, and increase connectivity for wildlife between restored habitat patches and nearby significant ecological zones such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains within the ARBOR reach throughout the period of analysis.

3) Increase passive recreation: Include recreation that is compatible with the restored environment in the ARBOR reach.

2.2 Rationale for Monitoring

Monitoring must be closely integrated with the adaptive management components because it is the key to the evaluation of adaptive management needs. Objectives must be considered to determine appropriate indicators to monitor. In order to be effective, monitoring must be able to distinguish between ecosystem responses that result from project implementation (i.e., management actions) and natural ecosystem variability.

Achieving objectives will require monitoring that focuses on the target habitats and the hydrologic and geomorphic processes that support them.

2.3 Monitoring Plan

According to the Corps' implementation guidance memo for WRDA Section 2039, dated 31 August 2009, "Monitoring includes the systemic collection and analysis of data that provides information useful for assessing project performance, determining whether ecological success has been achieved, or whether adaptive management may be needed to attain project benefits."

The following discussion outlines a monitoring plan that will support the LARERP Adaptive Management Program. The plan identifies performance measures along with desired outcomes and monitoring design in relation to specific objectives. A performance measure includes specific feature(s) to be monitored to determine project performance. Additional monitoring is identified as supporting information needs that will help to further understand the interrelationships of restoration features and external environmental variability and to corroborate project effects.

Decision-making triggers are related to each performance measure and desired outcome and identify the need to discuss potential implementation of adaptive management actions with the AMT. These criteria/triggers are identified in Section 6.1.

Overall, monitoring results will be used to evaluate the progress of habitat restoration toward meeting project objectives and to inform the need for adaptive management actions to ensure successful restoration is achieved.

2.3.1 Monitoring Period

Upon completion of construction of each phase or feature of the LARERP, cost-shared monitoring for ecological success and adaptive management will be initiated and will continue for five years or until restoration success is achieved, for no longer than ten years. Concurrent monitoring of one or more nearby reference sites with similar conditions to the desired restored habitat, such as the Santa Ana River or San Gabriel River, is recommended to differentiate changes at the restoration site that are attributable to the restoration activity versus normal environmental variability affecting the region.

This monitoring plan includes the minimum monitoring actions to evaluate success and to determine adaptive management needs. Assuming that multiple construction contracts will be required to implement all of the restoration elements associated with the recommended plan, monitoring and adaptive management will be initiated at the completion of each phase of construction.

Although WRDA 2007 allows for up to ten years of cost-shared monitoring when necessary, this plan anticipates that only five years of monitoring and adaptive management would be required for each feature, for habitat to mature sufficiently to be self-sustaining, and to meet performance criteria for project objectives. Once the Corps determines that ecological success for a feature has been fully achieved, even if this occurs in less than five years, no further monitoring will be performed. For each phase, if performance criteria for project objectives have not been met within the first five years, then cost-shared monitoring and adaptive management would continue within those areas until performance criteria are met or for a maximum of five additional years, whichever is less. If success cannot be determined within the ten-year period of cost-shared monitoring allowed by law, any additional monitoring and management will be a non- Federal responsibility. Cost-shared monitoring shall not continue beyond ten years.

2.3.2 Performance Measures and Monitoring Design

Performance Measure 1a: Vegetative community, cover, and structure

Desired Outcome: Increase percent cover of native riparian and marsh habitat.

Desired Outcome: Maintain appropriate structural diversity of native riparian habitats to support target wildlife species.

Desired Outcome: Increase percent vegetative cover over water to reduce water temperatures to support native fish.

Desired Outcome: Decrease percent cover of non-native invasive species that out-compete natives.

Monitoring Design and Rationale: Permanent vegetation monitoring stations will be established for assessing project area vegetation communities. These stations will be sampled annually for five years post construction.

Supporting Information Need - Depth to Groundwater: Depth to groundwater will be monitored seasonally for five years, along with the hydrologic monitoring as set forth below in performance measure 1b.

Supporting Information Need - Wildlife Surveys: Inventories of general wildlife would be documented during the annual vegetation monitoring effort.

Wildlife surveys will be performed annually for five years post construction in coordination with the vegetation monitoring to provide supporting information on the establishment of target habitats. Data on large mammal use will be compiled from studies performed by existing USGS WERC monitoring programs.

Monitoring of vegetation (including percent cover, structural diversity, cover over water, and cover of invasives) and depth to groundwater, as well as inventorying wildlife will indicate if target habitats and the hydrology that supports them have been successfully restored. Shallow depth to groundwater is essential for riparian habitats to persist and be self-sustaining.

Wildlife surveys serve to provide supplemental information on restoration success for target habitats and habitat connectivity While wildlife presence is not a requirement to confirm success, presence of riverine obligate and facultative species (such as least Bell's vireo, yellow warbler, and yellow breasted chat) that use the habitat for all or a portion of their life requirements is an indicator of successful habitat establishment, as well as the successful establishment of a self-sustaining ecosystem and its underlying functions. If vegetative cover and structure criteria are not being met, wildlife species presence, distribution, and diversity may provide supporting information to help identify which habitat elements and underlying ecosystem functions have not been achieved in target habitats.

Results of monitoring for vegetation communities would also indicate whether habitat components necessary to provide habitat connectivity and support increased wildlife

movement have been successfully established.

Decision-making triggers can be found in Section 6.1.1

Performance measure 1b: Stream channel native fish habitat

Desired Outcome: Increase structure and diversity of in-channel form and habitats.

Desired Outcome: Increase and maintain availability of gravel and cobble substrates.

Monitoring Design and Rationale: Permanent monitoring stations will be established for monitoring of geomorphic and in-channel habitat elements such as large woody debris; stream gradient; channel form, dimensions, and dynamics; gravel bars or riffle-pool-run complexes and distributions; flood refugia and back-channel areas; and substrate composition and distribution. Monitoring will be performed twice annually (wet season and dry season) post construction for five years in soft bottom areas of the main channel and in widened areas.

Bathymetry/topography surveys to evaluate widespread geomorphic changes, such as sediment aggradation and degradation, would be performed at the end of Year 1 after construction and at the end of Year 5 after construction in soft bottom areas of the main channel and in widened areas. Scour and erosion will also be assessed as part of geotechnical O&M procedures.

Supporting Information Need - Hydrology: Water quality, flow, and hydroperiod will be assessed seasonally for five years post construction to support evaluation of suitable fish habitat.

Monitoring of these features is necessary to determine the successful establishment of native fish habitat, including for Santa Ana sucker and arroyo chub, which require gravel and cobble substrates for foraging and spawning, shade over water that supports cooler water temperatures, inputs of large woody debris to support structural diversity and refugia, in-channel geomorphic diversity to support all stages of life requirements, and perennial flowing water.

Furthermore, changes to geomorphic processes will affect the vegetation component of target habitats. If vegetative cover and structure criteria are not being met, data from monitoring of geomorphic and hydrologic processes may provide additional information on the underlying causes of failure. Bathymetry/topography surveys will also provide data on sedimentation that can be used to assess channel conveyance capacity.

Results of monitoring for native fish habitat would also indicate whether habitat components necessary to provide habitat connectivity and support increased wildlife movement have been successfully established.

Decision-making triggers can be found in Section 6.1.2

2.3.3 Monitoring Procedures

The following monitoring procedures will provide the information necessary to evaluate the previously identified project objectives for the LARERP:

Vegetation: Vegetation sampling will occur annually at 12 sites per reach and at a reference site for the duration of the monitoring period. Sampling will occur during spring months, at the peak of growing season, and will consist of permanent field monitoring plots along one or more transects either perpendicular to the stream centerline or parallel to the floodplain slope and hydraulic gradient. Plots will be located randomly within each reach/feature, and the distance between plots and along transects will be dependent on the project site area and variability. Monitoring will measure percent cover of native and non-native plant species, structural diversity, and percent cover over water. Photograph stations are also important for documenting vegetation conditions. All plots and photograph stations will be documented via Global Positioning System (GPS) coordinates to reoccupy in each year of sampling.

General observations, such as fitness and health of plantings, native plant species recruitment, and signs of drought stress would be noted during the surveys. Additionally, potential soil erosion, flood damage, vandalism and intrusion, trampling, and pest problems would be qualitatively identified.

A general inventory of all wildlife species observed and detected using the project area would be documented. Nesting sites, roosting sites, animal burrows, and other signs of wildlife use of the newly created habitat would be recorded. These notes would be important for early identification of species colonization patterns.

In-Channel Stream Habitat: To assess the overall stream health and available habitat for native fish, a California Stream Bio-assessment Worksheet (CDFG 1999) will be completed annually at permanent monitoring stations. This assessment is meant to rapidly assess the stream and be able to give it a habitat value score based on the physical characteristics of the site. Some of the physical factors that are assessed include the stream gradient, substrate composition, organic material in the stream (woody debris and leaf litter), and vegetative cover above the stream.

In-stream characteristics will also be recorded annually by taking channel cross-sections at permanent monitoring stations. Methods involve placing a transect line perpendicular to flow at the up and downstream extents of 100 meter monitoring sites. Substrate composition (silt, sand, gravel, cobble, boulder, sandbars, and emergent vegetation), channel width, channel depth, and mid-column current velocity will be measured at 1.0 meter intervals along each transect line.

Bathymetry and topography surveys would occur at Year 1 and Year 5, and may be generated using LiDAR or a ground survey crew.

Supporting Information Need – Wildlife Surveys: A general inventory of all wildlife species observed and detected using the project area would be documented annually in coordination with vegetation monitoring. During the general inventory, station counts will be conducted for sensitive and target species including least Bell's vireo, yellow-breasted chat, and yellow warbler. Amphibian surveys may also be performed using station counts, fence arrays or pit fall traps. Presence of non-native and nuisance wildlife species will be noted.

Data on wildlife use by large mammals will be gathered from existing monitoring being performed by USGS WERC.

Supporting Information Need - Hydrology: Hydrology will be assessed seasonally each monitoring year and at storm events. Mid-column current velocities will be measured at 1.0 meter intervals along each in-stream cross-section transect line. Measurements for current velocity will be taken using a hand-held flow meter, such as the Global Water Flow Probe, following methods described in Gore (2007). Hydroperiod metrics (depth, duration, and frequency of flooding) will be obtained from documented elevations and recorded water levels. Depth to groundwater will be assessed using installed piezometers.

Supporting Information Need - Water Quality: Water quality parameters will be measured seasonally each monitoring year to assess the quality of native fish habitat. Parameters to be measured include water temperature (°F), dissolved oxygen ([DO]%, saturation. and mg/L), turbidity (neophelometric turbidity units [NTUs]), pH levels, conductivity (uS/cm), and salinity (mg/g). Measurements will be taken using Hanna HI 9928 and HI 93703 water quality meters or other similar water quality meters.

2.3.4 Use of Monitoring Results and Analysis

Results of the monitoring will be assessed in comparison to project objectives and decision-making triggers to evaluate whether the project is functioning as planned and whether adaptive management actions are needed to achieve project objectives. The results of the monitoring will be provided to the AMT who will evaluate and compare data to project objectives and decision making triggers. The AMT will use the monitoring results to assess habitat responses to management, evaluate overall project performance, and make recommendations for adaptive management actions as appropriate. If monitoring results, as compared to desired outcomes and decision making triggers, show that project objectives are not being met, the AMT will evaluate causes of failure and recommend implementation of adaptive management actions, as identified in Section 6.2, to remedy the underlying problems.

As data is gathered through monitoring, more information will also be available to address uncertainties and fill information gaps. Uncertainties such as effective operational regimes, urban restoration design needs, benefits generated by restored features, and accuracy of hydrologic models can be evaluated to inform adaptive management actions and future restoration needs.

3.0 PROJECT ADAPTIVE MANAGEMENT PLANNING

The MAMP outlines how the results of the project-specific monitoring program would be used to adaptively manage the project, including specification of conditions that will define project success.

The MAMP reflects a level of detail consistent with the feasibility study phase. The primary intent was to develop monitoring and adaptive management actions appropriate to assess and achieve the project's restoration goals and objectives. The specified management actions, as well as expected timelines for achieving successful establishment and self-sustaining maturity of restored habitat features, were used to develop an estimation of the adaptive management program costs and duration for the project.

The following section outlines restoration actions that will be undertaken to achieve the project objectives and lists sources of uncertainty that may impact the need for adaptive management actions. Subsequent sections describe assessment of monitoring results, data management, and decision-making on the implementation of adaptive management.

The level of detail in this plan is based on currently available data and information developed during plan formulation as part of the feasibility study. Uncertainties may remain concerning the exact project features, monitoring elements, and adaptive management opportunities. Components of the MAMP, including costs, were similarly estimated using currently available information. Uncertainties will be addressed in the preconstruction, engineering, and design (PED) phase, and the MAMP may be amended to incorporated additional detail as part of the design phase.

3.1 Management and Restoration Actions

The PDT performed a thorough plan formulation process to identify potential management measures and restoration actions that address the project objectives. Many alternatives were considered, evaluated, and screened in producing a final array of alternatives. The Corps subsequently identified a Recommended Plan.

The Recommended Plan, which is also the Locally Preferred Plan (LPP), is referred to as Alternative 20, also known as the RIVER (for Riparian Integration via Varied Ecological Reintroduction) Alternative. The restoration actions have been divided into 8 reaches based on the geomorphology of the ARBOR reach to assist with planning (see Figure 1-2 of the Integrated Feasibility Report (IFR)).

The proposed action includes restoration in all 8 reaches and provides transitions or connections between existing riparian corridors and concrete lined river reaches. The RIVER Alternative would riparian, wetland, and riverine habitats and functions and would provide 6,782 habitat units (HU). Large habitat nodes that support native riparian and riverine habitat would be created where the river is widened at Verdugo Wash, Taylor Yard, and the LATC site. Increased habitat connectivity would be achieved with these restored widened areas in combination with restoration of overbank habitat patches, riparian corridors, and daylighted streams, as well as restoration at the Arroyo Seco and Verudgo Wash confluences and the Cornfields site. The Recommended Plan is described in detail in Section 7 of the IFR. Potential plant palettes for each proposed vegetation community are

included in Section 4.4 of the IFR.

3.2 Sources of Uncertainty

Adaptive management provides a coherent process for making decisions in the face of uncertainty. Scientific uncertainties and technological challenges are inherent with any large- scale ecosystem restoration project. Below is a list of uncertainties associated with restoration of the riverine habitats included in the LARERP.

- Correct engineering and design to fully address project objectives
- Correct operational regime to fully achieve project objectives
- Ability of CHAP (Combined Habitat Assessment Protocol) method to predict project benefits
- Ability of hydrologic models to predict project impacts/benefits
- Imprecise relationships between management actions and corresponding outcomes
- Future availability of water for restored habitats due to extreme drought or other climate change issues.
- Other factors which are not completely within the Corps' or Sponsor's control or ability to predict, such as high flow events that may occur before the restored habitat has fully established, vandalism, or upstream watershed changes that may affect the project area.

4.0 RATIONALE FOR ADAPTIVE MANAGEMENT

The primary incentive for implementing an adaptive management program is to increase the likelihood of achieving desired project outcomes given the identified uncertainties listed above.

Given these uncertainties, adaptive management provides an organized, coherent, and documented process that suggests management actions in relation to measured project performance compared to desired project outcomes. The adaptive management program for the LARERP will use the results of continued project monitoring to manage restoration actions in order to achieve the previously stated project objectives. Adaptive management establishes the critical feedback of information from project monitoring to inform project management and promote learning through reduced uncertainty.

Implementation of the MAMP will provide flexibility to account for changing environmental conditions and new information and will allow project success to be measured, though it will not alleviate all uncertainty. The MAMP provides a mechanism to evaluate the effectiveness of the restoration measures implemented in this project and to implement adaptive changes, if required, to realize project objectives.

5.0 ASSESSMENT

The assessment phase of the adaptive management framework describes the process by which the results of the monitoring efforts will be compared to the project performance measures, which reflect the objectives of the restoration action.

The results of the LARERP monitoring program will be assessed annually through the AMT. Monitoring results will be compared to the desired project outcomes as set forth by the project performance measures. This assessment process will measure the progress of the project in relation to the stated project objectives.

The AMT will compare monitoring results to decision-making triggers to evaluate project effectiveness and consider if adaptive management actions are needed.

The assessments will indicate if the habitat responses to management actions are undesirable (e.g., are moving away from restoration goals) or if the responses have met the success criteria for the project. Assessments will also inform the AMT if other factors are influencing the response that may warrant further research.

5.1 Database Management

Database management is an important component of the monitoring plan and the overall adaptive management program. As part of the AMT, individuals with responsibility for data management activities (data managers) in support of an adaptive management program will be identified from the Corps. The data managers should collaborate with the AMT in developing a data management plan to support the adaptive management program. The data management plan should describe how and where data will be archived, data standards, data upload process and format, quality assurance and quality control procedures, metadata standards, and public data release. Storage of all data will be handled by the Corps

Data analysis and reporting will be the responsibility of the Corps, who will provide reports for the AMT to facilitate evaluation of adaptive management needs.

5.2 Documentation and Reporting

The Corps will document the monitoring results, assessments, and the results of the AMT deliberations. The Corps will produce annual reports that will measure progress towards meeting project objectives as characterized by the performance measures. Results of assessments will be used to evaluate adaptive management needs and inform decision-making.

6.0 DECISION-MAKING

Decisions on the implementation of adaptive management actions are informed by the assessment of monitoring results. The information generated by the monitoring plan will be used by the Corps and City in consultation with the other AMT members to guide decisions on adaptive management that may be needed to ensure that the ecosystem restoration project achieves success. Final decisions on implementation of adaptive management actions are made by the Corps.

6.1 Decision Criteria

Decision criteria, also referred to as adaptive management triggers, are used to determine if and when adaptive management opportunities should be implemented. They can be qualitative or quantitative based on the nature of the performance measure and the level of information necessary to make a decision. Desired outcomes can be based on reference sites, predicted values, or comparison to historic conditions. Several decision criteria are identified below, based on the project objectives and performance measures.

If assessments show that any of these triggers are met, the Corps would consult with the AMT to discuss which adaptive management action, as described in Section 6.2, is warranted. Investigations may be required to determine the cause of failure in order to inform which of the adaptive management actions identified should be implemented, if needed.

6.1.1 Vegetative community, cover, and structure triggers:

1) Desired Outcome: Increase percent cover of native riparian and marsh habitat.

   Triggers: 50% cover of native riparian and marsh habitats is not achieved (based on locations of restoration of each habitat) within 3 years. 75% cover of native riparian or marsh habitat is not achieved (based on locations of restoration of each habitat) within 5 years.

2) Desired Outcome: Maintain appropriate structural diversity of native riparian habitats to support target wildlife species.

   Trigger: Suitable structural diversity is not achieved within 5 years, whereby canopy cover exceeds 60% and/or shrub cover does not achieve 50%.

3) Desired Outcome: Increase percent vegetative cover over water to reduce water temperatures to support native fish.

   Trigger: Percent cover over water does not achieve 25% within 3 years, and 40% within 5 years.

4) Desired Outcome: Decrease percent cover of non-native invasive species that out-compete natives.

   Trigger: Non-native percent cover does not achieve less than 10% after 3 years. Non-native percent cover does not achieve less than 5% after 5 years.

Riparian and marsh vegetation may not achieve the target percent cover or structural conditions (needed to support habitat and connectivity) due to improper geomorphic conditions. Such conditions may include excessive distance to groundwater, sedimentation, channel incision, or scour of soils. These conditions may be created naturally, such as during storm events, or may be the consequence of design. Lack of water due to drought may affect the establishment and persistence of vegetation, and subsequently the percent cover. Plantings may fail due to predation or trampling.

Invasive infestation may occur due to upstream inputs of seed/source material. It is expected that invasives will be adequately controlled through O&M procedures. However, if invasive infestation control is found to be ineffective, the Corps may recommend adjustments to invasive control methods utilized under O&M.

Adaptive management actions that may be implemented to address problematic conditions and achieve project objectives are outlined in Section 6.2.

6.1.2 Stream channel native fish habitat triggers:

1) Desired Outcome: Increase structure and diversity of in-channel form and microhabitats.

   Trigger: Geomorphic and in-channel habitat elements do not achieve diversity within 3 years and 5 years, as compared to reference sites, with monitoring results showing trends of channel incision that create uniform channel form (i.e., lack of sinuosity and riffle-pool-run complexes, uniform depth).

2) Desired Outcome: Increase and maintain availability of gravel and cobble substrates.

   Trigger: Substrates do not achieve gravel and cobble composition of comparable reference sites within 5 years.

Desirable geomorphic conditions would be evaluated using reference sites at the San Gabriel and/or Santa Ana Rivers or other sites of similar hydrologic character and gradient to determine quantitative thresholds for channel form and substrates.

In-channel fish habitat may not achieve the target composition due to improper geomorphic conditions caused by natural events or design. Channel incision could develop due to lack of upstream sediment inputs in a highly hydrologically altered system. Flood events may wash gravel and cobble substrates out of the study area.

Adaptive management actions that may be implemented to address problematic conditions and achieve project objectives are outlined in Section 6.2.

6.2 Potential Adaptive Management Measures

The results of monitoring will be used by the AMT to evaluate project status and adaptive management needs. Identified adaptive management actions for this project are described below. Prior to implementing adaptive management measures, the Corps and City shall assess whether supplemental environmental analysis is required.

Irrigation/Supplemental Water: Irrigation and/or supplemental water may be needed if triggers for vegetative cover and/or structure are met. Assessment of monitoring results may show that drought conditions are causing poor establishment or die off of planted vegetation. Adaptive management actions would include supplemental water to support achievement of percent cover criteria and successful restoration of target vegetation communities.

Replanting: Replanting may be needed if triggers for vegetative cover and/or structure are met.

Monitoring results should be used to assess the underlying cause of inadequate cover, which may require that additional adaptive management actions be implemented to support successful replanting. For instance, monitoring results may show that channel incision has prevented successful establishment of vegetative communities. Adaptive management would include actions to remedy the incision (i.e., re-grading as described below), which would be required for successful replanting.

Plant Protection: Plant protection may be needed if triggers for vegetative cover and/or structure are met. Monitoring results may show that plantings are failing due to predation or trampling from recreational use or homeless encampments. Adaptive management actions would include measures such as plant cages or protective fencing that could be installed to protect plantings.

Invasives Control: It is expected that invasives will be adequately controlled through O&M procedures. However, if monitoring results show that triggers for invasives are met, the Corps may recommend adjustments to invasive control methods under O&M.

Erosion Control: Erosion control may be needed if triggers for vegetative cover are met. Monitoring results may show that vegetative cover is inadequate due to slope erosion issues. Adaptive management actions would include erosion control measures such as installation of straw wattles or erosion mats. Additional information may be required to determine the cause of erosion, and additional adaptive management measures may be required to be implemented (i.e., re-grading as described below).

Importing of Substrates: Substrates may need to be imported if triggers for native fish habitat are met. Suitable substrates would be provided during construction, however monitoring results may show that substrates are not sufficient to support native fish (i.e., homogeneity). Adaptive management actions would include importing of additional gravel and cobbles. It is assumed that frequent or routine import of substrates would not be required as part of O&M. If monitoring shows that importing of substrates is required as adaptive management more than once during the monitoring period, adjustments to O&M may be made to require recurring substrate import based on appropriate triggers informed by monitoring results.

Re-grading: Re-grading or re-distribution of sediments may be needed if triggers for vegetative cover or native fish habitat are met. Monitoring results may determine that sedimentation, scour of soils, channel incision or erosion has impacted the successful establishment of target vegetative communities in habitat nodes and corridors or that channel incision has prevented establishment of in-channel diversity. Adaptive management actions would include re-grading or re-distributing sediments to support the appropriate geomorphic conditions for successful establishment of habitat.

6.3 Conclusion of Monitoring for Project Features

Ecological success of a project feature will be confirmed when desired outcomes have been achieved, measured by meeting or exceeding the 5-year achievement thresholds identified in the triggers in Section 6.1 (e.g., for vegetative cover, 75 percent cover is achieved; for non-native cover, less than 5 percent is achieved; for native fish habitat, channel and substrate diversity is

achieved). Once ecological success has been documented by the District Engineer in consultation with the Federal and State resources agencies, and a determination has been made by the Division Commander that ecological success has been achieved, no further monitoring will be required. Ecological success will be documented through an evaluation of the predicted outcomes as measured against the actual results.

7.0 COSTS FOR IMPLEMENTATION OF MONITORING AND ADAPTIVE MANAGEMENT PROGRAMS

The costs associated with implementing the monitoring and adaptive management plan were estimated based on currently available data, methods, and comparable projects. The potential adaptive management actions as described in Section 6.2 and potential expected frequency of need were used as a basis for cost estimating. Costs were estimated based on the overall area of monitoring over 8 reaches. Because uncertainties remain as to detailed designs and adaptive management needs and opportunities, the costs estimated in Table 1 may be refined in PED during the development of the detailed monitoring and adaptive management plans for each project phase/feature.

7.1 Costs for Implementation of Monitoring Program

Cost calculations for monitoring are displayed as a five-year total. If ecological success is determined earlier, the monitoring program will cease and costs will decrease accordingly.

The current total estimate for implementing the monitoring plan is approximately $4.9 million for the Recommended Plan and $4 million for the NER Plan.

7.2 Costs for Implementation of Adaptive Management Program

Costs for the adaptive management program were based on estimated level of effort and potential frequency of need, and include participation in the Adaptive Management Team and reporting. The current total estimate for implementing the adaptive management program is approximately $3.8 million for the Recommended Plan and $3.6 million for the NER Plan.

7.3 Total Costs for Monitoring and Adaptive Management

The cost figures above are provided at October 2014 price levels and prior to contingency. The monitoring and adaptive management costs at October 2015 price levels, as included in the certified total project cost summary, total $12.25 million for the Recommended Plan and $10.4 million for the NER Plan including contingency.

8.0 REFERENCES

Gore, J. A. 2007. Discharge Measurements and Streamflow Analysis. Pages 51-78. In R. F. Hauer and G.A. Lamberti (Eds.). Methods in Stream Ecology. 2nd ed. Academic Press, San Diego, CA.

TABLE 1: PRELIMINARY COST ESTIMATES FOR MONITORING AND ADAPTIVE MANAGEMENT

Task	Assumed Tasks for Recommended Plan	Frequency	Cost Assumptions for Recommended Plan	Total Cost RP for 5 years	Total Cost NER for 5 years	Cost Differential
Monitoring						
Vegetation Monitoring	Assume monitoring of project area and 1 reference site, including transects for percent cover of natives, non-natives, structural diversity, canopy cover over water using transect/plot monitoring. Assume vegetation mapping, inventories of general wildlife, and observations of damage to habitat would be recorded. Assume monitoring of all parameters would be done concurrently during each monitoring event.	annually for 5 Years	Monitoring: Assume 3 hours/plot/2 biologists. Assume 12 plots per reach/site on avg, with 8 reaches and 1 reference site. Mapping: Assume 2 biologists over 4 days (2 reaches/day), plus GIS work of 1 person over 5 days	$ 470,000.00	$ 436,250.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site or in-channel retoration in Reach 8. The number of monitoring plots is therefore slightly reduced based on the reduced monitoring area.
Native Fish Habitat Monitoring	Assume monitoring of geomorphology, in-channel habitat elements, and substrates (i.e., composition and distribution of cobble, gravel, sands; riffle/pool/run complexes; stream gradient; channel form). Assume need for this monitoring in widened areas such as Verdugo Wash, Taylor Yard, LATC, and Arroyo Seco, and in-channel soft bottom areas.	annually for 5 Years	Costs referenced from similar existing monitoring contract on the Santa Ana River	$ 2,694,000.00	$ 2,216,000.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site.
	Assume monitoring of topography/bathymetry to assess widespread geomorphic changes. Assume need for this monitoring in widened areas such as Verdugo Wash, Taylor Yard, LATC, and Arroyo Seco, and in-channel soft bottom areas.	Years 1 and 5	assume $1500-$2000/acre	$ 1,300,000.00	$ 966,000.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site.
Supporting Information Need - Hydrologic Monitoring	Assume monitoring of flow, hydroperiod seasonally (i.e., 4 times per year, plus at storm events (assume 4 times per year on avg)) to evaluate suitability of habitat for native fish. Assume monitoring of depth to groundwater seasonally (i.e., 4 times per year) to evaluate ability to support riparian vegetation.	seasonally for 5 Years	Assume 16 piezometers (2 per reach on avg), 16 stream gagues (2 per reach on avg). Assume installation by 2 people over 2 days. Assume 1 biologist monitoring data per event times 12 events per year.	$ 200,000.00	$ 200,000.00	costs are expected to be similar

TABLE 1: PRELIMINARY COST ESTIMATES FOR MONITORING AND ADAPTIVE MANAGEMENT

Task	Assumed Tasks for Recommended Plan	Frequency	Cost Assumptions for Recommended Plan	Total Cost RP for 5 years	Total Cost NER for 5 years	Cost Differential
Supporting Information Need - Hydrologic Monitoring	Assume monitoring of water quality seasonally (i.e., 4 times per year) to evaluate suitability of habitat for native fish.	seasonally for 5 Years	Assume 2 biologists over 4 days per year	$ 40,000.00	$ 40,000.00	costs are expected to be similar
Supporting Information Need - Wildlife Surveys	Assume that general wildlife observations would be performed during vegetation monitoring. Assume focused amphibian surveys with pitfall traps. Assume that data for large mammal use would be gathered from existing USGS movement studies.	annually	Assume 2 biologists over 5 days per survey, performed in time with vegetation monitoring.	$ 240,000.00	$ 192,000.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site or in-channel retoration in Reach 8.
			TOTAL MONITORING	**$ 4,944,000.00**	**$ 4,050,250.00**	

Adaptive Management Actions						
Irrigation/Supplemental Water	Assume 1/4 of the area needs supplemental water (approx. 3 river miles)	Assume twice in 5 years	Assuming $50K per river mile per year to maintain.	$ 300,000.00	$ 250,000.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site or in-channel retoration in Reach 8.
Re-planting	Assume that natural recruitment with invasives control will be the primary means of vegetation re-establishment post flood in widened areas. Assume that assume 25% of vegetation may require replanting over 5 years.		Cost of vegetation was estimated at $16,500 per planted acre, based on project costs.	$ 1,125,000.00	$ 1,000,000.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site or in-channel retoration in Reach 8.
Plant Protection & Fencing	Assume 3000 plant cages, 3 miles fencing may be needed.		Assume $8/plant cage; $3/linear foot for fencing; plus $50,000 installation. Costs referenced from existing restoration contracts.	$ 121,520.00	$ 109,600.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site or in-channel retoration in Reach 8.
Erosion Control	Assume installation of erosion control such as straw waddles, erosion mats.	Assume annually for 5 Years	Assume $10K/year as rough estimate.	$ 50,000.00	$ 50,000.00	costs are expected to be similar
Importing substrates for fish habitat	Assume importing cobbles/gravels in widened areas such as Verdugo Wash, Taylor Yard, LATC, and Arroyo Seco.	Assume once in 5 years	Costs referenced from similar existing contract on the Santa Ana River, which totaled $50K for a smaller area.	$ 250,000.00	$ 200,000.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site.

TABLE 1: PRELIMINARY COST ESTIMATES FOR MONITORING AND ADAPTIVE MANAGEMENT

Task	Assumed Tasks for Recommended Plan	Frequency	Cost Assumptions for Recommended Plan	Total Cost RP for 5 years	Total Cost NER for 5 years	Cost Differential
Regrading	Assume 12 sites would need re-grading over 5 years.		Costs refereced from existing construction contracts, at $20K for small fixes	$ 240,000.00	$ 200,000.00	Costs for the NER plan were slightly decreased due to a decreased area of monitoring, as the NER plan does not include the Verdugo Wash site or in-channel retoration in Reach 8.
Adaptive Management Team & Reporting						
Team Meetings	Assume 1 meeting per year over 20 years (20 years accounts for some phased construction, needing 5 years of monitoring for each phase, staggered over time).	annually for 5 years	Assume $3K per meeting	$ 60,000.00	$ 60,000.00	costs are expected to be similar
Investigations (studies/surveys to determine cause of problems)	As needed, assume over 20 years (20 years accounts for some phased construction, needing 5 years of monitoring for each phase, staggered over time)		Assume $10K per year	$ 200,000.00	$ 200,000.00	costs are expected to be similar
Annual Report		annually for 5 years per reach	assume $37,500 per report, annually for 5 years per reach, 8 reaches	$ 1,500,000.00	$ 1,500,000.00	costs are expected to be similar based on overall area of monitoring
			TOTAL ADAPTIVE MANAGEMENT	**$ 3,846,520.00**	**$ 3,569,600.00**	
			PROGRAM TOTAL	**$ 8,790,520.00**	**$ 7,619,850.00**	

*Costs were referenced from current Southern California projects including Reach 9 Santa Ana River, Santa Maria, feedback from Prado Construction Division, Design Engineer, H&H, Environmental PDT members

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX H, Part 3
Mitigation Monitoring and Reporting Program

May 2015

Mitigation Monitoring and Reporting Program

TABLE OF CONTENTS

1.0 Introduction 1
2.0 Purpose 1
3.0 Roles and Responsibilities 1
4.0 Changes to BMP/Mitigation Measures 2
5.0 Summary Table 3

LIST OF TABLES

Table 5-1 Mitigation Monitoring and Reporting Program Summary Table 4

1.0 Introduction

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared pursuant to the California Environmental Quality Act (CEQA) and the State CEQA Guidelines. It provides for the monitoring of mitigation measures required of the U.S. Army Corps of Engineers (USACE) and the City of Los Angeles (City) in the Los Angeles River Ecosystem Restoration Project (proposed project), as set forth in the Environmental Impact Statement/Environmental Impact Report (EIS/EIR).

Section 21081.6 of the California Public Resources Code and Sections 15091(d) and 15097 of the State CEQA Guidelines require public agencies "to adopt a reporting or monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." An MMRP is required for the proposed project because the EIR identified potentially significant adverse impacts, and identified best management practices (BMPs)/mitigation measures to reduce some of those impacts to a less-than-significant level. All measures are intended to offset, to the degree possible, potential adverse effects under both CEQA and the National Environmental Policy Act (NEPA). Some thresholds for significant air quality impacts are different under the two statutes, but common measures were applied to all air quality impacts since those impacts cannot be mitigated to less than threshold values under either law.

This MMRP will be adopted by the City Council when it approves the project. It will be kept on file at the City of Los Angeles, Department of Public Works, Bureau of Engineering, 1149 S. Broadway, Suite 600, Los Angeles, CA 90015.

2.0 Purpose

This MMRP has been prepared to ensure that all required BMP/mitigation measures are implemented and completed according to schedule and maintained in a satisfactory manner throughout implementation of the proposed project. The MMRP may be modified by the USACE or the City in response to changing conditions or circumstances. A summary table (attached) has been prepared to assist the responsible parties in implementing the MMRP. The table identifies individual BMP/mitigation measures, and for each measure identifies monitoring/mitigation procedures and timing, responsible agencies, and a record of implementation of the mitigation measures. Impacts for which BMP/mitigation measures are proposed are listed under the various resource categories in the EIS/EIR. The order in which BMP/mitigation measures are presented (by resource category) follows the sequence established in the EIS/EIR.

3.0 Roles and Responsibilities

Unless otherwise specified herein, the USACE and City are responsible for taking all actions necessary to implement the BMP/mitigation measures according to the provided specifications and demonstrating that each action has been successfully completed. The USACE and the City, at their discretion, may delegate implementation responsibility or portions thereof to a licensed contractor.

4.0 Changes to BMP/Mitigation Measures

Any substantive change to the MMRP shall be documented in writing. Modifications to the best management practices/mitigation measures may be made by the USACE and the City subject to one of the following findings and documented by evidence included in the record:

1. The measure included in the EIS/EIR and the MMRP is no longer required because the significant environmental impact identified in the EIS/EIR has been found not to exist, or to occur at a level which makes the impact less than significant as a result of changes in the project, changes in conditions of the environment, or other factors.

OR

2. The modified or substitute BMP/ mitigation measure to be included in the MMRP provides a level of environmental protection equal to or greater than that afforded by the mitigation measure included in the EIS/EIR and the MMRP.

AND

3. The modified or substitute mitigation measures do not have significant adverse effects on the environment in addition to or greater than those which were considered by the USACE or City Council in its decisions regarding the EIS/EIR and the proposed project.

AND

4. The modified or substitute mitigation measures are feasible, and the USACE or City, through measures included in the MMRP or other established procedures, can assure their implementation.

Findings and related documentation supporting the findings involving modifications to mitigation measures shall be maintained in the project file with the MMRP and shall be made available to the public upon request.

5.0 Summary Table

The table that follows should guide the USACE and City in evaluating and documenting implementation of mitigation measures. The columns identified in the table are described below:

Mitigation Measure or Best Management Practice – Provides the text of the BMP/ mitigation measures identified in the EIR.

Timing/Schedule – Identifies the time frame or milestone at which the BMP/mitigation measure will be implemented.

Implementation Responsibility – Identifies the entity responsible for complying with BMP/ mitigation measure requirements.

Implementation and Verification – These fields are to be completed as the MMRP is implemented. The "Status/Verification" column describes the type of action taken to verify implementation, and is to be filled out by USACE or City staff based on the documentation provided by qualified contractors, or through personal verification.

Table 5-1. Mitigation Monitoring and Reporting Program Summary Table

MITIGATION MONITORING AND REPORTING PROGRAM SUMMARY TABLE (Includes Text for Best Management Practices and Mitigation Measures)				
BMPs / Mitigation Measures	**Responsibility for Implementation**	**Schedule**	**Monitoring/Report Responsibility**	**Status/ Verification**
Geology, Seismology, Soils, and Minerals				
Construction **GEO 1:** Minimizing the extent of areas to be cleared, graded, or recontoured, **GEO 2:** Erecting construction fencing in all areas that require clearing, grading, revegetation, or recontouring, **GEO 3:** Conducting all construction work in accordance with site-specific construction plans that minimize the potential for sediment to enter the stream, **GEO 4:** Applying mulch or chemical stabilizers to disturbed areas as needed, and/or using a water truck to reduce fugitive dust, **GEO 5:** Stabilizing and reseeding disturbed areas with native grasses after construction is complete, **GEO 6:** Installing silt fences to prevent silt and sediment from entering the River channel, **GEO 7:** Grading spoil sites to minimize surface erosion and prevent sediment from entering water courses or the stream channel to the maximum extent feasible, **GEO 8:** Designing and implementing a dewatering plan to avoid operating equipment in flowing water by using temporary cofferdams or some other suitable diversion to divert channel flow around the channel and bank construction area, and **GEO 9:** Limiting certain aspects of in-channel construction to the low-flow period between April 15 and October 31 (non-flood season) to minimize soil erosion. **GEO 10:** Soils and all materials used for backfilling or stabilization must be certified to be free of contaminants. **GEO 11:** In-channel work would be isolated from existing flows by the use of dewatering structures such as cofferdams constructed from k-rails and other suitable materials. a. Cofferdam construction will be adequate to prevent seepage into or from the work area. b. Cofferdams may be constructed from sand bags, concrete k-rails, sheet piles or other appropriate materials that would not leach contaminants into the water column or increase downstream turbidity. c. Ensure that dewatering structures and coffer dams are in place and functional prior to in-water work.	USACE	Throughout project construction; In-channel construction limited to low-flow period between April 15 and October 15 (non-flood season)	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.

MITIGATION MONITORING AND REPORTING PROGRAM SUMMARY TABLE (Includes Text for Best Management Practices and Mitigation Measures)				
BMPs / Mitigation Measures	**Responsibility for Implementation**	**Schedule**	**Monitoring/Report Responsibility**	**Status/ Verification**
d. Visually inspect all cofferdam components on a regular basis. e. Check for water seepage under the dam and general integrity of the dam. f. Fix all leaks immediately. g. If turbid water is discharged from the work area despite the cofferdam, place wattles, filter fabric, silt fencing across the flow stream downstream of the work area as appropriate. h. All cofferdams and associated structures will be removed upon completion of work. **GEO 12:** Require the construction contractor to prepare a storm water pollution prevention plan (SWPPP) consistent with State Water Board policy and guidelines. At a minimum, the SWPPP would include the following elements: a. Work areas, staging areas, or stockpile areas that could be subject to erosion during storm events would be stabilized with erosion control measures as appropriate. These measures could typically include silt fencing, straw bales, sand bags, filter fabric, coir rolls or wattles. b. Erosion control methods used to prevent siltation would be monitored weekly and maintained as needed. c. Stabilize and reseed disturbed upland areas with native grasses, shrubs, and trees upon completion of construction. d. Stationary equipment such as motors, pumps, generators and welders located within or adjacent to the channel or basin will be positioned over drip pans. e. Any equipment or vehicles driven and/or operated within or adjacent to the channel or basin should be checked and maintained daily, to prevent leaks. All maintenance will occur in a designated offsite area. The designated area will include a drain pan or drop cloth and absorbent material to clean up spills. f. Fueling and equipment maintenance will be done in a designated area removed from the area of the channel or basin such that no petroleum products or other pollutants from the equipment may enter these areas via rainfall or runoff. The designated area will include a drain pan or drop cloth and absorbent materials to clean up spills. g. Materials for the containment of spills (i.e., absorbent materials, silt fencing, filter fabric, coir rolls) will be identified and be available onsite prior to commencement of construction or maintenance activities. h. Any accidental spill of hydrocarbons or coolant that may occur within the				

MITIGATION MONITORING AND REPORTING PROGRAM
SUMMARY TABLE
(Includes Text for Best Management Practices and Mitigation Measures)

BMPs / Mitigation Measures	Responsibility for Implementation	Schedule	Monitoring/Report Responsibility	Status/ Verification
work area will be cleaned immediately. Absorbent materials will be maintained within the work area for this purpose. i. No wet concrete product will come into contact with any flowing or standing water at any time. Areas where raw cement or grout are applied or where concrete curing or finishing operations are conducted will be separated from any ponded or diverted water flows by a cofferdam or silt-free, exclusionary fencing. All equipment involved with the concrete or grouting operations will be located within a contained area while using any slurry or concrete product. A protective berm or other structure will be in place prior to maintenance and/or repair activities. **GEO 13:** Any spill of the grout, concrete, concrete curing or wash water adjacent to or within the work area will be removed immediately.				
Air Quality and Greenhouse Gases				
AQ 1: Tier 4 equipment and haul trucks no older than 2010 would be utilized to the extent practicable during construction years when emissions are expected to exceed Local Significance Thresholds. ***Mobile Emission Attenuating Measures*** **AQ 2:** Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow. **AQ 3:** Provide dedicated turn lanes for movement of construction trucks and equipment on-and off-site. **AQ 4:** Reroute construction trucks away from congested streets or sensitive receptor areas. **AQ 5:** Utilize electricity from power poles rather than temporary diesel or gasoline power generators to the extent practicable. ***Fugitive Dust Attenuating Measures*** **AQ 6**: Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM_{10} generation. **AQ 7:** Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per-hour. **AQ 8:** Require frequent street sweeping surrounding the project site to minimize fugitive dust emissions from track-out. All street sweeping shall use alternatively	USACE	Prior to and throughout project construction	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.

MITIGATION MONITORING AND REPORTING PROGRAM
SUMMARY TABLE
(Includes Text for Best Management Practices and Mitigation Measures)

BMPs / Mitigation Measures	Responsibility for Implementation	Schedule	Monitoring/Report Responsibility	Status/ Verification
fueled sweepers that are equivalent to those specified in SCAQMD Rules 1186 and 1186.1. **AQ 9:** Install wheel washers where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip. **AQ 10:** Apply water three times daily, or non-toxic soil stabilizers according to manufacturer's specifications, to all unpaved parking or staging areas or unpaved road surfaces. **AQ 11:** Replace ground cover in disturbed areas as quickly as possible. **AQ 12:** Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).				
Water Resources				
Construction **WR 1:** Limiting most in-channel construction to the low-flow period between April 15 and October 31 to minimize soil erosion. **WR 2:** Soils and all materials used for backfilling or stabilization must be certified to be free of contaminants. **WR 3:** All sites with known and suspected HTRW soil contamination will be investigated and remediated prior to project construction. All groundwater contamination that cannot be remediated prior to project construction will be subject to appropriate handling, treatment and disposal ensured by the non-Federal sponsor. All work shall be consistent with Engineering Regulations 1165-2-132. **WR 4:** In-channel work would be isolated from existing flows by the use of dewatering structures such as cofferdams constructed from k-rails and other suitable materials. a. Cofferdam construction will be adequate to prevent seepage into or from the work area. b. Cofferdams may be constructed from sand bags, concrete k-rails, sheet piles or other appropriate materials that would not leach contaminants into the water column or increase downstream turbidity. c. Ensure that dewatering structures and coffer dams are in place and functional prior to in-water work. d. Visually inspect all cofferdam components on a regular basis. e. Check for water seepage under the dam and general integrity of the dam. f. Fix all leaks immediately. g. If turbid water is discharged from the work area despite the cofferdam, place	USACE	Throughout project construction; In-channel construction limited to low-flow period between April 15 and October 15 (non-flood season)	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.

MITIGATION MONITORING AND REPORTING PROGRAM
SUMMARY TABLE
(Includes Text for Best Management Practices and Mitigation Measures)

BMPs / Mitigation Measures	Responsibility for Implementation	Schedule	Monitoring/Report Responsibility	Status/ Verification
wattles, filter fabric, silt fencing across the flow stream downstream of the work area as appropriate. h. All cofferdams and associated structures will be removed upon completion of work. **WR 5:** Require the construction contractor to prepare a storm water pollution prevention plan (SWPPP) consistent with State Water Board policy and guidelines. At a minimum, the SWPPP would include the following elements: a. Work areas, staging areas, or stockpile areas that could be subject to erosion during storm events would be stabilized with erosion control measures as appropriate. These measures could typically include silt fencing, straw bales, sand bags, filter fabric, coir rolls or wattles. b. Erosion control methods used to prevent siltation would be monitored weekly and maintained as needed. c. Stabilize and reseed disturbed upland areas with native grasses, shrubs, and trees upon completion of construction. d. Stationary equipment such as motors, pumps, generators and welders located within or adjacent to the channel or basin will be positioned over drip pans. e. Any equipment or vehicles driven and/or operated within or adjacent to the channel or basin should be checked and maintained daily, to prevent leaks. All maintenance will occur in a designated offsite area. The designated area will include a drain pan or drop cloth and absorbent material to clean up spills. f. Fueling and equipment maintenance will be done in a designated area removed from the area of the channel or basin such that no petroleum products or other pollutants from the equipment may enter these areas via rainfall or runoff. The designated area will include a drain pan or drop cloth and absorbent materials to clean up spills. g. Materials for the containment of spills (i.e., absorbent materials, silt fencing, filter fabric, coir rolls) will be identified and be available onsite prior to commencement of construction or maintenance activities. h. Any accidental spill of hydrocarbons or coolant that may occur within the work area will be cleaned immediately. Absorbent materials will be maintained within the work area for this purpose. i. No wet concrete product will come into contact with any flowing or standing water at any time. Areas where raw cement or grout are applied or				

MITIGATION MONITORING AND REPORTING PROGRAM SUMMARY TABLE (Includes Text for Best Management Practices and Mitigation Measures)				
BMPs / Mitigation Measures	**Responsibility for Implementation**	**Schedule**	**Monitoring/Report Responsibility**	**Status/ Verification**
where concrete curing or finishing operations are conducted will be separated from any ponded or diverted water flows by a cofferdam or silt-free, exclusionary fencing. All equipment involved with the concrete or grouting operations will be located within a contained area while using any slurry or concrete product. A protective berm or other structure will be in place prior to maintenance and/or repair activities. **WR 6:** Any spill of the grout, concrete, concrete curing or wash water adjacent to or within the work area will be removed immediately.				
Biological Resources				
Construction **BIO 1:** To the maximum extent practicable, vegetation clearing activities would not occur during the breeding season, which generally runs from March 1-August 31. **BIO 2:** If vegetation removal must occur during the avian breeding season, a qualified biologist will perform nesting bird surveys following established protocol prior to construction. If nests are detected during these surveys, a 300-foot no construction buffer will be delineated around the nest (500-foot buffer for raptors). **BIO 3:** Construction will be monitored by a qualified biologist. **BIO 4:** Construction will be phased to minimize impacts to wildlife species, so that the entire study area will not be under construction at the same time. **BIO 5:** Pre-construction surveys for special-status plants and wildlife would be performed as needed in coordination with USFWS. **BIO 6:** Protocol level surveys for least Bell's vireo would be performed during the detailed design phase and prior to construction to avoid impact to this species. If paired and potentially nesting vireo or other listed species are found, the Corps will coordinate with USFWS and consult as applicable, if it is later determined that the project would affect the species. **BIO 7:** Trails and other recreational features will be designed and located to be compatible with restoration features and goals. For instance, trails may be placed around the perimeter, rather than through restored areas.	USACE	Throughout project construction; Moratorium on vegetation clearing from March 1-August 31 will be maintained if feasible	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.
Operations **BIO 8:** Invasives control or maintenance of vegetation to maintain restoration success and comply with constraints would be performed outside of the bird nesting season,	City (maintenance)	In perpetuity. Moratorium on vegetation clearing from March 1-August 31 will be maintained if	City (maintenance)	USACE and City PMs to verify compliance. No completion date has

MITIGATION MONITORING AND REPORTING PROGRAM
SUMMARY TABLE
(Includes Text for Best Management Practices and Mitigation Measures)

BMPs / Mitigation Measures	Responsibility for Implementation	Schedule	Monitoring/Report Responsibility	Status/ Verification
BIO 9: Sensitive habitat types will be avoided to the maximum extent practicable during maintenance. Designated access points for maintenance vehicles will be created to reduce impacts to restored areas. ***Construction and Operations*** **BIO 10**: Informational signs will be installed to educate the public regarding the restored habitat, sensitive resources, and the impact that human intrusion may have. Exclusionary fencing will also be installed where and if necessary, as part of the Adaptive Management program (see Appendix H).		feasible		been set, as maintenance is assumed to continue for the life of the project.
Cultural Resources				
CR 1: An archeologist meeting the Secretary of the Interior's Qualification Standards shall monitor all construction activities in areas where there is a potential for buried resources. The monitor shall immediately notify the USACE's on-site construction supervisor of any discovery. The USACE on-site construction supervisor shall temporarily stop construction in the area of the discovery. The discovery area and a surrounding buffer zone shall then be clearly delineated. Ground disturbing activities can resume outside of the delineated buffer zone. Should previously unknown historic or archaeological remains be discovered, the USACE would comply with 36 CFR 800.13. At the conclusion of monitoring activities, a detailed letter report shall be prepared. This report shall be submitted to the SHPO for review and comment. **CR 2:** When construction crews are working within 50 meters of an eligible or unevaluated cultural resource, the edge of the site, including a 25 meter site buffer will be fenced off, thus ensuring that no construction equipment inadvertently strays into the culturally sensitive area. **CR 3:** Cultural resource block inventories and evaluations shall be conducted early in the next design phase so that avoidance and impact minimization measures for cultural resources can be incorporated in project design. **CR 4:** Recordation and evaluation of the constructed features of the flood risk management system on the river and lower tributaries within the APE will be prioritized in PED. The recordation and evaluation shall be conducted in one effort and in reference to and in the context of the entirety of the flood risk management system constructed on the Los Angeles River and lower tributaries. **CR 5:** Comply with the terms and conditions of the PA executed by and between the Corps and SHPO, and any amendments thereto.	USACE	Prior to and throughout project construction	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.

MITIGATION MONITORING AND REPORTING PROGRAM
SUMMARY TABLE
(Includes Text for Best Management Practices and Mitigation Measures)

BMPs / Mitigation Measures	Responsibility for Implementation	Schedule	Monitoring/Report Responsibility	Status/ Verification
Traffic and Circulation				
Construction **TRAF 1**: The location and duration of any lane or street closures, including impacts on public transit, railroads, bicycle lanes, sidewalks, and parking will be fully coordinated with local cities and nearby residents. **TRAF 2:** Detour routes will be provided if needed (including detour routes for public transit, bicycles, and pedestrians when affected). **TRAF 3:** Local traffic and emergency vehicle access will be maintained or accommodated. **TRAF 4:** Traffic protective devices and control measures will be implemented such as barricades, cones, flaggers, lights, warning beacons, temporary turning restrictions, temporary traffic signals, and warning signs. **TRAF 5:** Advance notice will be provided to affected residents, businesses, emergency services providers (police, fire, ambulance), and public transit providers. **TRAF 6:** Temporary bus stops will be located within a reasonable walking distance of any displaced bus stops when public transit stops are affected. **TRAF 7:** Safety improvements would be made to existing at-grade street-rail crossings where traffic increases would be expected. **TRAF 8:** The project will coordinate with railroad companies to ensure continuous operation and appropriate safety measures	USACE	Prior to and throughout project construction	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.
Noise				
Noise 1: Develop and implement a project noise control plan that identifies when construction activities would occur and where and how avoidance measures shall be used. Construction activities would generally occur between the hours of 8 a.m. and 6 p.m. Monday through Friday, and 8 a.m. and 5 p.m. Saturday. Construction and operations would not occur on Sunday or a national holiday. The plan will require the identification of a Noise Control Coordinator, who will be available to receive and respond to any concerns from residents regarding construction noise. Residents shall be notified prior to the start of construction activities and informed of the Coordinator's contact information. Signage will also be posted on the construction site with Noise Control Coordinator's contact information. **Noise 2:** Use power construction equipment with state-of-the-art noise shielding and muffling devices.	USACE	Throughout project construction.	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.

MITIGATION MONITORING AND REPORTING PROGRAM SUMMARY TABLE (Includes Text for Best Management Practices and Mitigation Measures)				
BMPs / Mitigation Measures	**Responsibility for Implementation**	**Schedule**	**Monitoring/Report Responsibility**	**Status/ Verification**
Noise 3: Whenever construction occurs within 500 feet of occupied residences, temporary barriers shall be constructed around the construction sites to shield the ground floor of the noise-sensitive uses. These barriers shall be of ¾-inch medium density plywood sheeting, or equivalent, and shall achieve a Sound Transmission Class of 30 or greater, based on certified sound transmission loss data taken according to American Society for Testing and Materials Test Method E90 or as approved by the City of Los Angeles Building Department. **Noise 4:** Construction equipment staging areas shall be located as far as practicable from residential areas. **Noise 5:** Quieter "sonic" pile drivers shall be used as necessary, unless engineering studies are submitted to the City of Los Angeles showing this is not feasible and cost effective, based on geotechnical considerations. **Noise 6:** Routes for heavy construction site vehicles shall be identified to minimize noise impacts to residences and noise-sensitive receptors. **Noise 7:** Impose construction hours that are more restrictive than those set forth in the LAMC if necessary and when practical. **Noise 8:** Require vehicle parking and deployment activities to be separated and buffered from sensitive uses. **Noise 9:** Limit haul truck or other vehicle speed on roads adjacent to residences and on unpaved roadways. **Noise 10:** Notify residents about type and schedule of construction.				
Recreation				
Construction **Rec 1:** Public media/meetings to provide clear information on the types and durations of disruptions to the River and adjacent resources. **Rec 2:** Signed detour routes for affected roads as well as pedestrian, bicycle, and equestrian trails, and river access points. **Rec 3:** Signage at construction areas with information relevant to recreation users (length of closure, alternative access points, etc.). **Rec 4:** Work with park representatives on timing of park and golf club closures to minimize effects on recreational access and use. **Rec 5:** Consult with park maintenance personnel prior to implementation of measures to coordinate maintenance during construction and operations.	USACE and City	Throughout project construction	USACE and City	USACE PM to verify compliance during construction. Considered complete after end of project construction.

MITIGATION MONITORING AND REPORTING PROGRAM
SUMMARY TABLE
(Includes Text for Best Management Practices and Mitigation Measures)

BMPs / Mitigation Measures	Responsibility for Implementation	Schedule	Monitoring/Report Responsibility	Status/ Verification
Public Health and Safety, Including Hazardous, Toxic, and Radioactive Waste				
PHS 1: A rigorous review of the HTRW sites identified as those with potential impacts on the project would be conducted. The review would include obtaining and reviewing regulatory files, site visits, and discussions with regulators and others about the severity of the contamination. Following this review, Phase I or II environmental site assessments would be conducted as necessary. In areas where existing information is limited, environmental investigations shall follow industry approved protocols for conducting Phase I and Phase II investigations as needed. The sponsor shall not provide lands for project construction without first ensuring that it has undertaken adequate investigation and determined there is no contamination of concern for the relevant parcel or, where contamination is identified, has remediated or ensured remediation of the parcel to the standards necessary to support the restoration project, as agreed by the relevant regulatory agency and USACE. Coordination and consultation with the appropriate regulatory agencies, including the USEPA and California lead agency (usually the LARWQCB or the DTSC), and responsible parties, as necessary, would begin as early as possible regarding investigation and remediation at the San Fernando Valley Superfund Site and Taylor Yard G1 and G2 sites, as well as the LATC site as needed. The City would conduct remediation at contaminated sites prior to construction of restoration features at those sites. **PHS 2:** A new ecological risk assessment would be performed for the Taylor Yards G1 and G2 properties. The risk assessment would include risk calculations and analyses for recreational human health standards. **PHS 3:** Prior to the start of construction, the USACE will develop engineering specifications and plans that will include a written environmental protection plan. This plan will include a written pollution prevention plan that outlines the actions needed to respond to spills or release of hazardous materials during construction or maintenance activities. The environmental protection plan will describe hazardous materials management and spill prevention and response methods. The plan will be reviewed with all site workers.	USACE and City	Prior to construction of each phase	USACE and City	USACE and City PMs to verify compliance prior to construction.
Construction **PHS 4:** City will request increased police presence within the project area, particularly during episodes of increased water levels and flow velocities. **PHS 5:** Fire extinguishers or other firefighting equipment (such as drums of water) will be close at hand during construction, regularly inspected, and maintained in proper	USACE and City	Throughout project construction	USACE and City	USACE and City PMs to verify equipment requirements as of first day of construction.

MITIGATION MONITORING AND REPORTING PROGRAM
SUMMARY TABLE
(Includes Text for Best Management Practices and Mitigation Measures)

BMPs / Mitigation Measures	Responsibility for Implementation	Schedule	Monitoring/Report Responsibility	Status/ Verification
working condition. **PHS 6:** Equipment with internal combustion engines will be placed so that exhaust is not near combustible materials. **PHS 7:** Combustible or flammable materials will be properly stored and proper clearance around these materials would be maintained. **PHS 8:** A site-specific health and safety plan will be prepared and reviewed with all workers detailing methods of compliance with occupational health and safety regulations, emergency response actions, and include the route to the nearest emergency medical facility. **PHS 9:** Relevant paperwork such as material safety data sheets and chain-of- custody documents recording the transport and disposal of hazardous materials and waste will be maintained and available for inspection. **PHS 10:** All hazardous materials would be removed from the site when construction or maintenance activities were completed if not before. **PHS 11:** Construction sites will be fenced to prevent unauthorized access. **Post-Construction** **PHS 12:** Operations of the project would include public education on hazards associated with the river channel, including risk of water-related injury and drownings. **PHS 13:** City will coordinate as needed with vector control agencies after completion of construction.				USACE and City PMs to verify delivery of environmental protection plan to workers on first day of construction.
Utilities and Public Services				
Construction **UPS 1:** Develop a utility management plan. **UPS 2:** Obtain a Private Solid Waste Hauler Permit from the City's Bureau of Sanitation prior to collecting, hauling and transporting waste. **UPS 3:** Recycle/reuse construction debris to the extent possible. **UPS 4:** Dispose of excess debris to City-certified waste processing facility. **UPS 5:** Stagger construction of daylighting outfalls in order to minimize reduction in capacity of the stormwater system.	USACE	Prior to and during project construction	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.

MITIGATION MONITORING AND REPORTING PROGRAM SUMMARY TABLE (Includes Text for Best Management Practices and Mitigation Measures)				
BMPs / Mitigation Measures	**Responsibility for Implementation**	**Schedule**	**Monitoring/Report Responsibility**	**Status/ Verification**
Socioeconomics and Environmental Justice				
SEJ 1: Carry out acquisition and compensation of affected businesses in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Pub. L. 91-646, 42 U.S.C. 4601. As a component of the acquisition, businesses would have the opportunity to participate in the relocation assistance program. USACE will actively participate in relocation of these businesses to ensure fair and equitable compensation.	City	Prior to project construction	USACE	USACE PM to verify compliance during construction. Considered complete after end of project construction.

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

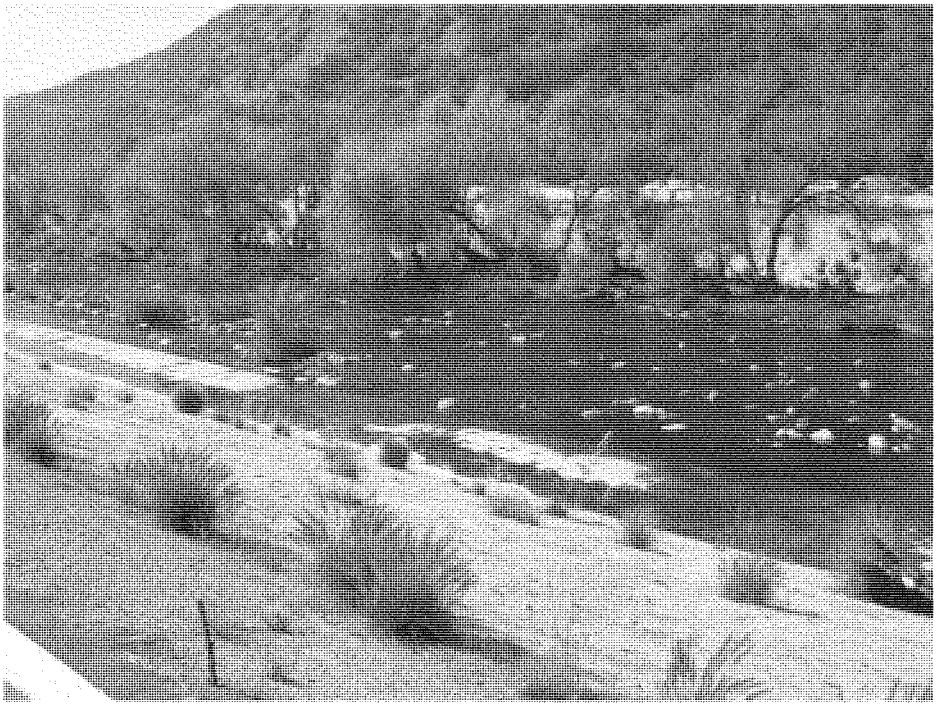
APPENDIX I
Value Engineering

April 2015

US Army Corps
of Engineers

LOS ANGELES RIVER
ECOSYSTEM RESTORATION

VALUE ENGINEERING STUDY SUMMARY REPORT



PROJECT SPONSOR:
THE LOS ANGELES DISTRICT

ARPIL 2013

VALUE ENGINEERING TEAM STUDY

DOD SERVICE: USACE
CONTROL NO: CESPL-13-02
VALUE ENGINEERING OFFICER: Arnecia Williams, AVS

Value Engineering Study on

Los Angeles River Ecosystem Restoration

Final 29 April 2013
U.S. Army Engineer District, Los Angeles

VALUE ENGINEERING STUDY TEAM LEADER:

Ron Burkhard, P.E., CVS (843) 860-3549

VALUE ENGINEERING STUDY TEAM MEMBERS

Arnecia Williams
Michael Affeldt
Mike Scuderi (webmeeting)
Klaire Desamparo
Megan Whalen
Mike Wyatt
Carol Armstrong

VALUE ENGINEERING TEAM STUDY
TABLE OF CONTENTS

Page No.

Cover 1

Table of Contents 2

Project Description and Background 4

Executive Summary 5

Summary of Proposals 6

Disposition of Recommendations 7

Proposals:

1 Develop Mass Balance for Materials 8

2 Down Scale the Planter Boxes 10

3 Use Pre-Cast Concrete Planters and/or Modularize Planters 12

4 Modify the Terraces 16

5 Use Random Material for Grade Control Structures Cores 19

6 Use Sheet Pile Walls in Lieu of Concrete for Planter Boxes 21

7 Delete the Fences 23

8 Use Wrought Iron Fence In Lieu of Chain-Link 25

VALUE ENGINEERING TEAM STUDY
TABLE OF CONTENTS

Page No.

Value Engineering Comments 28

Supporting Documents 36

Appendix A: Contact Directory 37

Appendix B: Speculation and Analysis List 39

Appendix C: Cost Models 42

Appendix D: Function Analysis System Technique (FAST) Diagram 45

VALUE ENGINEERING TEAM STUDY

PROJECT DESCRIPTION AND BACKGROUND

PROJECT TITLE:	Los Angeles River Ecosystem Restoration
PROJECT LOCATION:	Los Angeles, California

The U.S. Army Corps of Engineers (Corps) involvement with the LA River began after devastating floods destroyed homes, businesses, and infrastructure in the early 20th Century. The Corps then began examining options for flood risk management, which led to the channelization of the River in the 1930s and 1940s and the current concrete configuration. This configuration destroyed and drastically altered riparian and freshwater marsh habitats as well as ecosystem functions in the once natural river system. The flood control project also allowed for increased urbanization and development in the floodplain, further reducing the marsh and riparian habitats that had naturally occurred on the river and its tributaries. The Corps' involvement on the LA River continues today in sharing operation and maintenance responsibilities with the LA County Flood Control District.

The U.S. Congress directed the Corps to undertake the LA River Ecosystem Restoration Study in 2006. The Study initially focused on the first 32 miles of river, and was subsequently narrowed to focus on the 10-mile Study area (aka ARBOR reach), which exhibits the greatest potential for ecosystem restoration. This reach includes the "soft-bottomed" Glendale Narrows that connects Griffith Park to Downtown LA and that currently supports degraded riparian habitat. The soft bottomed reaches currently support a natural bed with concrete banks due to a high groundwater table that did not allow the bed to be constructed with concrete. In 2007, the City of LA adopted the long-range LA River Revitalization Master Plan that calls for the creation of a 64-mile network of trails, parks, and recreation along both sides of the first 32 miles of the LA River, from the San Fernando Valley to the City of LA's border with the City of Vernon, an area home to more than one million people. The entire Study area is within the Master Plan's focus area.

This value engineering study focused on the current state of design, and the aforementioned 10-mile Study area. Opportunities for increased value and decreased cost were investigated. Please see the CHAP Habitat Evaluation Appendix, Los Angeles River Ecosystem Restoration Study for further information.

VALUE ENGINEERING TEAM STUDY
EXECUTIVE SUMMARY

Value Engineering is a process used to study the functions a project is to provide. As a result, it takes a critical look at how these functions are met and develops alternative ways to achieve the same function while increasing the value of the project. In the end, it is hoped that the project will realize a reduction in cost, but adding value over reducing cost is the focus of VE.

The Value Engineering Study was initiated during the week of 25 to 29 March, 2013 at the Los Angeles District. The project was studied using the Corps of Engineers standard Value Engineering (VE) methodology, consisting of five phases:

Information Phase: The team studied drawings, figures, descriptions of project work, and cost estimates to fully understand the work to be performed and the functions to be achieved. Cost Models (see Appendix C) were compared to determine areas of relative high cost to ensure that the team focused on those parts of the project which offered the most potential for cost savings. The team visited the construction sites to gain knowledge of the area.

Speculation Phase: The Team speculated by conducting brainstorming sessions to generate ideas for alternative designs. All team members contributed ideas and critical analysis of the ideas was discouraged (see Appendix B).

Analysis Phase: Evaluation, testing and critical analysis of all ideas generated during speculation was performed to determine potential for savings and possibilities for risk. Ideas were ranked by priority for development. Ideas which did not survive critical analysis were deleted.

Development Phase: The priority ideas were developed into written proposals by VE team members during an intensive technical development session. Proposal descriptions, along with sketches, technical support documentation, and cost estimates were prepared to support implementation of ideas. Additional VE Team Comments were included for items of interest which were not developed as proposals, and these comments follow the study proposals.

Presentation Phase: Presentation is a two-step process. The published VE Study Report is distributed for review by project supporters and decision makers. A briefing is later conducted to decide which proposals merit implementation into project design. The Summary of Proposals follows on the next page.

VALUE ENGINEERING TEAM STUDY
SUMMARY OF PROPOSALS

Seventy one ideas for ways to improve the projects or reduce costs were generated during the Speculation Phase of this study. The Analysis Phase of the study reduced the number of ideas to thirty six for development, of which twenty eight ideas were designated as design comments and are included in this report.

Of all the ideas from the Analysis and Development Phases, eight ideas became proposals which, when accepted, can result in the savings shown below. The idea that shows a negative number is not recommended.

PROPOSAL NO.	DESCRIPTION	SAVINGS
1	Develop Mass Balance for Materials	$19,597,000
2	Down Scale the Planter Boxes	$36,203,000
3	Use Pre-Cast Concrete Planters and/or Modularize Planters	$90,507,000
4	Modify the Terraces	$120,736,000
5	Use Random Material for Grade Control Structures Cores	$4,700,000
6	Use Sheet Pile Walls in Lieu of Concrete for Planter Boxes	-$861,625,000
7	Delete the Fences	$10,206,000
8	Use Wrought Iron Fence In Lieu of Chain-Link	$0

Disposition of Recommendations

Below are the VE recommendations, potential savings, and an explanation as to whether these recommendations are valid, and accepted or rejected. The decision to accept or reject a proposal is based on the technical, environmental, and cost feasibility of the proposal, as well as input from the PDT.

VE Study Recommendations:

Rec #	Description	Projected Savings	Comment
1	Develop Mass Balance for Materials	$19,597,000	Valid recommendation and conditionally accepted. Additional technical analysis during PED.
2	Down Scale the Planter Boxes	$36,203,000	Valid recommendation and conditionally accepted. Proposal not applicable for Reach 4.
3	Use Pre-Cast Concrete Planters and/or Modularize Planters	$90,507,000	Valid recommendation and conditionally accepted. Proposal not applicable for Reach 4. Additional technical analysis during PED.
4	Modify the Terraces	$120,736,000	Valid recommendation and conditionally accepted. Proposal not applicable for Reach 4. Additional technical analysis during PED.
5	Use Random Material for Grade Control Structures Cores	$4,700,000	Valid recommendation and conditionally accepted. Additional technical analysis during PED.
6	Use Sheet Pile Walls in Lieu of Concrete for Planter Boxes	-$861,625,000	Not valid and rejected due to extensive cost.
7	Delete the Fences	$10,206,000	Not valid and rejected due to safety concerns.
8	Use Wrought Iron Fence In Lieu of Chain-Link	$0	Valid recommendation and accepted.

TOTAL POTENTIAL CUMULATIVE SAVINGS: $ 281,949,000

TOTAL OF ACCEPTED/CONDITIONALLY ACCEPTED RECOMMENDATIONS = $ 271,743,000

TOTAL OF QUALITY IMPROVEMENT RECOMMENDATIONS = $0

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 1 PAGE NO: 1 OF 2
DESCRIPTION: Develop Mass Balance for Materials

ORIGINAL DESIGN:

The original design calls for material from excavations to be hauled off site, and material for embankments to be hauled in.

PROPOSED DESIGN:

The proposed design is to create a "Mass Balance" of materials. This would be accomplished by using all excavated materials from the entire job as fill material in other locations in the project area.

ADVANTAGES:

- Faster construction.
- Reduced cost.
- Less wear and tear on local roads and streets.
- More environmentally friendly.
- Less soil testing.

DISADVANTAGES:

- Slight decrease in quality of some embankments.

JUSTIFICATION:

From the unit costs available, the cost for material hauled off site is $28.50 per cubic yard. The cost for compacted fill is $33.50. These costs go down if the material is kept on site. From the estimate if only 15% is hauled off and replaced the cost drops to $7.00 and $13.00 per cubic yard respectively. For purposes of this proposal, it was assumed that an additional 10%, or 25% of the total of the required cut could be used or wasted on site. This results in a savings of $21.50 for excavation and $20.50 for embankment. This could be accomplishable since the fills are not part of critical structure where settlement and instability are an issue. The following spreadsheet presents the data by reach.

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 1 PAGE NO: 2 OF 2

COST ESTIMATE WORKSHEET				
DELETIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
Reach 1 Excavation	CY	359,700		$0
Reach 1 Embankment	CY	88,952		$0
Reach 2 Excavation	CY	30,000		$0
Reach 2 Embankment	CY	0		$0
Reach 3 Excavation	CY	117,685		$0
Reach 3 Embankment	CY	0		$0
Reach 3 Excavation	CY	1,524,592		$0
Reach 3 Embankment	CY	0		$0
Reach 4 Excavation	CY	133,711		$0
Reach 4 Embankment	CY	0		$0
Reach 5 Excavation	CY	94,065		$0
Reach 5 Embankment	CY	42,289		$0
Reach 6 Excavation	CY	1,463,100		$0
Reach 6 Embankment	CY	0		$0
Reach 7 Excavation	CY	918,331		$0
Reach 7 Embankment	CY	0		$0
Reach 8 Excavation	CY	1,886,602		$0
Reach 8 Embankment	CY	0		$0
				$0
Total Excavation Hauled Off	CY	6,527,786		$0
Total Embankment Hauled In	CY	131,241		$0
Excess Material	CY	6,396,545		$0
				$0
Assumed an additional 10% Remains on Site	CY	639,655	$21.50	$13,752,572
				$0
				$0
		Total Deletions		$13,752,572
ADDITIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
None				$0
				$0
		Total Additions		$0
		Net Cost Decrease		$13,752,572
		Mark-ups	42.50%	$5,844,843
		Total Cost Decrease		$19,597,415

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 2 PAGE NO: 1 OF 2
DESCRIPTION: Down Scale the Planter Boxes

ORIGINAL DESIGN:

The current design calls for 158,784 Cubic Yards of steel reinforce planter boxes.

PROPOSED DESIGN:

The proposed design is to downsize the planter box features, as the team identified it as a high cost item.

ADVANTAGES:

- Reduce cost.
- Faster construction.

DISADVANTAGES:

- Reduced scope.

JUSTIFICATION:

The following spreadsheet shows that a modest decrease in planter boxes of 20% would result in a substantial savings, while at the same time providing most of the project value. However, this is a decrease in scope. If this modest decrease can fulfill the project purpose it is recommended. This would be accomplished in final design by optimizing the planter box location.

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 2 PAGE NO: 2 OF 2

COST ESTIMATE WORKSHEET				
DELETIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
Concrete Planters				$0
Reach 4	CY	119253		$0
Reach 5	CY	29187		$0
Reach 8	CY	10344		$0
				$0
Concrete Planters 20% Reduction				$0
Reach 4	CY	23850.6	$800.00	$19,080,480
Reach 5	CY	5837.4	$800.00	$4,669,920
Reach 8	CY	2068.8	$800.00	$1,655,040
				$0
				$0
				$0
		Total Deletions		$25,405,440
ADDITIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Additions		$0
		Net Cost Decrease		$25,405,440
		Mark-ups	42.50%	$10,797,312
		Total Cost Decrease		$36,202,752

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 3 PAGE NO: 1 OF 4

DESCRIPTION: Use Pre-Cast Concrete Planters and/or Modularize Planters

ORIGINAL DESIGN:

The original design utilizes 158,794 cubic yards of concrete planters which would be cast on site. Planters are integrated as ecosystem restoration features through use of riparian vegetation to provide edge habitat adjacent to the river.

PROPOSED DESIGN:

The Proposed design is to incorporate either individual or modular pre-cast concrete planters in lieu of custom-fit planters cast at the site.

ADVANTAGES:

- Reduces cost while maintaining functionality.
- Quick turnaround and reduced cycle time
- Meets International Building Code requirements
- Durability

DISADVANTAGES:

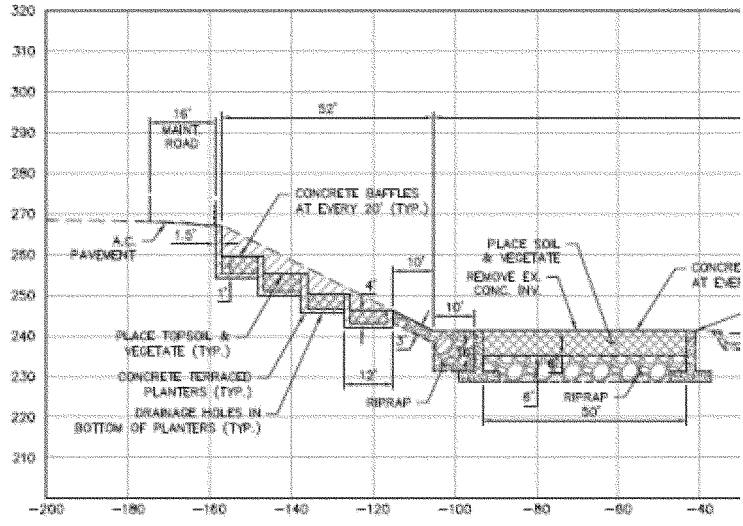
- Would not provide custom fit of the planters to the site.

JUSTIFICATION:

Using modular pre-cast concrete planters will reduce the cost of using custom planters while maintaining functionality. Using precast concrete planters provide for a quicker turnaround. It allows for the ability to begin casting components for the superstructure while foundation work is in progress. Precast concrete components can also be cast and erected year-round, without delays caused by harsh weather. Additionally, the new systems have a variety of textures, colors, finishes and inset options that can be used.

VALUE ENGINEERING PROPOSAL

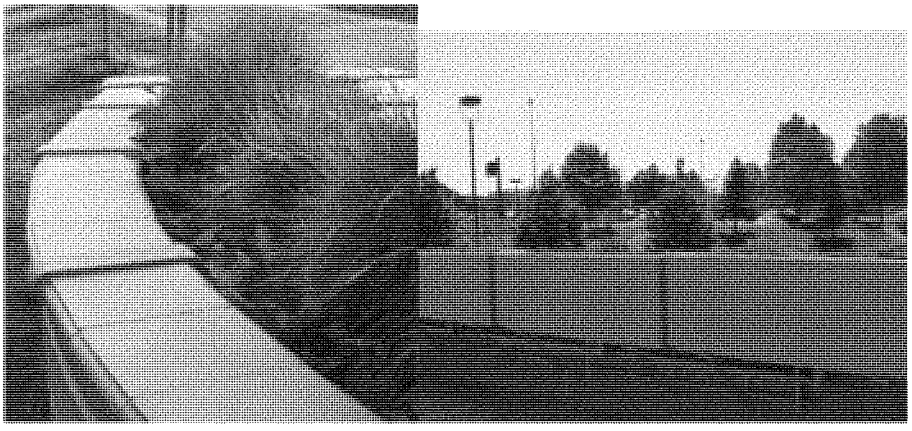
PROPOSAL NO: 3 PAGE NO: 2 OF 4



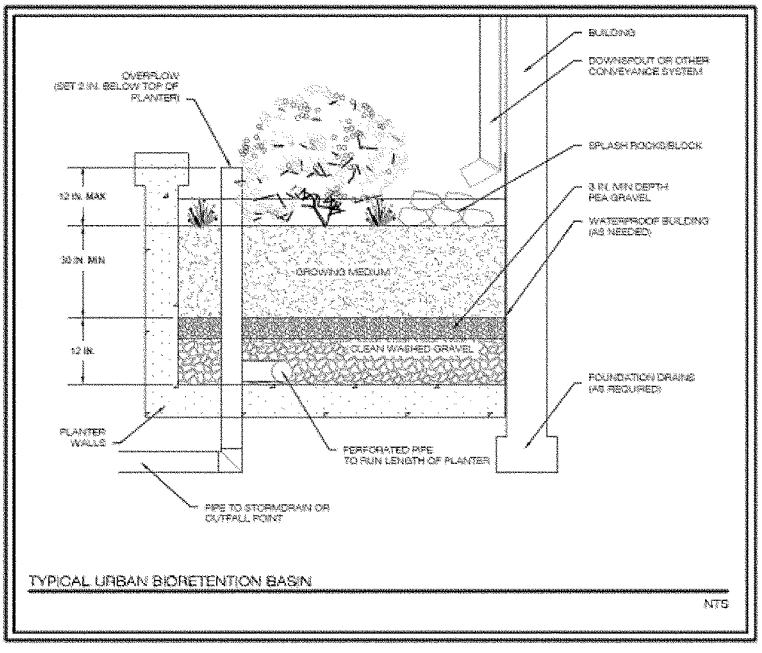
Concrete planter cross-section

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 3 PAGE NO: 3 OF 4



Examples of pre-cast concrete planters



VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 3 PAGE NO: 4 OF 4

COST ESTIMATE WORKSHEET				
DELETIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
Concrete Planter Boxes	CY	158,784	$800.00	$127,027,200
Assume 2 CY per planter Box				$0
79392 Planter Boxes				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Deletions		$127,027,200
ADDITIONS				
	UNITS	QUANTITY	UNIT COST	TOTAL
Concrete Planter Boxes	CY	158,784	$400.00	$63,513,600
Assume 2 CY per planter Box				$0
79392 Planter Boxes				$0
and a reduction to $500 per Cubic Yard				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Additions		$63,513,600
		Net Cost Decrease		$63,513,600
		Mark-ups	42.50%	$26,993,280
		Total Cost Decrease		$90,506,880

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 4 PAGE NO: 1 OF 3
DESCRIPTION: Modify the Terraces

ORIGINAL DESIGN:

Terraces are incorporated throughout each reach to reduce the angularity of the trapezoidal channel, serve as a medium for vegetative restoration and provide public access points to the river. Terraces require demolition of the existing channel surface, change to the channel geometry and reconstruction through the use of concrete planters and surface walkways.

PROPOSED DESIGN:

The proposed design is to reduce the scale of the terraces by 33% to achieve cost savings for the project.

ADVANTAGES:

- Reduces the total project costs and footprint of impact.

DISADVANTAGES:

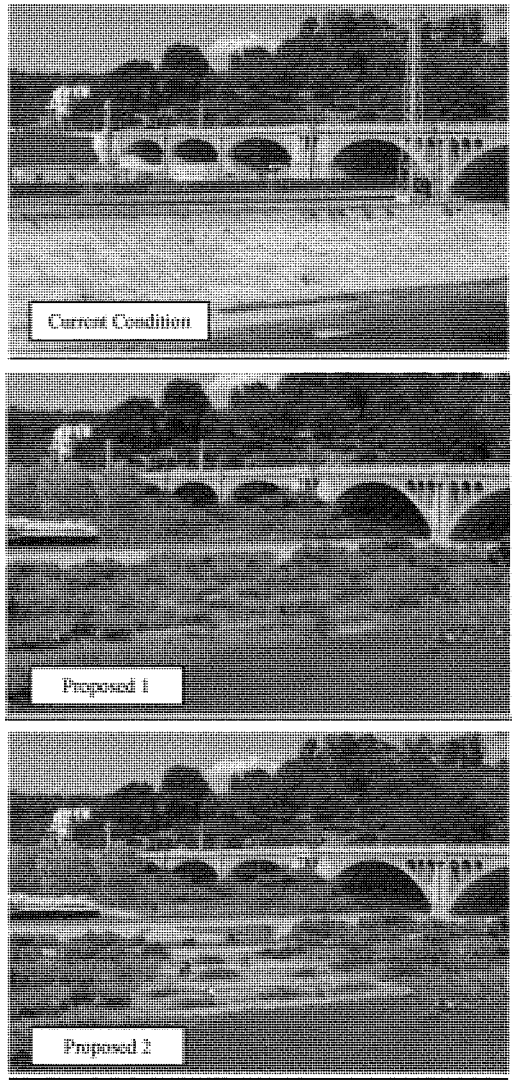
- May reduce the overall benefits of the project. The PDT will need to evaluate which areas may be suitable candidates based on a cost-benefit analysis of the effects of the terraces.

JUSTIFICATION:

Terraces compose a significant portion of the total project costs. Reduction in the scale of the terraces may be able to be achieved while maintaining high priority ecosystem restoration areas.

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 4 PAGE NO: 2 OF 3



Examples of terraces with existing and proposed conditions. Proposed condition 1 will maximize the vegetation on the terraces and proposed condition 2 allows for minimum vegetation.

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 4 PAGE NO: 3 OF 3

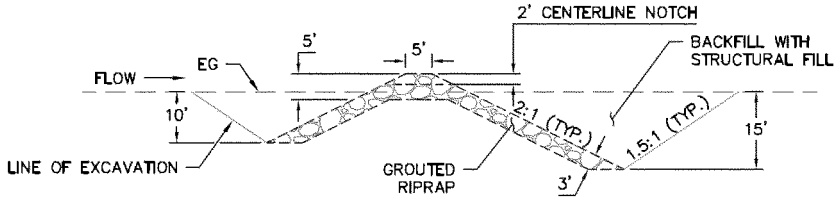
COST ESTIMATE WORKSHEET				
DELETIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
Concrete Planter Boxes	CY	158,784	$800.00	$127,027,200
Assume 2 CY per planter Box				$0
79392 Planter Boxes				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Deletions		$127,027,200
ADDITIONS				
	UNITS	QUANTITY	UNIT COST	TOTAL
Assumes a 33% reduction	CY	105,750	$400.00	$42,300,058
in quantity				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Additions		$42,300,058
		Net Cost Decrease		$84,727,142
		Mark-ups	42.50%	$36,009,036
		Total Cost Decrease		$120,736,178

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 5 PAGE NO: 1 OF 2
DESCRIPTION: Use Random Material for Grade Control Structures Cores

ORIGINAL DESIGN:

The original design calls for grouted rip-rap grade control structures with a compacted fill core.



GRADE CONTROL STRUCTURE DETAIL
NTS

PROPOSED DESIGN:

The proposed design calls for a random fill core. From the available data the quantities and units costs were derived. A 25% reduction in the cost of the core fill was assumed.

ADVANTAGES:

- Reduce cost.
- Faster construction.

DISADVANTAGES:

- Reduced scope.

JUSTIFICATION:

The following spreadsheet shows a modest decrease in core material costs, if a random material is used. This would result in a savings, while at the same time providing most of the project value. However, this is a small decrease in scope. If this modest decrease can fulfill the project purpose it is recommended. This would be accomplished in final design by optimizing the core fill.

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 5 PAGE NO: 2 OF 2

		DELETIONS		
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
Total Compacted Fill	CY	1,552,056		$0
				$0
25% of Total Compacted Fill	CY	388,014	$21.50	$8,342,301
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Deletions		$8,342,301
		ADDITIONS		
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
				$0
				$0
25% of Total Compacted Fill	CY	388,014	$13.00	$5,044,182
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Additions		$5,044,182
		Net Cost Decrease		$3,298,119
		Mark-ups	42.50%	$1,401,701
		Total Cost Decrease		$4,699,820

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 6 PAGE NO: 1 OF 2
DESCRIPTION: Use Sheet Pile Walls in Lieu of Concrete for Planter Boxes

ORIGINAL DESIGN:

The original design calls for steel reinforced concrete planter boxes.

PROPOSED DESIGN:

The proposed design calls for sheet pile cells.

ADVANTAGES:

- None.

DISADVANTAGES:

- Increase cost.

JUSTIFICATION:

The assumption that follows is that a 2 CY concrete planter box would be replaced by a sheet pile cell. The assumption was a PZ 27 with 3 feet exposed and 9 feet driven. As is shown on the following spreadsheet the cost is much higher and this proposal is not recommended.

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 6 PAGE NO: 2 OF 2

COST ESTIMATE WORKSHEET				
DELETIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
Concrete Planter Boxes	CY	158,784	$800.00	$127,027,200
Assume 2 CY per planter Box				$0
79392 Planter Boxes				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Deletions		$127,027,200
ADDITIONS				
	UNITS	QUANTITY	UNIT COST	TOTAL
Sheet Pile (PZ 27) 12' Stick 3 Up 9 Down				$0
288 Face Feet per Box				$0
79392 Planter Boxes				$0
Sheet Pile (PZ 27) 12' Stick 3 Up 9 Down	SF	22,864,896	$32.00	$731,676,672
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Additions		$731,676,672
		Net Cost Decrease		-$604,649,472
		Mark-ups	42.50%	-$256,976,026
		Total Cost Decrease		-$861,625,498

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 7 PAGE NO: 1 OF 2
DESCRIPTION: Delete the Fences

ORIGINAL DESIGN:

The original design utilizes 239,000 linear feet of chain-link fence to protect sensitive restoration areas, manage public traffic and improve site safety.

PROPOSED DESIGN:

The proposed design is to remove 100% of the fences proposed for the eight major reaches, but maintain fencing within tributary areas.

ADVANTAGES:

- Reduces overall costs.
- Increases aesthetics of viewscape.
- Promotes ecosystem connectivity.

DISADVANTAGES:

- Elimination of fencing would result in loss of protection of a large portion of the project footprint and may have public safety impacts.

JUSTIFICATION:

Cost reduction only.

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 7 PAGE NO: 2 OF 2

COST ESTIMATE WORKSHEET				
DELETIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
Chain Link Fence	LF	238,732	$30.00	$7,161,960
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Deletions		$7,161,960
ADDITIONS				
ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
				$0
		Total Additions		$0
		Net Cost Decrease		$7,161,960
		Mark-ups	42.50%	$3,043,833
		Total Cost Decrease		$10,205,793

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 8 PAGE NO: 1 OF 3
DESCRIPTION: Use Wrought Iron Fence In Lieu of Chain-Link

ORIGINAL DESIGN:

The original design utilizes 239,000 linear feet of chain-link fence to protect sensitive restoration areas, manage public traffic and improve site safety.

PROPOSED DESIGN:

The proposed design is to reduce the quantity of chain-link fence by 86% and replace with wrought iron fence.

ADVANTAGES:

- Improves aesthetics and durability.
- Reduces vandalism.
- Increases long-term reliability of protection.

DISADVANTAGES:

- Significantly more expensive. Would require reduction in quantity in order to remain cost-neutral.
- Reductions in quantities would result in loss of protection of a large portion of the project footprint.

JUSTIFICATION:

In order to remain cost-neutral, an 86% reduction would need to occur in the linear feet of fence proposed for the project. This would result in reducing the fence footprint from 239,000 linear feet to 32,500 linear feet. Locations for elimination of fencing would need to be undertaken by the PDT. Since this is a neutral cost with no change, no cost sheet is shown.

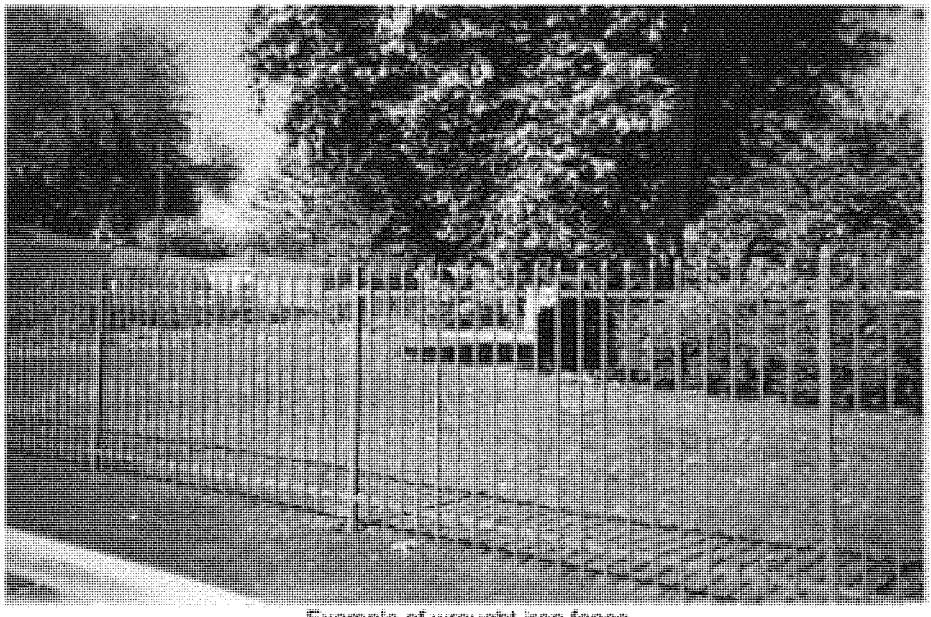
VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 8 PAGE NO: 2 OF 3

Example of 6' chain-link fence

VALUE ENGINEERING PROPOSAL

PROPOSAL NO: 8 PAGE NO: 3 OF 3



Example of wrought-iron fence

VALUE ENGINEERING COMMENTS

1. ***Redesign the Terraces*** The terraces should accommodate plantings and wildlife passage to and from the channel bottom. Consider designing fences with fewer steps, and potentially incorporate an access path that can accommodate people and maintenance vehicles also. Terraces are an important feature for wildlife mobility in and out of the river. They are also beneficial to human access and enjoyment. The form terraces take can be varied and differ at different places in the project area. Whereas the costs were estimated with a design including a certain number of terraces, fewer, larger steps could be utilized.

2. ***Acquire More Land*** To maximize value (i.e. increase habitat units per cost to project), an effective way would be to add land to the project area under the following conditions:

- The land is adjacent to a site of restoration already in the project.
- The presumed restoration would be similar to or the same as the adjacent restoration, so it could be treated as an expansion of the existing area.
- No significant landscape/ excavation would be needed.
- The acquisition cost would be low compared to the other areas.

Under these conditions, ad expansion of planned restoration areas would be valuable, in an increase in total cost.

3. ***Recycle Existing Concrete.*** Concrete that is removed from the LA River channel and adjacent infrastructure should be recycled and/or incorporated into the new ecosystem restoration project. The recycled concrete can be used in other capacities and to reduce concrete cost, e.g. as fill or aggregate.

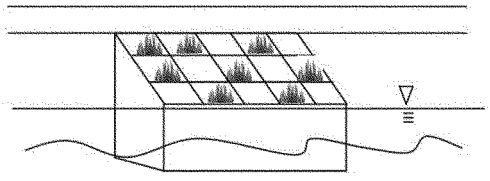
4. ***Recycle All Hard Material.*** All hard material (steel, concrete, etc) that is removed with the construction of the new project should be recycled with a preference of re-using the materials. Additionally the reduced cost associated with hauling and disposing of these materials from the demolition of previous structures is a benefit.

5. ***Increase Vehicular Access*** Adding access for motorized vehicles provides for a multiple-use function. Currently the LA River only has two access points. This will allow for the community to have several access points for entering the channel as well as habitat connectivity. Balance the popular use of using motorized vehicles and having it done in an environmentally-sensitive way.

6. ***Increase Shade.*** Where possible, design pathways, viewing towers, and other project elements to create shaded spots to aid in habitat establishment and health. For example, (a) cantilever paths, (b) design towers with awnings, and (c) create boulder-based refuge areas in the channel.

7. ***Use Differently Armored Banks.*** Instead of terraces at some places, or to replace grouted riprap slopes, or where geo-engineered banks are infeasible, use an armored bank that will allow vegetation to grow in gaps. This could be a concrete "egg carton" inset into the bank or box concrete storm culverts could be repurposed and inset vertically to create a structural slope with infill that is vegetated. This could present a significant cost saving to cast-in-place boxes while offering some habitat.

Illustration Provided



8. ***Add Viewing Stations.*** Viewing stations can be used to monitor how geomorphology is performing over time, can aid in habitat and wildlife health evaluation, can provide public educational value, and can keep people away from direct interference in habitat areas. They may also be able to provide bird perches and/or bat habitat and their bases could support vegetation such as vines.

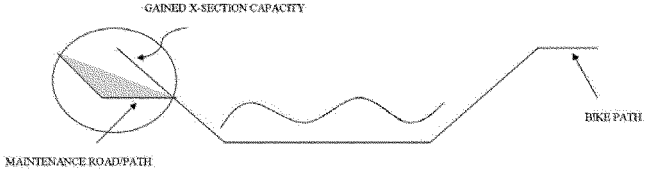
9. ***Creatively Finance Across Corp Mission.*** Acknowledge if it may be possible to consolidate Corps investments in O&M, ecosystem, recreation and/or flood protection if a project's implementation can be shown to affect or be impacted by each. For example, O&M has been historically underfunded and new ecosystem and recreation funds will be needed. Could the aggregate needs/requests in the separate accounts be reduced if a blended investment is made with reduced transaction costs associated with the overhead, administration, etc in the 3 separate bureaucratic channels? This could be a 'special case' applicable only to urban cases recognized as Urban Waters Federal Partnership pilots by the Obama administration (there are seven (7) and USACE is a partner agency of this).

10. ***Use Adjacent Areas for Any Mitigation.*** When and where feasible, given that adjacent land acquisition is critical – consider using lands that will be needed for future phases of the project for staging, storage, etc, thereby acquiring those for future ecosystem use. For example, to avoid long hauls to distant places (an air quality problem) or dumping of materials in distant landfills (expensive and accumulative/climate change impacts) store materials on nearby parcel, recycle them, break them up, etc. to reuse them (cap or cover lay soil as part of geomorphology is landscape). This way lands are acquired for staging, construction but reused as ecosystem areas and result in acquisition mitigation, etc.

11. ***Allow Natural Sedimentation to Act as Fill.*** Allowing natural sedimentation processes to establish islands and banks in certain areas would save costs of fill importing and placement, and would allow the river to form a more natural geomorphology. This may be especially appropriate at the areas of major channel reconfiguration like Verdugo Wash Confluence, Taylor Yard, and Piggybank Yard. For instance at Taylor Yard, if modular concrete armoring sheet curves were placed in the bed of the river and allowed to catch debris and sediment, then the deposits would form in a more natural way. Additionally, the process would be studied by local researchers for future optimization.

12. ***Increase Capacity by Lowering Maintenance Roads.*** In strategic places it may make sense to change the location of the maintenance roads and notch it into the channel (see illustration). This would be most beneficial where we know there is a chance of break-out during a rare rain event, or the maintenance part is wide enough at the top to still accommodate emergency access during rain even, or there would be little impact to existing structures at the top of the bank. The road should be placed at the level of storm event for optimized access (say 20% storm). The excess capacity could offset increase vegetation (roughness) elsewhere in the channel.

Illustration provided



13. ***Build One Small Area First, as an Example.*** Construct a portion of the total project first, showcasing what is possible and what will work well in a given area or reach. This may be useful if only partial funding is available and sequencing construction (based on a small area) is more feasible at the time. Also, the entire project may need to be constructed in smaller pieces overtime as funding and resources are allocated. This project area can act as a pilot for the overall larger project and offer solutions for future design and engineering challenges.

14. ***Build the Most Intensive Areas First.*** By sequencing or phasing construction strategically, and building the largest most intense areas first, the most ecological value would be realized earlier. This could be considered during the completion of the feasibility report.

15. ***Use Strategic Maintenance Methods.*** Do invasive plant/vegetation work upstream in the LA River and tributaries first, and then work in project area. This will maximize performance of the overall project. Due to seed transport, it is highly likely that seeds from invasives will re-plant themselves in the project area, if they are not managed upstream from the project area.

16. ***Establish Plant Harvesting Area.*** The construction of the recommended project will be done in phases over several years, and there is a significant amount of vegetation and trees that will be installed. These will be specific native species. It may be possible to save money be having an initial phase of the project include establishing a nursery of plant farm that will be used by the rest of the project. For example, if the Taylor Yard area was started right away with the trees that will be needed in 10 years at Piggyback, then the cost of buying mature trees in 10 years is eliminated or reduced and replaced with the cost of nurturing the trees, which may be lower. This offers a significant aesthetic and ecosystem benefits as well by establishing mature plants in restoration areas. This could also be done with bushes and other plants.

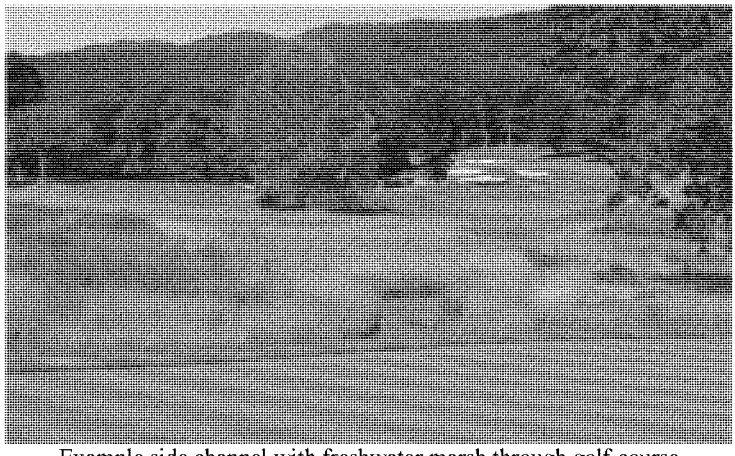
17. ***Increase In-Channel Vegetation***. Focusing on increasing in-channel vegetation, in part at the expense of the terrace/bank vegetation will increase the value of the habitat created since the riparian vegetation will be closer to the water. In combination with focusing on the primary areas for connectivity to the mountains (item 54), will increase the functionality of the riparian areas. Focusing on maintaining and improving in-channel vegetation will reduce O&M costs due to the reduction in watering required.

18. ***Use Different Armoring Techniques***. While the traditional bank protection method for the Los Angeles River has been a concrete lined trapezoidal channel, this technique has become outdated and carries with it significant environmental impacts. Especially in areas where levees are not present, an examination of alternative bank protection methods should be evaluated. As long as a significant toe is established, riprap or other structures could be used in various locations on the project alignment. As one progresses further up the bank and velocities drop, the integration of vegetation with the protection can be accomplished to increase environmental benefits.

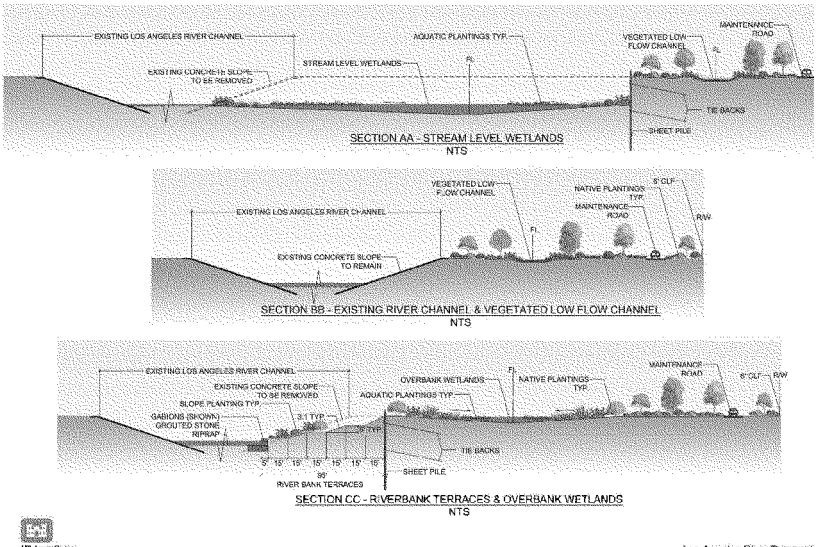
19. ***Prioritize Projects with Connectivity to Santa Monica and San Gabriel Mountains***. Because the project is focusing on establishing the "bones" of the ecosystem which can be built upon via other restoration projects, emphasis/priority should be placed on first building the projects which will establish connectivity to the Santa Monica and San Gabriel Mountains. Establishing these connections first will allow for increased wildlife usage of the riparian areas.

20. ***Reevaluate Roughness Coefficient***. The values used for vegetation roughness in the hydraulic analysis should be reevaluated. Researchers at ERDC (Fischenich and Derrick) have additional information that could be used in adjusting the Manning's N for vegetation. A decrease in Manning's N could significantly change project design as well as increase project benefits due to increased planting of vegetation and reduction in maintenance costs and frequency while at the same time maintaining the existing level of protection.

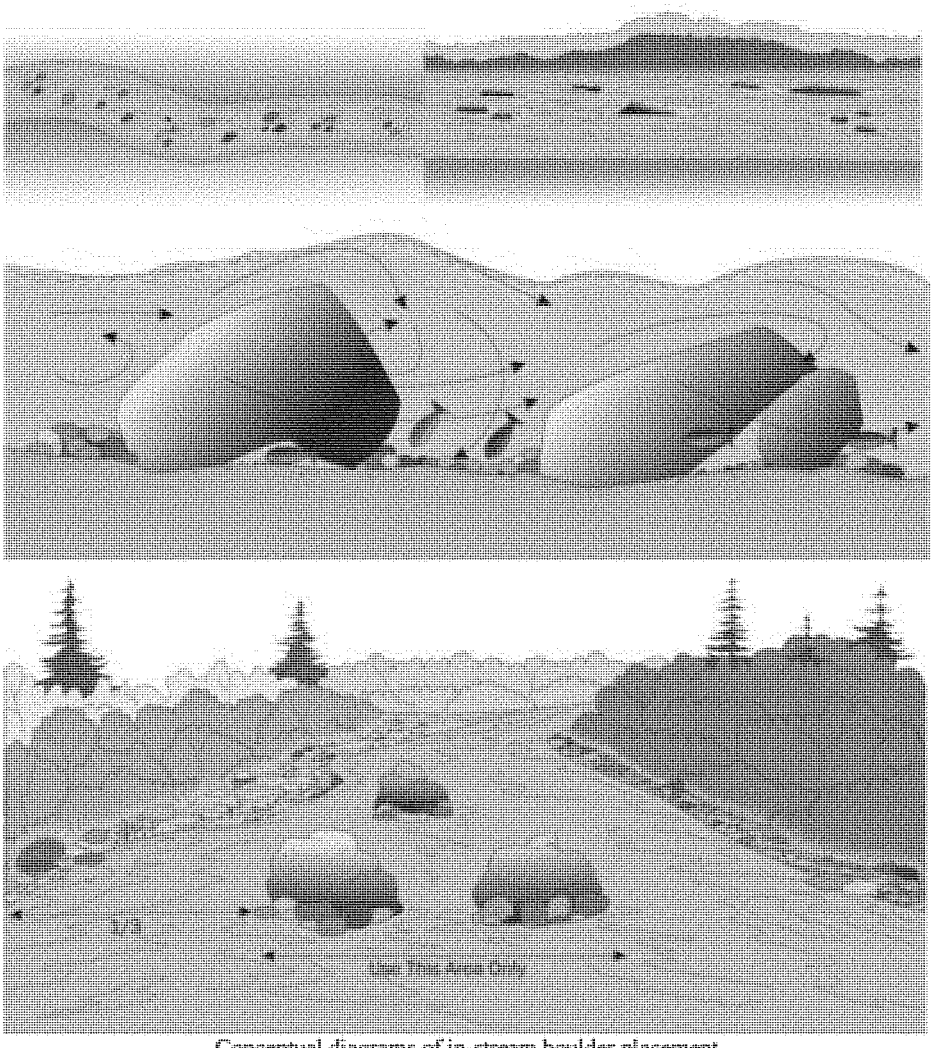
21. ***Increase Channel Complexity.*** The VE team suggested that the project increase the channel complexity. Some ideas are as follows:
Restore freshwater marsh areas at the confluence of the main stem of the LA River and tributaries such as Burbank Channel, Verdugo Wash and Arroyo Seco.
Incorporate boulder fields in bottom of channel through the marsh areas to provide in-stream habitat refuge and resting areas for aquatic species. Boulders provide velocity breaks during high flows to disperse energy and allow for refuge areas for aquatic species. Boulder fields may mobilize during high flows and will require evaluation. Integration of channel complexity into the marsh design will require consideration of maintenance for replacement of lost material. Addition of boulder fields will increase project benefits at minimal cost.



Example side channel with freshwater marsh through golf course



Cross-section examples of freshwater marsh areas



Conceptual dingrams of in-stream boulder placement

22. ***Use Vegetated Reinforced Soil Slopes in Lieu of Concrete Walls.*** There are several turf reinforcement products on the market that could be used on a steep slope, in lieu of concrete walls. At this stage of design, the team did not feel that a defendable cost and quantity could be developed. It is recommended that, during final design, these types of products on steep slopes could be recommended. However, maintenance is increased.

23. ***Identify and Acquire the Footprint (Real Estate) as Soon as Possible.*** This project involves a substantial amount of real estate acquisition. It would help the project progress if the real estate requirement were established early on in the process and identified. This may preclude construction of new buildings and infrastructure that would have to then be removed at a higher cost.

24. ***Externalize Relocation Cost.*** This project involves a substantial amount of utility relocations. As with real estate as discussed above the requirement should be identified as soon as possible and communicated to the effected utilities.

25. ***Use Project Features for Multi Purposes.*** Every project element should have at least two functions, e.g. paths for O&M may also function as wildlife passages, towers keep people out of the habitat while providing bird perches, public education, and O&M functions.

26. ***Add Bird Towers.*** Birds are an important, and highly visible part of the ecosystem. Birds are important ecologically as well as economically. They are vital links in many food webs, and often serve as biological indicators of overall ecosystem health. Providing bird towers/areas provide essential habitat for one or more species of bird, including sites for breeding, wintering, and/or migrating birds. This will include bird monitoring, habitat restoration, land protection, and proposing changes to municipal land use policies.

27. ***Identify Multi-Uses for Staging Areas.*** Construction staging areas can also be used to host shop and job activities to support the project, such as materials remanufacturing.

28. ***Examine Types and Costs of Plants and Trees to be Purchased.*** Consider life cycle cost of selected trees/plants, including their ability to thrive, survive high flow events, the need for water, need to be replaced, what kind of maintenance required, etc. Also purchasing plants at cheaper unit costs should be evaluated and possibilities to use non-certified or non-traditional suppliers (to reduce cost) should be explored. Seed banking for future use is also an option to reduce cost.

SUPPORTING DOCUMENTS

CONTACT DIRECTORY

Ron Burkhard	Value Engineer	burkhardvalue@hotmail.com
Carol Armstrong	Local Sponsor/City	Carol.armstrong@lacity.org
Klaire Desamparo	COE - DA Intern - Cost& Spec.	Klaire.C.Desamparo@usace.army.mil
Mike Wyatt	ATR - Planning (NWS)	Michael.D.Wyatt@usace.army.mil
Michael Affeldt	Local Sponsor/City	Michael.affeldt@lacity.org
Megan Whaler	Local Sponsor/ Consultant	Megan.whaler@lacity.org
Arnecia Williams	COE - District VEO	Arnecia.N.Williams@usace.army.mil
Mike Scuderi (webmeeting)	ATR - Planner	Michael.R.Scuderi@usace.army.mil
Reuben Sasaki	Corps - Hydraulics	Reuben.a.Sasaki@usace.army.mil
Kerry Casey	COE - HH	Kerry.T.Casey@usace.army.mil
Alison Lind	COE - HH	Alison.k.Lind@usace.army.mil
Erin Jones (webmeeting)	COE - Planning	Erin.L.Jones@usace.army.mil
Jon Fleischman (webmeeting)	ATR - Civil Design	Jon.P.Fleischman@usace.army.mil
David Williams (webmeeting)	ATR - H&H	David.J.Williams@usace.army.mil
Kathleen Bergmann	COE - Planner	Kathleen.m.Bergmann@usace.army.mil
Lisa Sandoval	Asset Management	Lisa.m.Sandoval@usace.army.mil
Chris Spitzer	COE - SPL-ED-GD	Chris.a.Spitzer@usace.army.mil

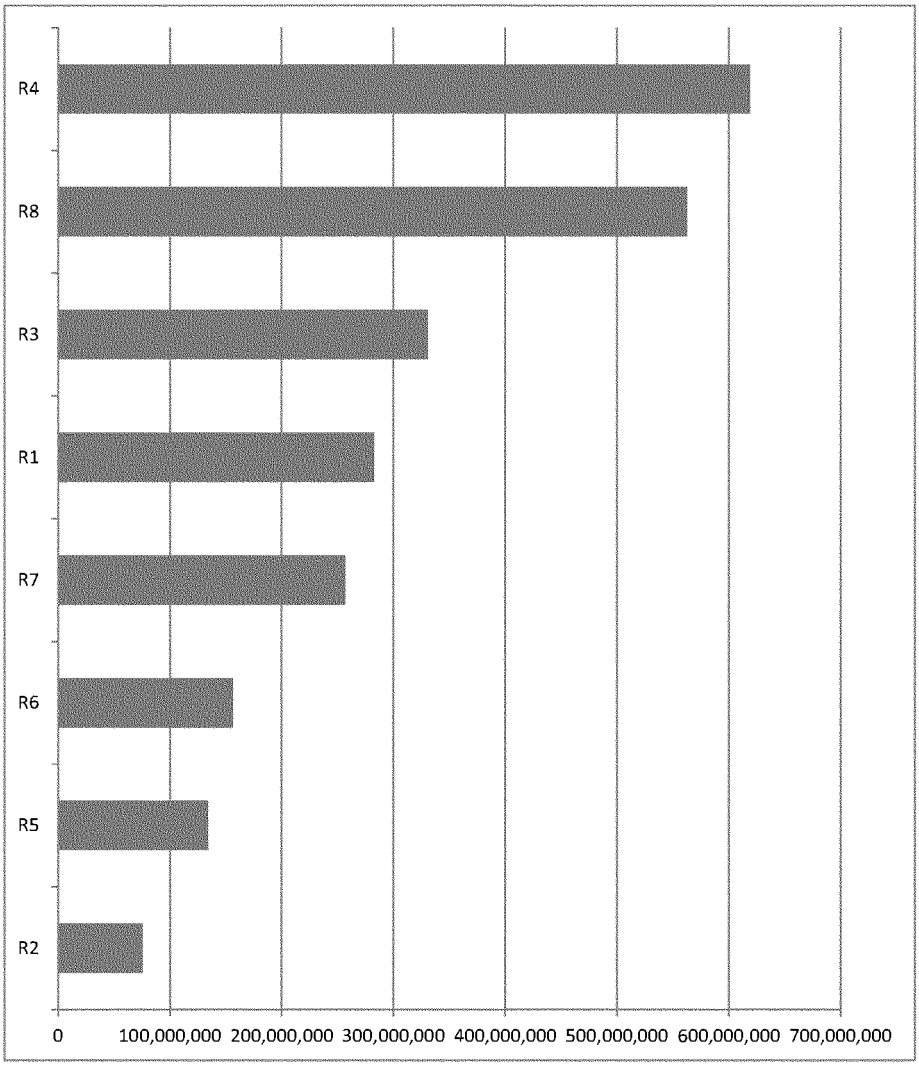
SPECULATION LIST

P	1	modify the terraces
C	2	redesign terraces - see 31
P	3	down scale the planter boxes
C	4	aquire more land
X	5	use alternative materials for concrete
C	6	increase in-channel vegetation
C	7	recycle existing concrete
C	8	recycle all hard material
C	9	use project features for multi purposes
C	10	increase vehicular access
C	11	increase shade
C	12	use vegitated reinforced soil slopes in lieu of concrete walls
C	13	use differently armored banks
C	14	add viewing stations
C	15	add bird tower
X	16	bury the railroads
P	17	develop mass balance from materials
X	18	bury the freeways
C	19	creatively finance across Corp mission
C	20	use adjacent areas for any mitigation
X	21	examine additional flood control feature during project
P	22	increase the channel complexities
X	23	cover the channel
P	24	use wrought iron fence in lieu of chain link
P	25	remove most of the fences
C	26	allow natural sedimentation to act as fill
X	27	conduct a sediment study
X	28	use islands for borrow
P	29	use random material for grade control structures
X	30	use inflatable dams to increase open water habitat
P	31	use sheet pile walls in lieu of concrete
X	32	use vinyl sheet pile
X	33	reduce the geotechnical factors of safety
X	34	reduce the structural factores of safety
X	35	use temporary structures

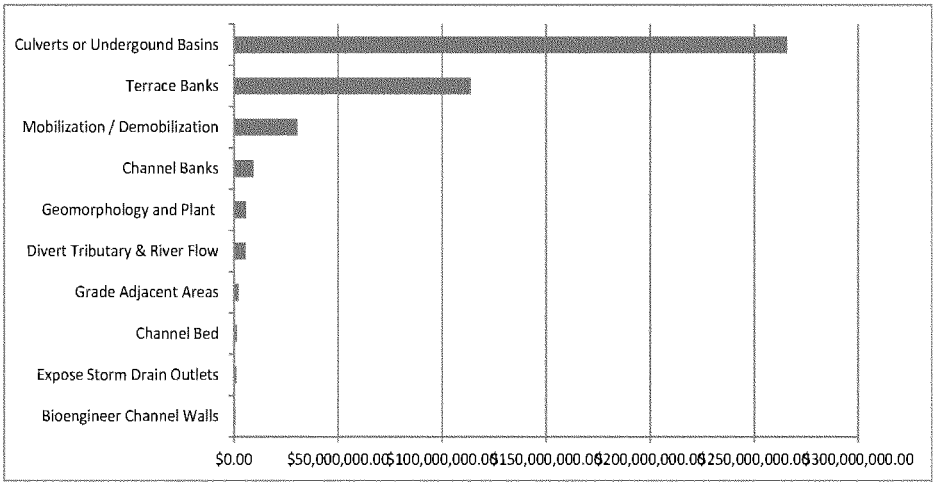
C	36	increase capacity by lowering maintainance roads
X	37	use shot crete for terraces
P	38	use pre cast planters
X	39	all materials should be sourced locally
X	40	use a supply contractor for pre cast planters
C	41	identify multi uses for staging areas
P	42	build pre cast planters into existing riprap - see 38
P	43	modularize the terrace planters
X	44	use gabions with or without recycled concrete
X	45	use a-jacks for riprap and concrete
X	46	use untreated wood for planters
X	47	concentrate investment in one area
C	48	build one small area first as an example
C	49	build the most intensive areas first
X	50	build it all in one contract
X	51	use design build contracts
C	52	use strategic maintainance methods
BD	53	use local labor and organizations for maintainance
C	54	focus sites which improves connectivity with the San Gabriel and Santa Monica Mountains
C	55	reduce the roughness coefficients in the hydrualic analysis
C	56	examine types and costs of plants and trees to be purchased
X	57	establish area to grow plant then harvest (i.e. plant farm)
X	58	add injection wells
X	59	add wells for water supply
X	60	capturing up stream flows to improve downstream habitat
X	61	reduce sediment transport (improve downstream habitat) and reduce cost of dredging
X	62	Sediment traps for island creation
X	63	use colored concrete
C	64	use scarified concrete surfaces
X	65	do not build to seismic standards
C	66	identify and acquire the footprint (real estate) as soon as possible
C	67	externalize relocation cost
X	68	use rock columns in lieu of concrete planters
X	69	use geo-grid
BD	70	use adaptive management
X	71	narrow the maintainance road

COST MODELS

Cost by Reach

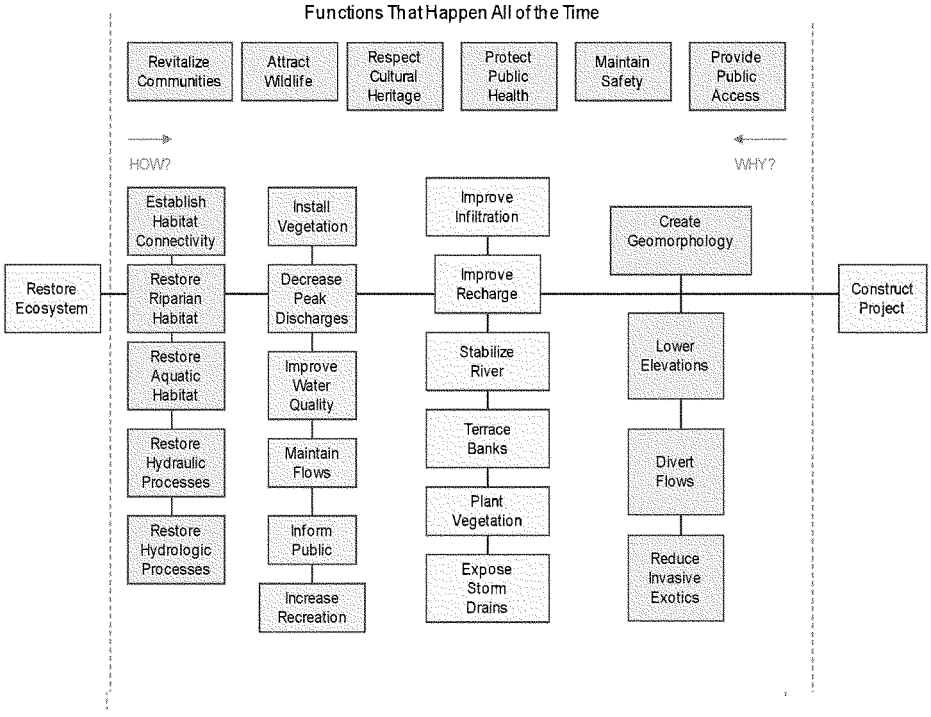


The cost for Reach Four is presented below as an example.
The underground basins have since been removed.



FUNCTION ANALYSIS SYSTEM TECHNIQUE (FAST) DIAGRAM

FAST DIAGRAM FOR THE LA RIVER ECOSYSTEM RESTORATION



US Army Corps of Engineers

Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX J
Real Estate Plan

May 2015

TABLE OF CONTENTS

1. Purpose 7

1.1 Project Purpose 7

1.2 Study Authority 8

1.3 Locally Preferred Plan-Alternative 20 9

2. Description of Lands, Easements, Rights of Way, Relocations and Disposal Sites (LERRD) 10

2.1 Description by Reach 11

2.1.1 Reach 1 Pollywog Park 11

2.1.2 Reach 2 Bette Davis Park Area of Griffith Park 12

2.1.3 Reach 3 Ferraro Fields/Verdugo Wash Area of Griffith Park 14

2.1.4 Reach 4 Griffith Park 15

2.1.5 Reach 5 Riverside Drive 16

2.1.6 Reach 6 Taylor Yard 18

2.1.7 Reach 7 Arroyo Seco/L.A. State Historic Park 20

2.1.8 Reach 8 Los Angeles Trailer and Container Intermodal Facility 22

2.2 Other Lands and Rights of Way 24

2.2.1 Rights of Way to be Further Defined During PED 25

2.3 Staging Areas 26

2.4 Borrow and Disposal Site Assumptions 26

2.4.1 Borrow Sites 26

2.4.2 Borrow Required for Future Maintenance 27

2.4.3 Disposal 27

2.4.4 Disposal Required for Future Maintenance 27

2.4.5 Summary 28

3. Sponsor Owned LERRD 29

4. Proposed Non-Standard Estates 29

5. Existing Federal Project 34

6. Federally Owned Land 38

7. Extent of Navigational Servitude 38

8. Map 39

9. Extent of Induced Flooding 40

10. Baseline Cost Estimate 40

11. P.L. 91-646 Relocation Assistance Benefits 43

12. Description of Present or Anticipated Mineral Activity 44

13. Project Sponsor's Land Acquisition Ability 44

14. Enactment of Zoning Ordinance 48

15. Land Acquisition Schedule and Milestones 49

16. Description Of Facility/Utility Relocations 49

16.1 Electrical Transmission Towers 50

16.2 Railroad Lines 51

16.3 Sewer Lines 51

16.4 LATC 51

17. Knowledge or Suspected Presence of Contaminants 53

18. Support/Opposition for Project 55

19. Land Acquisition Prior to PPA 56

20. Other Relevant Real Estate Issues 57

Attachment A: Estates

Attachment B: Parcel Ownership Mapping

Attachment C: Assessment of Non-Federal Sponsor's Real Estate Acquisition Capabilities

Attachment D: Risk of Early Acquisition Letter to Sponsor

1. PURPOSE

This appendix is prepared in accordance with Engineering Regulation (ER) 405-1-12, 12-16, Real Estate Plan, and presents the real estate requirements for the Los Angeles River Ecosystem Restoration Study Locally Preferred Plan (LPP), described below. The City of Los Angeles (City) is the non-Federal sponsor for the study.

1.1 Project Purpose

The primary purpose of the proposed project and alternatives considered in the study is to restore 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles by reestablishing riparian strands, freshwater marsh, and aquatic habitat communities and reconnecting the river to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo Mountains while maintaining existing levels of flood risk management. A secondary objective is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. This reach is identified as the "Area with Restoration Benefits and Opportunities for Revitalization" reach, or ARBOR reach (referred to herein as ARBOR reach or study area).

The Los Angeles River, once the backbone for a vast natural system of riparian foothill and freshwater marsh habitat, carrying seasonal rains and subterranean flows to the coastal plain and the Pacific Ocean, has been degraded over time by a cycle of increasing urban development, flooding, and channelization, culminating in the mid-20th century with the Federal flood risk management project known as Los Angeles County Drainage Area (LACDA). LACDA was undertaken by the US Army Corps of Engineers (USACE) in partnership with the Los Angeles County Flood Control District (LACFCD), today known as the Los Angeles County Department of Public Works but referred to as

LACFCD throughout this real estate plan for consistency). The LACFCD, the non-Federal sponsor for LACDA, and the City of Los Angeles, the non-Federal sponsor for the restoration study, are separate governmental bodies. The LACDA project encased the river in concrete banks and a partially concrete bed which straightened the river's course, diminishing its plant and wildlife diversity and quality, disconnecting it from its floodplain and significant ecological zones, and dramatically changing its appearance.

The ARBOR reach has the greatest potential for restoration compared to the rest of the river because it includes the Glendale Narrows, one of the few reaches in the river with a non-concrete bed with natural flows fed by underground sources, and has connections to the Verdugo Wash and Arroyo Seco tributaries that can link to significant habitat areas as well as adjacency to Griffith Park, the eastern terminus of the Santa Monica Mountains. For these reasons, the ARBOR reach is the focus of the restoration alternatives.

1.2. Study Authority

This Study is authorized as a partial response to Senate Committee on Public Works Resolution, approved June 25, 1969, reading in part:

> *Resolved by the Committee on Public Works of the United States Senate, that the Board of Engineers for Rivers and Harbors, created under Section 3 of the River and Harbor Act, approved June 13, 1902, be, and is hereby requested to review the report of the Chief of Engineers on the Los Angeles and San Gabriel Rivers and Ballona Creek, California, published as House Document Numbered 838, Seventy-sixth Congress, and other pertinent reports, with a view to determining whether any modifications contained therein are advisable at the present time, in the interest of providing optimum development of all water and related land resources in the Los Angeles County Drainage Area.*

Section 4018 of the Water Resources Development Act of 2007 (Public Law 110-114) provided authorization for a "feasibility study for environmental ecosystem restoration,

flood control, recreation, and other aspects of Los Angeles River revitalization that is consistent with the goals of the Los Angeles River Revitalization Master Plan published by the city of Los Angeles...." The Corps of Engineers (Corps) implementation guidance for this section identified that the scope and substance of the study under the Senate resolution is identical to the study mandated by section 4018 and directed that the ongoing study incorporate the section 4018 study.

1.3. Locally Preferred Plan – Alternative 20

This Real Estate Plan will focus on the real estate requirements for the locally preferred plan, Alternative 20, "ARBOR Riparian Integration via Varied Ecological Reintroduction (RIVER)," referred to herein as the Locally Preferred Plan or LPP.

Alternative 20, RIVER, includes restoration features throughout the 11-mile project reach. Alternative 20 widens the river at Verdugo Wash, Taylor Yard, and the Los Angeles Trailer and Container Intermodal Facility (LATC). Alternative 20 also restores the confluence with the Arroyo Seco tributary, restores habitat at the Los Angeles State Historic Park, and includes several daylighted streams and side channels.[1]

In this Real Estate Plan, an appendix to the Integrated Feasibility Report, the Corps must, for each project purpose and feature, fully describe the lands, easements, and rights-of-way, relocations, and disposal sites (LERRD) required for construction, operation, and maintenance of the project, including the acreage, estates, number of tracts/parcels, ownership, and estimated value. The Corps must include other relevant information on sponsor ownership of land, proposed non-standard estates, existing Federal projects and ownership, required relocations under the Uniform Relocation Assistance and Real Property Acquisition Policies Act (P.L. 91-646, as amended) ("the

[1] More detailed feature descriptions are provided, relative to the LERRD required, below.

Uniform Act"), presence of contaminants, and other issues as required by ER 405-1-12. This real estate plan does not contain a comparison of LERRD requirements and costs of the LPP with the NER Plan, Alternative 13v, because the Federal share of total ecosystem restoration cost for the LPP excludes any LERRD cost and is not affected by the difference in LERRD cost between the NER and LPP, as identified in the main IFR and in Section 20 of this real estate plan. The LERRD requirements for the NER Plan are on file with the Los Angeles District. This real estate plan is tentative in nature for planning purposes only and both the final real estate acquisition lines and the estimate of value are subject to change even after approval of the report.

2. DESCRIPTION OF LANDS, EASEMENTS, RIGHTS OF WAY, RELOCATIONS AND DISPOSAL SITES (LERRD)

The Los Angeles River Ecosystem Restoration Feasibility Study is analyzing the ecosystem restoration opportunities along the ARBOR reach. The non-Federal sponsor owns lands within and adjacent to the river in several cases, discussed in Section 3, below. As noted above, the study area also overlaps with a part of the existing Federal flood risk management project on the Los Angeles River, LACDA. The interests previously provided for that project and their inadequacy to fully support the restoration project are discussed in Section 5, below.[2] The study area has been divided into 8 reaches based on their physical characteristics for purposes of formulation and evaluation of restoration measures and alternatives. The lands required for each reach are described below, with discussion of number of parcels, acreage, non-Federal sponsor ownership,

[2] Because the interests in land previously provided for the LACDA flood risk management project are not sufficient to support the proposed restoration project features, and the restoration project sponsor must provide the remaining interests needed, the lands affected by the LACDA project are identified below as "within the existing LACDA project boundary" rather than "previously provided for the LACDA project." This complex issue is discussed in detail in Section 5 of this real estate plan.

public and private ownership, and whether the lands are within the existing LACDA project boundary. A discussion of the type of estates required for the project is also discussed for each reach. A brief discussion of non-standard estates is included for each reach and discussed in greater detail in Section 4 of this report. In addition to the lands required for specific constructed restoration features by reach, the channel bottom of the river and lower tributaries is required for the general measure of invasives removal during construction and invasives management during operation and maintenance of the project. These acreages are discussed in Section 2.2 below rather than by reach and are included in the summary table in Section 2.4.5.

2.1 Description by Reach

2.1.1 Reach 1 Pollywog Park Area of Griffith Park

Reach 1 extends from Pollywog Park/Headworks to the downstream edge of the concrete portion of the river. It is approximately 1.5 miles in length. In this reach, lands for the LPP will be used for riparian planting on the overbanks of the river, overbank of the Burbank Western Channel, and in the Pollywog Park area of Griffith Park. Overbanks are defined in the report as "...areas adjacent to the river where overland flow in flood events could occur in a natural river environment."

There are 33 parcels needed for this reach. The 33 parcels total 48.58 acres, of which 12.87 acres are within the existing LACDA project boundary. The non-Federal sponsor owns fourteen parcels in fee totaling 35.56 acres, of which 12.01 acres are within the existing LACDA project boundary. Six other parcels in public and private ownership total 0.86 acres and are within the existing LACDA project boundary. The non-Federal sponsor would need to acquire fee interest in the six parcels that are under public and private ownership.

There are also 13 parcels totaling 12.16 acres that do not have Assessor Parcel Numbers (APNs) and do not show an owner according to county assessor data. These parcels are adjacent to and may be a part of existing road and highway rights of way. Currently, it is anticipated that, for ten parcels of land, the non-Federal sponsor will request to acquire a lesser estate (perpetual ecosystem restoration easement) since in these areas the land in question is within Caltrans right of way. The remaining three parcels appear to be adjacent to street rights of way and may already be owned by the non-Federal sponsor. The non-Federal sponsor will provide fee where it is the fee owner and acquire fee where a private entity is determined to be the owner of the underlying fee. If a public entity is determined to be the underlying fee owner, the non-Federal sponsor may request to acquire a perpetual ecosystem restoration easement.

The following table lists the acreages needed for Reach 1 of the LPP:

	Acres outside of LACDA Boundary	Acres in LACDA Boundary	Total Acres needed for project including LACDA in Reach 1	Number of Parcels	Recommended Estates
Non Federal Sponsor	23.55	12.01	35.56	14	Fee
Public other than NFS	0	0.78	0.78	4	Fee
Private	0	0.08	0.08	2	Fee
Non-APN (owner not defined in gross appraisal)	12.16	0	12.16	13	Perpetual Easement (10 parcels) Fee (3 parcels)
TOTAL	35.71	12.87	48.58	33	

2.1.2 Reach 2 Bette Davis Park Area of Griffith Park

Reach 2 begins at the midpoint of Bette Davis Park to just past the bridge crossing of Interstate 5. It is approximately ¾ miles in length. The plan in this reach would create riparian habitat corridors along the overbanks of the river similar to Reach 1. Restoration of the Bette Davis Park area of the right bank of the river and a portion of Griffith Park of the left bank will also take place in this reach. In the LPP, there will also be modifications

to the channel changing the right bank from trapezoidal to a vertical bank with overhanging vines, creating an additional 80 feet of soft bottom channel width.

A total of 28 parcels have been identified as necessary for the implementation of the LPP. The non-Federal sponsor owns 12 parcels in this reach with a total acreage of 35.33 acres. Seven parcels totaling 0.53 acres that are located within the LACDA right of way will need to be acquired from other public agencies. Nine parcels with a total acreage of 5.82 acres do not have APNs. It is anticipated that the non-Federal sponsor will request a lesser estate (perpetual ecosystem restoration easement) from Caltrans for five of the nine non-APN parcels that are between the existing LACDA right of way and the 134 freeway and within Caltrans right of way. The other four non-APN parcels are within city road rights of way. For those parcels, the non-Federal sponsor will provide fee where it is the fee owner and acquire fee where a private entity is determined to be the owner of the underlying fee. If a public entity is determined to be the underlying fee owner, the non-Federal sponsor may request to acquire a perpetual ecosystem restoration easement.

The following table lists the acreages needed for Reach 2 of the LPP:

	Acres outside of LACDA Boundary	Acres in LACDA Boundary	Total Acres needed for project including LACDA in Reach 2	Number of Parcels	Recommended Estates
Non Federal Sponsor	25.55	9.78	35.33	12	Fee
Public other than NFS	0	0.53	0.53	7	Fee
Private	0	0	0	0	
Non-APN (owner not defined in gross appraisal)	5.82		5.82	9	Perpetual Easement (5 parcels) Fee (4 parcels)
TOTAL	31.37	10.31	41.68	28	

2.1.3 Reach 3 Ferraro Fields/Verdugo Wash Area of Griffith Park

Reach 3 begins at Ferraro Fields and ends at Brazil Street. It is approximately 1 mile long. Under the LPP, the Corps will construct a side channel along Ferraro Fields to divert water from the river. A stream will also be daylighted on the right bank of the river in the Zoo Drive area. Two smaller streams will be daylighted on the left bank. Daylighted streams will support a riparian fringe, open water and freshwater marsh at their confluence. In the Verdugo Wash confluence, the channel mouth would be widened and the south slope would be sloped back to the existing overbank elevation, thus creating a combined riparian and marsh community.

A total of 49 parcels (53.18 acres) will need to be acquired for Reach 3. A total of 10 parcels, 17.87 acres, are owned by the non-Federal sponsor. Of the 17.87 acres, 7.40 acres is within the existing LACDA right of way. The non-Federal sponsor will need to acquire 28 parcels totaling 26.35 acres from other public agencies and private parties within the reach. There are also 11 non-APN parcels, totaling 8.96 acres, which are within existing highway and street right of way. Six of the 11 parcels are within the Verdugo Wash area where the LPP would widen the channel, and the remaining five are in the area where the LPP would construct a side channel to divert water flows adjacent to where the 134 freeway connects with Interstate 5. Of these parcels, eight are believed to be within Caltrans right of way. For those parcels, it is likely the non-Federal sponsor will request a non-standard estate (perpetual ecosystem restoration easement) with rights to construct, operate and maintain the project. The other three non-APN parcels are within city road rights of way. For those parcels, the non-Federal sponsor will provide fee where it is the fee owner and acquire fee where a private entity is determined to be the owner of the underlying fee. If a public entity is determined to be the underlying fee

owner, the non-Federal sponsor may request to acquire a perpetual ecosystem restoration easement.

The following table lists the acreages needed for Reach 3 of the LPP:

	Acres outside of LACDA Boundary	Acres in LACDA Boundary	Total Acres needed for project including LACDA in Reach 3	Number of Parcels	Recommended Estates
Non Federal Sponsor	10.47	7.40	17.87	10	Fee
Public other than NFS	0	4.69	4.69	4	Fee
Private	21.35	0.31	21.66	24	Fee
Non-APN (owner not defined in gross appraisal)	8.96	0	8.96	11	Perpetual Easement
TOTAL	40.78	12.4	53.18	49	

2.1.4 Reach 4 Griffith Park

Reach 4 starts at Brazil Street and ends at Los Feliz Boulevard. It is 1.75 miles long. The restoration in this reach would daylight streams in eight areas, create a side channel through the Griffith Park Golf Course on the right side of the river, lower the Los Feliz Golf Course on the left bank to allow seasonal flooding, and provide a riparian habitat corridor. The storm drains in this reach will be opened and naturalized as tributaries within the right of way of the existing LACDA project and adjacent lands.

In this reach, 17 parcels (totaling 17.42 acres) are needed for the LPP. Eight parcels totaling 13.70 acres are already owned in fee by the non-Federal sponsor. Of those 13.70 acres, 1.59 acres is part of the existing LACDA footprint. The non-Federal sponsor will also need to acquire two parcels (0.60 acres) within the existing LACDA right of way from the LACFCD. Two parcels totaling 0.60 acres will need to be acquired in fee from private owners. In addition, a total of five parcels identified as necessary for the project do not have APNs, four within Caltrans right of way and one within the non-

Federal sponsor's road right of way. It is anticipated the non-Federal sponsor will request a lesser estate (perpetual ecosystem restoration easement) for the four parcels within Caltrans right of way. In this area, the LPP would divert river flows into a side channel and plant on the banks of the channel. For the non-APN parcel within existing City road right of way, the non-Federal sponsor will provide fee where it is determined to be the fee owner and acquire fee where a private entity is determined to be the fee owner; if it is determined that a public entity is the underlying fee owner, the non-Federal sponsor may request to acquire a perpetual ecosystem restoration easement.

The following table lists the acreages needed for Reach 4 of the LPP:

	Acres outside of LACDA Boundary	Acres in LACDA Boundary	Total Acres needed for project including LACDA in Reach 4	Number of Parcels	Recommended Estates
Non Federal Sponsor	12.11	1.59	13.70	8	Fee
Public other than NFS	0	.60	.60	2	Fee
Private	0	.41	.41	2	Fee
Non-APN (owner not defined in gross appraisal)	2.71	0	2.71	5	Perpetual Easement (4 parcels) Fee (1 parcel)
TOTAL	14.82	2.60	17.42	17	

2.1.5 Reach 5 Riverside Drive

Reach 5 starts at the Los Feliz Boulevard Bridge and ends at the Glendale Freeway. It is approximately 1.55 miles in length and the right bank would be modified from a trapezoidal bank to a vertical bank. This would increase the width of the soft bottom of the riverbed by over 100 feet. Overhanging vines will be planted on the top of the new bank. The left bank will be terraced and planted with herbaceous vegetation. Erosion measures will be taken by installing concrete-lined beds which would then be

planted with riparian vegetation. At the downstream end of this reach, the river will also be widened.

A total of 63 parcels totaling 32.05 acres are needed for this reach of the LPP. Of the 32.05 acres, 29.34 acres are within the existing LACDA right of way. The non-Federal sponsor will need to acquire 23 parcels totaling 9.92 acres within the LACDA boundary from the LACFCD and 8 parcels from private owners which are also within the existing LACDA footprint. There are also 2.40 acres, 16 parcels, without APNs. Two of the 16 parcels are within existing Caltrans highway rights of way and it is anticipated the non-Federal sponsor will request to acquire a lesser estate (perpetual ecosystem restoration easement) to plant riparian vegetation. The remaining 14 parcels are within existing City road rights of way which are under the City's control. The City will provide fee where it is the fee owner and acquire fee where a private entity is determined to be the owner of the underlying fee for the 14 parcels. If a public entity is determined to be the fee owner, the City may request to acquire a perpetual ecosystem restoration easement. In this area the channel walls will be modified from trapezoidal to vertical and bioengineered.

The following table lists the acreages needed for Reach 5 of the LPP:

	Acres outside of LACDA Boundary	Acres in LACDA Boundary	Total Acres needed for project including LACDA in Reach 5	Number of Parcels	Recommended Estates
Non Federal Sponsor	0	16.47	16.47	16	Fee
Public other than NFS	0	9.92	9.92	23	Fee
Private	0.31	2.95	3.26	8	Fee
Non-APN (owner not defined in gross appraisal)	0	2.40	2.40	16	Perpetual Easement (2 parcels) Fee (14 parcels)
TOTAL	2.71	29.34	32.05	63	

2.1.6 Reach 6 Taylor Yard

Reach 6 extends from the Glendale Freeway to the Interstate 5 freeway. It is approximately 2.34 miles in length. In this reach, the LPP includes riparian corridors and widening of the soft bottom river bed by over 300 feet into Taylor Yard with additional slope back to the overbank elevation along the length of the reach. At the upstream end of the reach, a back water wetland will be developed in the Bowtie parcel at river level. There will also be a small terraced area on the downstream end of the Bowtie parcel as the channel transitions into the widening at Taylor Yard. In this reach, the entirety of the right bank and a portion of the left bank of the river will also be restructured to support overhanging vines and other vegetation.

Reach 6 contains the parcel known as Taylor Yard, a key opportunity area. The Taylor Yard area is considered an important parcel in the study because it provides an opportunity for restoration of large contiguous expanses of riparian and aquatic habitat. The Taylor Yard area is also one of the main areas in the LPP where the channel will be widened and connectivity between the river and the historic floodplain will be restored. Widening of the channel will allow the river and overbank to approach more natural dynamics, enhancing riparian and in-stream habitat for plants and wildlife.

A total of 76 parcels are needed in this reach. The total acreage needed for this reach is 94.53 acres, of which 33.01 acres are within the existing LACDA project boundary. The non-Federal sponsor has ownership of 5 parcels (6.12 acres) within the existing LACDA project boundary. The non-Federal sponsor will need to acquire 28 parcels (44.88 acres, of which 6.04 acres are within the existing LACDA project boundary) from private owners and 22 parcels (40.71 acres, of which 20.85 acres are within the existing LACDA project boundary) under public ownership from the

California State Parks, the Mountains Recreation and Conservation Authority (MRCA) and the LACFCD. Twenty-one parcels do not have APNs and are part of existing highway or street right of way. It is anticipated that the non-Federal sponsor will request approval to acquire a lesser interest (perpetual ecosystem restoration easement), for 5 State-owned parcels (17.58 acres) at the Rio de Los Angeles State Park and for two of the 21 non-APN parcels which are within Caltrans highway rights of way, as discussed in Section 4, below. The remaining 19 non-APN parcels are within the LACDA right of way and at the end of the city streets. For these parcels, the City will provide fee where it is the fee owner and acquire fee where a private entity is determined to be the owner of the underlying fee. If a public entity is determined to be the owner of the underlying fee of a non-APN parcel, the City may request to acquire a perpetual ecosystem restoration easement.

In this reach the LPP calls for planting built into the walls of the channel.

As stated above, there is also one parcel within LACDA right of way owned in fee by the MRCA, a local government public entity established pursuant to the Joint Powers Act. Although the non-Federal sponsor will seek to acquire this small parcel in fee, it is possible the non-Federal sponsor may request approval of a lesser estate (perpetual ecosystem restoration easement) as discussed in Section 4.

The following table lists the acreages for Reach 6 of the LPP:

	Acres outside of LACDA Boundary	Acres in LACDA Boundary	Total Acres needed for project including LACDA in Reach 6	Number of Parcels	Recommended Estates
Non Federal Sponsor	0	6.12	6.12	5	Fee
Public other than NFS	19.86	20.85	40.71	22	Perpetual Easement (5 parcels) Fee (17 parcels)
Private	38.84	6.04	44.88	28	Fee
Non-APN (owner not defined in gross appraisal)	0	2.82	2.82	21	Perpetual Easement (2 parcels) Fee (19 parcels)
TOTAL	61.52	33.01	94.53	76	

2.1.7 Reach 7 Arroyo Seco/LA State Historic Park

Reach 7 extends from the Interstate 5 freeway downstream to Main Street. It is about 1 mile in length. In this reach of the project the Arroyo Seco tributary will be restored with riparian habitat. The stream itself will have its banks and bed softened for approximately one-half mile upstream. At the confluence of the Arroyo Seco and the River a backwater riparian wetland will be established. Downstream, freshwater marsh would be restored at the LA State Historic Park, and the right bank of the river would be terraced to connect the restored area with the river. The railroad line along the bank would be trestled to allow for the terracing (further discussed in Section 16 below).

A total of 81 parcels are required for this reach. The total acreage needed for this reach is 48.11 acres, of which 28.58 acres are within the existing LACDA right of way. The non-Federal sponsor owns 23 parcels in this reach totaling 24.22 acres. Of the 24.22 acres, 22.92 acres are within the existing LACDA right of way. In this reach, 28 parcels under private ownership will need to be acquired. Approximately 1.37 acres are within the LACDA right of way, and 1.2 acres are out of the existing LACDA right of way footprint. The non-Federal sponsor will need to acquire 10 parcels totaling 12.24 acres

from the Los Angeles County Metropolitan Transportation Authority (LACMTA), LACFCD, MRCA, and California State Parks. It is anticipated the non-Federal sponsor will contemplate a lesser estate (perpetual ecosystem restoration easement) for parcels owned by LACMTA in which we plan to plant riparian vegetation within parts of the right of way without affecting the operations of the railroad track, and to daylight a stream which will run below the tracks. Although the non-Federal sponsor will seek to acquire fee title for the two parcels owned by LACMTA where we plan to trestle the railroad track and daylight a stream on the west bank of the channel in this reach, it is possible the non-Federal sponsor may request approval of a lesser estate (perpetual ecosystem restoration easement). It is also contemplated the non-Federal sponsor will request a lesser estate (perpetual ecosystem restoration easement) for lands owned by the California State Parks at the Los Angeles State Historic Park. Lastly, there are 20 non-APN parcels identified as being part of existing highway and road right of way. It is contemplated the non-Federal sponsor will request a lesser estate (perpetual ecosystem restoration easement) for six of the 20 non-APN parcels, which have been identified as within Caltrans highway right of way. The remaining 14 of the 20 non-APN parcels are within existing City road right of way. The non-Federal sponsor will provide fee where it is the fee owner and acquire fee where a private entity is determined to be the owner of the underlying fee. If a public entity is determined to be the owner of the underlying fee, the non-Federal sponsor may request to acquire a perpetual ecosystem restoration easement.

Lastly, this reach also has one parcel within LACDA right of way owned in fee by the MRCA, a local government public entity established pursuant to the Joint Powers Act. Although the non-Federal sponsor will seek to acquire this small parcel in fee, it is

possible the non-Federal sponsor may request approval of a lesser estate (perpetual ecosystem restoration easement).

The following table lists the acreages required for Reach 7 of the LPP:

	Acres outside of LACDA Boundary	Acres in LACDA Boundary	Total Acres needed for project including LACDA in Reach 7	Number of Parcels	Recommended Estate
Non Federal Sponsor	1.30	22.92	24.22	23	Fee
Public other than NFS	7.95	4.29	12.24	10	Perpetual Easement
Private	1.2	1.37	2.57	28	Fee
Non-APN (owner not defined in general appraisal)	8.71	0.37	9.08	20	Fee
TOTAL	19.53	28.58	48.11	81	

2.1.8 Reach 8 Los Angeles Trailer and Container Intermodal Facility (LATC)

This reach extends from Main Street to First Street. It is approximately 1 mile in length and will restore riparian habitat, restore a historic wash, and create a fresh water marsh at the Los Angeles Trailer and Container Intermodal Facility (LATC). The channel would be changed from concrete to soft bottom and the left bank of the channel adjacent to the LATC site would be removed. The marsh would extend into the LATC site 500 feet, with the riparian area extending another 1,000 feet into the property. A trestle (further discussed in Section 16 below) will be required to allow the active rail lines to remain in place and create connectivity between the river and the adjacent restored lands. In this reach, the right bank of the channel upstream of LATC and the left bank of the channel downstream of LATC will be modified to incorporate terracing and the planting of riparian vegetation.

LATC is a key opportunity area due to its location, close proximity to Downtown Los Angeles, lot size, number of owners and lack of buildings. It is also one of two

parcels identified in the LPP which provide an opportunity to restore large expanses of riparian and aquatic habitat which is rare in highly-urbanized Los Angeles. It is a key site because it allows for restoration of the historic floodplain including restoration of a historic wash marsh and riparian habitat.

In this reach, 51 parcels are required for the project (141.7 acres, of which 25.95 acres are within the existing LACDA project boundary). The non-Federal sponsor owns 8 parcels totaling 25.40 acres which are part of the existing LACDA right of way. Eleven parcels are owned by the Los Angeles County Metropolitan Transportation Authority (LACMTA) for a total of 7.68 acres. There are active rail lines located on the 11 parcels owned by the LACMTA; currently we are assuming the non-Federal sponsor will acquire fee for two of the parcels where the river would be reconnected to the LATC, with the non-Federal sponsor trestling the active railroad tracks adjacent to the LATC. We anticipate the non-Federal sponsor will propose to acquire a lesser estate (perpetual ecosystem restoration easement) for the remaining nine parcels in Reach 8 outside of trestled railroad tracks to plant vegetation in part of the right of way. A total of 25 privately owned parcels (108.08 acres) will need to be acquired in fee. Eleven of the 25 parcels make up the area known as the LATC. There are also six non-APNs that are within existing City road right of way and one non-APN parcel that is within Caltrans right of way. It is anticipated the non-Federal sponsor will request to provide a lesser estate (perpetual ecosystem restoration easement) for the one parcel within Caltrans right of way. For the parcels in City road rights of way, the non-Federal sponsor will provide fee where it is the fee owner and acquire fee where a private entity is determined to be the owner of the underlying fee. If a public entity is determined to be the owner of the

underlying fee for a non-APN parcel, the non-Federal sponsor may request to acquire a perpetual ecosystem restoration easement.

The following table lists the acreages needed for Reach 8 of the LPP:

	Acres outside of LACDA Boundary	Acres in LACDA Boundary	Total Acres needed for project including LACDA in Reach 8	Number of Parcels	Recommended Estates
Non Federal Sponsor	0	25.40	25.40	8	Fee
Public other than NFS	7.13	0.55	7.68	11	Perpetual Easement
Private	108.08	0	108.08	25	Fee
Non-APN (owner not defined in gross appraisal)	0.21	0.33	0.54	7	Perpetual Easement (1 parcel) Fee (6 parcels)
TOTAL	115.75	25.95	141.7	51	

2.2 Other lands and rights of way

The LPP is designed with specific project features on the lands discussed above. In addition to the lands identified for construction and operation of specific features, the project also includes a general measure for removal of invasive species throughout the features and existing channel and lower tributary bottom areas, and the project requires management of invasives throughout the same area as part of the non-Federal sponsor's operation and maintenance of the project. Therefore, the LERRD required for the project includes 236.66 acres within the channel and tributary bottom areas (both hard and soft bottom) that is not required for other specific restoration measures. These areas are within the existing LACDA right of way and are already subject to the LACDA project encumbrances (generally flood risk management easement), as further described below in Section 5. The existing interests are not considered sufficient to allow for the removal of

invasive species vegetation from the channel on a recurring basis to ensure restoration benefits throughout the life of the project.

2.2.1 Rights of way to be further defined during PED

Geotechnical analysis has identified that tie backs or counterforts may be determined to be needed during the detailed design (PED) phase to support features such as vertical walls. A scouring analysis and other technical evaluations are scheduled to take place during detailed design which may modify the identified right of way required to construct and maintain such features. A permanent easement (such as a flood protection levee or rock anchor easement) is the likely interest, but the interest and estate required will be determined once the feature(s) has (/have) been further designed and analyzed.

In addition, design refinements for locations of measures such as wildlife access slopes and maintenance ramps could in some cases require minor additional real estate interests within the existing LACDA right of way if they extend into areas not included in the identified restoration footprint. Although such design refinements are expected to be located within the identified restoration footprint, specific locations for such design refinements will be further developed during the detailed design phase, as they are dependent on data and hydraulic analysis to be generated during that phase to ensure they are consistent with the constraints of the restoration project, including the function and conveyance of the existing LACDA project. These refinements may require small portions of land in fee with low remaining value, as the affected lands are already subject to the LACDA project encumbrances (generally flood risk management easement), as further described below in Section 5.

2.3 Staging areas

Throughout the 8 reaches of the project, potential staging areas have been identified. In most cases, the staging areas identified are areas the non-Federal sponsor owns in fee. The LPP identifies the non-Federal sponsor already owns approximately 32 acres in various locations of the project area that would be used for staging areas.

Currently, the LPP identifies the following additional staging areas to be acquired through a temporary work area easement:

-In Reach 4 and 5, three parcels (11.77 acres).

-In Reach 5, one parcel (three acres) (site known as North East Interceptor Sewer 2 Shaft Site).

-In Reach 6, parcels totaling 10 acres owned by Los Angeles Community College District, State of California, and a private owner.

-In Reach 7, four acres in private ownership.

-In Reach 8, 6.5 acres in private ownership.

Additionally, in some cases in Reaches 3, 4, and 6, the study team has identified potential to use lands to be acquired in fee for restoration as staging areas prior to construction at those sites if the timeline permits. These areas total 32.14 acres.

2.4 Borrow and Disposal Site Assumptions

No LERRD for borrow and disposal sites has been identified as required for this project.

2.4.1 Borrow sites

Borrow material for construction is expected to come from within the project footprint whenever practicable; however, to the extent that small amounts of borrow material are needed from outside the project footprint, it will be supplied by the

construction contractor through use of a commercial site or sites. Because of the urbanized character of the Los Angeles region and the length of project construction (15 years), borrow from a designated borrow site (as LERRD) is not anticipated to be practicable.

2.4.2 Borrow required for future maintenance

At this time, borrow material is not anticipated to be required for future maintenance. However, if monitoring identifies insufficient substrate being retained in the system to support aquatic habitat (e.g., sufficient cobble/gravel for native fish habitat compared), adaptive management may include import of such substrate. According to the Monitoring and Adaptive Management Plan (Appendix H), if import of substrate is required more than once during the monitoring period, adjustments to O&M may be made to require substrate import. This substrate would be anticipated to come from a commercial source as well.

2.4.3 Disposal

Project assumptions include a least-cost disposal plan that includes disposal capacity for excavated earth material exceeding quantities re-used for project purposes being provided by the contractor through use commercial facilities. Disposal facilities were limited to a 20-mile radius in part to reduce/minimize air quality impacts. The cost for commercial disposal facilities was captured in the cost appendix as a construction cost item.

2.4.4 Disposal required for future maintenance

No disposal sites are anticipated to be required for maintenance. Maintenance activities would generally gather debris and trash for commercial disposal.

All assumptions associated with borrow and disposals are captured in the risk register for the project.

2.4.5. Summary

The Figure below provides a summary of the LERRD required for the LPP.

Fig. 1 – Summary Table – acreages and ownerships

	Acres Outside LACDA Boundary	**Acres Within LACDA Boundary**	**Total Acreage**
Lands Required for Specific Restoration Measures			
Non-Federal Sponsor owned	72.98	101.69	174.67
Public parcels to be acquired (Fee)	15.08	42.14	57.22
State parcels to be acquired with Ecosystem Restoration Easement (Non-Standard Estates)	19.86	0.07	19.93
Non-APN parcels (Owners not defined by gross appraisal)	38.57	5.92	44.49
Private parcels to be acquired (Fee)	169.78	11.16	180.94
Sub-Total	**322.19**	**155.06**	**477.25**
Lands Identified as Channel Bottom Needed for General Restoration Measures*			
Soft Bottom Channel	0	145.64	145.64
Hard Bottom Channel	0	91.02	91.02
Sub-Total	**0**	**236.66**	**236.66**
Staging Area			
Non-Federal Sponsor owned	32	0	32
Staging areas within lands being acquired for restoration (no additional credit)**	32.14	0	32.14
Temporary Work Area Easement (TWAE) to be acquired	35.27	0	35.27
Sub-Total	**99.41(67.27 for TWAE credit)**	**0**	**99.41 (67.27 for TWAE credit)**
Other Rights of Way (for design refinements)	TBD	TBD	TBD
Grand Total	389.46	391.72	781.18

* This is the channel bottom acreage required for general measures for invasives removal during construction and operation and maintenance of the project that is not otherwise required for specific restoration features.

**This acreage is included in fee acquisitions under "lands required for restoration" above and would not be additionally credited for staging area use.

3. SPONSOR-OWNED LERRD

The non-Federal sponsor for the Los Angeles River Ecosystem Restoration Study is the City of Los Angeles. The non-Federal sponsor currently owns approximately 96 parcels of land, 345.93 acres out of the 713.91 acres needed, for the Locally Preferred Plan. Of the 345.93 acres owned by the non-Federal sponsor, 272.95 acres are within the existing LACDA project boundary. The 96 parcels, although owned by the City of Los Angeles, are managed by different departments within the City. The 96 parcels do not include non-APN parcels for which the City may have fee or easement interest, as described in Section 1 and further discussed in Section 4. Ownership of these parcels will be further defined during PED.

4. PROPOSED NON-STANDARD ESTATES

The standard estate for an ecosystem restoration project is fee simple. The Los Angeles District has reviewed the capability of the non-Federal sponsor to acquire fee simple and assessed that there are instances where LER required is owned by a public entity and where acquisition of a fee simple estate may be infeasible for the non-Federal sponsor. As briefly discussed in Section 2 above, State Parks, LACMTA, Caltrans, and the MRCA are currently the fee owners of some of the LER required to implement the project.

We have reviewed the standard estates provided in exhibit 5-29 to EC 405-1-11, which have been incorporated into ER 405-1-11, and determined that the standard estates provided, other than the fee simple estate, do not include sufficient rights to establish, operate and maintain an ecosystem restoration project. Based upon preliminary discussions with the non-Federal sponsor, we understand that fee simple cannot be acquired in some locations which are owned by public entities; therefore, we anticipate

that the non-Federal sponsor will request approval to acquire a perpetual ecosystem restoration easement for cases in which fee simple estate cannot be acquired. ER 405-1-12, while indicating fee as the appropriate estate for ecosystem restoration, allows that a lesser, or easement estate, may be appropriate based on the extent of interest required for the operation or requirements of a project. An easement estate will serve the intended project purpose, and will not increase costs nor result in potential liability of the Government. A perpetual ecosystem restoration easement would provide sufficient perpetual rights necessary to construct, operate, and maintain the affected project features. Because each site is unique, we anticipate that sites may require language that takes into consideration specific site requirements. Where the lands are also required for compatible passive recreation features such as trails, the interest for construction, operation, and maintenance of those features would also be proposed as part of the specific easement language. We acknowledge that each site-specific perpetual easement would require careful legal and policy review to ensure that appropriate prohibitions on conflicting activities are included, and we are prepared to work closely with the non-Federal sponsor to ensure that project needs and the federal investment are satisfied. This REP presents the non-standard estates based upon the assumption that each perpetual ecosystem restoration easement will require separate Headquarters US Army Corps of Engineers (HQUSACE) and South Pacific Division (SPD) approval. A description of the needs and requirements for each public-entity-owned site for which a non-standard estate is proposed is below.

With respect to the lands owned by California State Parks, we anticipate that the non-Federal sponsor will request approval to acquire a perpetual ecosystem restoration easement. State Parks is a state entity established pursuant to the California Public

Resources Code, entrusted with the jurisdiction and management of public lands for the benefit of the people of the State and whose stated mission includes preservation of ". . . the state's . . .biological diversity, protecting its most valued natural and cultural resources . . .." Granting of a fee simple estate to the non-Federal sponsor for LER required in Reaches 6 and 7 at the Rio de Los Angeles State Park and the Los Angeles State Historic Park would not be consistent with State Parks' mission. Fee acquisition of these lands is not considered practicable as the state has acquired the lands for use as a state park and would not allow for the negotiated sale of the property. The non-Federal sponsor has indicated that, as a practical matter, it generally cannot condemn lands owned by or under the jurisdiction of the State of California as discussed further in Section 13.

With respect to the proposed perpetual ecosystem restoration easement, State Parks has determined that ecosystem restoration is compatible with its park land and supports the implementation of the ecosystem restoration features proposed to be constructed at the two State Park areas identified. Therefore, a perpetual ecosystem restoration easement would be the most efficient means of satisfying the real estate requirements necessary to support the project. Both the Corps and non-Federal sponsor continue to coordinate with the State Parks on specific perpetual ecosystem restoration easement language. Sample language attached to this document as Attachment "A" has been provided to State Parks for discussion purposes. As required by ER 405-1-12, the specific language of the proposed perpetual ecosystem restoration easement, once fully negotiated, will be submitted for approval separate from this Real Estate Plan to HQUSACE through SPD.

The second proposed non-standard estate is for a site-specific perpetual ecosystem restoration easement on land owned by the LACMTA in Reaches 7 and 8. In Reach 7, the project proposes to daylight a stream to run below the LACMTA tracks outside of the trestle component, described in section 2.1.7, and in Reach 8, proposes to plant riparian vegetation. Where relocation of active rail lines to trestles at grade has been identified as required to facilitate construction of restoration features, as described in Section 17, the non-Federal sponsor will pursue acquisition of fee simple underlying LER, but may need to acquire a non-standard perpetual ecosystem restoration easement, if fee simple acquisition is too difficult to obtain through negotiated transaction. As required by ER 405-1-12, the specific language of a proposed ecosystem restoration easement, once fully negotiated, will be submitted for approval separate from this Real Estate Plan to HQUSACE through SPD.

The third proposed non-standard estate is for a site-specific perpetual ecosystem restoration easement to be acquired on lands which, based on the best available information,[3] we understand are owned in fee by the California Department of Transportation (Caltrans). The specific parcels at issue are located adjacent to freeway on-ramps and underneath the freeway overpasses. The areas of Caltrans ownership include parcels in all reaches, mainly needed for establishment of riparian planting. Additionally, in Reach 3, LER required includes areas for widening of the confluence of the river with the Verdugo Wash within and adjacent to existing LACDA right of way, and in Reaches 3 and 4, for diversion of tributary and river flow into small side

[3] Because the subject parcels do not have APNs assigned to them, it was not possible to identify an owner as part of development of the Gross Appraisal.

channels.[4] As required by ER 405-1-12, the specific language of a proposed ecosystem restoration easement, once fully negotiated, will be submitted for approval separate from this Real Estate Plan to HQUSACE through SPD. In limited circumstances, a perpetual ecosystem restoration easement may also be proposed for parcels without APNs that are part of existing City street right of way. For these parcels, the City may be the fee owner or hold an easement. Where the City is determined to be the fee owner, the City will provide the fee interest to the project, and where a private entity is determined to own the underlying fee, the City will acquire and provide the fee interest. However, if a public entity is determined to be the fee owner, the City may request to acquire a perpetual ecosystem restoration easement. As required by ER 405-1-12, the specific language of a proposed ecosystem restoration easement, once fully negotiated, will be submitted for approval separate from this Real Estate Plan to HQUSACE through SPD.

Lastly, on two small parcels within the LACDA right of way in Reach 6 and 7, the sponsor may request to acquire a site-specific perpetual ecosystem restoration easement from MRCA, the fee owner, to implement alterations to the channel wall to facilitate implanting of vegetation. MRCA provides natural resources and scientific expertise and other educational and park services, and is one of the lead agencies for the revitalization of the Los Angeles River. In the MRCA-owned areas identified as LER, lands are used primarily for pocket parks along the river, outside the LACDA right of way. The two MRCA-owned areas identified as LER required for the project are the portions of such parcels that extend into the LACDA right of way. While the non-Federal sponsor will make best efforts to acquire the standard fee estate for land owned by

[4] It is anticipated that additional LER may be identified that would be necessary for sub-surface tiebacks and/or counter forts for which a standard estate, rock anchor easement, may be acquired, as identified in Section 2.2, under *"Rights of way to be further defined during PED."* It is not anticipated at this time that a non-standard estate would be required for these areas.

MRCA, the non-Federal sponsor may request approval to acquire a site-specific perpetual ecosystem restoration easement in lieu of fee. MRCA is a local joint powers entity dedicated to the preservation and management of local open space and parkland, watershed, lands, trails and wildlife habitat. As a public entity managing a recreational zone in this stretch of the river, it may not support the sale of land in fee. If negotiated acquisition of fee simple is unsuccessful, the Corps will, as required by ER 405-1-12, submit the specific language of a proposed ecosystem restoration easement, once fully negotiated, for approval to HQUSACE through SPD.

5. EXISTING FEDERAL PROJECT

Where there is an existing Federal project within the area proposed for a new project, such lands must be identified, and the sufficiency of those lands for the proposed project must be evaluated. In addition, the value of lands provided as an item of local cooperation for a previous Federal project should not be included in the valuation of lands for the current project, and no credit may be afforded for such interests.[5] In this case, the existing project footprint/boundary for LACDA overlaps with the lands required for the restoration project LPP. The interests previously provided for the LACDA project are not sufficient to support the full construction, operation and maintenance of the ecosystem restoration project because they are less than fee, but they do not conflict with the restoration project. The interests previously provided by the LACFCD for the flood risk management project would not be required to be provided by or credited to the City as restoration project sponsor. The underlying fee ownership would generally be needed to support the construction, operation and maintenance of restoration features of a

[5] This is the rule regardless of whether the sponsors of the existing and proposed projects are different, as they are in this case.

restoration project, and that is the interest that would be required to be provided. Valuation is discussed briefly at the end of this section.[6]

As described above, the study area includes part of the existing LACDA flood risk management project. The portion of LACDA within the study area was constructed by the Corps from the 1930s through the 1950s with the partnership of the LACFCD. The existing LACDA project within the study area consists of channel and levee, some reaches with stone side slopes and other reaches with concrete side slopes. A portion of the lands within the LACDA right of way within the study area would be included in the LPP features, for the specific restoration measures as well as the general measure for invasives removal and management, as discussed in Section 2, above.

The LACDA project in the study area was constructed under several authorizations with evolving requirements. Portions of the project were begun under the Emergency Relief Acts, under which the LACFCD was required to make a cash contribution and provide rights of way. The project was further authorized and expanded under the Flood Control Acts (FCAs) of the 1930s and 1940s. According to the Flood Control Act of June 22, 1936, LACFCD was responsible for acquiring all lands, easements and rights of way for the construction of the project, some of which it already held at the time of the project.[7] Although certain lands for the LACDA project outside

[6] The credit to be afforded to the non-Federal sponsor for the value of LERRD required to be provided for the project is subject to limitations specific to this project. This project includes a policy exception allowing the sponsor to forgo reimbursement for LERRD exceeding its statutory share, and it also considers alternative cost sharing that includes a limitation on LERRD credit to be afforded to the sponsor. These issues are further described in Section 20 of this REP and in Chapter 7 of the IFR.

[7] The Operation, Maintenance, Repair, Rehabilitation, and Replacement (OMRRR) Manual for the LACDA project, LADM No. 1130-2-13, summarizes the history of the real estate and operations and maintenance responsibility changes in the early years of the project. The June 22, 1936, Flood Control Act directed the local sponsor to provide all LER needed for the construction of the project. However, the action of June 28, 1938 amended this provision to direct that title to all LER should be acquired by the United States or obtained by the local sponsor and conveyed to the United States, and that the United States should operate and maintain the system. According to the manual, in response to the 1938 law, the United

the study area, such as lands within flood control basins, were acquired in fee and are owned by the United States, a lesser interest or right was generally acquired for construction and operation of channels, and the existing LACDA project area within the study area contains a patchwork of ownerships, easements, and permits.

Due to the age of the existing LACDA project, the Corps does not have detailed records showing what specific interests were required to be provided for the project as the necessary "rights of way" within the LACDA boundary in the study area. The understanding at this time is that for most parcels, LACFCD, and in a few cases both LACFCD and the United States, hold(s) an easement "for the purpose of the construction and maintenance thereon of a channel and appurtenant works to carry and confine the flood and storm waters of the Los Angeles River and its tributaries in, over and across [the described real property]" or similar language. In other cases, LACFCD is the fee owner of parcels within the existing project boundary in the study area, but based on the rest of the LACFCD ownerships in the study area and other channel reaches, it does not appear fee was required to be provided for LACDA.[8] Where the City of Los Angeles is the fee owner of LACDA lands, as it is for a portion of the existing LACDA project area within the study area as described in Section 3 above, it granted permits for construction and long-term operation of the flood risk management project rather than an easement,

---

States retained or took on operation and maintenance responsibilities for facilities completed after the date of the law and arranged for responsibilities for completed facilities to be transferred back to the Corps. The FCA of 1941 repealed certain parts of the 1938 law and reinstated the parts of the June 1936 law directing local sponsors to operate and maintain the project after completion, but the Corps continued to operate certain features. The FCA of 1941 approved the general comprehensive plan for the LACDA project. Other FCAs further amended and appropriated funds for the LACDA project.

[8] If additional research during project design and implementation identifies, contrary to the current understanding, that LACFCD was required to provide the fee interest for the LACDA project in the areas where it owns fee, the non-Federal sponsor for the restoration project would not be required to acquire, nor would it be credited for, the underlying fee interest in the areas with LACFCD fee ownership within the LACDA boundary.

and committed under City ordinance that river lands shall not be transferred from City ownership. Permit language from the City to the County and United States is similar to the easement language. These ownerships and interests will be confirmed through the course of the acquisition process.

The easements and permits provided for the LACDA project by LACFCD would not be sufficient to support construction and operation of all aspects of an ecosystem restoration project. The underlying fee ownership would generally be needed to support a restoration project, and that is the interest that would be required to be provided. This remaining interest has a very low value compared to unencumbered fee. Although a detailed examination of all easements, permits, and other rights in land for existing LACDA LER has not been conducted, as noted above, the easements reviewed do not contain language that would directly conflict with an ecosystem restoration project. The Corps is in the process of a longer-term effort with LACFCD to assess rights in the portion of the river the Corps must OMRRR and ensure that the Corps has adequate assignment of rights from LACFCD. Compatibility with the purpose of the existing project as a flood risk management channel is a central constraint of the proposed project alternatives, and the two OMRRR manuals will be complementary.

The valuation of LERRD for this project excludes the value of the interests and rights in land (the easement interests and permit rights) previously provided for the LACDA project or held by the Federal government. To avoid "double-counting" lands previously provided for the LACDA project, the City, as sponsor of the restoration project, will be required to provide the underlying fee interest to support the restoration project, with LACFCD (and the United States in some limited cases) continuing to hold

the existing easements and permits. This encumbrance and previous provision of LERRD is reflected in the land valuation conducted for these parcels in the Gross Appraisal.

6. FEDERALLY OWNED LAND

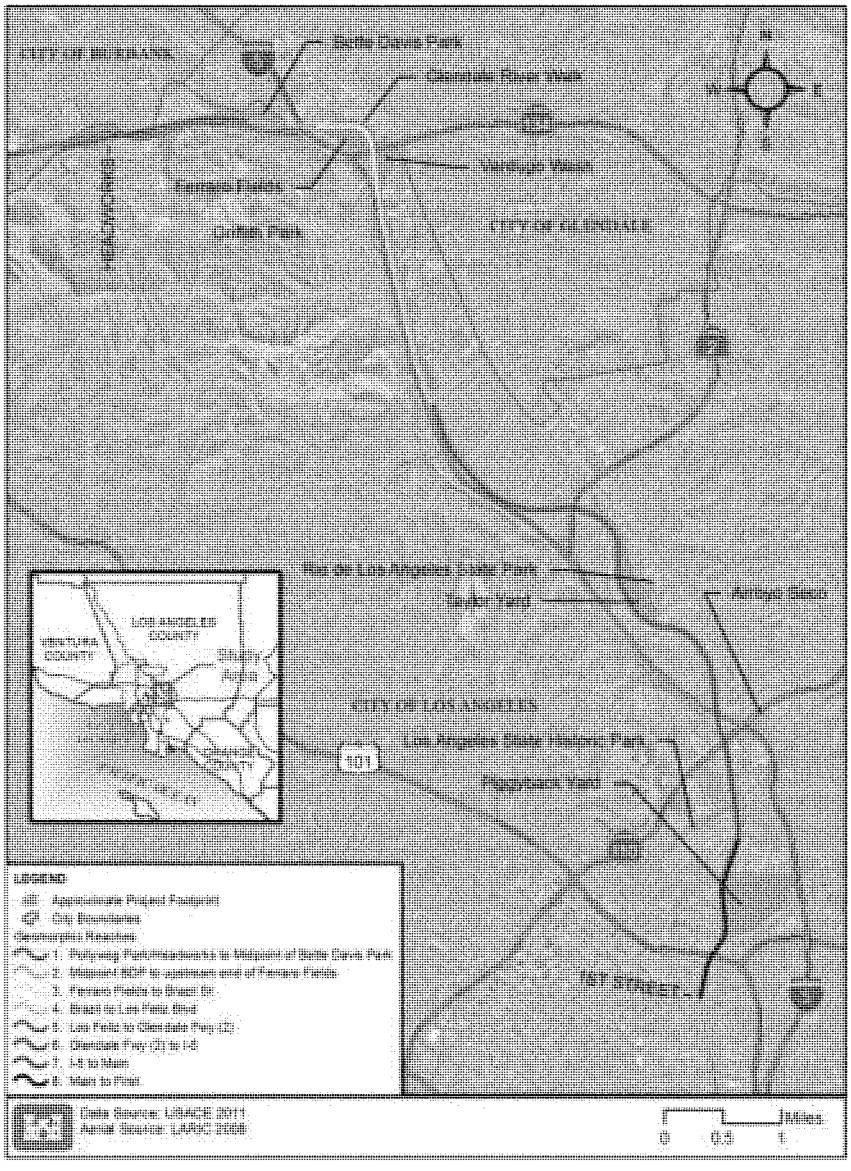
Although the Corps has operation and maintenance responsibility for LACDA in all 8 reaches of the Los Angeles River within the study area, no land is owned in fee by the United States. As discussed in Section 5 above, in some cases the United States has easements that were transferred from the LACFCD. In other cases where the study non-Federal sponsor, City of Los Angeles, has ownership within the existing Los Angeles River, permits were issued to both the LACFCD and the United States to construct, operate, and maintain the LACDA, as discussed in Section 5 above. The value of interests and rights previously provided for the LACDA project or held by the United States is excluded from the LERRD cost estimate, and no credit shall be afforded for such interests and rights previously provided or held by the United States.

7. EXTENT OF NAVIGATIONAL SERVITUDE

Navigational servitude is the dominant right of the Government under the Commerce Clause of the U.S. Constitution that allows use, control and regulation of navigable waters of the United States and the submerged lands.

Exercise of Federal navigational servitude is not applicable to this project and is not being invoked.

8. MAP



This map shows the overall project. More detailed maps by reach are included at the end of this Real Estate Plan as Attachment "B."

9. EXTENT OF INDUCED FLOODING

As stated in the Hydrology and Hydraulics Appendix, the restoration project will not create induced flooding compared to existing conditions. The study screened out any alternatives that adversely impacted the water surface elevation in a way that could not be addressed through detailed design.

While initial assessment by the Hydrology and Hydraulics Branch of the Engineering Division identified that an increase in water surface elevation could occur at transition areas (areas where the channel has geometric changes (transitioning from trapezoidal to rectangular or from a widened section to a narrow section)) or changes in construction material (transitioning between soft-bottom and concrete) in the final array of alternatives, including the LPP, any change in water surface in the transition areas will be avoided through design refinements to the project modifications to channel geometry and/or avoidance of introduction of vegetation and enforcing requirements limiting vegetation growth in those areas. With implementation of such design refinements, there will be no increase in flood damages as compared to existing conditions. Therefore, no flooding would be induced by the project.

10. BASELINE COST ESTIMATE

The Baseline Cost Estimate for Real Estate (BCERE) is presented below. A gross appraisal of the LPP was completed, which forms the basis for the Lands portion of the BCERE. The BCERE also includes an estimate of administrative and incidental costs associated with the acquisition of the real estate required for the project. The incidental costs include those costs associated with title work, appraisals and their review, review of documents, review of P.L. 91-646 actions, legal support and other costs associated with acquisition and provision of LERRD required for the project. The BCERE also includes

the estimate of costs for facility/utility relocations currently expected to be required for the project.

The BCERE includes contingencies for lands and relocations. A contingency was added to the estimated land costs pursuant to information provided by the Corps appraiser during the gross appraisal process. The estimate and contingency for the sponsor's costs of constructing facility/utility relocations was provided by the Corps' Engineering Division. The costs of preconstruction engineering and design (PED) and construction management for relocations were calculated separately and are thus displayed as a sub-line item in the table below. Note that the cost shown below is the Estimated Cost using 2014 year price levels rather than the First Cost of LERRD (including PED and Construction Management) shown in the IFR's cost apportionment tables. The table below includes references to the different accounting codes the Corps uses to organize cost estimates for Civil Works. Those accounting codes are known as the "Work Breakdown Structure" (WBS).

Locally Preferred Plan	(LERRDs)[9]	Contingency%[10]	Contingency Value
Non-Federal Sponsor Cost			
Land and Damages (01)			
Lands	$402,649,086	15.1%	$60,939,573
PL 91-646 Entitlements	$22,617,000	15.1%	$3,423,006
Non-Federal Admin	$16,141,875	15.1%	$2,443,018
Sub-Total	$441,407,961	15.1%	$66,805,597
Facility/Utility Relocations (02)			
Relocations Facility/Utility	$165,624,000	35.5%	$58,746,000
PED - Relocations[11]	$10,412,422	36.7%	$3,821,359
Construction Management - Relocations[12]	$5,419,549	36.6%	$1,983,555
Sub-Total	$181,455,971		$64,550,914
Total Non-Federal Cost	$ 754,220,443		
Federal Cost			
Federal Admin.[13]	$5,380,625	15.1%	$814,339
Total Federal Cost	$ 6,194,964		
Total Real Estate	$ 760,415,407		

[9] BCERE shows the estimated cost for LERRD and Federal administrative cost using 2014 year price levels. According to ER 405-1-12, Section 12-18, a Baseline Cost estimate for Real Estate (BCERE) is the estimated cost for LERRD. The BCERE includes Fair Market Value of LER required for the project, cost of PL 91-646 entitlements, incidental cost for both the Federal government and the sponsor, and estimated risk based contingencies.

[10] Contingencies are rounded to the tenth of a percent for the table. The actual contingency used to come up with the contingency is 15.1346608% for the Lands and Damages (01) account and 35.4694971% for the Relocations (02) account.

[11] This cost is shown in the 30 account in the cost tables by WBS in the IFR and Cost Appendix.

[12] This cost is shown in the 31 account in the cost tables by WBS in the IFR and Cost Appendix.

[13] Federal administrative costs are part of the overall real estate costs and part of the 01 account but not part of sponsor LERRD requirements.

11. PL 91-646 RELOCATION ASSISTANCE BENEFITS

Currently, the LPP identifies displacement of businesses in Reaches 3, 7, and 8 of the project. In Reach 3, where the project calls for the widening of the Verdugo Wash confluence with the river, 11 businesses have been identified as being displaced due to the project features. These businesses currently consist of a recycle plant, yogurt manufacturer, window and door manufacturing plant, entertainment lighting company, film industry rental equipment business and a large scale printer. In Reach 7, two buildings have been identified for acquisition, and the businesses they house would be displaced in order to create connectivity between the river and Los Angeles State Historic Park. Reach 8 has land that is leased out for a concrete recycling plant and windshield repair shops, which would be displaced in addition to the LATC facility discussed in facility relocations below.

The non-Federal sponsor is aware of and will comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Act of 1970, Public Law 91-646, as amended, in acquiring the lands, easements and rights-of-way and performing relocations. According to Public Law 91-646, each business is entitled to search expense payments not to exceed $2,000, reestablishment expenses not to exceed $25,000, moving costs, and lost revenue. Preliminary relocation costs for Reach 3, 7, and 8 total approximately $26,032,000. These estimates were based on information provided for Reaches 3 and 7 by contract appraisers hired by the non-Federal sponsor and data acquired by the Corps for Reach 8. A preliminary inventory was put together by internet and visual research (driving past the businesses), as well as moving-companies providing average costs for moving office and specialized equipment. Databases were also used in formulating the final PL 91-646 entitlements estimates.

12. DESCRIPTION OF PRESENT OR ANTICIPATED MINERAL ACTIVITY

There are no present or anticipated mineral activities in the proposed project area.

13. PROJECT SPONSOR'S LAND ACQUISITION ABILITY

A thorough assessment of the non-Federal sponsor's legal and professional capability and experience to acquire and provide the LER has been completed through the Assessment of Non-Federal Sponsor's Real Estate Acquisition Capability, which is in the format prescribed in ER 405-1-12, Chapter 12 & Appendix 12-E. Based on the information provided by the non-Federal sponsor, the District's overall assessment is that the non-Federal sponsor is "anticipated to be highly capable." The assessment was coordinated with the non-Federal sponsor and is attached to the real estate plan as Attachment C. The District's assessment is based upon the overall capability to acquire the LER required and perform the necessary relocations. The District supports this assessment, acknowledging that the non-Federal sponsor is limited in its capacity to acquire the fee simple estate for LER required for the project on certain lands.

The non-Federal sponsor has limited condemnation authority that does not extend to all lands. The eminent domain provisions of the California Code of Civil Procedure do not contain specific authority that would allow the non-Federal sponsor to acquire for ecosystem restoration purposes land owned by the State of California, including parcels owned by Caltrans or State Parks, and they create presumptions that the non-Federal sponsor has accurately concluded would preclude it from being able to take a fee estate in these parcels.

Section 1240.610 of the California Code of Civil Procedure permits generally that the power of eminent domain may be exercised to acquire property that is already appropriated to public use "if the use for which the property sought is to be taken is a

more necessary public use than the use to which the property is appropriated." Other provisions of the Code further limit the exercise of this authority by creating presumptions affecting the burden of proof. Section 1240.640 states that "[w]here property has been appropriated to public use by the state, the use thereof by the state is presumed to be a more necessary use than any other use to which such property might be put by any person." Section 1240.660 creates a similar presumption in favor of a local public entity which has already appropriated the property sought to public use. Section 1240.680 states that "property is presumed to have been appropriated for the best and most necessary public use" if used as "(1) A state park, regional, county, or city park, open space, or recreation area. . . . (3) A historic site included in the National Register of Historic Places or state-registered landmarks."

Where property is sought to be taken under section 1240.610, section 1240.630 provides that "the defendant is entitled to continue the public use to which the property is appropriated if the continuance of such use will not unreasonably interfere with or impair, or require a significant alteration of the more necessary public use as it is then planned." If the taking is contested and the court determines that the defendant is entitled to continue use of the property, the court will direct the parties to "make an agreement determining the terms and conditions" concerning, among other things, "the manner and use of the property by each party." The non-standard estates that the non-Federal sponsor proposes for acquiring interests in land appropriated to public use by other public entities is the type of agreement that a court would likely direct if the non-Federal sponsor brought a successful condemnation action to acquire these parcels.

As discussed in Section 4, the Corps and non-Federal sponsor have evaluated the potential for acquiring a lesser estate, a site-specific perpetual ecosystem restoration

easement, and found that acquisition of this estate would support the project purposes and protect the federal investment. The continued use of the land by the current public owner which would be permitted by such an easement will not unreasonably interfere with, impair, or require a significant alteration of the project as planned. Initial discussions with State Parks about the proposed restoration and passive recreation features that would occupy State Parks lands at the Rio De Los Angeles State Park and Los Angeles State Historic Park have been successful to the extent that State Parks understands and supports the construction, operation and maintenance of the proposed ecosystem restoration and passive recreation features on their land. The Corps and non-Federal sponsor have been and are closely coordinating with State Parks, to ensure that the proposed ecosystem restoration and passive recreation features of the Federal project are consistent with State Parks' general plans for these areas. We anticipate that an acceptable perpetual ecosystem restoration easement would be proposed for review and approval as a non-standard estate and that the non-Federal sponsor is capable of acquiring sufficient real estate interests from State Parks.

With respect to Caltrans, as noted in Section 4, the lands required for restoration are largely for riparian planting, although some lands in Reach 3 are required for the widening of the Verdugo Wash confluence and construction of a combined riparian and marsh community. Caltrans generally does not support sale of lands it holds in fee, but a review of Caltrans general plans indicate that the proposed planting and improvements would be compatible with Caltrans use of these areas. The non-Federal sponsor has indicated in the "Assessment of Non-Federal Sponsor's Real Estate Acquisition Capabilities" that it is unlikely it would pursue fee acquisition or condemnation of lands owned by Caltrans and would seek a non-standard estate. Based upon past dealings with

Caltrans, we anticipate that an easement could be acquired through a negotiated transaction. As stated in Section 4, a perpetual ecosystem restoration easement would adequately address the needs of the project. The Corps and non-Federal sponsor will coordinate closely with Caltrans during design, as Caltrans requires design plans in order to review grants of rights of way. We anticipate that an acceptable perpetual ecosystem restoration easement would be proposed for review and approval as a non-standard estate and that the non-Federal sponsor is capable of acquiring sufficient real estate interests from Caltrans.

In addition, with respect to active railroad lines and facilities, the provisions of the Interstate Commerce Commission Termination Act (ICCTA) preempt state law allowing the City to condemn property. One railroad facility owned by UPRR and two rail lines owned by the LACMTA would be affected by the LPP, as discussed in Sections 2 and 16. The City would work with UPRR on relocation of the existing LATC site functions to a new location within the Los Angeles Basin, as described in Section 16.5. UPRR has expressed willingness to cooperate with the City in a sale or exchange of the property subject to relocation of the site functions to a comparable facility, as discussed in Section 18. Although we anticipate a negotiated transaction based upon discussions with UPRR, if the City cannot reach agreement with UPRR, the City may apply to the Surface Transportation Board for abandonment and relocation of the facility. Based upon our assessment, the non-Federal sponsor is capable of acquiring sufficient real estate interests through the two options described above.

Two active rail lines owned by the LACMTA would be affected by the project, along the right bank of the channel in Reach 7 and along the left bank of the channel in Reach 8. To allow terracing of the channel bank in Reach 7 and to allow restoration of

more natural water movement and habitat between the river and the LATC site in Reach 8, the existing rail lines would have to be removed for lengths of 500 ft. and 1500 ft., respectively. As identified in Section 16, these lines would be relocated at grade on trestles. The project has taken into account design considerations such as maintaining the grade of the existing lines and will minimize effects on rail service during physical relocation. Coordination between the Corps and non-Federal sponsor and the LACMTA during the study period has identified no issues with the relocation of the lines to trestles at grade, and other LACMTA needs, such as those outlined above, have been incorporated into the planning for the restoration project. Although we anticipate a negotiated transaction based upon discussions with LACMTA, if the City cannot reach agreement with LACMTA, the City may apply to the Surface Transportation Board for abandonment and relocation of the lines if necessary. Based upon our assessment, the non-Federal sponsor is capable of acquiring sufficient real estate interests through the two options described above.

The non-Federal sponsor is aware of and will comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Act of 1970, Public Law 91-646, as amended, in acquiring the lands, easements and rights-of-way and performing relocations. The non-Federal sponsor has been advised of the requirement to document expenditures and maintain records for LERRD valuation and crediting purposes.

14. ENACTMENT OF ZONING ORDINANCE

After consulting with the project delivery team and the non-Federal sponsor it was determined that at this time there are no foreseen enactments of zoning ordinances to facilitate acquisition of real property.

15. LAND ACQUISITION SCHEDULE AND MILESTONES

Currently, the study is anticipated to be implemented in phases by reach; thus the acquisition of rights of way needed for the LPP will be accomplished over an 11-year period. The following is a preliminary acquisition schedule for each reach:

REACH	CALENDAR YEAR	LERRDS ACQUISTION NUMBER OF MONTHS
REACH 6	February 2017- August 2018	18 MONTHS
REACH 5	May 2019 – November 2020	18 MONTHS
REACH 4	May 2020 – October 2021	17 MONTHS
REACH 7	June 2022 – November 2023	17 MONTHS
REACH 3	May 2023 – October 2024	17 MONTHS
REACH 1 & 2	June 2026- November 2027	17 MONTHS
REACH 8	May 2027 – November 2028	18 MONTHS

16. DESCRIPTION OF FACILITY/UTILITY RELOCATIONS

A preliminary assessment of the utilities within the LPP has been completed using a desktop survey of utilities within the study area in the design appendix and guidance set forth in Real Estate Policy Guidance Letter No. 31. Based on the preliminary assessment of the utilities, Reaches 6, 7 and 8 have been identified as having potential facility and/or utility relocations. The total potential relocations are more than 30% of the estimated total project cost; therefore, preliminary opinions of compensability have been prepared. The identified utilities or facilities are generally of the type eligible for compensation under the substitute facilities doctrine, and the District has consulted data or evidence that demonstrates that it has identified an owner with a compensable interest in the property.

16.1 Electrical Transmission Towers

There are six electrical transmission tower structures identified in Reach 6 of the LPP that will be impacted by the project as they are situated on parcels identified for restoration. The LPP plans to widen the channel in this section of the river (thus removing the existing channel wall where the transmission tower structures are located) and expand the channel to create marsh/wetland on the property. Based on the Corps' assessment, the transmission towers are of the type eligible for compensation and LADWP has been identified as having a compensable interest in the property. Four out of the six towers identified as requiring relocation are on parcels owned in fee by the LADWP. The other two transmission towers that will need to be relocated in Reach 6 are on land owned by the non-Federal sponsor with an easement to the LADWP.

The second area identified as having utility towers requiring relocation is Reach 7. There are two electrical transmission towers identified for relocation on the west bank of the channel. These structures are also of the type generally eligible for compensation. Based on aerial photography, the two towers sit on land owned by the non-Federal sponsor and the Los Angeles County Metropolitan Transportation Authority (LACMTA). The LADWP is believed to have an easement for the transmission towers in this reach. The LPP would require these towers be moved to allow restructuring of the banks of the river to create a terraced connection between the LA State Historic Park's restored freshwater marsh and the river.

The third area identified with transmission tower relocations is the left bank of the channel in Reach 8. The non-Federal sponsor owns the real estate on which the transmission towers are located, with the LADWP possessing an easement. Similar to

Reach 6, these towers must be moved to allow widening of the channel into the LATC site, restoring the connection to the historic floodplain.

16.2 Railroad lines

A portion of the active rail lines in Reaches 7 and 8 have also been identified as requiring relocation in order to create connectivity between restored habitat and the river. LACMTA owns the property where the active rail lines are located and has use agreements with Metrolink, Union Pacific, and Amtrak. LACMTA holds a compensable interest. To allow construction and operation of project features planned in these reaches, the rail lines will be placed on trestles at grade for a length of approximately 500 ft in Reach 7 and approximately 1,500 ft in Reach 8.

16.3 Sewer lines

Two LADWP sewer lines running parallel to the river on the left bank, along the LATC site in Reach 8, would require relocation in order to create connectivity between marsh land and the river. These lines would otherwise be affected by flows from the river into the historic floodplain once restored. The land is owned by Southern Pacific Railroad, with an easement to LADWP for the two sewer lines. It has been determined that the sewer lines are of the type generally eligible for compensation and LADWP has a compensable interest. One of the sewer lines is in regular use, while the other is a backup/emergency line for recurring use during maintenance and emergency situations.

16.5 LATC

Lastly, the Union Pacific Railroad's LATC has been identified as a facility subject to relocation to implement the LPP. Union Pacific Railroad is the fee owner of the land and operator of the LATC facility. According to the Los Angeles County Assessor, the LATC facility is approximately 141.67 acres, of which 102.67 acres of the

LATC site will be required for the project for conversion to restored habitat. Under the LPP, the majority of the LATC site would be restored to a historic wash with braided channels and fresh water marsh connecting to the Los Angeles River. According to correspondence received from Union Pacific Railroad, the LATC was described as follows:

"UP first established its rail maintenance facility at the LATC in the early 1900s. Today, UP's modern 120 acre intermodal, i.e., truck to rail and rail to truck container facility receives, sorts and distributes approximately 240,000 cargo containers per year, ninety-five percent of which are domestic (UP Operating Data, October 2013). Activities at the LATC include receiving inbound trains, switching cars, loading and unloading intermodal trains, storing intermodal containers and chassis, building and departing outbound trains, and repairing freight cars and intermodal containers and chassis. The LATC also provides forty-seven percent of California car transport...serves as a relief valve for the Port of Los Angeles traffic..."

According to published UPRR documents, LATC is one of four intermodal facilities operated by UPRR in the Los Angeles Basin. The other facilities are East Los Angeles, City of Industry, and the Intermodal Container Transfer Facility (ICTF) in Long Beach. Relocation of the site functions is anticipated to occur within the Los Angeles Basin at a site within an industrial zone, with proximity to existing rail lines, able to host equivalent functions. The IFR analyzes the relocation impacts in Chapter 5, "Evaluation of Alternative Plans and Environmental Consequences," by resource area. Prior to site selection, the lead CEQA agency would conduct a detailed CEQA analysis of the relocation of site functions. Should any additional NEPA documentation be required, it would be undertaken by the NEPA lead agency.

Relocation cost for purposes of the feasibility phase was based on relocation of equivalent site functions, including improvements and fixtures, to a parcel of similar size within the parameters identified above. Because only a portion of the LATC site would be required for the project and the remainder of the existing parcel was determined to be an economic unit with access, no severance damages were estimated or included in the cost estimate.

Any conclusion or categorization contained in this report that an item is a utility or facility relocation to be performed by the non-Federal sponsor as part of its LERRD responsibilities is preliminary only. The government will make a final determination of the relocations necessary for the construction, operation, or maintenance of the project after further analysis and completion and approval of final attorney's opinions of compensability for each of the impacted utilities and facilities.

17. KNOWLEDGE OR SUSPECTED PRESENCE OF CONTAMINANTS

The study area is located in a highly urbanized corridor that has been home to industrial development, with associated Hazardous, Toxic, and Radioactive Waste (HTRW) contamination and petroleum product contamination. The District has identified HTRW sites in accordance with ER 1165-2-132 (26 Jun 92) and is avoiding them wherever practicable. Where HTRW-contaminated lands cannot be avoided, the appropriate procedures and requirements as described in ER 1165-2-132 will be applied.

A preliminary assessment of HTRW sites has identified three known HTRW sites that cannot be avoided by any proposed project alternative, including the LPP. These sites are the Taylor Yard G1 and G2 parcels, in Reach 6, and the San Fernando Valley

Superfund Site (SFVSS), a groundwater plume that runs underneath the majority of the study area. For sites with soil contamination, the sponsor must undertake or ensure the remediation of the sites to the standards necessary to support the restoration project prior to providing the lands to the project for construction. This cost is 100 percent sponsor cost and not a project cost. The sponsor understands its responsibility to ensure the remediation of the sites prior to providing the lands to the project.

The SFVSS is currently being remediated through pumping and treatment under the oversight of Los Angeles Department of Water and Power. However, the project would be unable to avoid all contact with the plume during construction activities such as dewatering, and the sponsor would be responsible for ensuring the proper treatment, handling and disposal of contaminated groundwater during construction at 100% non project cost.

One additional site within the project footprint, LATC, has undetermined levels of HTRW contamination, but based on the similarity of historical use at this site to Taylor Yard, some HTRW contamination can reasonably be anticipated. Further information on the nature and extent of contamination, remediation status, and impacts to the restoration project alternatives is contained in Appendix K, HTRW Survey Report. Like the Taylor Yard sites, any contamination at the LATC would be required to be remediated to the level required for the project prior to the lands being provided to the project. The sponsor understands its responsibility to ensure the remediation of the site at 100% non-project cost prior to providing the land to the project.

The survey of HTRW sites identified 19 smaller sites within 500 feet of the LPP footprint that would be avoided by the LPP. However, remaining contamination on these sites may have some indirect impacts to the LPP if groundwater contamination from

these sites enters the LPP area. If localized groundwater contamination is identified, such contamination would require an approach similar to addressing ancillary SFVSS contamination during dewatering activities, but the HTRW impacts of these sites on the project are likely to be more limited because none of these sites are included in the LERRD required for the project. These sites are in various stages of remediation, and there are groundwater monitoring wells in several locations to provide information on the location and levels of contamination. A fuller discussion of these issues is contained in Appendix K and the IFR.

18. SUPPORT/OPPOSITION FOR PROJECT

The project is supported by Federal, State, and local governmental entities and several non-profit organizations, as well as the public, and it has strong Congressional support. Several local non-profit organizations have an active involvement in the river from organizing cleanups to building pocket parks. Both residents and non-residents are in favor of a restored Los Angeles River. One such group that advocates for a restored River is Friends of the Los Angeles River (FOLAR). FOLAR has been instrumental in bringing people out to the river for cleanups, walking tours and studying adjacent parcels that can connect to the river. FOLAR has won six planning awards for the work it did in studying restoration potential at LATC, a key location for this restoration study. Another group involved in working for a natural restored river is North East Trees. North East Trees has been instrumental in building pocket parks affording passive recreation, removal of non-native vegetation and planting native vegetation. Currently, North East Trees and FOLAR are working together on the Forest Lawn-Sennett Creek Los Angeles River Greenway. According to the project description this project aims to create a public park and green space on an 8.3-acre parcel just above where the Los Angeles River

Ecosystem Restoration Study begins. Along with creating recreational opportunities on this site both FOLAR and North East Trees plan to plant native vegetation, create a riparian area that will capture and treat urban runoff and create an inviting healthy environment for birds and other wildlife. A further discussion of public and institutional support for the project is contained in the main IFR.

By letter dated November 18, 2013, received during the public comment period on the Draft IFR, Union Pacific Railroad (UPRR) indicated that it currently has no intention of moving the LATC. The November letter expressed UPRR's opposition to the action alternatives ". . . to the extent they impact the LATC." In a subsequent letter dated March 28, 2014, UPRR stated that it has a long history of working cooperatively with the City of Los Angeles on a variety of matters and that a future sale or exchange agreement for the LATC could be reached if the City were to acquire, in cooperation with UPRR, a suitable replacement facility with all necessary permits and approvals necessary for UPRR's use as a rail yard fully comparable to the current facility at LATC. This represents a modification of UPRR's previous position as expressed in its letter of November 18, 2013.

19. LAND ACQUISITION PRIOR TO PPA

The non-Federal sponsor has been advised in writing of the risks associated with acquiring land prior to the execution of the project partnership agreement. A copy of the letter has been attached to this appendix as Attachment D.

20. OTHER RELEVANT REAL ESTATE ISSUES

One relevant real estate issue for the study is that of high land costs. In addressing the issue of high land costs and high LERRD percentage of total project costs, the study team has undertaken several efforts, including (1) a sequenced search of public lands

within the study area to ensure all lands are adequately considered and the reasons for not including them well-documented, and (2) submittal of a request by the non-Federal sponsor to the Assistant Secretary of the Army (Civil Works) (ASA (CW)) to allow it to forgo reimbursement for LERRD value above its required share of ecosystem restoration costs. The ASA(CW) granted the requested policy exception on August 8, 2013, and directed that the IFR document the offer and grant of waiver of reimbursement.

Although land acquisition was minimized as part of the planning process, the high land values unavoidable in urban Los Angeles resulted in each alternative having LERRD costs that substantially exceeded 35 percent of the total ecosystem restoration plan costs, with higher LERRD percentages for the smaller alternatives. Lands outside the existing LACDA flood risk management channel boundary, including high-cost private lands at critical opportunity areas (Taylor Yard, Verdugo Wash, and LATC), are essential to meeting the planning objectives. Because of these issues, the District was unable to identify best buy plans or highly cost effective plans that would have LERRD percentages under 35 percent of total ecosystem restoration costs. As part of its commitment to the study and the proposed project, the non-Federal sponsor offered to waive reimbursement of LERRD. The policy exception for waiver of reimbursement for LERRD has been approved, and the sponsor's request letter and the ASA (CW)'s approval of the policy exception are included as part of Appendix P, "Letters and Guidance Memoranda."

Subsequent to the circulation of the Draft IFR, the City of Los Angeles requested that Alternative 20 be the plan recommended to Congress for authorization and proposed cost sharing different from that generally applicable to ecosystem restoration projects under WRDA 1986. The ASA (CW) granted consideration of Alternative 20 as a Locally

Preferred Plan and granted the Corps permission to consider recommending alternative cost sharing to Congress, subject to certain restrictions, including a limitation that no reimbursement or credit shall be given for LERRD costs exceeding 35 percent of total ecosystem restoration costs. The IFR therefore outlines two cost sharing options: one consistent with statutory cost sharing applicable to Locally Preferred Plans, and one consisting of a non-standard cost sharing option in response to a request by the non-Federal sponsor. As stated above, the highly effective plans, including the NER Plan and LPP, all had LERRD percentages exceeding 35 percent of the total ecosystem restoration cost including the NER and LPP; therefore the Federal share of total ecosystem restoration cost of the LPP is not affected by the difference in LERRD cost between the NER and LPP.

US Army Corps of Engineers
Los Angeles District

Attachment A: Estates

Attachment A

STANDARD ESTATES

TEMPORARY WORK AREA EASEMENT

A temporary easement and right-of-way in, on, over and across (the land described in Schedule A) (Tracts Nos. _____, _____ and _____), for a period not to exceed _____, beginning with date possession of the land is granted to the City of Los Angeles or the United States, for use by the United States, its representatives, agents, and contractors as a (borrow area) (work area), including the right to (borrow and/or deposit fill, spoil and waste material thereon) (move, store and remove equipment and supplies, and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the _____ Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

ROCK ANCHOR EASEMENT

A perpetual and assignable right and easement to construct, operate and maintain underground anchors or tie-backs under and through Tract Nos. ___, ___ and ___, where needed, as part of the _____ Project, with such anchors or tie-backs installed from (name of stream or river) located at a minimum, ___ feet below ground level; limited, however, to such rights and easement hereby acquired as may be used without disturbing the surface of the land and without interfering with or abridging the surface owner's right to use the surface of the land except to the extent the surface owner's use does not include removal, excavating or constructing around the anchor or tie-back; subject however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

NON-STANDARD ESTATES

PERPETUAL ECOSYSTEM RESTORATION EASEMENT (PERE)

A perpetual and assignable right, easement, and right-of-way in, on, over and across the land described in Appendix A attached hereto (Tract No(s). ____; hereinafter the "Easement Area"), to construct, operate, maintain, repair, rehabilitate, and replace aquatic ecosystem restoration features, and appurtenances thereto, including: [features], which structures are illustrated generally on Exhibits(s) __attached hereto, to [do what], all for the purposes of providing for aquatic ecosystem restoration and protection in connection with the Los Angeles River Ecosystem Restoration Project, Los Angeles County, California, implemented under the authority of [insert authority once authorized] and otherwise conserving, restoring, and managing the use of natural resources; TOGETHER WITH the right to plant vegetation in the Easement Area and to trim, cut, fell, and remove therefrom all trees, underbrush, and other vegetation; to remove and dispose of any and all obstructions, structures, debris, or obstacles within the Easement Area; to excavate and place soil, stone, rock, and other materials within the Easement

Attachment A

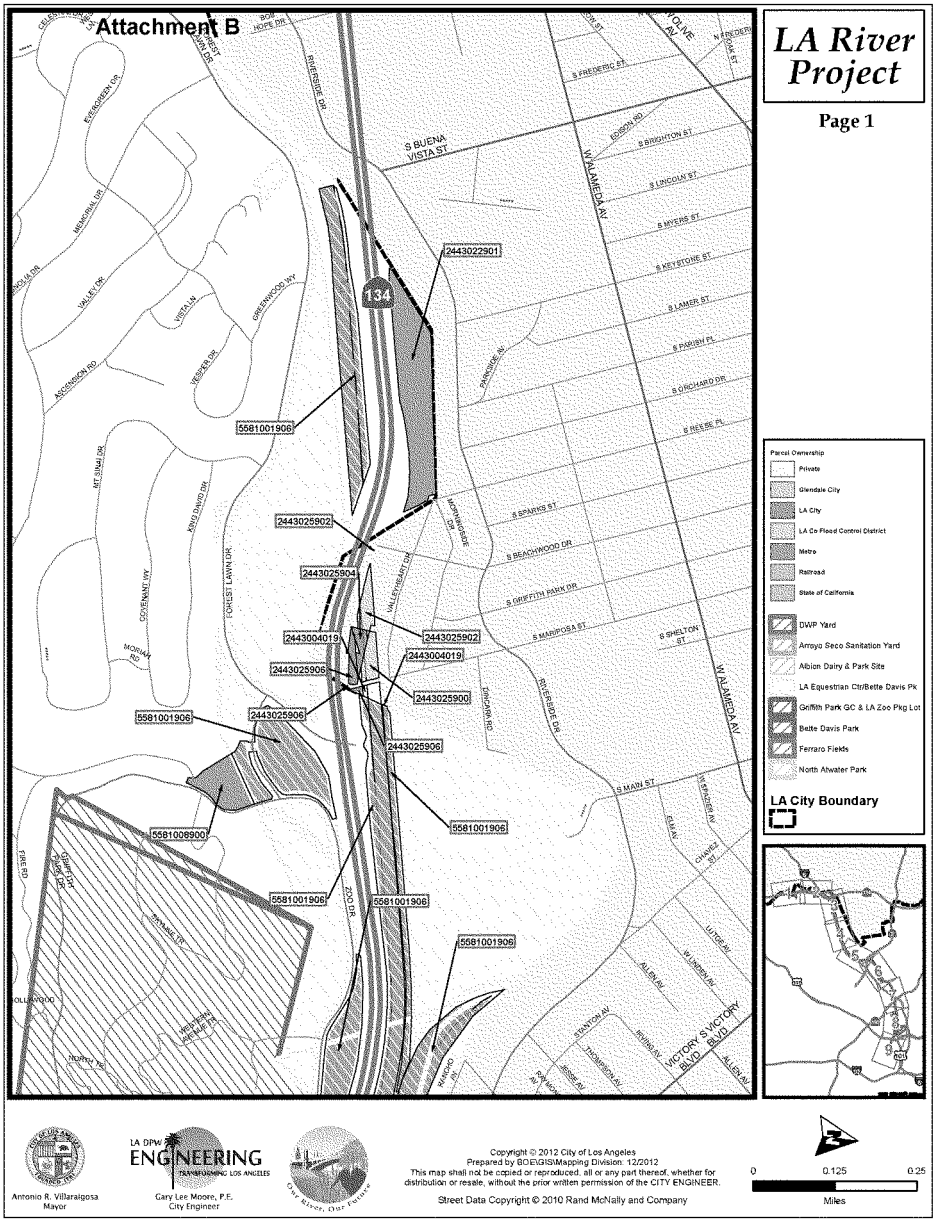
Area that may be required in connection with said features; to post signs and Easement Area boundary markers; and TOGETHER WITH the right to construct, install, maintain, repair, rehabilitate, and replace: [other features] all in the approximate locations as depicted on Exhibit __ attached hereto; and TOGETHER WITH the right of ingress and egress over and across the Easement Area for the purpose of exercising the rights set forth herein; subject, however, to existing easements for [are there any existing easements].

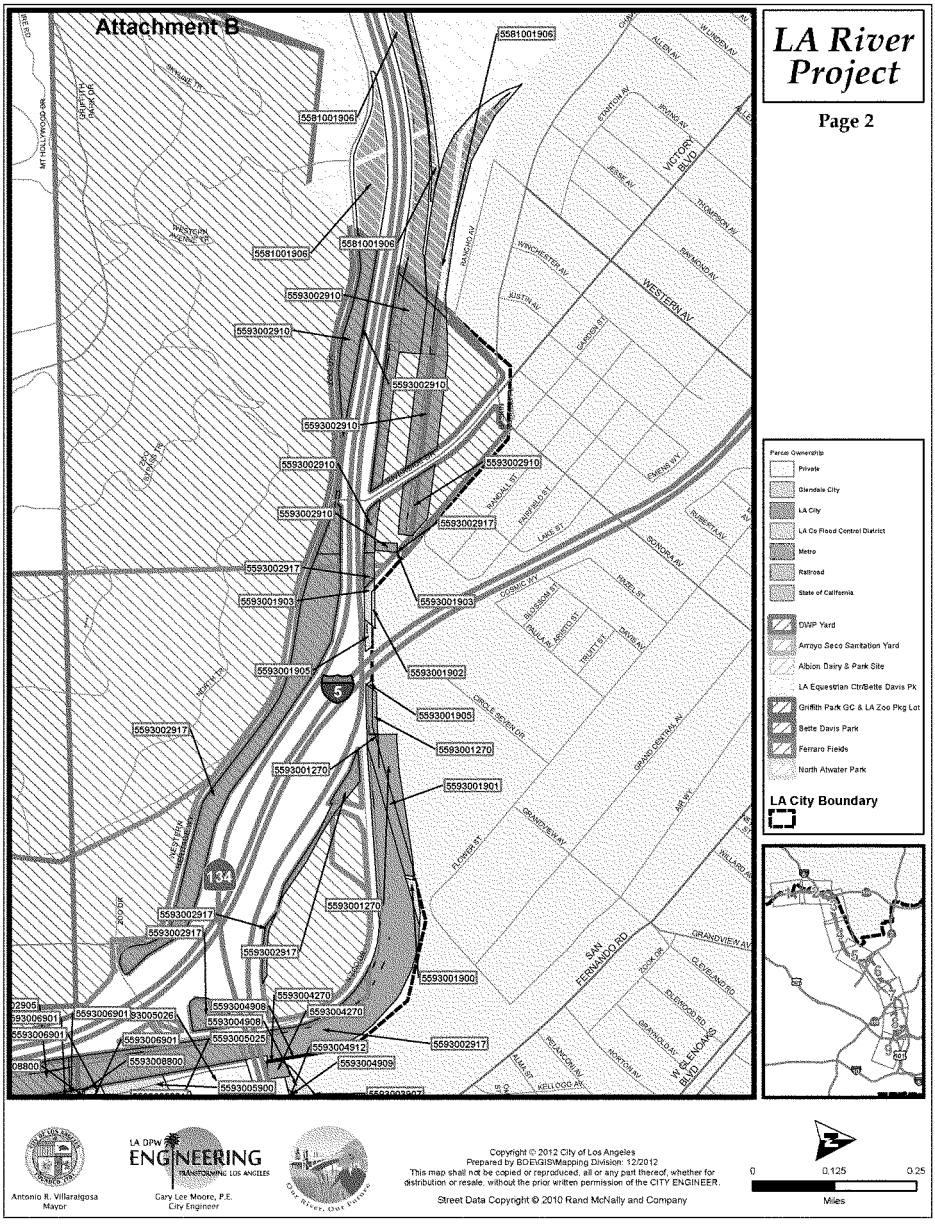
The Grantor(s), (his) (her) (its) (their) (heirs), successors and assigns, reserves unto (itself) (themselves) all such other rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired. However, any activity on or use of the Easement Area inconsistent with the purposes of this easement is prohibited. Without limiting the generality of the foregoing, the following uses by Grantor(s), (his) (her) (its) (their) (heirs), successors and assigns, agents or third parties are expressly prohibited in or on the Easement Area:

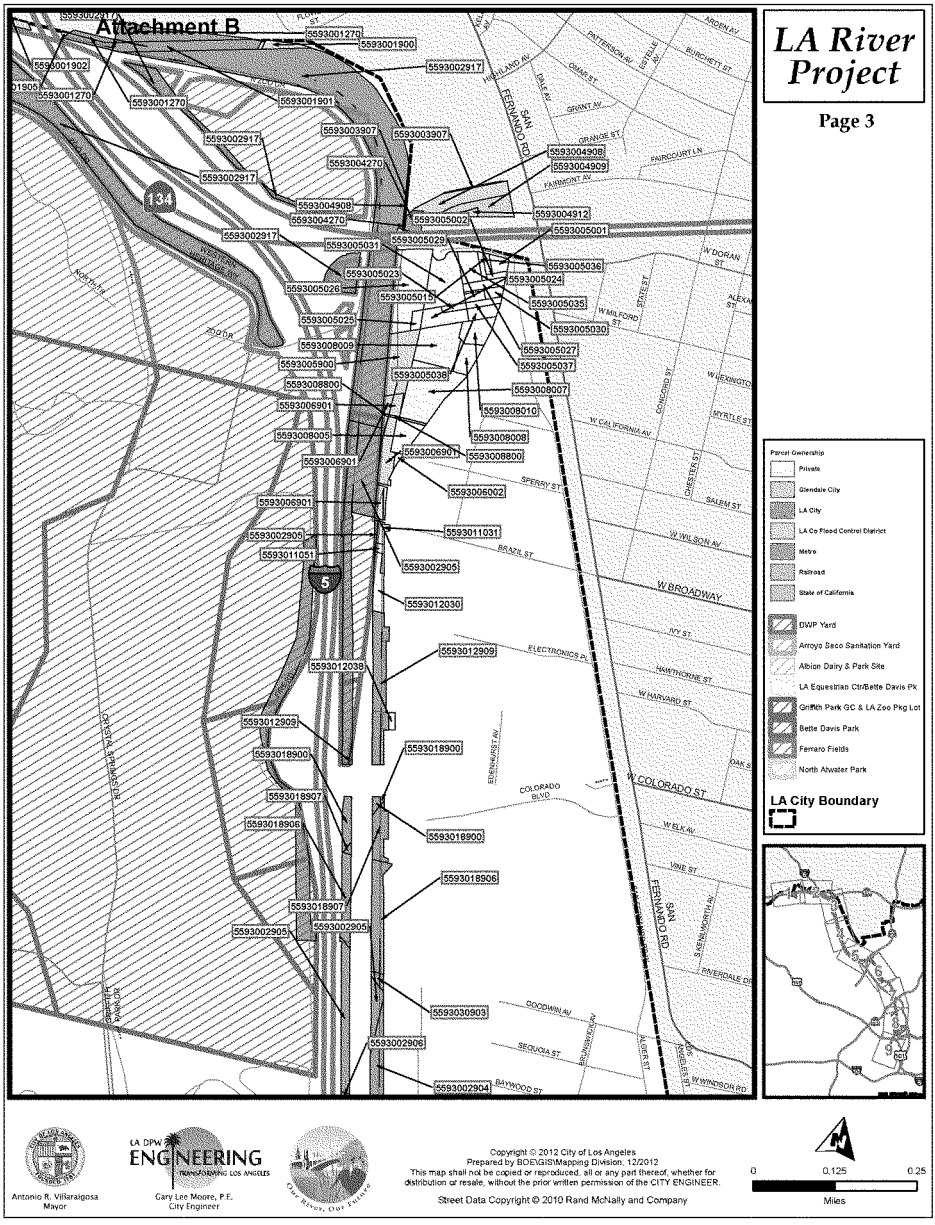
(a) constructing, locating, placing, or installing any building or structure of any kind, whether permanent or temporary, or any signage of any type including billboards;
(b) removal, destruction, cutting, or altering of trees, shrubs, or other vegetation by mechanical, chemical, manual or other means;
(c) filling, excavation, or other alteration to the surface or subsurface including, without limitation, the excavation or removal of soil, sand, gravel, rock, peat, or sod;
(d) dumping or other disposal or storage of rubbish, garbage, debris, hazardous or other waste material; and
(e) agricultural use or activities including grazing or watering of livestock; except that watering of livestock may occur at constructed livestock stream crossings and off-stream oxbow areas that are depicted on Exhibit__ attached hereto.

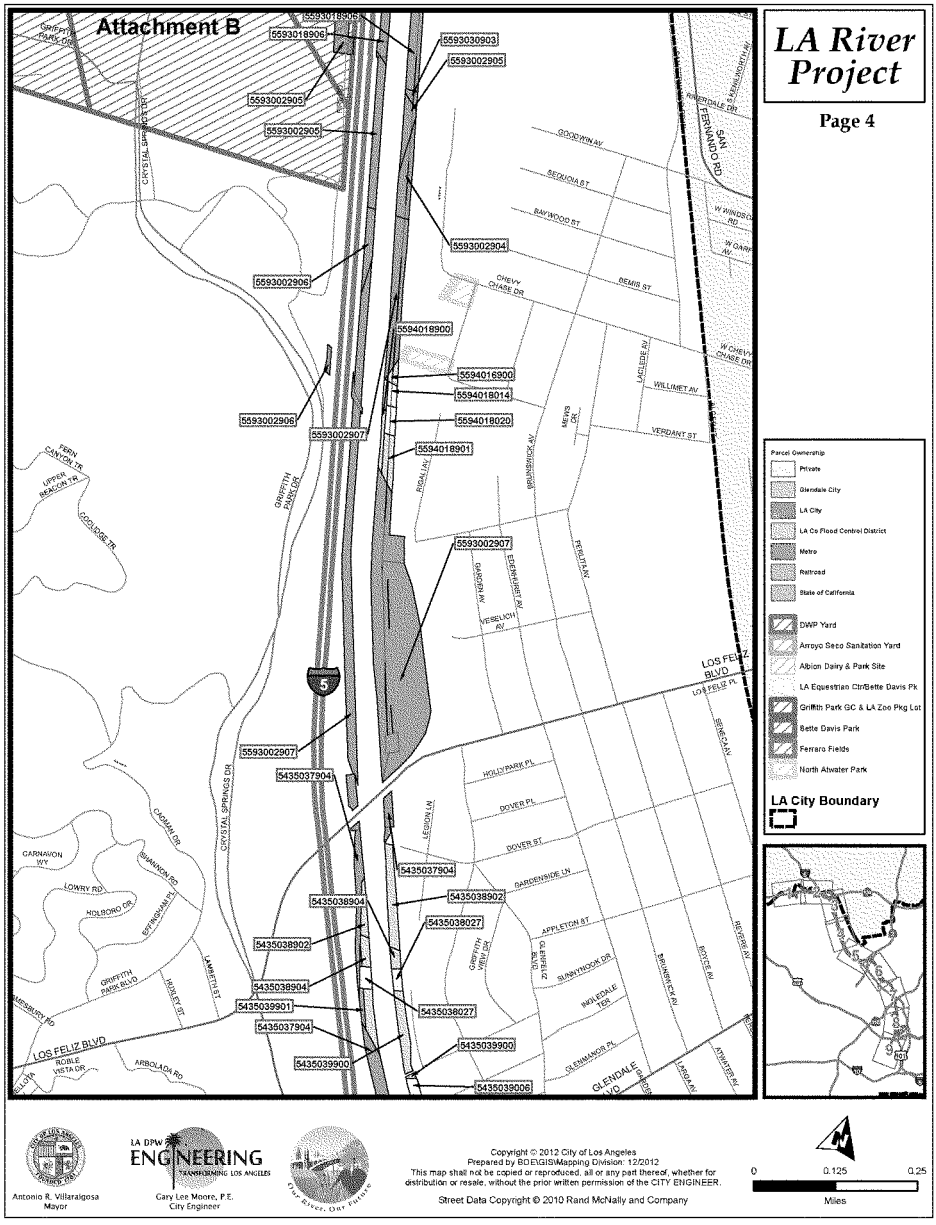
US Army Corps of Engineers
Los Angeles District

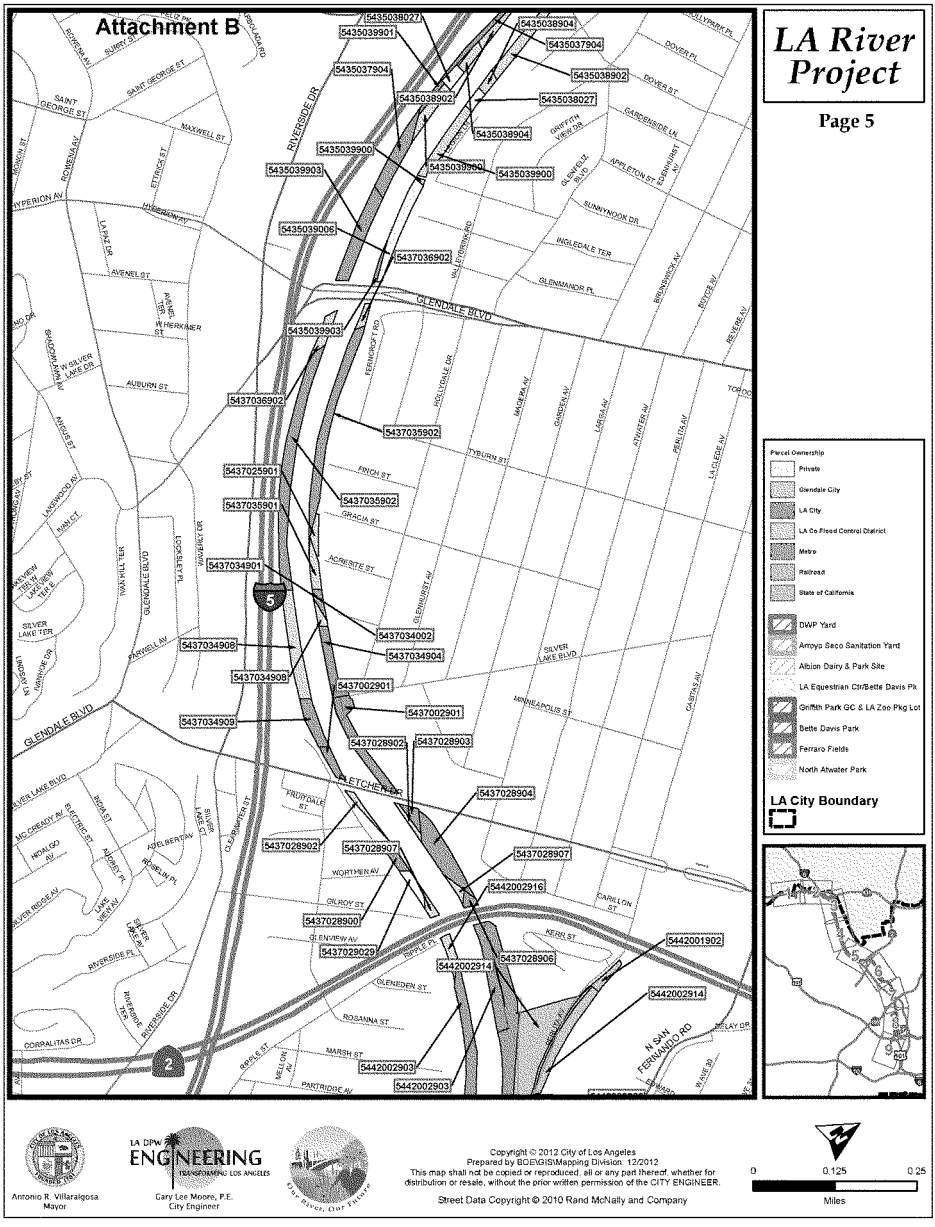
Attachment B: Parcel Ownership Mapping

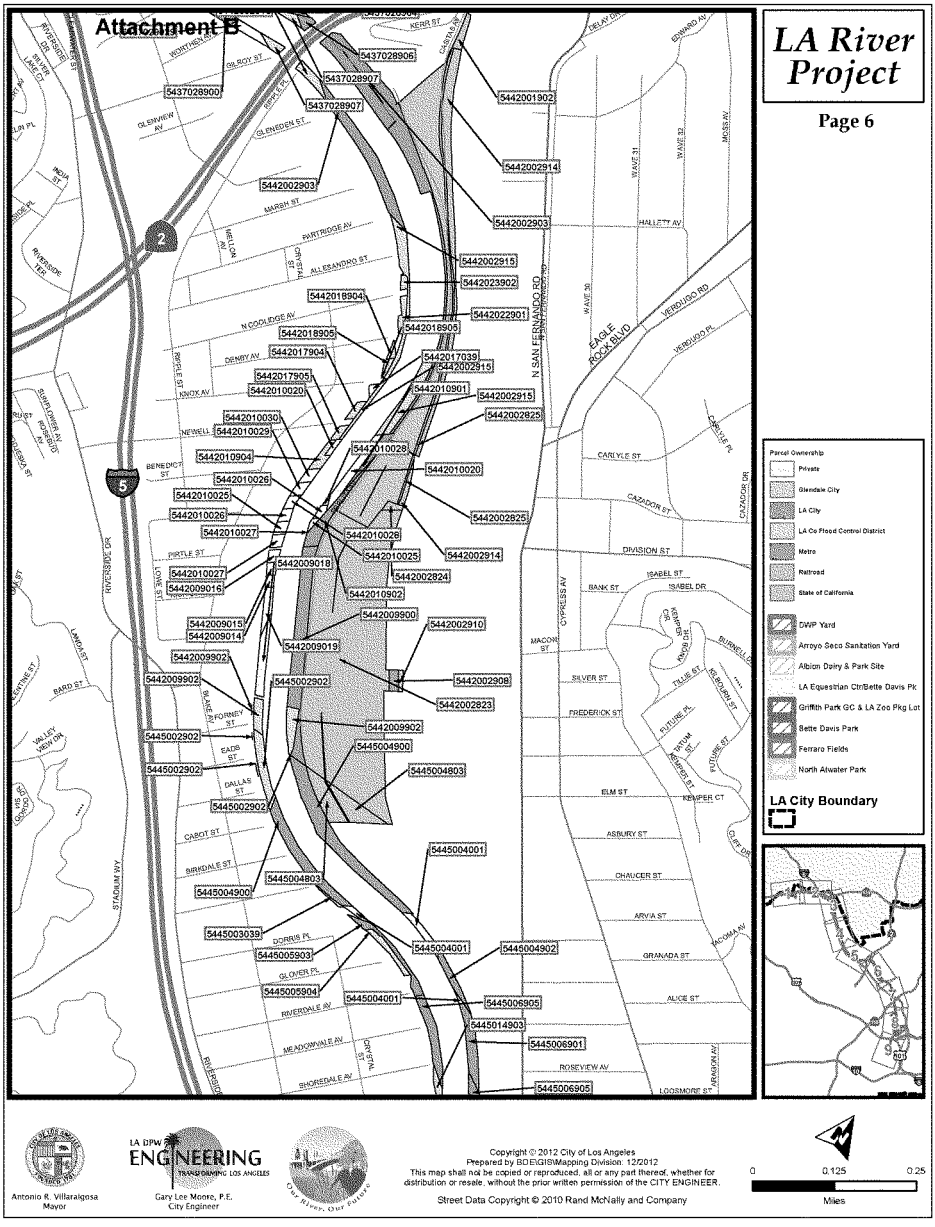

Attachment B
LA River Project
Page 1
2443022901
5581001906
2443025902
2443025904
2443004019
2443025906
2443025900
5581008900
S BUENA VISTA ST
W ALAMEDA AV
S BRIGHTON ST
S LINCOLN ST
S MYERS ST
S KEYSTONE ST
S LAMER ST
S PARISH PL
S ORCHARD DR
S REESE PL
S SPARKS ST
S BEACHWOOD DR
S GRIFFITH PARK DR
S MARIPOSA ST
S SHELTON ST
S MAIN ST
RIVERSIDE DR
ZOO DR
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Bette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Bette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
Antonio R. Villaraigosa
Mayor
Gary Lee Moore, P.E.
City Engineer
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division: 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles

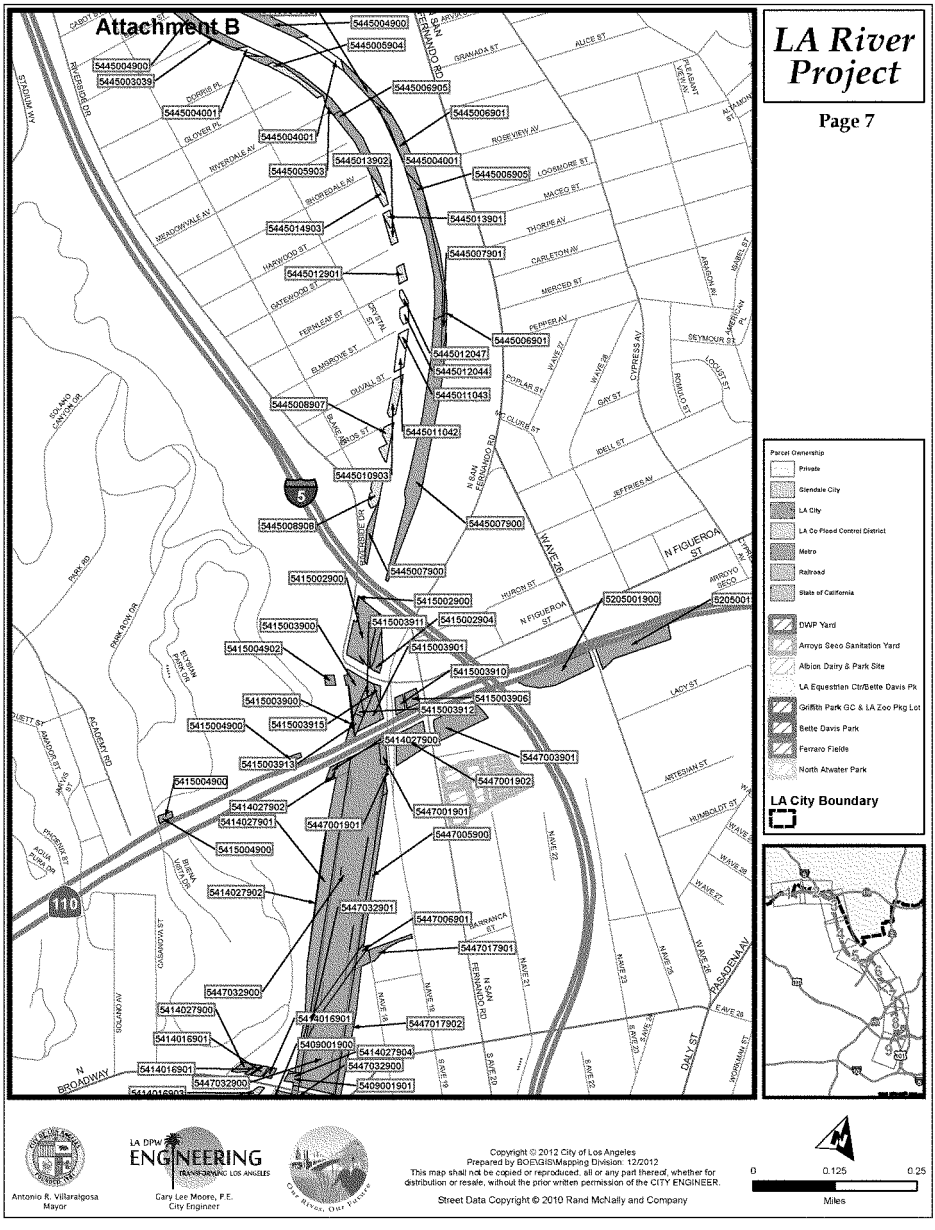

Attachment B
LA River Project
Page 2
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Bette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Bette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
Antonio R. Villaraigosa
Mayor
LA DPW
ENGINEERING
TRANSFORMING LOS ANGELES
Gary Lee Moore, P.E.
City Engineer
One River, One Future
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division: 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles

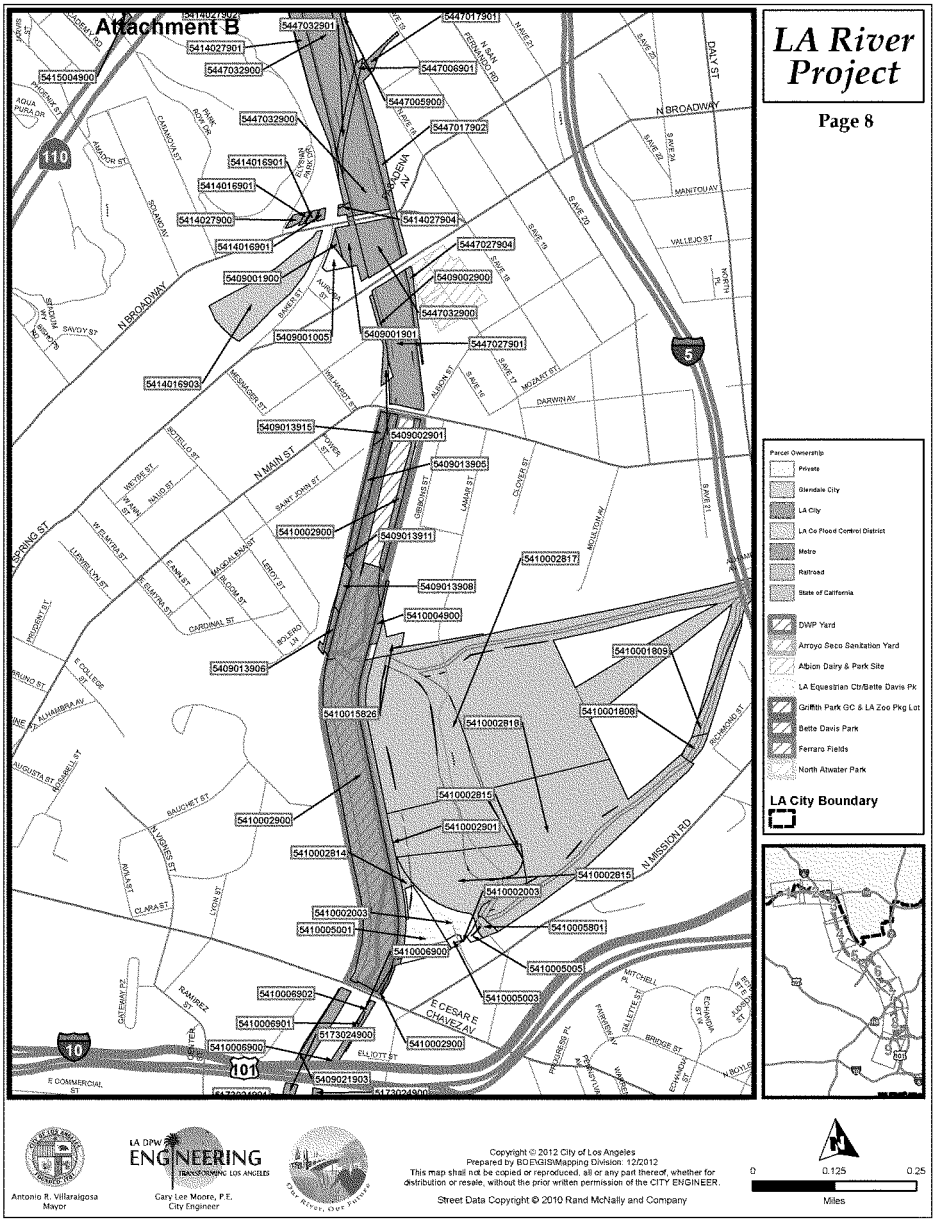

Attachment B
LA River Project
Page 3
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Bette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Bette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
W BROADWAY
W COLORADO ST
SAN FERNANDO RD
Antonio R. Villaraigosa
Mayor
LA DPW
ENGINEERING
Gary Lee Moore, P.E.
City Engineer
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division; 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles

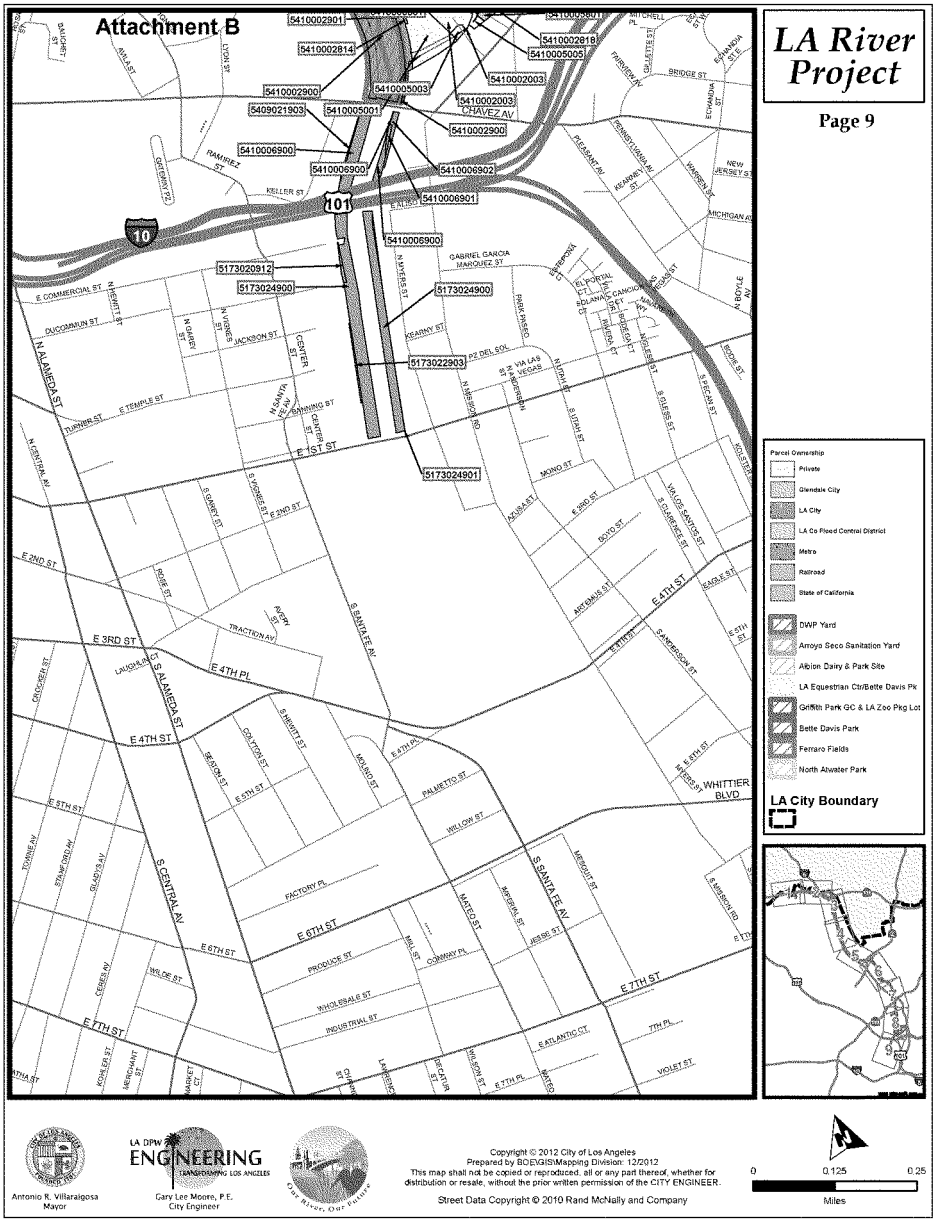

Attachment B
LA River Project
Page 4
SAN FERNANDO RD
LOS FELIZ BLVD
GLENDALE BLVD
5593018906
5593030903
5593002905
5593002904
5593002906
5594018900
5594016900
5594018014
5594018020
5593002907
5594018901
5435037904
5435038904
5435038902
5435038027
5435039901
5435039900
5435039006
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Bette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Bette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
Antonio R. Villaraigosa
Mayor
LA DPW
ENGINEERING
TRANSFORMING LOS ANGELES
Gary Lee Moore, P.E.
City Engineer
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division: 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles


Attachment B
LA River Project
Page 5
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Bette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Bette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
GLENDALE BLVD
SILVER LAKE BLVD
FLETCHER DR
RIVERSIDE DR
SAINT GEORGE ST
HYPERION AV
GLENMANOR PL
INGLEDALE TER
SUNNYNOOK DR
AUBURN ST
FINCH ST
TYBURN ST
GRACIA ST
ACRERITE ST
MINNEAPOLIS ST
FRUITDALE ST
WORTHEN AV
GILROY ST
GLENVIEW AV
GLENEDEN ST
ROSANNA ST
MARSH ST
PARTRIDGE AV
CORRALITAS DR
KERR ST
CARILLON ST
DOVER ST
GRIFFITH VIEW DR
GLENHURST AV
APPLETON ST
BRUNSWICK AV
ROYCE AV
REVERE AV
ATWATER AV
GARDEN AV
LARISSA AV
RENFRO AV
LA CLEDE AV
FERNHURST RD
HOLLYDALE DR
WALTERIA RD
N SAN FERNANDO RD
DELAY DR
5
2
5435038027
5435039901
5435038904
5435037904
5435037904
5435038902
5435038902
5435038027
5435038904
5435039900
5435039903
5435039900
5435039900
5435039006
5437036902
5435039903
5437036902
5437035902
5437025901
5437035902
5437035901
5437034901
5437034002
5437034904
5437034908
5437034908
5437002901
5437002901
5437034909
5437028902
5437028903
5437028904
5437028902
5437028907
5437028907
5442002916
5437028900
5437029029
5442001902
5437028906
5442002914
5442002914
5442002903
5442002903
Antonio R. Villaraigosa
Mayor
LA DPW
ENGINEERING
Cary Lee Moore, P.E.
City Engineer
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division: 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles


Attachment B
LA River Project
Page 6
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Sette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Sette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
5437028906
5437028907
5437028900
5437028907
5442001902
5442002914
5442002903
5442002903
5442002915
5442023902
5442018904
5442022901
5442018905
5442018905
5442017904
5442017039
5442002915
5442017905
5442010020
5442010901
5442002915
5442010030
5442010029
5442002825
5442010904
5442010028
5442010020
5442010026
5442010025
5442002825
5442010026
5442010027
5442010028
5442002914
5442010025
5442009018
5442010027
5442009016
5442002824
5442010902
5442009900
5442009015
5442009014
5442002910
5442009019
5442009902
5442009902
5445002902
5442002908
5442002823
5445002902
5442009902
5445004900
5445002902
5445004803
5445002902
5445004001
5445004803
5445004900
5445003039
5445004001
5445004902
5445005903
5445005904
5445004001
5445006905
5445014903
5445006901
5445006905
Antonio R. Villaraigosa
Mayor
LA DPW
ENGINEERING
TRANSFORMING LOS ANGELES
Gary Lee Moore, P.E.
City Engineer
Our River, Our Future
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division: 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles


Attachment B
LA River Project
Page 7
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Bette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Bette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
Antonio R. Villaraigosa
Mayor
LA DPW
ENGINEERING
Cary Lee Moore, P.E.
City Engineer
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division: 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles


Attachment B
LA River Project
Page 8
N BROADWAY
N MAIN ST
SPRING ST
E CESAR E CHAVEZ AV
N MISSION RD
DALY ST
MANITOU AV
VALLEJO ST
DARWIN AV
MOZART ST
ALISAL ST
ELLIOTT ST
BRIDGE ST
MISSION RD
SAN FERNANDO RD
ALHAMBRA AV
E COLLEGE ST
BAUCHET ST
CLARA ST
LYON ST
RAMIREZ ST
CESAR E CHAVEZ AV
E COMMERCIAL ST
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Bette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Bette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
5414027902
5447032901
5414027901
5447017901
5447032900
5447006901
5415004900
5447005900
5447032900
5447017902
5414016901
5414016901
5414027900
5414027904
5414016901
5447027904
5409001900
5409002900
5447032900
5409001005
5409001901
5447027901
5414016903
5409013915
5409002901
5409013905
5410002900
5409013911
5410002817
5409013908
5410004900
5410001805
5409013906
5410015826
5410002818
5410001808
5410002815
5410002901
5410002900
5410002814
5410002815
5410002003
5410002003
5410005001
5410005801
5410006900
5410005005
5410006902
5410005003
5410006901
5173024900
5410002900
5410005900
5409021903
5173024900
Antonio R. Villaraigosa
Mayor
Gary Lee Moore, P.E.
City Engineer
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division: 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles


Attachment B
LA River Project
Page 9
5410002901
5410002814
5410002900
5409021903
5410005001
5410005003
5410002003
5410002900
5410006900
5410006902
5410006901
5173020912
5173024900
5173022903
5173024901
101
10
CHAVEZ AV
E 1ST ST
E 2ND ST
E 3RD ST
E 4TH ST
E 4TH PL
E 5TH ST
E 6TH ST
E 7TH ST
WHITTIER BLVD
N ALAMEDA ST
S ALAMEDA ST
S SANTA FE AV
S CENTRAL AV
Parcel Ownership
Private
Glendale City
LA City
LA Co Flood Control District
Metro
Railroad
State of California
DWP Yard
Arroyo Seco Sanitation Yard
Albion Dairy & Park Site
LA Equestrian Ctr/Bette Davis Pk
Griffith Park GC & LA Zoo Pkg Lot
Bette Davis Park
Ferraro Fields
North Atwater Park
LA City Boundary
Antonio R. Villaraigosa
Mayor
Gary Lee Moore, P.E.
City Engineer
Copyright © 2012 City of Los Angeles
Prepared by BOE\GIS\Mapping Division: 12/2012
This map shall not be copied or reproduced, all or any part thereof, whether for distribution or resale, without the prior written permission of the CITY ENGINEER.
Street Data Copyright © 2010 Rand McNally and Company
0
0.125
0.25
Miles

US Army Corps of Engineers
Los Angeles District

Attachment C: Assessment of Non-Federal Sponsor's Real Estate Acquisition Capabilities

Attachment C

ASSESSMENT OF NON-FEDERAL SPONSOR'S REAL ESTATE ACQUISITION CAPABILITIES

January 27, 2015

I. Legal Authority:

a. Does the Sponsor have legal authority to acquire and hold title to real property for project purposes?

Yes

b. Does the Sponsor have the power of eminent domain for this project?

Yes

c. Does the Sponsor have "quick-take" authority for this project?

Yes
State of California law gives a public entity authority to seek immediate possession of a condemned property by depositing probable compensation with the court; under the California Code of Civil Procedure 1255.410 and 1255.450.

For example: (*Mt. San Jacinto Community College Dist. v. Superior Court* (2007)40 Cal.4th 648, 653 [54 Cal.Rptr.3d 752, 151 P.3d 1166]

d. Are any of the lands/interests in land required for the project located outside the Sponsor's political boundary?

Yes
A relatively small portion of the project area is within the City of Glendale. The land in the City of Glendale's political boundary includes two parcels for only approximately 2 acres of restoration at the Verdugo Wash confluence with the Los Angeles River.

The City of Glendale has been supportive of Los Angeles River Revitalization and has improved its riverfront with the Glendale Riverwalk project, providing public access and recreational space to its citizens. On October 29, 2013, the Glendale City Council passed a resolution in support of the project and identifying Alternative 20 is its preferred alternative. Alternative 20 includes the land that falls within the City of Glendale's political boundary.

Attachment C

ASSESSMENT OF NON-FEDERAL SPONSOR'S
REAL ESTATE ACQUISITION CAPABILITIES
Page 2

e. Are any of the lands/interests in land required for the project owned by an entity whose property the Sponsor cannot condemn?

Yes
The project area includes land owned by or under the jurisdiction of the State of California, including California State Parks (State Parks) and the California Department of Transportation (Caltrans). State Parks has been a strong supporter of Los Angeles River Revitalization and is specifically supportive of their land in the project area being used for this project. It is extremely unlikely that any sort of condemnation action would be necessary for inclusion of State Parks land in the project area.

The project area includes land alongside and beneath Caltrans freeways. It is unlikely that the City would pursue fee acquisition or condemnation of that land. Rather, a lesser estate, such as a restoration easement or encroachment permit is the likeliest scenario for the City to provide that land to the project.

II. Human Resource Requirements:

a. Will the Sponsor's in-house staff require training to become familiar with the real estate requirements of federal projects including P.L. 91-646, as amended?

No

b. If the answer to II.a. is "yes", has a reasonable plan been developed to provide such training?

N/A

c. Does the Sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project?

Yes

d. Is the Sponsor's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule?

Yes

e. Can the sponsor obtain contractor support, if required in a timely fashion?

Yes

Attachment C

ASSESSMENT OF NON-FEDERAL SPONSOR'S
REAL ESTATE ACQUISITION CAPABILITIES
Page 3

f. Will the sponsor likely request U. S. Army Corps of Engineers assistance in acquiring real estate?

No

III. Other Project Variables:

a. Will the sponsor's staff be located within reasonable proximity to the project site?

Yes

b. Has the sponsor approved the project/real estate schedule/milestones?

Yes
The City has been an integrated member of the project team and has participated fully in discussions regarding the project schedule and the real estate milestones for the Study. The Study milestones as included in the Project Management Plan have been approved by the City. Formal approval of the implementation schedule and real estate actions will follow the Feasibility Phase.

IV. Overall Assessment:

a. Has the sponsor performed satisfactorily on other U. S. Army Corps of Engineers projects?

Yes
The City regularly works with the Army Corps on projects that involve Army Corps property and or property over which the Army Corps has jurisdiction. These projects are planned and with Army Corp participation in the review and approval of plans project scope.

Among these projects are bridge rehabilitations that have taken place over the Los Angeles River, and projects that involve the Tillman plant such as; the Berm Improvements Project, the Multi-Purpose and Office Building Exhibits, the In Plant Storage; and the Advanced Water Purification Facility.

b. With regard to this project, the sponsor is anticipated to be:

Highly Capable

V. Coordination:

a. Has this assessment been coordinated with the sponsor?

Yes

Attachment C

ASSESSMENT OF NON-FEDERAL SPONSOR'S
REAL ESTATE ACQUISITION CAPABILITIES
Page 4

b. Does the sponsor concur with this assessment?

Yes

Prepared by:

Uriel Jimenez
Chief Real Estate Officer
City of Los Angeles

Reviewed by:

Lisa Sandoval
Real Estate Specialist
US Army Corps of Engineers

Reviewed and Approved by:

Theresa M. Kaplan
Chief, Real Estate Division
US Army Corps of Engineers

US Army Corps of Engineers
Los Angeles District

Attachment D: Risk of Early Acquisition Letter to Sponsor

Attachment D

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

March 25, 2015

Office of the Chief
Asset Management Division

SUBJECT: Los Angeles River Ecosystem Restoration Study- Real Estate Acquisition

Mr. Gary Lee Moore, P.E. City Engineer
City of Los Angeles
Department of Public Works Bureau of Engineering
1149 South Broadway Suite 700
Los Angeles, California 90015-2213

Dear Mr. Moore:

The intent of this letter is to formally advise the City of Los Angeles as the non-Federal sponsor for the proposed project, of the risk associated with land acquisition prior to the execution of the Project Partnership Agreement (PPA) or prior to the Government's formal notice to proceed with acquisition. If a non-federal sponsor deems it necessary to commence acquisition prior to an executed PPA for whatever reason, the non-federal sponsor assumes full and sole responsibility for any and all costs, responsibility, or liability arising out of the acquisition effort.

Generally, these risks include but may not be limited to, the following:

a. Congress may not appropriate funds to construct the proposed project;

b. The proposed project may otherwise not be funded or approved for construction;

c. A PPA mutually agreeable to the non-Federal sponsor and the Government may not be executed and implemented;

d. The Non-Federal sponsor may incur liability and expense by virtue of its ownership of contaminated lands, or interests therein, whether such liability should arise out of local, state, or Federal laws or regulations including liability arising out of CERCLA, as amended;

e. The non-Federal sponsor may acquire interests or estates that are later determined by the Government to be inappropriate, insufficient, or otherwise not required for the project

Attachment D

f. The non-Federal sponsor may initially acquire insufficient or excessive real property acreage which may result in additional negotiations and/or benefit payments under P.L. 91-646 as well as the payment of additional fair market value to affected landowners which could have been avoided by delaying acquisition until after PPA execution and the Government's notice to commence acquisition and performance of LERRD; and

g. The non-Federal sponsor may incur costs or expenses in connection with its decision to acquire or perform LERRD in advance of the executed PPA and the Government's notice to proceed which may not be creditable under the provisions of Public Law 99-662 or the PPA otherwise not required for the project.

We appreciate the City's participation in this project. Should you have questions or concerns pertaining to this letter please feel free to contact Ms. Lisa M. Sandoval at (213) 452-3147 or by email at lisa.m.sandoval@usace.army.mil.

Sincerely,

Theresa M. Kaplan
Chief, Asset Management Division
Real Estate Contracting Officer

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX K
HAZARDOUS, TOXIC and RADIOACTIVE WASTE SURVEY REPORT

April 2015

US Army Corps of Engineers

Los Angeles District

Geotechnical Branch, Geology & Investigations Section

HTRW Survey Report of the
Los Angeles River Ecosystem Restoration Project Study Area, Los Angeles County, CA

July 2014

ACRONYMS USED IN THIS APPENDIX

AAI: All Appropriate Inquiry (ASTM abbreviated ESA method)

ASTM: American Society for Testing and Materials

CAA: Clean Air Act (federal environmental law)

CERCLA: Comprehensive Environmental Response Cleanup and Liability Act (federal environmental law)

CFR: Code of Federal Regulations

CWA: Clean Water Act (federal environmental law)

DTSC: Department of Toxic Substances Control (California environmental regulatory agency for soil)

EA: Environmental Assessment

EDR: Environmental Data Resources (private environmental data search record storehouse)

EIR: Environmental Impact Report (state environmental impact report)

EIS: Environmental Impact Statement (federal environmental reporting requirement)

ER: Engineering Regulation (Corps of Engineers internal regulations)

ERA: Ecological Risk Assessment

ESA: Environmental Site Assessment (general environmental reporting guideline by ASTM)

ESASs: Environmental Site Assessment Standards (category of environmental ASTM standards within the ASTM standards)

F4: Feasibility 4 (level 4 of the Corps of Engineers feasibility study process)

FS: Feasibility Study (CERCLA step)

HHRA: Human Health Risk Assessment

HTRW: Hazardous, Toxic and Radioactive Waste (Corps of Engineers program terminology)

IRA: Interim Removal Action (CERCLA step)

IRAP: Interim Removal Action Plan (CERCLA step)

LARWQCB: Los Angeles Regional Water Quality Control Board (California regulatory agency for Los Angeles area water)

LUST: Leaking Underground Storage Tank

NEPA: National Environmental Policy Act (federal environmental law)

NPL: National Priority List (list of USEPA Superfund sites)

OMRRR: Operation and Maintenance Repair, Rehabilitation, and Replacement (Corps of Engineers operations and maintenance phase for Civil Works projects)

OSHA: Occupational Safety and Health Act (federal safety law)

PAH: Poly Aromatic Hydrocarbon

PCE: Tetrachloroethylene

PED: Planning Engineering Design (Corps of Engineers combined planning and engineering process/phase; occurs prior to actual construction of project)

Phase I ESA: Phase I Environmental Site Assessment (ASTM method)

Phase II ESA: Phase II Environmental Site Assessment (ASTM method)

PPA: Project Partnership Agreement (Agreement between Corps and non-Federal Sponsor to construct, operate and maintain a project)

PRP: Potential Responsible Party

RAP: Remedial Action Plan (CERCLA step)

RCRA: Resource Conservation and Recovery Act (federal environmental law)

REC: Recognized Environmental Condition

RI: Remedial Investigation (CERCLA step)

RP: Responsible Party

SARA: Superfund Amendments and Reauthorization Act (federal environmental law amending CERCLA)

SFVSS: San Fernando Valley Superfund Site (CERCLA-USEPA regulated)

SI: Site Investigation (CERLCA step)

SWRCB: State Water Resources Control Board (California environmental regulatory agency for water)

TCE: Trichloroethylene

TSCA: Toxic Substances Control Act (federal environmental law)

USACE: U.S. Army Corps of Engineers

USDOT: U.S. Department of Transportation

USEPA: U.S. Environmental Protection Agency (federal environmental regulatory agency)

UST: Underground Storage Tank

VOC: Volatile Organic Carbon

TABLE OF CONTENTS

1.0 PURPOSE 1

2.0 INTRODUCTION 1

2.1 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE 1

2.2 HAZARDOUS MATERIALS 4

2.3 HAZARDOUS WASTE 4

2.4 HAZARDOUS SUBSTANCE 7

2.5 HTRW AND THE CORPS OF ENGINEERS CIVIL WORKS PROGRAM 7

2.6 ASTM STANDARDS AND CORPS OF ENGINEERS ENVIRONMENTAL HTRW SURVEYS 9

3.0 F4 FEASIBILITY LEVEL HTRW SURVEY REPORT 9

3.1 SUMMARY OF F3 FEASIBILITY AAI SUMMARY RECORDS AND GEOTRACKER SEARCH LISTING 11

3.2 FOLLOW UP IDENTIFICATION OF ONE ADDITIONAL POTENTIAL HIGH IMPACT HTRW SITE AT LATC PROPERTY 13

4.0 SUMMARY OF THE F3 AAI AND GEOTRACKER DATABASE HTRW SEARCH SITES THAT ARE RECS AND THE NON-MAPPED REC OF LATC 14

5.0 PROJECT CONDITIONS 16

5.1 FUTURE WITHOUT PROJECT CONDITIONS 16

5.2 FUTURE WITH PROJECT CONDITIONS 17

5.3 CURRENT CONDITIONS 17

6.0 GROUNDWATER CONDITIONS 18

6.1 SUMMARY OF GROUNDWATER CONDITIONS AND RELATED DISCUSSION 18

7.0 SUMMARY OF HTRW SURVEY REPORT 19

7.1 EXTENT OF HTRW IMPACTS 19

7.2 PROJECT RELATED ACTIONS TO BE UNDERTAKEN 20

7.3 CONSTRUCTION SEQUENCING FOR COST EFFICIENCY 22

8.0 RECOMMENDATIONS 22

8.1 ADDITIONAL ENVIRONMENTAL INVESTIGATION 22

8.2 APPROACH TO HTRW IMPACTED SOIL 23

8.3 APPROACH TO HTRW IMPACTED GROUNDWATER 24

9.0 COSTS 24

FIGURE 1: CONCEPTUAL GRADING OF HTRW SITES

FIGURES 2 TO 5: MAPS SHOWING 2010 EXTENT OF HTRW GROUNDWATER CONTAMINATION AT SAN FERNANDO VALLEY SUPERFUND SITE

MAPS 1 TO 5: MAPS SHOWING ALL 22 HTRW IMPACTED PROPERTIES MAPPED FOR LOS ANGELES RIVER ECOSYSTEM RESTORATION PROJECT

MAP 6: MAPS 6A AND 6B SHOWING 1953 HISTORIC USGS TOPOGRAPHIC MAP OF LOS ANGELES AND RECENT AERIAL PHOTOGRAPH OF LATC

1.0 PURPOSE

The Los Angeles River (LAR) Ecosystem Restoration Feasibility Study (Study) evaluates and proposes alternatives that will provide habitat restoration and associated benefits to portions of the river near downtown Los Angeles and Burbank. The purpose of this report is to identify and list potential hazardous, toxic, and radioactive waste (HTRW) impacts to the alternative plans that will be considered for this Study. This report also provides general recommendations and costs associated with any such identified HTRW impacts.

2.0 INTRODUCTION

The introduction begins with Section 2.1, HTRW. This section includes discussion and definition of the U.S. Army Corps of Engineers (Corps) HTRW terminology and its programmatic relationship to federal environmental laws, Corps Civil Works policy and the ASTM standards for environmental HTRW surveys. It also provides cursory explanation of the difference between NEPA environmental, biological, and CERCLA type environmental HTRW surveys.

Sections 2.2 through 2.4 discuss definitions of and differences among hazardous substances, hazardous wastes and hazardous materials and their relationship to HTRW.

Section 2.5 provides further discussion of the relationship between HTRW and the civil works program and other Corps programs.

Section 2.6 provides a short history, definition and discussion of the ASTM standards that can be applied for performing HTRW environmental surveys.

Section 3 is the HTRW report for the project area with results. Section 4 is a concise summary of the report results.

Sections 5and 6 discuss the HTRW impacts to the project and without project scenario and groundwater conditions.

Sections 7 to 8 provide a summary of the overall report findings and a detailed summary of the Corps HTRW Regulations related to Civil Works projects. It also provides recommendations for future HTRW work that needs to be completed for this project.

Section 9 provides a random order of magnitude cost due to the high HTRW impacts that were identified for this project.

2.1 Hazardous, Toxic, and/or Radioactive Waste

Corps, Engineering Regulation (ER) 1165-2-132, "Hazardous, Toxic and Radioactive Waste (HTRW) Guidance for Civil Works Projects", dated June 26, 1992, provides guidance for consideration of HTRW issues and problems within project boundaries or which may affect/be affected by Corps Civil Works projects. HTRW is a term used by the Corps, and it primarily addresses "hazardous substances" as defined under CERCLA. CERCLA-regulated hazardous substances do not include pure petroleum substances, such as those that are derived or from commercial fuel or natural gas products. CERCLA-regulated hazardous substances include hazardous substances from the other major federal laws of CWA (toxic pollutants), CAA (hazardous air pollutants), TSCA (imminently hazardous chemical substances or mixtures) and RCRA (hazardous wastes). These laws can be thought of as fitting under the one umbrella of CERCLA for regulation of federal hazardous substances. The term HTRW generally does not include pure petroleum substances that emanate from fuel or natural gas products. However, ER 1165-2-132 also provides guidance for identifying and addressing petroleum substances of concern.

ER 1165-2-132 outlines procedures to facilitate early identification and consideration of HTRW issues in all phases of a study or project.

To accomplish early identification, the Corps schedules and performs HTRW surveys and reports during the initial Civil Works planning and design portions of the Civil Works project phases. These surveys are performed often at the reconnaissance level. Such surveys are conducted most often by following the procedures found in the commercial Environmental Site Assessment Standards (ESAs) written by the American Society for Testing and Materials (ASTM). Surveys can also be conducted by following any other type of Federal, local and/or state guidance or procedures that may be applicable to the HTRW concerns of the Corps project. ASTM Environmental Site Assessment Standards are specifically written for application to the environmental engineering field (discipline). The ASTM standards for ESAs are written as separately numbered, titled, but closely related ASTM standards within the set of ASTM ESAs. The standards are titled "Environmental Site Assessments (ESA)".

The two ASTM titles and their procedures most commonly used by the Corps for HTRW surveys and reports are ASTM E-1527-05, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (Phase I ESA) and ASTM E-1528-06, "Practice for Environmental Site Assessments: Transaction Screen Process (AAI)". Federal regulations and additional information directly related to ESA (HTRW survey) procedures can be found in the United States Environmental Protection Agency (USEPA) "Standards and Practices for All Appropriate Inquiries" (AAI, 40 CFR Part 312). Either a Phase I ESA or AAI or both are typically selected and used during the early stages of a Civil Works project development phase. In the planning development phase, the AAI is most typically selected, followed by a Phase I ESA, if warranted. A Phase I ESA was not conducted for this F4 Feasibility HTRW Survey Report. A brief AAI was conducted as part of the Corps' previous F3 Feasibility Main Report for this project. This F4 HTRW Survey Report is instead based on summary results and information from the F4 HTRW AAI and recent information gathered from the State Water Resources Control Board (SWRCB) online "Geotracker" HTRW environmental database. The "Geotracker" website was accessed for this project as recently as May 2013.

Of additional note, ESAs are sometimes confused with Environmental Assessments (EAs) conducted in accordance with National Environmental Policy Act (NEPA). A NEPA EA is a brief evaluation of environmental resources and the potential impacts on these resources from a proposed action, used to determine whether such an action may have significant impacts and thus must be evaluated in a more comprehensive study, an Environmental Impact Statement (EIS). In the case of the current study, an EIS is being performed, and the information in this appendix will be used in the impact analysis in that EIS.

The HTRW survey only considers project-area HTRW impacts which are a recognized and known material threat to human health and the environment. These HTRW impacts surveyed are all CERCLA hazardous substances, RCRA hazardous waste and/or non-CERCLA petroleum product contaminants already released or have a material threat potential to be released within the study area land or on adjacent lands. The HTRW survey also considers those known properties, lands and businesses that are identified or regulated as having or generating hazardous waste or possessing or using hazardous substances or petroleum products that are in general compliance with CERCLA and RCRA laws. HTRW impacts are not intended to include those impacts that generally do not present a threat to human health or the environment. Additional details on the proper ASTM selection process and use are explained in more detail within Section 2.6 below, titled *ASTM Standards for Corps of Engineers Environmental (HTRW) Surveys.*

It is important to note that there may be unknown HTRW impacts to the study area which were not fully disclosed and listed from the set of known sites or properties found during the HTRW site search performed for this HTRW survey. This survey was prepared using the list of HTRW sites supplied as part of the previous 2009 F3 HTRW abbreviated AAI efforts and according to sites found on the latest online web update of the CWQB's Geotracker HTRW site listings specific to Los Angeles, California. Unknown HTRW impacts could also consist of newly discovered HTRW or buried historical type HTRW that is not observed on the land surface or not found from the list of known HTRW search sites. Newly discovered HTRW is sometimes encountered during the future construction phases of work for a typical Civil Works project. Also, newly discovered HTRW can sometimes be derived from residual (leftover) forms of contamination existing within the soils, soil vapor, air, surface water and groundwater media from known and listed HTRW sites. This occurs when undefined portions of the remaining known residual HTRW are encountered at known HTRW properties.

The most common way HTRW can have impacts is if it is released into the surrounding property environment and remains there and is a current material threat to human health or the environment. The most persistent HTRW is often found as residual forms of HTRW contamination in the soils, surface and groundwater of the surrounding land near the release. Except for soil vapor, HTRW found in air is not as common because releases of HTRW into air are usually instantaneous and do not linger for long around HTRW properties. Air contaminants in the form of soil vapor do linger for longer around HTRW properties and thus soil vapor is the most common medium where HTRW air contamination is persistent.

The HTRW survey analysis for this report focused on these types of releases into the adjacent property and environment within a 500 foot distance of the habitat footprint areas. The analysis does not include evaluation of hazardous materials stored or used at or near the study area. Generally, hazardous materials are not considered part of HTRW impacts, unless or until they have been released to the environment, at which point they would be considered a hazardous substance or waste, according to CERCLA and RCRA. Further details on how hazardous materials, hazardous waste and hazardous substances are regulated by law and addressed in this HTRW survey report are explained in the following subsections.

2.2 Hazardous Materials

Hazardous materials are the common chemicals and chemical products used for various reasons within the workplace. This use or safe use is specifically regulated by the Occupational Safety and Health Act (OSHA). The transportation of hazardous materials in commerce is also regulated, but by the U.S. Department of Transportation (USDOT). HTRW hazardous substances are found as chemical ingredients in many commonly used industrial and household hazardous materials, which are manufactured in the form of liquids, solids, gases and/or mixtures. Hazardous materials can be relatively stable and harmless to humans and the environment, but only if certain precautions are followed such as: proper use in accordance with directions and intended uses; proper storage; proper management; proper disposal; and control with the proper engineering, environmental and personal protective measures and/or equipment. Hazardous materials can be quite dangerous if any such precautions are not followed. Releases of HTRW from hazardous materials most often occur as a result of accidental leaks and releases to soil and surface water, etc. This is often caused by improper storage and disposal. Under these situations the releases become HTRW impacts. It is important to note that hazardous materials by themselves (in useable form or as properly used in the workplace) are not hazardous substances, nor regulated as such, until such materials are released to the environment. In such a case they would become a hazardous substance. In all cases, hazardous materials are not supposed to be released to the environment, unless it is properly permitted or regulated to do so, otherwise it is unlawful. The most common example of a lawful or permitted way that hazardous materials are released into the environment is by properly disposing of them as a hazardous waste into a landfill in accordance with RCRA procedures.

2.3 Hazardous Waste

Most hazardous waste in the U.S. is generated directly from the waste byproduct activities of active industries or businesses and is a regulated form of solid waste. This special type of solid waste must be managed, transported, labeled and disposed of in a manner far different from ordinary solid waste (garbage). Hazardous waste is defined and regulated under the Federal environmental law of the Resource Conservation and Recovery Act (RCRA)[1]. Its basic definition under RCRA is a solid waste (or combination of solid wastes) which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may: (1) cause or contribute to an increase in mortality or an increase in serious irreversible, or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. In addition, under RCRA, USEPA establishes four characteristics that will determine whether a substance or solid waste is considered hazardous, including ignitability, corrosiveness, reactivity, and toxicity. Any solid waste that exhibits one or more of these characteristics is classified as a hazardous waste under RCRA. In addition to the characteristic definition, a hazardous waste is also defined as that found on the hazardous waste list. This list is prepared by the USEPA where the hazardous wastes are found by common name, chemical name, etc. Any hazardous waste not found on this list could still be a hazardous waste according to its characteristics. Indeed most of the hazardous wastes disposed of in the U.S. are defined as characteristic type wastes.

Hazardous waste could become an HTRW impact if it is previously known to have been released onto properties or it is observed as being improperly stored or managed and e.g., shows evidence of leaking containers and of staining soil, etc.

2.4 Hazardous Substance

Hazardous substances are most often found on properties as a result of being released in the surrounding environment. The releases from properties often manifest in the form of pollutants or contaminants into the surrounding environment. Once released, hazardous substances become regulated and defined according to the Federal environmental law of CERCLA . Hazardous substances are regulated and defined in terms of those substances either specifically designated in a listed form as hazardous under CERCLA. They are also those hazardous substances identified under the other major federal environmental laws of RCRA and the Toxic Substances Control (TSCA), Clean Water and Clean Air Acts (CWA and CAA).

Hazardous substances thus could also become HTRW impacts if they were previously known to have been released onto properties, e.g., a known active or non-active CERCLA Superfund hazardous substance contaminated site or any other such related regulated site, e.g. such as a California State Regional Water Quality Control Board or Department of Toxic Substance Control hazardous substance contaminated site, etc.

---

[1] 1 RCRA "hazardous waste": Hazardous wastes are usually generated by active commercial or industrial activities and may be classified as "listed" hazardous wastes or "characteristic" hazardous wastes by the EPA.

2.5 HTRW and the Corps of Engineers Civil Works Program

HTRW has implications across all programs within the Corps but affects the Civil Works program differently than other Corps programs, such as the military appropriated FUDS and Army appropriated O&M programs. HTRW issues at Civil Works studies and projects are addressed as outlined in ER 1165-2-1320. The ER states the Corps policy for addressing HTRW issues and outlines the timing and cost sharing requirements for HTRW encountered during the standard Civil Works project Planning, PED and Construction phases. Goals of the ER are to identify the level of detail for HTRW investigation for each Civil Works phase of the project, promote early detection and response by appropriate responsible parties, determine viable options to avoid HTRW problems, and establish a mechanism for resolution of HTRW issues. The Corps policy provides the following:

a. Civil Works project funds are not be used for HTRW related activities except as specifically stated in the policy or provided for specifically in law (see paragraph 6a, ER 1165-2-132).

b. The construction of Civil Works projects should be avoided in HTRW contaminated areas, where practicable. The Corps and project Sponsor will cost share environmental investigations to identify existence of HTRW (see paragraph 6b, ER 1165-2-132).

c. If it is not practical to avoid HTRW for a project, the Sponsor is responsible for ensuring that development and execution of HTRW response actions (CERCLA response) are accomplished at 100% Sponsor provided cost. The Sponsor is responsible for all costs associated with the required response (remediation) of any known or unknown HTRW contamination existing at the project throughout all of the Corps Reconnaissance, Feasibility, Planning, Engineering and Design (PED), Construction and Operation Maintenance, Repair, Replacement and Rehabilitation (OMRRR) programmatic project phases. The Sponsor is also 100% responsible for all costs associated with the required response plan, i.e. CERCLA remedial action plans. The Sponsor is also responsible for ensuring that response actions are accomplished in accordance with federal, state and local environmental laws. No in-kind project cost credit will be given to the Sponsor for these activities. The response action is determined during the investigation and study activities leading up to the actual response. The purpose of the cost sharing agreement and its timing are to ensure that all known HTRW is accounted for prior to construction as much as possible. This will ensure that quantities of known HTRW identified and to be removed from the project in areas that cannot be avoided are accounted for. This will further ensure a more accurate cost estimate for that HTRW identified as having to be remediated during the construction phase of the project (see paragraph 6c, ER 1165-2-132).

d. Costs for remediation and handling of contaminants not regulated under CERCLA will be credited to the Sponsor if the cost of these activities is required as part of a validly promulgated federal, state or local regulation (i.e. costs can be project shared for remediation of petroleum or natural gas pure product contaminants, etc. that are released at project properties). Petroleum related contaminants are typically regulated under Federal and State petroleum cleanup programs, i.e. leaking underground storage tank programs, etc. In such cases, the cost will be calculated in the economic analysis as the fair market value of the land considering the non-CERCLA contamination, and the cost of remediation will be a construction cost. Credit will not be allowed for both costs of the remediation and for the value of the land as if it were clean (see ER 1165-2-132).

The ER further provides that the Civil Works project must include the appropriate article in the Project Partnership Agreement (PPA) to address the Sponsor's responsibility for addressing hazardous substances. The Sponsor is encouraged to pursue recovery costs for investigations/studies and response from PRPs or RPs, as applicable, for all properties where unknown, known or potential HTRW contamination exists. The PPA between the Corps and the Sponsor does not limit the Sponsor's rights to recover any response costs.

In short, Corps policy is to identify HTRW issues early in the project process and avoid construction within HTRW-contaminated areas or properties, where practicable. Where impracticable to do so, the Corps will share the costs of survey to identify the existence and extent of HTRW, but any response or remediation activities required, including studies to determine the appropriated response are 100 % non-Federal costs and should be completed prior to construction. Although response costs are not cost shared, the presence of HTRW can affect alternative plan selection.

USACE's ER 1165-2-132, HTRW Guidance for Civil Works Projects is summarized in Section 2.5 above. This ER also outlines the timing and cost sharing requirements for HTRW encountered during the standard Civil Works project Planning, PED and Construction phases. The Corps will cost share for investigations and studies for known and unknown HTRW contamination, except for the response plan and the actual response throughout all Corps Civil Works programmatic project activity/category type phases. This is clearly shown below in Table.1 (page 5) from ER 1165-2-132:

TABLE 1

COST SHARING OF HTRW ACTIVITIES WITH
CIVIL WORKS PROJECTS AND STUDIES
ON NON-FEDERAL LANDS

HTRW ACTIVITY	PROJECT PHASE	COST SHARING
1. Environmental investigation to identify any existence of HTRW.	Reconnaissance	Reconnaissance
	Feasibility	Feasibility
	PED	Construction
	Construction	Construction
	OMRRR	OMRRR
2. Studies required for recognizing existence and extent of any HTRW, and studies required to evaluate alternative project plans.	Reconnaissance	Reconnaissance
	Feasibility	Feasibility
	PED	Construction
	Construction	Construction
	OMRRR	OMRRR
3. Development of a response plan for dealing with the HTRW. Includes studies and determine the appropriate response.	Any	100% Non-Federal (including responsible parties)
4. Response measures to relocate HTRW or to treat the HTRW in place.	Any	100% Non-Federal (including responsible parties)

NOTE: The costs for studing and remediating HTRW on Federally-owned lands will be assigned on a case-by-case basis.

2.6 ASTM Standards and Corps of Engineers Environmental HTRW Surveys

As stated in the HTRW introduction above, the Corps often utilizes ASTM standards and procedures in the performance of Environmental HTRW Surveys.

The ASTM Standard E-1527 was originally published in 1993. The purpose of the standard is to define good commercial and customary practice for performing ESAs of real estate parcels. The original purpose of an ESA was to satisfy the "Innocent Landowner" provisions of the CERCLA, thereby reducing the liability associated with taking ownership of property where hazardous substances or wastes are present. The ASTM Standard has been revised periodically since 1993 in response to changes in good customary practices and in response to changes or amendments the CERCLA in the form of Superfund Amendments and Reauthorization Act of 1986 (SARA); the Asset Conservation, Lender Liability, and Deposit Insurance Protection Act of 1996 (Lender Liability Amendments); and Small Business Liability Relief and Brownfields Revitalization Act of 2001 (Brownfields Amendments). The recent changes in the 2005 Standard are a result of the AAI requirements. The goal of the ASTM Standard is to determine if "Recognized Environmental Conditions" are present on the property being assessed. The term "recognized environmental condition" (REC) is defined in the standard as:".the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions." The AAI Regulations were developed to establish specific standards and requirements for investigating the prior ownership and historical use of a property in order to qualify for certain landowner liability protections to property owners under CERCLA.

3.0 F4 FEASIBILITY LEVEL HTRW SURVEY REPORT

The Los Angeles River Ecosystem Restoration project study area is very large in extent and the current land use is mixed residential and medium to light industrial. The land use history of the study area indicated that HTRW impacts would be moderate to heavy. This is because historic land use in much of the study area has been made up of densely compact residential, extensive infrastructure (construction of flood channels, bridges, railroads and major highways, airports and dams) and industrial (medium to heavy manufacturing/industry). From the late 1930s to the early 1950s the area was involved in heavy manufacturing of aircraft, automotive, as well as medium durable goods manufacturing. The heavy manufacturing use has given way to medium to light industrial use from 1960 to present.

There is plentiful evidence of historic operations involving HTRW from particularly intense industrial land use within the San Fernando Valley, plus light to medium industry and small service business adjacent to the study area. Much of the current larger HTRW impacts to the study area are due to pollution from the older heavy to medium aircrafts, durable goods and transportation industry. There are many numerous smaller HTRW impacts from contemporary light to medium industry and service businesses (i.e. gasoline stations, small businesses, dry cleaners, auto repair shops, etc). The sheer size of the study area was too large for a detailed site visit and interview of every property owner of every potential HTRW site that is known and listed from the previous F3 AAI summary of HTRW records, which was performed in 2005.

This AAI summary listing was gathered from the 2005 HTRW environmental database archive search of a mile wide corridor plot of the habitat study area. This search included all known Indian tribes, and state/local and federal government RCRA and CERCLA related environmental information and records. This archive was purchased by the Corps from Environmental Data Resources (EDR) Inc., one of several commercial clearinghouse retailers that sell HTRW archival database information for use in preparing Site Assessments according to the Standards. The EDR archive database was used to prepare an abbreviated AAI type of HTRW survey inquiry. This inquiry was part of the previous F3 Feasibility Main Report.

As most of the AAI inquiry database work had been partially completed beforehand and was not formally written, and because the number of HTRW sites within 1 mile to the study area is extensively large, the full ASTM Phase I ESA was not followed as the procedure for preparing this HTRW Survey Report. Instead, this F4 type HTRW Survey Report is a refinement of the original abbreviated AAI inquiry. It is a formal ASTM AAI report and is based on the HTRW summary results from the previous F3 AAI HTRW Survey and the "Geotracker" online website. An online inquiry was made of this website for recent and available online HTRW environmental records pertaining only to "active and open" HTRW properties near or within 500 feet of the habitat footprint of the study area. In addition, select listed active and open sites from the older 2005 AAI database search from within the 500 foot buffer were also included. The 500 foot buffer was chosen as a cutoff distance instead of a larger distance, i.e. one mile or more, for the HTRW environmental database listed properties, because this distance represents a reasonable search distance based on the land use history of the area and because most of the potential HTRW contamination risk to the project is from the list of HTRW impacted properties that are closest to the study area of concern. This HTRW search/inquiry did not specifically consider or target any particular one of the final array of habitat alternative footprint plans considered for this project. This AAI search and analysis includes all detailed alternatives considered for the project. As previously mentioned, only "active and open" HTRW listed properties within approximately 500 feet of the alternatives were considered as part of this HTRW Survey Report.

This approach is more useful and practical at this stage of planning, because it focuses on the latest known "active and open" HTRW site records listing from Geotracker and the older 2005 AAI database listings closest to the project footprints that are likely to pose the greatest HTRW risk or concern or human and environmental exposure to the study area. There are also "closed and inactive" HTRW sites listed as well, but these sites are <u>not</u> included in this survey, as HTRW contamination within them is considered by State, Federal and local CERCLA/RCRA regulatory authorities, as mitigated. This means these are "closed case" sites that require no further remedial

action because any residual HTRW contamination still present on these closed sites has been remediated to the extent that it is no longer a threat to the public health or environment.

After review of the previous 2005 AAI listing and the latest Geotracker website data search, any remaining listed HTRW sites (properties) of potential concern were judged as to their significance according to Recognized Environmental Conditions (RECs) for HTRW. Significant RECs or HTRW impacts for this project are those properties/sites that are routinely moved forward for recommendation for either a follow up ASTM Phase I or Phase II ESA HTRW survey. The Phase I ESA could include a further detailed site visit, property owner interview, and additional historical HTRW records search of files such as fire insurance maps, land title searches, historical topography and aerial photos, if available. The Phase II ESA site investigation is typically reserved only after conducting a full Phase I ESA. However, it could be implemented if RECs from the AAI screening are conclusively evident enough to preclude or skip the use of a Phase I ESA. In such case, the Phase II would involve additional steps of providing a field work plan and performing an actual environmental HTRW field site assessment. A Phase II site assessment would involve the collection and laboratory analysis of environmental samples to confirm the presence, extent and concentration of hazardous substances believed to have been released into the environmental media such as soil, sediment, groundwater, air and surface water.

3.1 Summary of F3 Feasibility AAI Summary Records and Geotracker Search Listing

Table 1 shows the 2005 AAI and Geotracker listings of all known CERCLA/RCRA type environmental records and data from potential HTRW sites or properties, with addresses that could be mapped within approximately a 500 foot distance of the habitat footprints. It contains those listings that are of significant HTRW impact to the project RECs, recognized environmental conditions or those impacts that are a material threat to human and ecological environment. The database search yielded a list of approximately 22 open and active environmentally regulated properties that are considered as having a potential HTRW impact to the project, i.e. they are all RECs. All of these 22 properties have had undergone previous HTRW investigations equal to or beyond the level of either an ASTM Phase I and/or ASTM Phase II (equivalent to a CERCLA PA/SI and RI/FS, etc.). Based on this survey, some of the RECs have more of a potential HTRW impact to the study project than others. 3 of the 22 are of a high HTRW impact to the study compared to the remaining 19. The 3 high HTRW impact sites are the one NPL Federal site (San Fernando Valley Superfund Site) and the two California State DTSC (Taylor Yard G1 and G2) regulated parcel sites, while the rest of the 19 sites are of low impact. The 22 impacted HTRW properties are shown in Maps 1 to 5 at back of this report.

Table 1 Results of the HTRW Database Inquiry/Search for Mapped REC Properties Only		
Database	**Brief Database Description**	**Records Found**
Federal Records		
NPL	National Priority List (Superfund) Database Listed: • San Fernando Valley Superfund Site (SFVSS) **(High Impact)**	1
State Records		
SWRCB	State Water Resources Control Board (Los Angeles Regional Water Quality Control Board) Listed: • San Fernando Consolidated Facility • Three Chevron Gas Stations • former Bortz Oil • Shell Gas Station • former Triangle Gas Station • former Hawkes Finishing • Mt Sinai (Forest Lawn) cemetery • former Albion Dairy • BNSF Tower • Valspar Corp • Chromal Plating & Grinding Co • Infinity Outdoor Co • Gannett Outdoor Systems Inc • MTA • Morton Intl Whittaker Corp • Union Pacific Railroad-Cornfield Yard	16
DTSC	California Department of Toxic Substances and Control Listed: • former Manufacture Gas Plant • former Manufacture Gas Plant • Bortz Oil • Taylor Yd G1 **(High Impact)** • Taylor Yd G2 **(High Impact)** • Union Pacific Railroad-Cornfield Yard (also listed as a SWRCB site, but only counted once)	5
	Total <u>Mapped and Listed</u> REC Records Found	**22**

The complete HTRW records data for the more than 1,400 properties listed from the F3 Corps Feasibility Report AAI HTRW environmental database search are not shown on this table. This is because the records shown in this Table 1 are only those from the list of environmental records that were found to have HTRW impact, i.e. "actual RECs", at a distance of 500 feet from the habitat footprints.

Instead, these records are available as an electronic archive report within the Los Angeles District Corps of Engineers Planning Division (office) working files for this project. If needed, copies of this entire database can be made available upon request to the Corps study project manager, Ms. Kathleen Bergmann or the Corps Geotechnical Branch, POC: Mr. Jeffrey Devine (213) 452-3579.

Further discussion of the results, project conditions and recommendations for this HTRW Survey Report are found in the following sections.

3.2 Follow Up Identification of One Additional Potential High Impact HTRW Site at LATC Property

The Los Angeles Trailer and Container Intermodal Facility (LATC) is a modern railroad freight transfer yard, used for the intermodal (truck to rail and rail to truck) transport of semi-truck cargo containers. It is located at the southern end of the LAR study boundary. The address for this property is: Union Pacific Railroad Company Los Angeles Transit Center; 750 Lamar Street, Los Angeles, CA 90031. A portion of the LATC property, over 100 acres, is included as part of the habitat footprint of the LAR project. It makes up a large portion of the overall acreage of the project and is included in all alternatives in the final array. Currently, the LATC property is utilized for sorting and transfer of shipping containers to and from rail and truck transport modes. To facilitate these activities, most of the ground surface is covered with asphalt pavement. Additional improvements include rail sidings, container storage areas and loading and handling facilities. There are no maintenance facilities or similar buildings on this property, nor are there any activities that involve the use, treatment, or storage of large amounts of hazardous materials.

The AAI search conducted for this report indicated no HTRW concerns for the LATC property. That is, no records of active or open environmental regulatory CERCLA-related HTRW concerns for this property were found. The environmental records for this property listed a few minor regulatory actions, for small, one-time spills of hazardous materials from railcars unloaded at the property. The spills were remedied to the satisfaction of the local California environmental regulatory authorities, and no further regulatory action was required.

However, based upon the recognized past use of the LATC property, some concern remains regarding the potential for HTRW on the site. Evaluation of the 1955 historic USGS topographic maps of the Los Angeles area revealed the presence of a railroad maintenance yard at the LATC property. This yard is expressed as a cluster of elongated buildings centered about a railroad round table and is labeled "Union Pacific Maintenance Yard." This map is included as Map 6 at the back of this report. This same map also showed similar facilities and labeling for the Taylor Yard property to the north. The map clearly shows that both properties, Taylor Yard and LATC, were railroad maintenance facilities until at least 1953. Historic topographic maps published after 1953 showed that the maintenance facilities at both properties had been removed.

The AAI search did not find that any Phase I or II site assessments, or other CERCLA investigations or actions have been conducted to date at the LATC property. As such, the actual presence of HTRW at the LATC property has not been confirmed. However, based on the similar land use history for the Taylor Yard and LATC properties and the fact that HTRW is known to be present at Taylor Yard, similar HTRW conditions to those at Taylor Yard may reasonably be anticipated at the LATC property. It is important to note that the historical maintenance activities

at Taylor Yard contributed to the majority of HTRW contamination at that site. Because LATC and Taylor Yard were in use at the same time, similar activities most likely occurred at these properties. Based on the historical similarities of these two properties, the LATC property is likely to contain similar HTRW contamination and is therefore carried forward as a REC.

Table 2 **Results of the Follow Up Discovery of LATC Property,** **Non HTRW Database Inquiry/Search and Non-mapped REC Description**	
Database or Source	**Records found**
• USGS Historical Topographic Map Database (online), 1953 USGS Topographic Map of Los Angeles, showing LATC	1
Total non-Mapped and non-Listed REC Records Found	**1**

4.0 SUMMARY OF THE F3 AAI AND GEOTRACKER DATABASE HTRW SEARCH SITES THAT ARE RECS AND THE NON-MAPPED REC OF LATC

The F3 AAI and Geotracker database inquiry/search results reported within this F4 HTRW Survey Report include 22 listed HTRW sites total (Table 1), plus one additional HTRW site (Table 2) that is a non-mapped REC. The total HTRW sites for this report are **twenty three**. All of these listed and mapped sites are RECs, because each property or site is still open and subject to State of California environmental regulatory enforcement by the Regional Water Quality Control Board, Department of Toxic Substances and Control, and/or the Federal U.S. Environmental Protection Agency, there has been a detected release of a combination of fuel, solvents (VOCs), metals, PAHs and related contaminants into the surrounding groundwater or soils from these sites, and residual contaminants still remain at the sites. The LATC site is a REC because of additional information obtained from the 1953 historical USGS topographic map of Los Angeles, which shows this property and Taylor Yard under use for similar purposes in the mid-20th century.

Of the 23 properties (sites), 3 are of high HTRW impact concern for the project study alternatives. These properties are the SFVSS, which is a widespread and pervasive HTRW contaminated groundwater plume, and the two Taylor Yard parcel G1 and G2 properties. These two properties are most heavily contaminated by HTRW in soils and soil vapor. The rationale for the 3 high impacts sites are as follows:

SFVSS: A very large release of solvent petroleum contamination exists within the surrounding groundwater from the one San Fernando Valley Superfund (SFVSS) site. This release is primarily a mapped groundwater plume of VOCs and metals that extend into a very large southern portion of the entire San Fernando Valley and run all along the east side of the Los Angeles River, which is where a large portion of the habitat footprint is planned, affecting project Reaches 1 through 6. This plume is shown on Figures 2 to 5 at the back of this report. It is currently being remediated by the USEPA via a large series of pump and treatment wells that are

strategically located amongst the plume. One such set of wells, the Pollock Well Field, is located approximately less than 1/2 mile northwest from the Taylor Yard G1 and G2 properties. The Los Angeles Department of Water and Power (LADWP) operates the wellhead treatment facility at Pollock. This treatment has been ongoing for approximately 10 years and has effectively stabilized much of the higher HTRW concentration impacted areas of the plume. Because of the existence of this facility and its ongoing operation, the EPA considers the Pollock Well Field as an adequate remedy for addressing the HTRW groundwater contamination in this area of the SFVSS site and has concluded that further remedy is unnecessary. Figures 2 to 5 show the extent of plume as of 2010, which shows the inner portions of the plume at higher concentrations than the outer portions. It is assumed that the plume will take some additional time (approximately 10 to 20 years) to further reduce in its size and concentration, as much of this depends on the ongoing treatment efficiency of the USEPA pump and treat response. For the purposes of projecting the impacts of SFVSS on the project, it is assumed that the plume will shrink over time, but may not likely be reduced in scale soon enough such that it would no longer impact the project properties closest to it before the construction phase begins. Therefore, it is assumed that the relative shape and concentrations mapped as of 2010 will be the same or similar during construction phase of the LAR Ecosystem project.

The Sponsor is responsible at 100% non- project costs for the response of any HTRW contamination for the SFVSS property that affects the construction activities for the restoration project. Dewatering during construction is the most likely activity that will be affected by the HTRW contamination in groundwater from this property. It is likely that this response will consist primarily of short term pump-treatment and disposal of treated discharge water on or near the study area. This is the most direct and effective remediation method. There are other remediation methods such as long term pump and treat and bioremediation/enhancement that are effective but require more time for cleanup, and therefore, are not suitable for the short time frame needed to construct the habitat. Requirements for disposal and discharge of HTRW contaminated groundwater will also have to be identified and complied with prior to determining the final pump type treatment technology for the contaminated water

It is important to note that the habitat footprint crosses mostly the outer edge of the SFVSS HTRW groundwater plume as shown on the maps at the back of this report. However, it is also likely that HTRW contaminants encountered could still have concentrations that are near or exceed those near the center of the plume." The final pump and treat remedy will be selected that addresses either likelihood.

Taylor Yard G1 and G2: The contamination at the G1 and G2 sites is a complex mixture of metals, solvents (VOCs), PAHs and fuels. Even though some contamination has been remediated by the RP, significant residual HTRW still exists at both of these properties. The contamination at G2 in particular is still very extensive and is a complex mixture of the aforementioned contaminants. An additional amount of it is scheduled to be remediated again in the future. However, some amount of residual contamination is planned to remain at G2 under the RP's remediation scenario. Both sites have had screening-baseline level human health risk assessment reports prepared. A screening-baseline level ecological risk assessment report was only prepared for the G2 site and not the G1 site. The planned amount of residual contamination leftover from the planned remediation at both these sites is such that it will satisfy primarily industrial human health standards. The habitat footprint for these two sites under the study alternatives is very large and includes coverage for 100% of these sites/properties. If the residual contamination is left on

these properties according to current conditions for land use, it will most likely not meet the future conditions for land use needed to meet the ecological or human health risk and exposure standards for land use of the restoration project. The Sponsor is responsible for 100% costs for the response of any HTRW contamination for these two properties such that it meets the future land use requirements for this LAR project. The Sponsor has committed to undertaking necessary remediation and providing "clean sites" prior to construction of the LAR restoration project. These costs would not be cost shared as part of the restoration project. It is likely that this response will consist primarily of excavation-removal- hauling efforts directed towards remediation of soil and soil vapors. This is the most direct and effectively remediation method. There are other remediation methods such as soil vapor extraction, bioventing, etc. that are effective but require more time for cleanup, and therefore, are not suitable for the short time frame needed to construct the habitat.

The rest of the 19 listed and mapped HTRW REC properties are low impacts to the restoration project because existing contamination is not as extensive or widespread and the habitat footprints are adjacent to and not within these REC properties. However, these 19 properties may still have HTRW impacts to a restoration project, because there is a possibility that future study project construction activities, especially dewatering, will encounter this residual contamination. It is likely that undefined portions of the known residual groundwater contamination at these properties could be encountered as wandering plumes and such. This is because groundwater contaminants of fuel, solvents and metals still exist as residual contaminants within the known/defined groundwater plumes at these 19 properties. This type of contamination is persistent and highly mobile. It is likely that there are remnant or relic plumes that may have migrated away from these properties, and are, therefore, likely to be encountered during project future construction activities.

The 22 known HTRW impacted properties are shown on Maps 1 to 5 at back of this report. The extent of the HTRW contaminated shallow groundwater for the SFVSS is shown on Figures 2 to 5 at back of this report. These figures show the extent of the Total Chromium, Hexavalent Chromium (metals), PCE and TCE (solvents) present within the upper approximately 50 feet of shallow groundwater for the end of year 2010, as reported by the USEPA.

LATC is one additional non-listed and non-mapped HTRW REC property that impacts the restoration project, because the extent and presence or existence of HTRW is unknown. The property has historic similarity with Taylor Yard, which is presently contaminated with HTRW, and is shown on Map 6 at the back of this report.

5.0 PROJECT CONDITIONS

5.1 Future Without Project Conditions

The RECs for the 22 properties/sites will continue to exist for the foreseeable future because:

- Remediation, monitoring, sampling and testing of the contaminants at most of these properties continues; residual contamination exists that is not yet safe to the public health and/or environment; the regulatory case files are still "open"; and the properties will continue to be managed under the authority of the appropriate California environmental regulatory agencies.

The RECs for the LATC property/site will continue to exist for the foreseeable future because:

- This property has a land use history similar to that of Taylor Yard, which is still heavily contaminated by HTRW. Information regarding the presence and extent of the HTRW contamination at LATC is unknown at this time.

5.2 Future With Project Conditions

The RECs for the 22 properties and the LATC will not continue to exist because:

- The HTRW impacts that now exist to the LAR study project are due to material threat of the undefined portions of the existing residual HTRW and contaminants that are likely to be encountered during construction of this project near the 19 low HTRW impact properties. The same impacts also exist for the 3 high HTRW impact properties due to the material threat of the defined portions of the existing residual HTRW, the contaminants that are highly likely to be encountered during future project construction activities, and because these 3 properties are directly within a large percentage of the habitat footprint needed for this project and cannot be avoided. The RECs (HTRW and contaminants) from these 22 properties will not exist in the future, because they will be properly addressed by the remediation (response) activities. The response for each property will be specifically tailored (site specific) to the final land use for each property. All response will be undertaken at 100% non-cost-shared costs by the Sponsor. As part of the cost sharing eligible portions of this project, these properties must be properly identified/investigated by both the Sponsor and the Corps prior to construction of this LAR study project. In addition, the strategy/purpose under each step for the investigation activities specific to each property must also be reviewed and agreed to by the local environmental regulatory agencies (either the DTSC and the LARWQCB, depending on the site). The extent of any of final response will be resolutely dependent on satisfying the specific land use for the LAR project and the human/ecological health risks specific to this project land use.

5.3 Current Conditions

- The Recognized Environmental Condition is: There is an existing HTRW impact to the project because as there is a potential for contamination to the groundwater and soils within a 500 feet distance of the habitat study area or directly beneath the habitat footprint areas.

6.0 GROUNDWATER CONDITIONS

6.1 Summary of Groundwater Conditions and Related Discussion

The groundwater throughout most of the project study area is best depicted as an unconfined aquifer. The upper surface of the aquifer is roughly coincident with the floor of the existing LAR channel. This aquifer contains both shallow and deep groundwater portions that differ in general water quality. The shallow portion extends from ground surface to approximately 100 feet below ground surface, while the deeper part extends from 100 feet below ground surface to approximately 200 feet. Both portions of the aquifer are co-mingled and are contaminated with known HTRW in the form of VOCs and Chromium metals. As previously discussed in Section 4.0, this groundwater contamination is officially known as the SFVSS, a Federal CERCLA Superfund site. It is being addressed through an ongoing response consisting of groundwater well pump and treatment that has been active for approximately 10 years. Because it is a Superfund site, the response is being conducted by Los Angeles Department of Water and Power and overseen by the USEPA.

The pump and treatment response for the SFVSS has captured much of the higher concentrations of the HTRW contaminants within the shallow groundwater aquifer. Lower and residual concentrations of contamination remain at the peripheral edges of the plume (see Figures 2 to 5 at back of this report). Portions of the existing LAR channel/levee were constructed with an open bottom, and the remaining concrete paved segments were equipped with subdrains and weep holes to relieve groundwater pressures. These devices provide a continuous open pathway for discharge of contaminated groundwater if it is present from the peripheral edge of the SFVSS into the LAR channel.

Much of the property required for this project will lay within or immediately adjacent to the SFVSS site. Due to the shallow, widespread and persistent nature of the SFVSS, it is likely that HTRW contaminated groundwater will be encountered where dewatering is needed for construction. Dewatering is temporary and will only be necessary where construction excavation extends beneath the groundwater surface. Any HTRW contaminated groundwater encountered during dewatering, either from the SFVSS or from a nearby local source, will be treated and disposed of in accordance with all local and California State water quality requirements. Unlike soil contamination, which can be remediated prior to construction, the widespread and persistent groundwater contamination associated with SFVSS cannot, from a time and economic perspective, be effectively addressed prior to construction. Addressing contaminated groundwater during construction, including treatment and disposal, will be the responsibility of the Sponsor at 100% non project cost.

Based on the data presented in figures 2 through 5, it is very likely that the edge of the SFVSS plume has in the past discharged, and is currently discharging, HTRW contaminated groundwater into the LAR channel, but at low levels given the progress of remediation. Due to the relatively limited nature of the proposed project features such as wetland and open bottom areas, it is anticipated that the magnitude of discharge from the SFVSS will remain roughly the same as current levels. Therefore, the presence of certain project features such as wetland and open bottom areas should not interfere or promote migration of this plume. The construction of restoration features should not significantly interfere with or alter the existing pathways of migration of contaminated groundwater beneath the Study area. As discussed above the upper surface of the aquifer is roughly coincident with the floor of the existing LAR channel. The position of the groundwater surface at any given time is a function of permeability and the quantity of recharge. The permeability of the alluvial deposits beneath the river is a fundamental physical property that cannot be altered or changed by construction of any of the proposed features. Recharge to the groundwater system is largely a function of weather and climate conditions which are not controllable. Therefore, the existing contamination plume associated with the SFVSS will not be impacted by implementation of the proposed restoration features.

In addition, the anticipated high HTRW impact properties, Taylor Yard and LATC, will largely be utilized to construct wetland and open bottom areas. These types of features have shown in the past to be beneficial and are known to naturally degrade HTRW contaminants. The presence of these particular features when combined with the ongoing groundwater well pump and treatment system should further reduce migration of HTRW contamination into the LAR after the project is completed.

Irrigation to initially establish vegetation within restoration features is not expected to adversely impact the existing groundwater system. This conclusion is based on the premise that sites will be free of soil contamination at the time of project construction; without soil contamination, any irrigation and subsequent infiltration is likely to have a beneficial impact on existing groundwater contamination. However, in keeping with good practices, irrigation should be limited to the extent necessary to establish vegetation and minimize infiltration, surface runoff and erosion. To this end, the habitat plans will include irrigation only to the extent necessary for plant establishment and survival.

Further details regarding the recommendations and costs for HTRW contaminated groundwater are mentioned in Section 9 below.

7.0 SUMMARY OF HTRW SURVEY REPORT

7.1 Extent of HTRW impacts

This appendix identifies 23 properties that are impacted by HTRW and contamination within 500 feet of the project footprint. Three of these properties are of high HTRW impact to the project. Nineteen are low impact. One is of unknown impact but has historic use characteristics similar to high impact sites.

The REC for 22 of 23 sites/properties exists based on the environmental database screening and record listing that still shows ongoing HTRW related remediation, monitoring, sampling, testing and residual contamination occurring at most of these sites. This residual contamination is not yet deemed safe to the public health and/or environment, according to environmental laws and requirements of the appropriate environmental regulatory agencies, and as a result, the individual HTRW property/site case files remain "open". From the record list, there is no listing of any of these 22 cases as having been closed. The residual solvent/metal contamination in the groundwater is pervasive in major portions of the shallow groundwater throughout the project study area, particularly at the SFVSS property. Dewatering of the shallow groundwater table that will occur during future project construction activities is highly likely to encounter solvent/metals HTRW contaminants that reside from the SFVSS groundwater plume. However, it is anticipated that low concentrations of contaminants will be encountered from this property during future construction dewatering activities adjacent or near it. This is because much of the habitat footprint alternatives are located on the outer edges of the SFVSS groundwater plume.

The REC for the one LATC property exists based on the historical similarities between this property and the Taylor Yard property, which is currently a high impact HTRW site with existing known amounts of heavy HTRW contamination. The presence and extent of the HTRW contamination at LATC is unknown at this time because it has never had cause to or has never before been formally investigated for the presence of HTRW. The full impact of HTRW at this site on this project will continue to remain unknown until such time a formal investigation is undertaken. Any HTRW impacts for LATC are assumed to be the same as that existing for Taylor Yard at this time. Further CERCLA type investigations and studies (PA/SI to RI/FS or ASTM Phase I to II steps) will need be undertaken before the impacts are ascertained fully.

The extent of the undefined portions of the known residual groundwater and/or soils contamination at all 23 properties is not known at this time. Only the extent of the known residual groundwater and/or soils contamination is currently being addressed. There is a possibility that future activities related to construction and maintenance of the habitat project will encounter portions of both known or undefined but known residual groundwater and/or soils contamination. In addition, the water discharge from these activities will need to be approved and permitted prior to release according to the Los Angeles RWQCB water quality standards and in a manner that is protective of both the existing groundwater and surface water resources in the area. This may involve a 401 certification, NPDES or waste discharge permits specific to the dewatering discharge method chosen for this project. Petroleum, solvent and metal related contamination exists within approximately a 500 feet distance to the habitat study area footprints and is, therefore, a material threat. This is a Recognized Environmental Condition according to the ASTM AAI standard and is in turn a HTRW impact to the Corps of Engineers Los Angeles River Ecosystem Restoration project study area.

7.2 Project related actions to be undertaken

The 3 properties of Taylor Yard G1 and G2 and the SFVSS are identified as HTRW impacted properties that cannot be avoided for any of the final array of alternatives selected for this project. Because of this, the Sponsor should begin coordination and consultation with the USEPA, appropriate California environmental regulatory agencies, and/or PRPs or RPs regarding investigation/studies and remediation activities for these properties. These negotiations will need

to be undertaken prior to their purchase and acquisition as part of this project. This should commence long before the formal project PPA for construction of this project is signed. Ideally this should begin now during the planning feasibility phase of this project, because much lead time is needed to complete environmental negotiations with the regulators for these two properties. The HTRW concerns for these properties to the project can be effectively addressed by further investigations/studies, reviews and analyses, along with selecting the most effective remediation methods. This should be done by early negotiations with the environmental regulators, along with developing a clear strategy that follows the CERCLA cleanup process. Because they are project cost sharing partners, both the Sponsor and the Corps will need to collaborate in these activities as well. Both the Corps and the Sponsor should also begin the strategy of and cost allocation sharing for the required HTRW investigation/study for remediation activities needed prior to land acquisition of these two properties.

The relative project costs for addressing the 3 high HTRW impact properties range from approximately **$2,575,000 to $6,825,000.** These are random order magnitude costs given for direct activities related to addressing the HTRW impacts and do not include Corps or Sponsor related supervision/administration and technical review costs. A major portion of this cost involves remediation related to future construction dewatering activities.

A more intensive ecological risk assessment needs to be performed for both the Taylor Yard G1 and G2 high HTRW impact properties in order to determine the impact that leftover residual contamination will have on the habitat and ecological system that is planned for these properties. In addition, the human health risk assessment should be further refined for these two sites and include risk calculations and analyses using the recreational/park human population planned uses for the habitat project. Only the industrial exposure for humans has been studied or made part of the current human health risk assessment performed by the current landowner/responsible party (Union Pacific Rail Road). The full impact to all human populations that will use the planned habitat area for recreation or park use still needs to be addressed and analyzed. This needs to be done in the form of a revised human health risk assessment in order to address the HTRW impacts to humans for the habitat park setting.

The 19 low impact HTRW properties may have HTRW impacts for the future construction dewatering activities. This is because there is a possibility that undefined portions of the known residual HTRW contaminated groundwater at these properties could be intercepted or encountered during dewatering. The Sponsor and the Corps should begin a strategy for addressing this possibility before the PPA and before construction. This can be accomplished by performing a limited groundwater review, investigation and study, along with a limited groundwater modeling exercise to help predict responses to future dewatering activities to this concern. The relative project cost for addressing the 19 low HTRW impact properties ranges from approximately **$750,000 to $1,500,000.** The low end range of cost involves a limited ASTM Phase II or CERCLA SI type study/investigation to ascertain the actual amounts/extent of undefined HTRW contamination that potentially exist for the 19 properties. The high range of cost is for remediation/monitoring/permitting in the event that a significant amount of undefined HTRW groundwater contamination is encountered during future construction dewatering activities. These costs are also for direct activities related to addressing the HTRW impacts and do not include Corps or Sponsor related supervision/administration and technical review costs.

There is insufficient information from the search/inquiry to determine the true extent or level of contamination, or severity of the HTRW impact that the entire 22 properties pose to the project planning activities. This is particularly the case for the 19 low impact HTRW properties. The recommended actions are to perform a more rigorous review of the available HTRW environmental reports or data case files of each of the 22 sites. The review would involve visiting and obtaining the files from the LARWQCB and DTSC for the listed REC sites. The review would also likely involve more intense discussions with regulatory agency personnel or scientists about the severity of the HTRW contamination at the 22 sites. A site visit to all 22 sites is also recommended to gain a clearer understanding of the nearby topography and features of each site. Until a more rigorous review of the Board files are performed, additional and more accurate planning recommendations such as whether future full Phase I or Phase II type ESAs are needed cannot be made at this time.

Approximate random order of magnitude costs are given for the assumed HTRW impacts for this project in Section 10 below.

7.3 Construction sequencing for cost efficiency

The response for excavation/haul/removal of HTRW contaminated soils at the high impact HTRW properties and any other HTRW impacted properties should stop after the final haul and removal that is required to clear all areas of these properties found to be impacted with HTRW. Areas leftover after excavation and free of HTRW, i.e. soils with contamination below the action levels (cleanup levels) specific to each property should not be further backfilled with fresh or uncontaminated soils or materials. Backfilling should be minimized to the freshly excavated ground surface elevations (grades). This finished ground should resemble an uneven hummocky surface with depressions where HTRW contaminated soils have been removed.

The sequencing of these events will reduce future construction costs associated with re-handling the clean filled areas devoid of HTRW, i.e. will reduce costs associated with double-handling of soils and materials used during final grading of project. This is expressed in Figure 1 below.

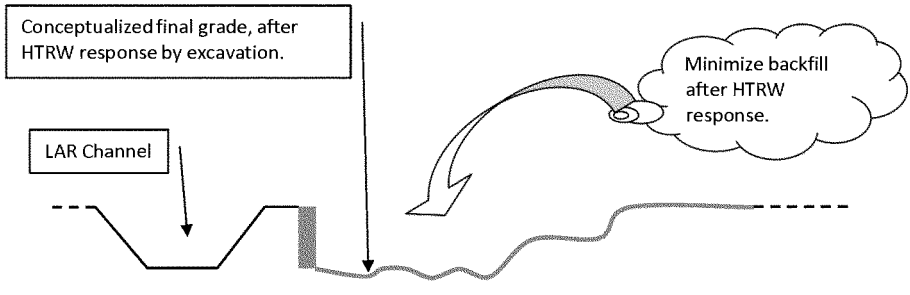


Figure 1 - Conceptual Grading of HTRW Sites

8.0 RECOMMENDATIONS

8.1 Additional Environmental Investigation

Additional environmental investigation will be required to characterize the distribution and chemical constituents of the contaminated soil and groundwater conditions throughout much of the feasibility area. The scope of these studies should be directed to the development of Remedial Action Plans that are ultimately approved by the local environmental regulatory agencies and compatible with the needs of the future restoration project. General recommendations are as follows:

a. To establish a rational basis for development of a work plan that will be approved by the local regulatory agencies; the initial phase of work should focus on a thorough review and evaluation of the publicly available data. In areas where a significant amount of environmental data has been compiled, such as the Taylor Yard properties, investigation will be limited to the extent necessary to establish criteria for evaluation of potential human and ecologic health risks. In areas where existing information is limited, such as LATC Yard, additional environmental investigation should follow industry approved protocols for conducting Phase I and Phase II investigations in compliance with regulatory requirements. For the 19 HTRW sites adjacent to the project footprint, a review and evaluation of existing Phase I documentation could be beneficial and should be considered.

b. The Sponsor should begin to take the lead on negotiations and coordination with the appropriate Federal and California state environmental regulatory agencies for the 2 high HTRW impact properties of Taylor Yard G1 and G2 and for LATC regarding specific investigation/studies and remedial activities for these properties. This needs to be done in order to more fully ascertain and identify the future CERCLA phases of work as well as their schedule and costs. The Corps will need to collaborate in these efforts as well.

c. An environmental scientist/toxicologist and the necessary additional Corps HTRW specialists need to be added as part of the Project Delivery Team. The toxicologist is a critical team member whose expertise is especially needed to review and provide technical input and recommendations for future CERCLA phases of work. This expertise is also needed to address the human and ecological health risks associated with future land use requirements.

8.2 Approach to HTRW Impacted Soil

All HTRW impacted soil within the project footprint must be remediated by the Sponsor to the requirements of the local environmental regulatory agencies, which include the DTSC and the LARWQCB, and be compatible with the future land uses for and needs of the restoration project. At this time, those areas with HTRW impacted soil to be addressed by the Sponsor are anticipated to be the Taylor Yard G1 and G2 sites and the LATC. The methodologies utilized to remediate HTRW impacted soils, regardless of their location, extent and degree of contamination must be compatible with the planned ecosystem restoration features. To preclude the adverse impact of contaminated soil leaching downward and further contaminating the shallow groundwater system, all contaminated soil should be removed from areas that are planned as wetlands, areas that will be

irrigated and areas that will be subject to erosion and infiltration of surface water runoff. Within areas where contaminated soil is remediated by removal and off-site disposal, the resulting excavations should not be filled with clean soil beyond the level of the planned ecosystem restoration grades. The Sponsor must complete remediation that is acceptable to the environmental regulatory agencies and according to the land use for the project selected final alternatives prior to restoration project construction at those sites.

8.3 Approach to HTRW Impacted Groundwater

Contaminated groundwater within the limits of the SFVSS site is on-going and is expected to continue for the foreseeable future. Localized groundwater contamination from remnant contamination at some of the 19 adjacent sites may also be encountered during dewatering activities. Contaminated groundwater encountered in excavations during construction and during dewatering operations must be treated and disposed of in accordance with the requirements of the local regulatory agencies. The persistent and shallow nature of the groundwater beneath the proposed restoration features, the widespread nature of the groundwater contamination, and potential impacts associated with local soil contamination make environmental cleanup of the groundwater prior to construction of the restoration features infeasible. As a result, it is anticipated that cleanup of contaminated groundwater will occur concurrently with construction of the ecosystem restoration facilities. It is recognized that the Sponsor will design, implement, coordinate and fully fund all treatment and disposal of contaminated groundwater encountered during construction. Dewatering and treatment operations should be designed so that they do not adversely impact the ongoing pump and treatment operations for the SFVSS at the nearby Pollock Well Field.

9.0 COSTS

A preliminary cost estimate was prepared for the 3 high impact HTRW properties within the project study area because they encompass almost 100% of the habitat footprint for the final array of alternatives selected for this study project. This is a random order of magnitude estimate and was also prepared as an aide to help determine the choice of the final project alternative. It includes a summary of the CERCLA/HTRW phases of work needed to complete investigations and studies leading up to the remediation, as well as the remediation itself. All costs are direct costs and are shown in the following table. The direct costs are given and are the costs for the actual investigation and response work needed to be performed in order to complete the HTRW response requirements for this study project. The required indirect costs for supervision and administration by the Corps and Sponsor, and inflation/escalation costs are not included. Costs shown in the table for investigations and studies, i.e. SI, RI to FS, etc., are eligible to be cost shared between the Sponsor and the Corps as part of the overall project costs. Costs shown in the table for the actual HTRW response, i.e. IRAP, RAP and Remediation or RA, are 100% paid for as a cost by the Sponsor. The HTRW cost estimate herein has been prepared as a separate cost for this feasibility study. This is the only HTRW cost estimate prepared for this project, and is a separate HTRW cost estimate that is not part of the overall parametric project costs shown in this project's general cost appendix. The current cost estimate provided in this report is considered sufficient for the feasibility phase and no update is needed or planned at this time. However, as the sponsor acquires properties impacted by HTRW and develops a response plan with the regulator and other relevant parties, the cost for response should be refined by the sponsor to more accurately account for actual site conditions.

Table 3 Preliminary HTRW Costs for 3 High HTRW Impact Properties			
CECRLA/HTRW environmental phase of work	HTRW property	Random Order Magnitude Total Cost	Rationale
Remedial Investigation = RI	Taylor Yard G1 and G2	$325,000.	Overall costs for RI through FS lower because both properties are assumed to be combined into single timed level of work effort throughout all of these environmental phases of work. Note: size of existing HTRW contamination is smaller than G2.
Revised human health and ecological risk assessment = HHRA & ERA		$125,000.	
Feasibility Study = FS		$225,000.	
Remedial Action Plan = RAP		$250,000.	
Remediation or RA		$1 million to $3.5 million.	Costs for remediation are conservative and difficult to determine at this time (during feasibility study). Actual remediation methods will depend on final land use and habitat project alternatives and negotiations with environmental regulators and current property owner (RP). None of these actions are yet fully developed. Accurate remediation costs are typically developed later on during commencement of the CERCLA FS.
Total Cost for Taylor Yard G1 and G2 = **$1,925,000 to $5,425,000.**			
Site Investigation and Remedial Investigation = SI/RI	SFVSS	$350,000.	These phases of work are combined and abbreviated because the assumed magnitude and complexity of unknown HTRW contamination/impacts to project properties is low (groundwater remediation is the only expected response action), and the timing is accelerated since most of this HTRW type will be encountered during Construction phases of dewatering. This abbreviated work activity is needed in order to stay within the Construction phase schedule of the project. This SI/RI work may not need to occur if IRA is accepted by regulatory agencies as substitute.
Interim Removal Action Plan = IRAP		$50,000.	Substitute for RAP. Will consist of general dewatering plans and CWA permitting actions/applications and coordination/approvals with LARWQCB.
Interim Removal Action = IRA		$250,000 to $1,000,000.	Conservative and based on large quantity of HTRW contaminated groundwater encountered w/shallow groundwater at random areas at properties and includes treatment prior to discharge or disposal. This phase is assumed to substitute in place of a formal Remediation with FS and will consist mainly of dewatering pump and treatment during Construction phase.
Total Cost for SFVSS = **$650,000 to $1,400,000 million; or $300,000 to $900,000 (lower cost assumes no SI/RI needed and can go directly to IRA).**			
Total Cost for all 3 High HTRW Impact Properties = **$2,575,000 to $6,825,000.**			

Table 4 Preliminary HTRW Costs for 19 Low HTRW Impact Properties*

CECRLA/HTRW environmental phase of work	HTRW property	Random Order Magnitude Total Cost	Rationale
Remedial Investigation = RI or Site Investigation = SI	19 low HTRW impact properties	$350,000.	Overall costs for RI or SI.
Interim Removal Action Plan = IRAP		$50,000.	Substitute for RAP. Will consist of general dewatering plans and CWA permitting actions/applications and coordination/approvals with LARWQCB.
Interim Removal Action = IRA		$350,000 to $1,100,000.	Conservative and based on moderate quantity of HTRW contaminated groundwater encountered w/shallow groundwater at random areas at properties and includes treatment prior to discharge or disposal. This phase is assumed to substitute in place of a formal Remediation with FS and will consist mainly of dewatering pump and treatment during Construction phase.
Total Cost for all 19 Low HTRW Impact Properties = **$750,000 to $1.5 million; or $400,000 (lower cost assumes no SI/RI needed and can go directly to IRA).**			

*Note: Table 4 does not include HTRW costs for LATC as the extent and characterization of HTRW is unknown.

MAP FIGURES 1 TO 4: SHOWING EXTENT OF 2010 HTRW GROUNDWATER CONTAMINATION AT SAN FERNANDO VALLEY SUPERFUND SITE

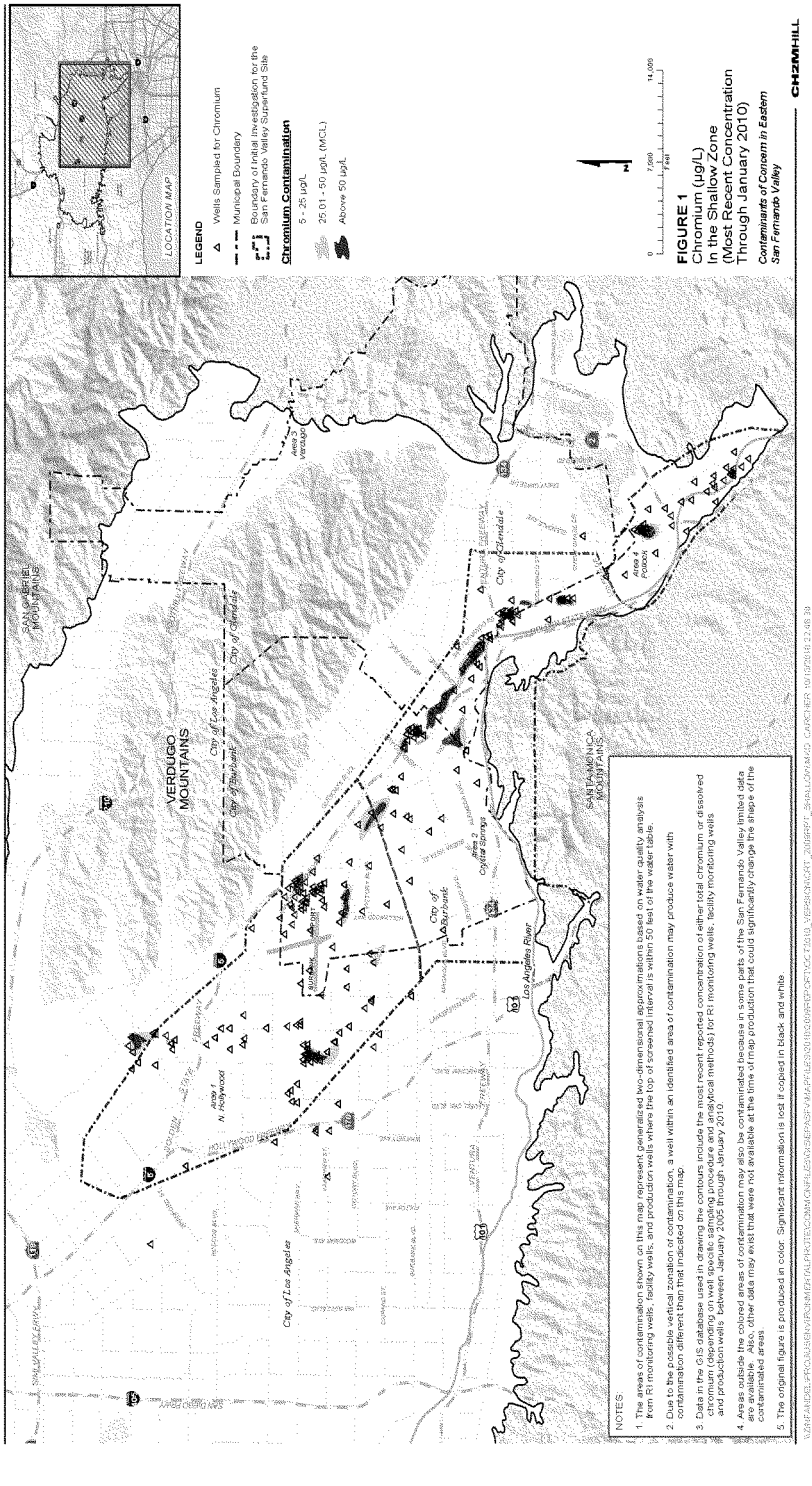


Figure 1. SFVSS/Total Chromium shallow groundwater contamination extent 2010. (from USEPA).

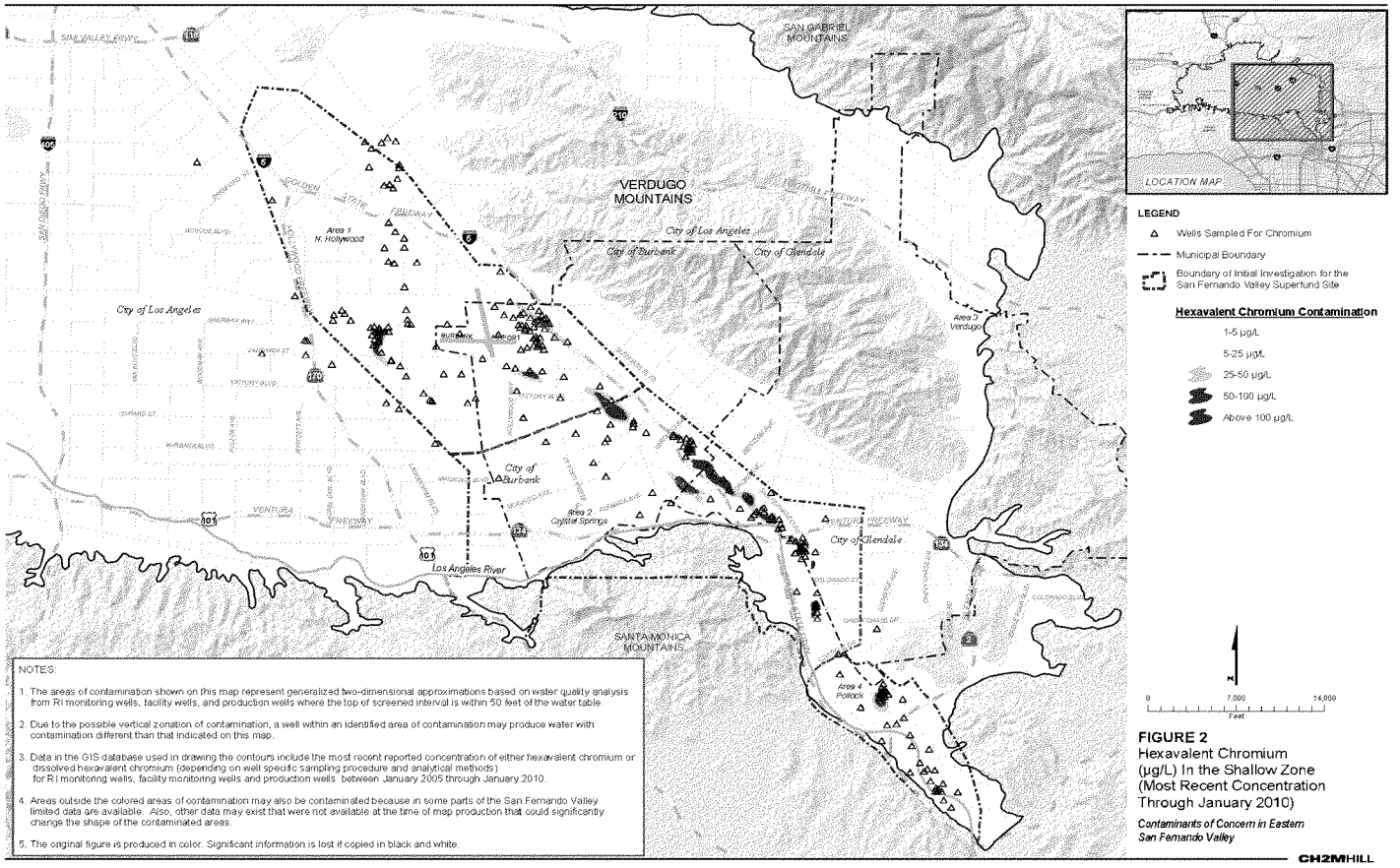


FIGURE 2
Hexavalent Chromium (µg/L) In the Shallow Zone (Most Recent Concentration Through January 2010)
Contaminants of Concern in Eastern San Fernando Valley

Figure 2. SFVSS/Hex Chromium shallow groundwater contamination extent 2010. (from USEPA).

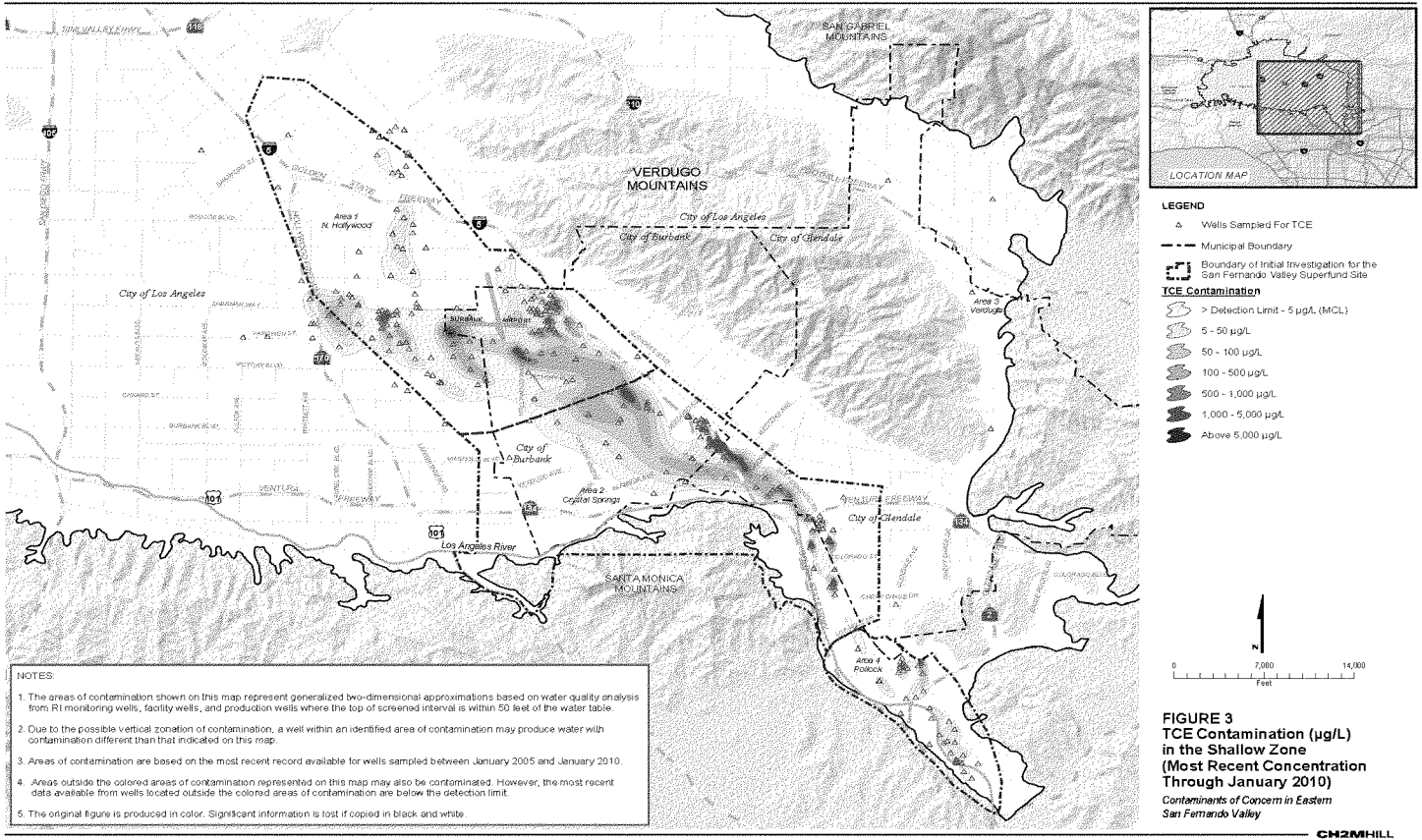


FIGURE 3
TCE Contamination (µg/L) in the Shallow Zone (Most Recent Concentration Through January 2010)
Contaminants of Concern in Eastern San Fernando Valley

CH2MHILL

\\DNFANDEL\PROJ\USBHVIRO\ENVIRONMENTAL\PROTECT\COMMONFILES\SVSHSE\EPA3PV\MAPFILES\2010\2009REPORT\OCT2010_VERSION\TCE_2009RPT_SHALLOW.MXD CARCHER 10/13/2010 13:04:19

Figure 3. SFVSS/TCE shallow groundwater contamination extent 2010. (from USEPA).

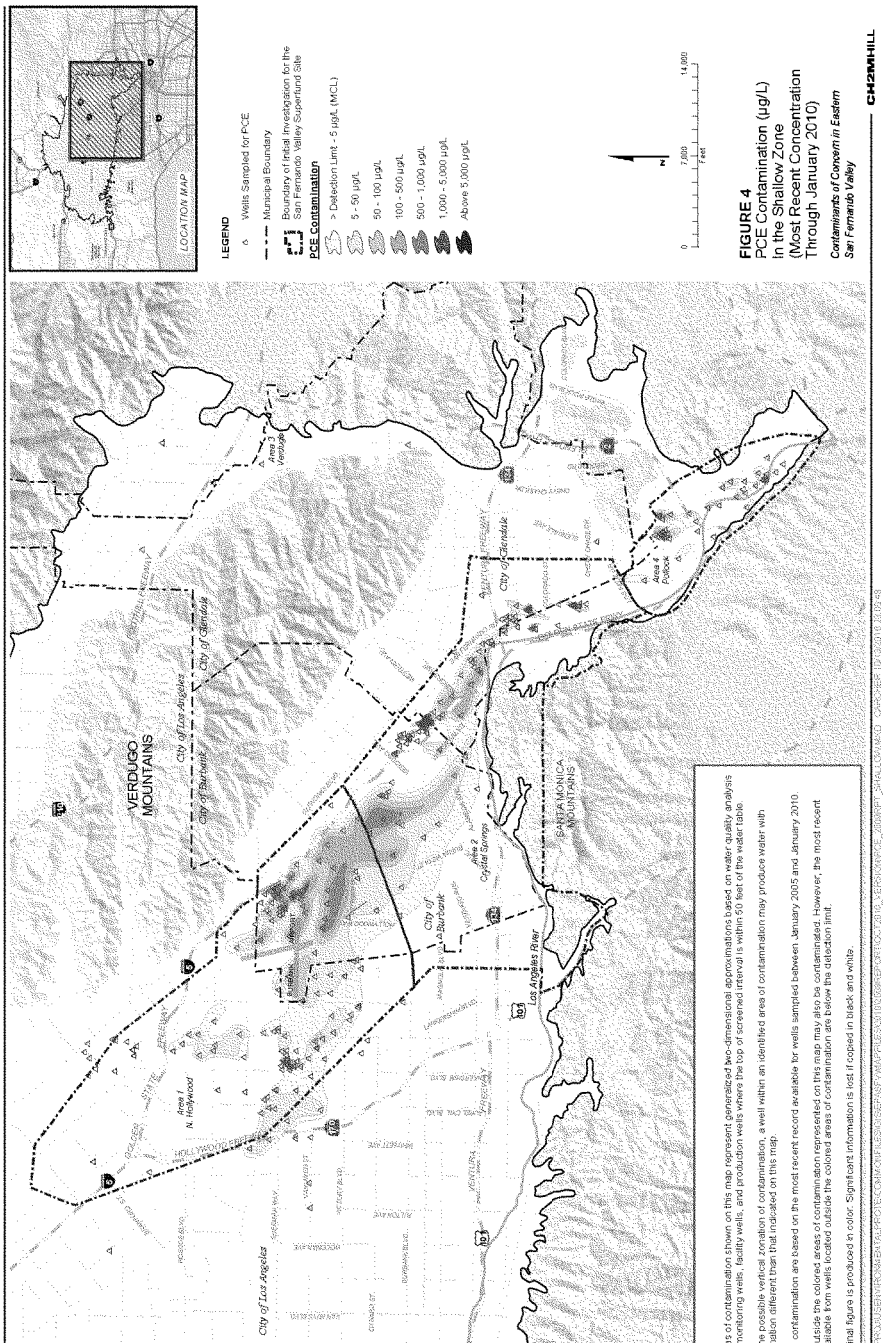


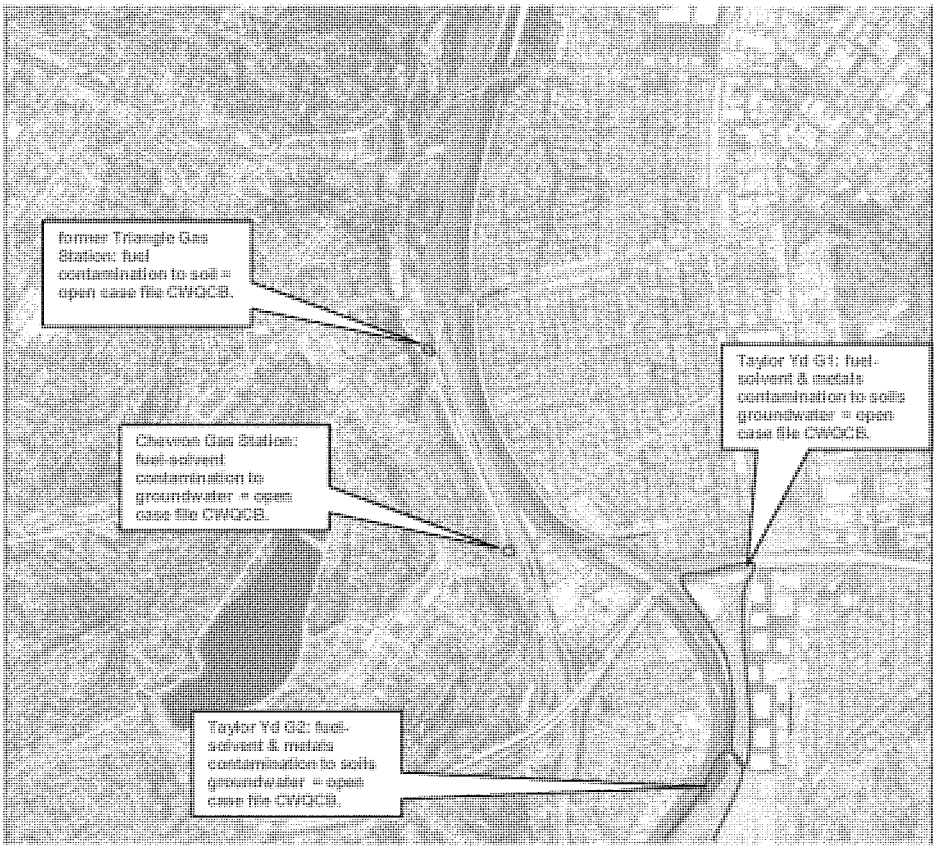
FIGURE 4
PCE Contamination (µg/L) in the Shallow Zone (Most Recent Concentration Through January 2010)
Contaminants of Concern in Eastern San Fernando Valley
CH2MHILL

Figure 4. SFVSS/PCE shallow groundwater contamination extent 2010. (from USEPA).

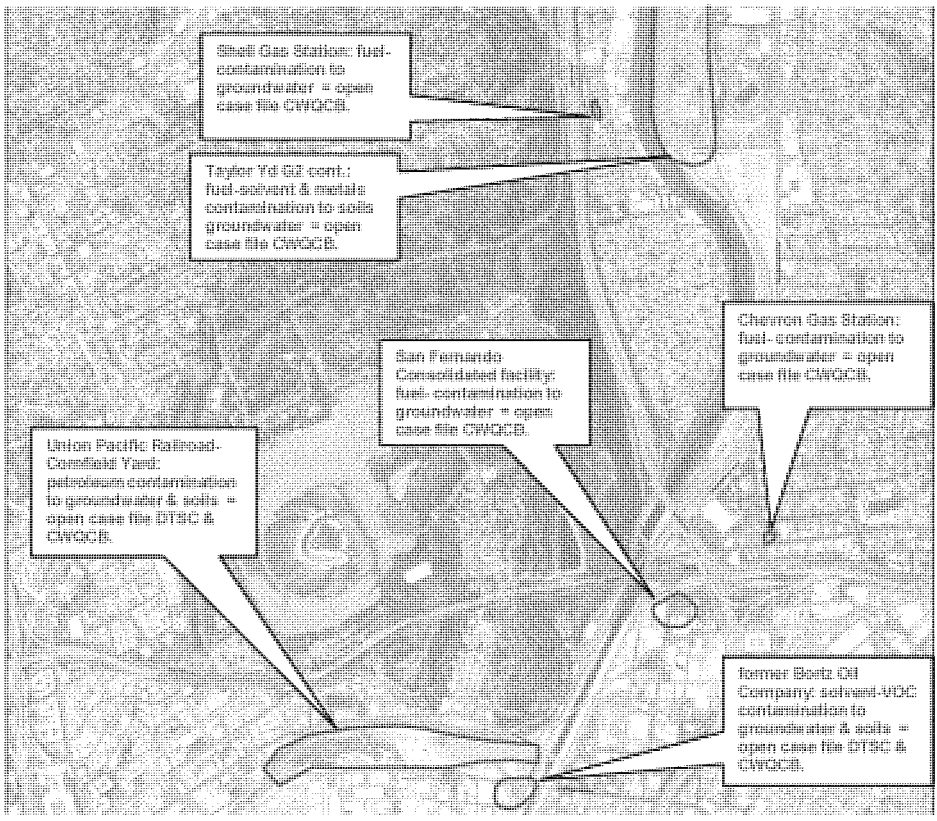
MAPS 1 TO 5: SHOWING ALL 22 HTRW IMPACTED PROPERTIES MAPPED FOR LOS ANGELES RIVER ECOSYSTEM RESTORATION PROJECT

Map 1. Mt Sinai property, one of twenty two HTRW impacted properties.

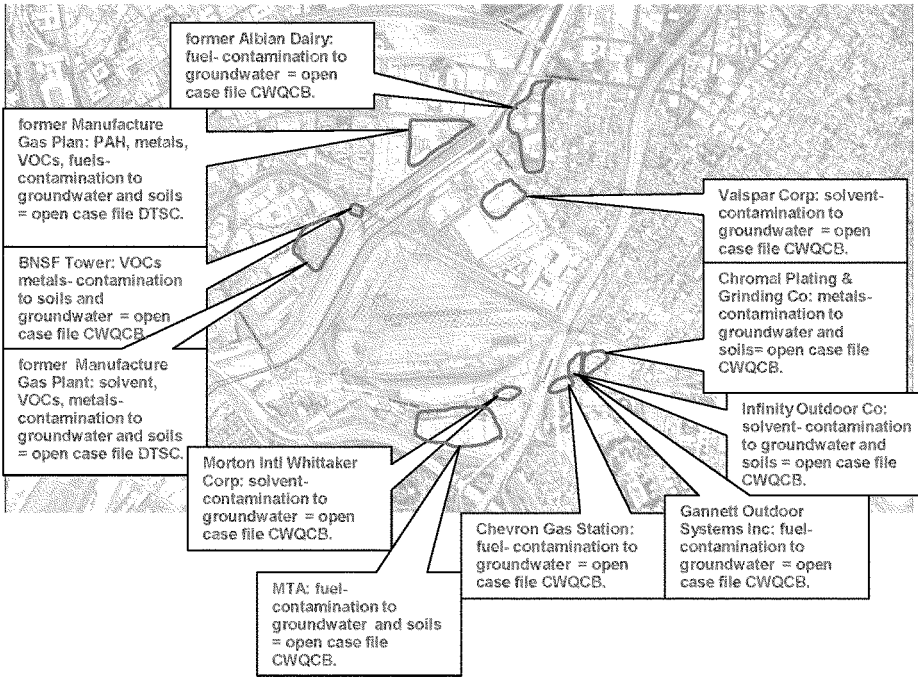
Map 2. former Hawkes Finishing property, one of twenty two HTRW impacted properties.



Map 3. Triangle Gas, Chevron Gas, Taylor Yd G2 and G2 properties, four of twenty two HTRW impacted properties.



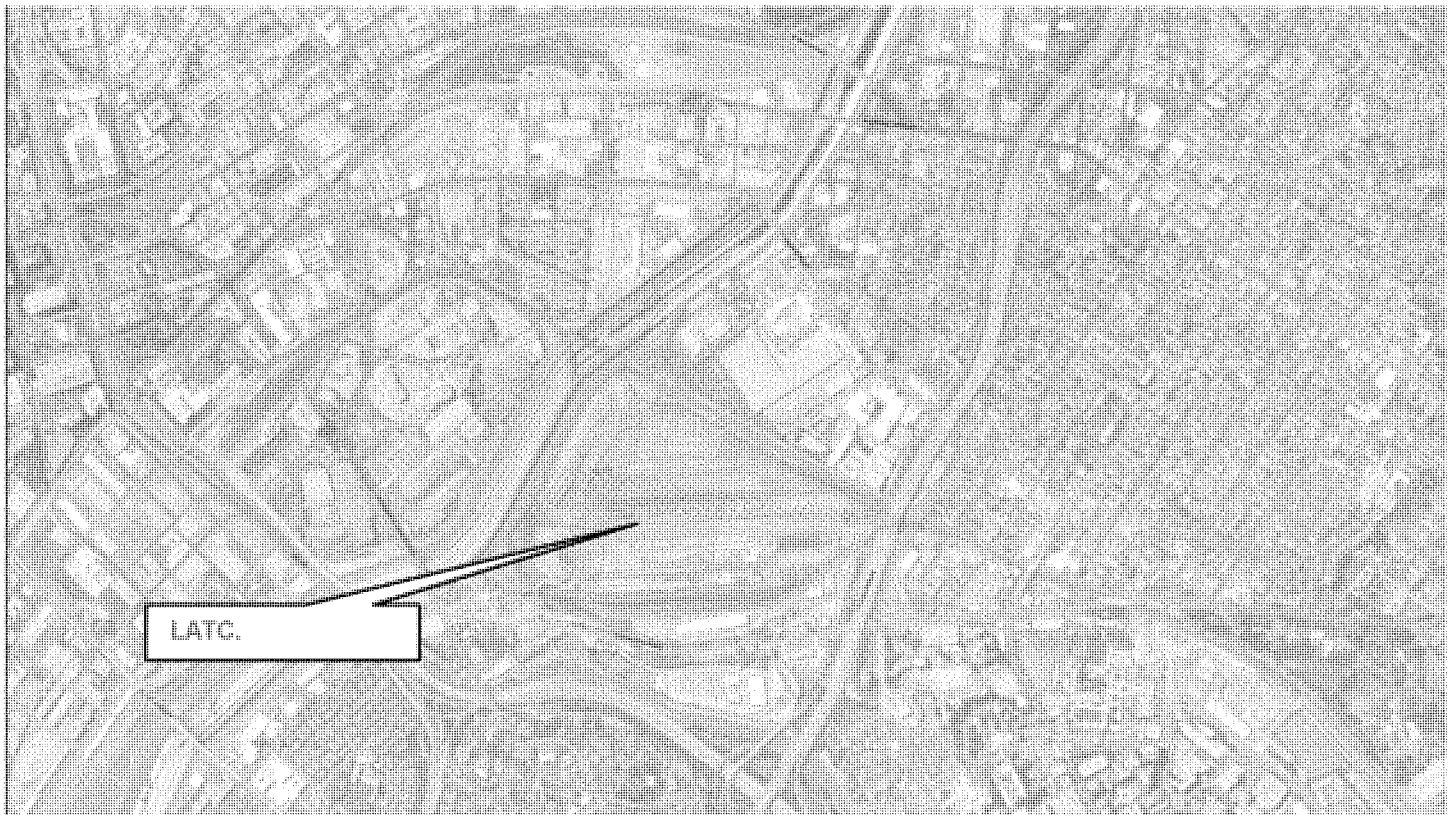
Map 4. Taylor Yd G2 cont., Shell Gas, Chevron Gas, SF Consolidated and Bortz Oil properties, four of twenty two HTRW impacted properties.



Map Figure 5. Albian Dairy, MFG plant, BNSF Tower, MFG plant, Morton Intl, Valspar Corp, Chromal Plating, Infinity Outdoor, Gannett Outdoor, Chevron Gas and MTA properties, eleven of twenty two HTRW impacted properties.

MAPS 6a and 6b: SHOWING 1 HTRW IMPACT PROPERTY OF LATC

Map Figure 6a. LATC & Taylor Yard, "SP Shops", 1953 USGS historic topographic map.



Map Figure 6b. LATC, one of twenty three HTRW impacted properties.

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX L
PUBLIC COMMENTS ON THE DRAFT INTEGRATED FEASIBILITY REPORT

April 2015

Appendix L - Public Comments on the Draft Integrated Feasibility Report Table of Contents

Part 1: Public Comments on the Draft Integrated Feasibility Report

Part 2: Responses to Public Comments on the Draft Integrated Feasibility Report

Boxer

BARBARA BOXER, CALIFORNIA, *CHAIRMAN*

MAX BAUCUS, MONTANA
THOMAS R. CARPER, DELAWARE
BENJAMIN L. CARDIN, MARYLAND
BERNARD SANDERS, VERMONT
SHELDON WHITEHOUSE, RHODE ISLAND
TOM UDALL, NEW MEXICO
JEFF MERKLEY, OREGON
KIRSTEN GILLIBRAND, NEW YORK
MAZIE K. HIRONO, HAWAII

DAVID VITTER, LOUISIANA
JAMES M. INHOFE, OKLAHOMA
JOHN BARRASSO, WYOMING
JEFF SESSIONS, ALABAMA
MIKE CRAPO, IDAHO
ROGER WICKER, MISSISSIPPI
JOHN BOOZMAN, ARKANSAS
DEB FISCHER, NEBRASKA

BETTINA POIRIER, *MAJORITY STAFF DIRECTOR*
ZAK BAIG, *REPUBLICAN STAFF DIRECTOR*

United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
ATTN: Ms. Erin Jones, CESPL-PD-RN
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

RE: Comments on SPL-2013-003-NLH-Draft IFR for LA River Eco. Rest. Study

Dear Ms. Axt:

As the Chairman of the Senate Environment and Public Works Committee, which is responsible for oversight of the U.S. Army Corps of Engineers, and as a Senator from California, I am providing comments on the Corps' Draft Integrated Feasibility Report for the Los Angeles River Ecosystem Restoration Project.

I feel very strongly that the Corps has chosen an alternative that is inconsistent with the Obama Administration's identification of the LA River as a priority in the America's Great Outdoors Initiative and the Urban Waters Federal Partnership, which was launched in 2011 to focus on working with local communities to restore urban watersheds and reconnect urban communities to their rivers. The Assistant Secretary of the Army signed a vision document for the partnership, which says, "We will work from the bottom up rather than taking a top down, one-size-fits-all approach."

As you know, the Corps District office in Los Angeles, in consultation with the City of Los Angeles, initially recommended Alternative 20, which is the alternative fully supported by local stakeholders. However, Corps headquarters overruled the District and insisted on the selection of Alternative 13. The Corps' approach on the LA River project is exactly the opposite of what the Administration has committed to do in places like Los Angeles!

I have deep concerns about the direction the Corps is heading on this critical study. Alternative 13 would provide much less restoration and leave existing concrete infrastructure in the river, missing an important opportunity to provide a fully restored LA River that will improve the quality-of-life for families that live along its banks. Alternative 20 also promises much greater opportunity for economic development, providing thousands of additional jobs and billions of dollars of increased investment in the local economy.

PRINTED ON RECYCLED PAPER

Boxer

I call on the Corps to follow the "bottom up" approach and endorse Alternative 20.

I have attached additional detailed comments on the draft feasibility report.

Sincerely,

Barbara Boxer
Chairman

ATTACHMENT

Acceptability and Public Support

When selecting an alternative, the Corps must determine whether the proposed alternative meets "Acceptability" criteria. According to the Corps' own planning guidance, "an ecosystem restoration plan should be acceptable to State and Federal resource agencies, and local government. There should be evidence of broad based public consensus and support for the plan."

Despite known local opposition and no evidence for broad based public consensus, the Corps has identified Alternative 13 as its Tentatively Selected Plan. The draft feasibility study provides no clear rationale for why this alternative meet's the agency's criteria for "Acceptability".

Significance of Ecosystem Outputs

The Corps' planning guidance requires "ecosystem restoration alternatives [to be] evaluated on the basis of cost effectiveness and incremental cost analyses of the possible restoration alternatives ***and*** significance of ecosystem outputs." (emphasis added) It appears from the conclusions in the draft feasibility report that significance of ecosystem outputs was not given equal weight in selecting Alternative 13. This approach ignores the clear direction in the agency's own regulations.

The incremental cost calculation used as justification for Alternative 13 does not take into account critical factors such as habitat connectivity. The Corps' cursory ecosystem significance analysis for each alternative ignores the increased environmental outcomes in Alternatives 16 and 20 and how they will contribute to the overall success of the project.

For example, alternatives 16 and 20 would provide much greater habitat connectivity as compared to Alternative 13 -- an additional 85 percent for Alternative 16 and over 200 percent for Alternative 20. And only Alternative 20 includes the Verdugo Wash Confluence, which links the LA River to the Verdugo Mountains -- a valuable wildlife corridor that has been lost since the river was channelized. It will also provide important habitat for the federally endangered Least Bell's Vireo.

Alternatives 16 and 20 also fully restore the Piggyback yard site, which Alternative 13 fails to do. Instead, Alternative 13 would invest significant funding in creating 113 acres of habitat in this area but would leave it separated from the river by a large concrete wall, relying on existing drainage culverts to provide connectivity. This approach creates habitat that would be inaccessible to mammals, reptiles, and other aquatic life. Alternatives 16 and 20 remove the concrete wall and establish a hydrological connection between the restored habitat at piggyback yard and the river. This is a much wiser approach that will support the long-term success of the restored habitat.

A similar situation exists at the LA State Historic Park. Instead of removing concrete structures and restoring more natural wetlands and river banks at this site, Alternative 13 leaves the

concrete channel in place along much of the river. Because of the hard infrastructure that remains, the restoration in this area will provide reduced habitat and wildlife value.

Environmental Justice

Alternative 13 does not fully realize the River's potential to bring green space to poor, underserved neighborhoods. Alternatives 16 and 20 provide much greater restoration and additional opportunities for local communities to enjoy a restored river. In addition, Alternative 20 is the only alternative that undertakes restoration at the LA State Historic Park, which provides critical public access for downtown and Chinatown. This area has a poverty rate of 22 percent and a population with limited access to public green space.

In addition to more public access to the restored river, Alternative 16 and 20 will provide much greater opportunity for economic development in the region. According to the Corps' own analysis, full restoration of the river, represented by Alternative 20, will provide 16,833 construction and economic redevelopment jobs versus vs. 4,016 jobs for Alternative 13. Further, Alternative 20 provides nearly $4.7 billion in labor income versus approximately $1.2 billion for Alternative 13. Given the high poverty rate in the restoration area, the Corps should consider the impact of the restoration alternatives on the human environment, including the added economic and development benefits that would be provided by Alternative 20.

Cost

Alternative 13 would require the City to pay approximately 70% of the total project costs because of the significant real estate and environmental remediation elements of the project. To keep the project moving forward and to be a constructive partner, the City has already agreed to pay these additional costs, which greatly exceed the standard non-Federal cost-share for such a project.

Therefore, the Federal investment in this project will be significantly less because of the increased costs borne by the City. Given the substantial contributions of the non-Federal interest, it is troubling that the Corps would place such a great emphasis on the total cost of the project while minimizing other key criteria that it is required to consider and that are important to the local community.

Members of US Congress

Congress of the United States
Washington, DC 20515

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

We are writing to express our strong support for Alternative 20 in the Corps' Los Angeles River Ecosystem Restoration Feasibility Study (Study). As you know, the Corps and the City of Los Angeles (LA) have been working together for the past seven years to complete the Study. At a cost of almost $10 million, the Study reflects a strong, resilient federal-local partnership that has weathered one of our Nation's most challenging economic downturns.

Through the hard work of the Corps and the City, we are at the threshold of approving a project that will transform the landscape of our Nation's second-largest urban region. Investing in the City's principal flood control infrastructure will finally breathe new life into the river as the great natural and vibrant resource it should be. The revitalized river will create public access that will reconnect communities divided by its channelization, provide green space for our underserved neighborhoods and provide an economic foundation for years to come. This will all, however, only come to fruition if the Corps selects the alternative that is the most complete and effective plan which provides the most benefits for the biological, human, and physical environment--Alternative 20.

The Obama Administration has endorsed restoration of the LA River through the President's America's Great Outdoors initiative. Led by the Council on Environmental Quality (CEQ) and the Department of the Interior, the effort resulted in EPA's selection of the River as one of 7 first-phase pilots, and Interior's inclusion of a portion of the LA River Trail in the National Recreational Trail System.

The Corps' Study represents a once-in-a-lifetime opportunity for all Angelenos. How we respond will present significant implications for how we value urban ecosystem restoration across the country and ultimately, how we value our responsibilities to our communities. The Study authorization required the Corps to consider the City's LA River Revitalization Master Plan in its alternative selection; yet only one of the alternatives in the final array includes three of the five key opportunities from that Plan while the others include only one. Connecting the LA State Historic Park (former Cornfields site) to the river in downtown would leverage a considerable State investment and restoration of the Verdugo Wash Confluence with its rich connections to the mountains and key habitat for endangered species would also directly benefit the cities of Burbank and Glendale. We strongly believe that the Corps' recommended

PRINTED ON RECYCLED PAPER

alternative must include the river connection to the LA State Historic Park as this will allow our park-starved, historically-underserved communities access to the river and natural environment that begins to address long-standing environmental justice issues. The Corps' recommended plan must also restore the hydrological connections between the river channel and the Piggyback yard, rather than creating an isolated habitat with minimal connections.

We strongly encourage the Corps to select Alternative 20, which meets the Study objectives and provides the necessary habitat connectivity for sustainable restoration of the river, provides the highest economic development and jobs, and addresses serious environmental justice issues. Fundamentally, the Corps' "acceptability" criterion means that it must be acceptable to the client community. The Mayor, the city councils of Los Angeles and Glendale, and the County Board of Supervisors have formally endorsed Alternative 20 and the community has overwhelmingly supported it. These stakeholders and others understand the urgency of completing this project now.

As you know, meaningfully restoring the Los Angeles River involves connecting as many of the critical pieces of its valuable, but dwindling ecosystem as we can -- now, this unprecedented chance to act exists. We strongly encourage you to consider the comments received from the public, the overwhelming support of the Mayor, local and state officials and stakeholders who, along with federal agencies, are raising critical environmental, economic development, and environmental justice issues -- all in support of Alternative 20 as the Selected Plan. We urge you to embrace the City's vision and select Alternative 20 as the only option that truly meets the long range objectives of the project.

Sincerely,

Lucille Roybal-Allard

LUCILLE ROYBAL-ALLARD
Member of Congress

Adam B. Schiff

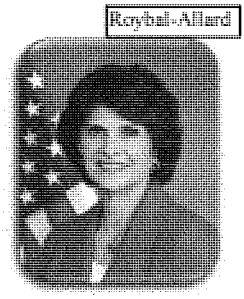
ADAM B. SCHIFF
Member of Congress

Karen Bass

KAREN BASS
Member of Congress

XAVIER BECERRA
Member of Congress

Cc: The Honorable Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works)
Lieutenant General Thomas Bostick, Commanding General and Chief of Engineers
The Honorable Eric Garcetti, Mayor, City of Los Angeles



Congresswoman Lucille Roybal-Allard
Representing California's 40th Congressional District

FOR IMMEDIATE RELEASE: October 17, 2013
CONTACT: Elizabeth Murphy (202) 225-1766

Statement of Congresswoman Lucille Roybal-Allard in Support of Alternative 20 for the Los Angeles River Ecosystem Restoration Feasibility Study

Commerce, CA—Today, Congresswoman Roybal-Allard released the following statement:

Thank you for providing me with the opportunity to comment on the Corps' Draft Integrated Feasibility Report for the Los Angeles River Ecosystem Restoration Study. I appreciate the work done by the Corps' Los Angeles District and the City of Los Angeles to reach this milestone. As you know, in the 1930's the Corps started to pave the LA River and today we are on the verge of reclaiming our river.

The Corps has indicated Alternative 13 as the Tentatively Selected Plan in the draft report and by doing so would miss a tremendous opportunity to improve the regional health of Los Angeles. Alternative 13 is inadequate as it does not meet the range of objectives outlined in the Corps' own Study. Based on the key technical, environmental, and economic development reasons I have heard from constituents, and I am confident the Corps will hear during this public comment period, it is clear that Alternative 13 is inadequate, as it includes limited ecosystem restoration, and the Corps should reject this limited alternative as not meeting the range of Corps' objectives.

Fortunately, within the Corps' draft Report, Alternative 20 does meet the range of objectives and includes key ecosystem restoration features, such as connecting the LA State Historic Park to the river in downtown, as well as restoring the Verdugo Wash Confluence, Taylor Yard/Bowtie, Taylor Yard/G-2, the Arroyo Seco Confluence, and the Piggyback Yard. These features will restore critical hydrological connectivity in the river and provide much needed riparian habitat, as well as reverse the trend of rapid biodiversity lass and restore the health and resilience to the natural and human environments. This is the alternative that the Corps should select moving forward.

Not only does Alternative 20 include critical ecosystem restoration features, but it is also broadly supported by the community. Alternative 20 will also provide an economic boost to the area, increasing property values in the vicinity of the Study area and improving the quality of life for residents of Los Angeles. According to the Corp's own analysis, full restoration of the river, represented by Alternative 20, will provide 425% more economic redevelopment employment and 400% more economic redevelapment income than Alternative 13. I understand that the business community has indicated their support of full restoration of the river.

As you know, this Administration selected the Las Angeles River as ane of seven areas chosen in the first-phase of the Urban Waters Federal Partnership, which seeks to implement the Americas Great Outdoors (AGO) Initiative. Alternative 20 is the only option for fully meeting the goals of the AGO to stimulate

regional and local economies, create local jobs, improve the quality of life, and protect Americans' health by revitalizing urban waterways in under-served communities.

I am also worried about our children. They don't all share in the same opportunities for clean water, clean air, and a healthy lifestyle. This plan will help connect our children to the wider range of environmental opportunities. With alternative 20, the Corps strikes a fair balance between restoring the environmental habitat and ensuring a robust base for economic development.

Thank you, again, for allowing me this opportunity to share my comments on the Draft Integrated Feasibility Report for the Los Angeles River Ecosystem Restoration Study. I strongly urge you to select Alternative 20 as the Plan moving forward so that we can begin the process of restoring and reclaiming our river for our community.

###

APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON STATE, FOREIGN OPERATIONS, AND RELATED PROGRAMS
SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES

PERMANENT SELECT COMMITTEE ON INTELLIGENCE
RANKING MEMBER, SUBCOMMITTEE ON TECHNICAL AND TACTICAL INTELLIGENCE

E-MAIL VIA WEB ADDRESS AT:
www.house.gov/schiff

FACEBOOK:
www.facebook.com/repadamschiff

ADAM B. SCHIFF
28TH DISTRICT, CALIFORNIA

WASHINGTON OFFICE:
2411 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-4176
FAX: (202) 225-5828

DISTRICT OFFICE:
245 EAST OLIVE AVENUE
SUITE 200
BURBANK, CA 91502
(818) 450-2900
FAX: (818) 450-2928

DISTRICT OFFICE:
5500 HOLLYWOOD BOULEVARD
SUITE 416
LOS ANGELES, CA 90028
(323) 315-5555
(BY APPOINTMENT ONLY)

Schiff

Congressman Adam Schiff Statement in Support of Alternative 20
Los Angeles Army Corps of Engineers -
Los Angeles River Study Public Hearing
October 17, 2013

Several years ago, I was proud to join with Congresswoman Lucille Roybal-Allard in efforts to designate the L.A. River as part of the Department of the Interior's 'America's Great Outdoors' program. Since then, the Army Corps of Engineers has been conducting the Los Angeles River Restoration Feasibility Study in partnership with the City of Los Angeles, to investigate opportunities to restore the natural and cultural heritage of the L.A. River.

On September 24, I met with the Colonel Kim Colloton, Commander of the Los Angeles District, U.S. Army Corps of Engineers and her staff in my district office to discuss the Integrated Feasibility Report. She discussed the Corps reasoning and methodology in deciding on Alternative 13 as the Tentatively Selected Plan. While I appreciate the Corp's concern with the most cost-effective option, I join fellow nature lovers and river advocates in voicing my support for Alternative 20 – and a comprehensive restoration of the LA River.

The Army Corps' report showcased several different alternatives for restoration of the L.A. River, and it's now up to river advocates to push for an expansive plan that will make the river contiguous and includes significant ecological restoration – and the best choice is 'Alternative 20.' This option – called RIVER, for Riparian Integration via Varied Ecological Reintroduction – is the most aggressive restoration plan as it includes all of the elements of Alternatives 10, 13, and 16, and also includes naturalization and ecological restoration in all reaches of the river and inclusion of two major confluences. Specifically, Alternative 20 includes the restoration and beautification of the Verdugo Wash bordering the City of Glendale and the connection of the LA River to the Los Angeles State Historic Park (Cornfields). The residents of my congressional district, which includes the cities of Burbank, Glendale, and many Los Angeles City neighborhoods adjacent to the river, will have greater access to the river for recreation and an improved quality of life.

I recently had the pleasure of taking my son on a kayaking adventure down the Los Angeles River – and witnessed a true revival of this wonderful habitat. We saw abundant plant life, navigated rapids – almost fell over several times – watched a blue heron dry its wings, and marveled at the resiliency of the nature around us. I've gone running and biking along the river, attended community events and cleanups along its banks, and seen firsthand how a river that once divided communities is now bringing them back together. It's my hope that the Army Corps of Engineers will continue to work with the City and nature lovers to embrace a public-private partnership and complete restoration of the L.A. River so that the ecosystem remains strong for future generations.

THIS STATIONERY PRINTED ON PAPER MADE OF RECYCLED FIBERS

US DOI

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
333 Bush Street, Suite 515
San Francisco, CA 94104

IN REPLY REFER:
(ER 13/0667)

Filed Electronically

22 November 2013

Ms. Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

Subject: Review of the Draft Environmental Impact Statement (DEIS) for the Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Los Angeles County, California.

Dear Dr. Axt:

Thank you for the opportunity to comment on the Review of the Draft Environmental Impact Statement for the Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Los Angeles County, CA. The Department of Interior (Department) has the following comments to offer:

The report evaluates options for restoration of 11 miles of the Los Angeles River between Griffith Park and downtown Los Angeles, while maintaining existing levels of flood risk management. The Draft EIS/EIR evaluates the baseline No-Action Alternative and four action alternatives: Alternative 10, 16, 20, and the agency-preferred Alternative 13.

Restoration measures considered include creation and reestablishment of historic riparian strand and freshwater marsh habitat to support increased populations of wildlife and enhance habitat connectivity within the study area, as well as to provide opportunities for connectivity to ecological zones, such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains. Restoration includes the reintroduction of ecological and physical processes, such as a more natural hydrologic and hydraulic regime that reconnects the river to historic floodplains and tributaries, reduced flow velocities, increased infiltration, improved natural sediment processes, and improved water quality. The study also evaluates opportunities for passive recreation that is compatible with the restored environment.

The Department appreciates the opportunity to comment on the Study EIS/EIR. The proposed restoration of the Los Angeles River is important to the Department from four important considerations: (1) the Los Angeles River is adjacent to the Santa Monica Mountains National Recreation Area (SMMNRA); (2) the Rivers, Trails, and Conservation Assistance (RTCA)

US DOI

Program's current and past projects along the Los Angeles River; (3) the proposed project's location within the planning corridor for the Juan Bautista de Anza National Historic Trail through the Los Angeles region; and (4) the Los Angeles River is situated in the study area for the Rim of the Valley Special Resource Study. Restoration of the river would promote the National Park Service (NPS) mission to protect the nation's natural and cultural resources while providing for the recreational enjoyment of those resources.

Santa Monica Mountains National Recreation Area

We find that Alternative 20 would be most compatible with NPS goals and objectives for habitat restoration, habitat connectivity, and contributing to a quality outdoor recreation experience.

The Los Angeles area generally, and the San Fernando Valley in particular, are extremely challenging for wildlife and wildlife movement. Riparian areas along streams and rivers are valuable as wildlife movement corridors, and NPS has seen this in studies of carnivores, including bobcats, coyotes, and mountain lions, throughout the Santa Monica Mountains, Simi Hills, and surrounding regions. In the areas around the Los Angeles River, though, the amount of natural wildlife habitat and the opportunities for wildlife movement are severely limited. Restoration of the river, in particular making it natural and not an intensely fenced and regulated deep concrete channel, would provide both habitat and connectivity for wildlife in this highly urbanized area. SMMNRA tracked a female coyote (C028) in the San Fernando Valley during our nine-year coyote study. C028 had been captured in SMMNRA federal parkland in the Simi Hills, but then dispersed out into the San Fernando Valley - every time C028 was relocated, this animal was either at Pierce College, or at Sepulveda Basin, two of the last relatively vegetated areas in the Valley. The Los Angeles River connects these two areas. SMMNRA determined that C028 occasionally followed the river to travel between habitat areas, even in the river's highly altered and channelized state. Restoration of the river along as many stretches as possible would greatly increase its value as a movement corridor. 2

In the Griffith Park area, NPS wildlife biologists have been following a mountain lion (P22) that has resided in Griffith Park at least since February of 2012. Based on genetic testing, it appears that P22 was born in the Santa Monica Mountains, which would mean that P22 crossed over both the 405 and the Hollywood (101) freeways to get into Griffith Park. One of the likely ways that P22 might have done this would have been along the Los Angeles River, although the highly restricted and channelized nature of the river near the park makes it extremely challenging for wildlife to get in or out of it. It is possible that P22 will attempt to leave Griffith Park at some point to locate female mountain lions with which to mate. If P22 were to attempt to go west, a restored river would greatly facilitate safe movement. However, the closest large natural area to Griffith Park, in terms of straight distance, is the Verdugo Hills to the northeast. Unfortunately, the opportunities to cross the intensely urbanized areas of Burbank and Glendale are even fewer than those to the west. If the Verdugo Wash were restored, this could be extremely beneficial in terms of increasing connectivity between Griffith Park, at the east end of the Santa Monica Mountains, and the Verdugo Hills, which then connect to the San Gabriel Mountains to the north.

Finally, restoring the Los Angeles River would be extremely valuable as wildlife habitat for other species, particularly birds. The Sepulveda Basin is already a very important habitat area for birds, both residents and especially migrants. Again, the amount of natural area, or something that is at least vegetated and natural appearing, is negligible in the valley and in areas around and along the River. Restoration would greatly increase the amount of available habitat

US DOI

for all kinds of bird species in this highly urbanized landscape. This would be valuable for the birds, of course, but also for the residents of the city and the valley that greatly enjoy birdwatching as a recreational activity, and as a resource for education in the city about the value and wonder of wildlife.

Our understanding is that the Santa Monica Mountains Conservancy (Conservancy), a California state agency tasked with land acquisition to protect and restore park resources and provide recreational opportunities, has submitted a detailed comment letter regarding the subject Draft EIS/EIR. The Conservancy's comments elaborate on the importance of maximizing restoration efforts that would result in long-term improvements to native habitat quality and enhance habitat connectivity. The Conservancy recommended Alternative 20 would be the best way to achieve restoration of these natural resource values. The Superintendent at SMMNRA is a member of the Conservancy Board of Directors, and therefore concurs with the Conservancy's comments and the Department incorporates this information by reference. 3

The Conservancy also notes the importance of providing passive recreation opportunities. The Los Angeles River is one of seven initial pilot locations selected in 2011 for the nation's Urban Waters Federal Partnership, in which NPS is participating to help reconnect urban communities with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts for economic, environmental and social benefits. As part of President Obama's America's Great Outdoors Initiative, the Los Angeles River Trail was selected in 2011 as one of two priority projects in California, with NPS being the federal lead in identifying opportunities for federal agencies to support City of Los Angeles's efforts to implement the Los Angeles River Revitalization Master Plan along the 11-mile reach of the river being studied by the USACE.

Juan Bautista de Anza National Historic Trail

The 11 miles of the Los Angeles River evaluated in the subject Draft EIS/EIR fall entirely within the identified recreation corridor of the Juan Bautista de Anza National Historic Trail (NHT), which was established to commemorate the 1775-76 Spanish expedition of the more than 240 men, women, and children who journeyed across the frontier of New Spain to settle Alta California.

In highly urbanized segments of the historic trail corridor, such as that found throughout the greater Los Angeles area, the ability to connect the compelling, multi-ethnic Anza story to the community and raise awareness of its place in shaping local history is greatly dependent upon environmental conditions which provide a vicarious experience of the setting and surroundings representative of what the expedition would have encountered along its historic journey.

The Army Corps' consideration of various environmental restoration measures to provide opportunities for the creation and reestablishment of historic riparian and freshwater marsh habitat, supporting wildlife and natural ecological processes, has direct and positive implications to NPS efforts towards sharing Anza's story and revealing the nature of the expedition's journey in this area centuries ago.

Every effort made to improve habitat quality in this area not only facilitates the community's connection to its natural environment but to its cultural heritage as well. Therefore, the Department endorses the efforts to restore natural habitat and ecological processes along the Los

US DOI

Angeles River, and urges that the Army Corps capitalize on this opportunity by selecting an alternative which maximizes restoration efforts as extensively as possible.

Rivers, Trails & Conservation Assistance Program
The NPS Rivers, Trails and Conservation Assistance Program (RTCA) has provided support for many years to many locally-led resource conservation and outdoor recreation efforts along this 11-mile reach of the Los Angeles River. RTCA works in partnership with local government and non-profit organizations to help achieve their objectives consistent with the Outdoor Recreation Act (1963), the National Trails System Act (1968) and the Wild and Scenic Rivers Act of (1968).

RTCA has provided technical assistance to a range of local partners that collectively are working in the Los Angeles River area to build upon the local network of parks, places, and open spaces that enhance the protection and understanding of America's heritage and resources, and provide close-to-home recreational opportunities for communities. An overview of RTCA-supported projects that interface with the "Area with Restoration Benefits and Opportunities for Revitalization" (ARBOR) area is attached. Each of these projects received RTCA assistance through a competitive application process.

RTCA has also been engaged in the ARBOR reach of the Los Angeles River through two federal, interagency efforts. In 2010, President Obama launched the federal America's Great Outdoors (AGO) Initiative to develop a 21st Century conservation and recreation agenda. As part of AGO, the Los Angeles River Trail was selected in 2011 as one of two priority projects in California, with NPS being the federal lead in identifying opportunities for federal agencies to support City of Los Angeles' efforts to implement the Los Angeles River Revitalization Master Plan along the ARBOR reach. Additionally, the Los Angeles River Watershed is one of the initial seven pilot locations selected in 2011 for the nation's Urban Waters Federal Partnership, in which NPS is participating. NPS is supporting these initiatives in part through the RTCA projects identified above.

The action alternatives presented in the Study EIS/EIR support achieving the community-defined goals of the Los Angeles River projects identified above. As described in *Section 5: Evaluation of Alternative Plans and Environmental Consequences* of the Study EIS/EIR, the greatest benefits to biological resources, recreation and aesthetics would occur as the result of implementing Alternative 20. This alternative best meets the goals and objectives of the locally-led projects that RTCA has supported.

National Recreation Trails Program
In May 2012, Secretary of the Interior Ken Salazar announced the designation of the Los Angeles River Trail (Greenway/Bike Path) as a national recreation trail, making the trail part of the national trails system. The designated reach is approximately seven miles from the north side of Griffith Park at Riverside Drive (at Zoo Drive) along the Los Angeles River to Barclay Street in Elysian Valley, north of downtown Los Angeles. The National Trail System Act of 1968 (Public Law 90-543) authorized creation of a national trail system comprised of National Recreation Trails, National Scenic Trails and National Historic Trails. While National Scenic Trails and National Historic Trails may only be designated by an act of Congress, National Recreation Trails may be designated by the Secretary of Interior or the Secretary of Agriculture to recognize exemplary trails of local and regional significance in response to an application from the trail's managing agency or organization. Through designation, these trails are

recognized as part of America's national system of trails. The national recreation trail program is jointly administered by the NPS and the USDA Forest Service in conjunction with a number of other federal and nonprofit partners.

The action alternatives presented in the Study EIS/EIR would enhance the reach of the Los Angeles River Trail that is designated a national recreation trail. As described in *Section 5: Evaluation of Alternative Plans and Environmental Consequences* of the subject Draft EIS/EIR, RTCA concludes that the greatest benefits to biological resources, recreation and aesthetics would occur as the result of implementing Alternative 20, and that these benefits would best enhance the Los Angeles River NRT.

Rim of the Valley Corridor Special Resource Study

The Consolidated Natural Resources Act of 2008 (P.L. 110-229 – May 2008) directed the NPS to conduct a special resource study of the area known as the Rim of the Valley Corridor, generally including the mountains encircling the San Fernando, La Crescenta, Santa Clarita, Simi, and Conejo Valleys in California. The 11-mile stretch of the Los Angeles River under consideration for restoration by the U.S. Army Corps of Engineers feasibility study is included within the NPS special resource study area. The study legislation directs the NPS to determine whether any portion of the Rim of the Valley Corridor study area is eligible to be designated as a unit of the national park system or added to an existing national park unit (Santa Monica Mountains National Recreation Area); and to explore other ways that private and governmental entities can protect resources and provide more outdoor recreation opportunities.

The NPS conducted public scoping for the special resources study in 2010 and released preliminary findings and alternative concepts for public review in 2012 in Newsletter #3. Habitat connectivity is a key issue being considered in exploring alternatives for protecting and interpreting nationally significant resources within the study area. This 11-mile stretch of the Los Angeles River was included in a potential expansion of the Santa Monica Mountains National Recreation Area (preliminary alternative concept C) in the draft study report and environmental assessment currently being prepared by the study team. The draft study report will be presented to the public for comment in summer 2014. A final study report is scheduled for submission to Congress in early 2015. For additional information on the Rim of the Valley Special Resource Study (RIVA) and a study area map, please refer to the project website at: *www.nps.gov/pwro/rimofthevalley*.

For clarification regarding our comments, or for further assistance in addressing these concerns and recommendations, please contact the following persons directly as needed:

David Szymanski, Superintendent, Santa Monica Mountains National Recreation Area, 401 W. Hillcrest Dr., Thousand Oaks CA 91360 (805) 370-2344.

Naomi Torres, Superintendent, Juan Bautista de Anza National Historic Trail, 333 Bush St., Ste.500, San Francisco CA 94104 (415) 623-2315

Anne Dove, RTCA Outdoor Recreation Planner, National Park Service, 570 W. Avenue 26, #175, Los Angeles CA 90065 (323) 441-9307

Barbara Butler, Rim of the Valley Study, National Park Service, 333 Bush St., Ste.500, San Francisco, CA 94104 (415) 623-2311

US DOI

The Department of the Interior very much appreciates the opportunity to review the Draft EIS/EIR document and provide information and recommendations needed in order to prepare the subsequent Los Angeles River Ecosystem Restoration Integrated Feasibility Report.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

Enclosure: Summary of NPS RTCA projects in the Los Angeles River watershed

cc:
Director, OEPC
OEPC Natural Resource Management Team Leader, Dave Sire
OEPC Staff Contact, Loretta B. Sutton
Alan Schmierer, NPS

US DOI

Attachment 1

Summary of NPS RTCA projects in the Los Angeles River watershed

Project/Date: Los Angeles River Master Plan (FY92-FY96)
Partner: Los Angeles County Department of Public Works
Location: 51-mile Los Angeles River Corridor and 9-mile Tujunga Wash from the San Fernando Valley to Long Beach

Description: The project objectives are to improve the appearance of the river; promote the river as an economic asset to the surrounding communities; preserve, enhance and restore environmental resources in and along the river; ensure that flood control and public safety needs are met considering storm water management alternatives; and provide a safe environment and a variety of recreational opportunities along the river--ensure safe access to and compatibility between the river and other activity centers.

Project/Date: Arroyo Seco Watershed Restoration Feasibility Study (FY01-03)
Partners: North East Trees & Arroyo Seco Foundation
Location: Arroyo Seco Watershed including portions of the Angeles National Forest; unincorporated community of Altadena; and the Cities of La Canada Flintridge, Pasadena, South Pasadena, and Los Angeles

Description: The project objectives are to improve and connect 22 miles of trails along the Arroyo Seco, and to the extent feasible, restore the hydrologic and ecological functioning of this watershed as an integrated system.

Project/Date: Cornfield Arroyo Specific Plan (FY12-13)
Partner: Los Angeles Department of City Planning:
Location: City of Los Angeles' Cornfield Arroyo Specific Plan (CASP) area around the Los Angeles River and Arroyo Seco confluence including portions of the communities of Lincoln Heights, Cypress Park, and Chinatown.

Description: The project objective is to create a 7.2-mile neighborhood trail network that will connect the community to the Los Angeles River, Arroyo Seco and Los Angeles State Historic Park; and engage high school students in assessment, and planning and design recommendations.

Project/Date: Griffith Park Anza Trail (FY13-14)
Partner: Friends of Griffith Park
Location: Griffith Park, City of Los Angeles

Description: This project will result in enhancements to 4 miles of existing certified Juan Bautista de Anza National Historic Trail within Griffith Park which will improve community access to the trail, increase awareness of its historic significance, and support long-term conservation of the resource.

Project/Date: Safe Routes to the River (FY 13-14)
Partner: Mountains Recreation and Conservation Authority

US DOI

Location: Three communities along the Los Angeles River from its headwaters in Canoga Park to the confluence with the Arroyo Seco, including the Glendale Narrows section of the river.

Description: The project will result in 2-3 miles of safe urban routes between the Los Angeles River and 3-4 targeted schools and adjacent neighborhoods, and engagement of high school students in assessment, and planning and design recommendations.

Project/Date: Northeast Los Angeles Riverfront Recreation and Open Space (FY13-14)
Partner: City of Los Angeles, Community Development Department
Location: Glendale Narrows reach of the Los Angeles River and surrounding communities of Cypress Park, Elysian Valley, Glassell Park, and Atwater Village.

Description: The project objectives are to implement approximately 9 miles of the recreational route of the Juan Bautista de Anza National Historic Trail; enhanced access to the Los Angeles River; and facilitate water-based recreation including kayaking, canoeing and fishing along this river reach in part through the "Los Angeles River Recreation Zone Pilot Program".

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer To:
FWS-LA-14B0040-14CPA0006

NOV 25 2013

Colonel Kimberly M. Colloton, PMP
District Engineer
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, California 90053-2325

Attention: Josephine Axt, PhD

Subject: Los Angeles River Ecosystem Restoration Feasibility Study

Dear Colonel Colloton:

On behalf of the U.S. Fish and Wildlife Service (Service), thank you for the opportunity to provide comments on the U.S. Army Corps of Engineers (Corps) Los Angeles River Ecosystem Restoration Feasibility Study (Study). Of the four primary Alternatives presented in the Study's Final Array, we endorse Alternative 20 because it is closely aligned with the mission of the Service based on three factors: Connecting People with Nature; outreach to underserved communities; and enhancing biodiversity.

The Service's Connecting People with Nature Initiative recognizes the natural world is part of our heritage and it is our responsibility to make opportunities for youth to experience the natural world and for children to grow up with the chance to develop a relationship with the land where they live. The City of Los Angeles has one of the lowest ratios of open space per capita for its residents of any city in the nation. Alternative 20 provides a significant increase in the amount of restored open space created for Los Angelinos to interact with the natural world and maximizes the opportunity to connect with nature on land relevant to their neighborhoods.

This past fall, the Service launched a multi-faceted Urban Wildlife Refuge Initiative to make its programs reflect the diverse perspectives, values, and cultures of America. This initiative strives to make programs far more relevant to millions of Americans living in urban settings by giving them myriad ways to participate in wildlife conservation and recreation. Such opportunities to participate in outdoor related activities will provide economic benefits to local communities as new generations of city dwellers learn about wildlife-dependent recreation. Many Los Angelinos have grown up without any real connection to wildlife or nature. For this reason, one of the eight pilot projects selected as part of the Refuge Initiative is the Los Angeles River Urban Wildlife Refuge Partnership. It is our intent to work with our Federal partners along the Los Angeles

River to bring "the people to the river and the river to the people." Alternative 20 increases the chance to bring nature into people's lives in one of the most urbanized areas of the country.

The Corps recognizes that the primary purpose of the proposed alternatives is to restore natural hydrological functions providing riparian and aquatic habitats supporting a variety of sensitive wildlife and enhance key linkages that potentially provide for wildlife to move across the landscape now fractured by development. Alternative 20 will accomplish more habitat restoration thus creating habitats and open space, while forming wildlife corridors to areas adjacent to the river floodplain.

Southern California geographically sits in a world-renowned biodiversity hotspot, the California Floristic Province. Unfortunately, this region has been severely impacted by development. None of the proposed alternatives in the Feasibility Study will reverse impacts of previous land use practices; however, Alternative 20 has the greatest potential to improve biodiversity historically associated with the floodplain. One of the management issues associated with this region is climate change. Alternative 20 addresses some of the potential impacts of climate change by mitigating the increase in urban temperatures, improving water quality, increasing shade factors, and lowering evaporation rates.

Alternative 20 maximizes the collective effort of the Federal government to most efficiently join the similar goals various agencies have to increase people's exposure to the natural world and enhance the living environment of a diverse group of people. In particular, Alternative 20 provides an ideal opportunity to effectively reach out to underserved communities. We support Alternative 20 because it provides habitat restoration and opportunities for outdoor recreation. We believe the unique urban partnerships created by Alternative 20 can inspire the imagination of citizens and help create a connected conservation constituency of people who are aware of, understand, and support fish and wildlife conservation.

Thank you again for the opportunity to provide comments on Corps' Study. If you have any questions regarding this letter, please contact Clark Winchell, Division Chief, Conservation Partnerships Program, of this office at 760-431-9440, extension 275.

Sincerely,

for Jim A. Bartel
Field Supervisor

US EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

OFFICE OF THE
REGIONAL ADMINISTRATOR

NOV 25 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, California 90053-2325

Subject: Los Angeles River Ecosystem Restoration Feasibility Study Draft Integrated Feasibility Report (Feasibility Study/Environmental Impact Statement/Environmental Impact Report), Los Angeles County, California (CEQ#20130289)

Dear Dr. Axt:

The Environmental Protection Agency has reviewed the Draft Environmental Impact Statement for the above project. Our review and comments are pursuant to the National Environmental Policy Act , Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The Feasibility Report and Draft EIS clearly demonstrates the need to restore the stretch of the Los Angeles River from Griffith Park to Downtown Los Angeles through the reestablishment of habitat communities; reconnection to tributaries, its historic floodplain, and the habitat zones of local mountain ranges; and maintenance of the existing levels of flood risk management. The action alternatives provide various degrees of restoration that would increase habitat acreage and connectivity. They would also result in more natural hydrologic regimes that would reconnect the river to historic floodplains, reduce flow velocity, increase infiltration, improve water quality, and help prepare for the effects of climate change.

EPA strongly supports restoration of the LA River and the use of green infrastructure (http://water.epa.gov/infrastructure/greeninfrastructure/index.cfm) to improve the management of local water resources. As lead federal agency for the Urban Waters Federal Partnership's Los Angeles River Watershed pilot project, EPA has worked closely with over 40 organizations involved in LA River issues, including the US Army Corps of Engineers. Guiding the work of the LA River pilot are the mission, vision and principles of the national Urban Waters Federal Partnership, which were agreed upon by federal agencies participating in this national partnership on June 24, 2011:

- Promote clean urban waters;
- Reconnect people to their waterways;
- Water conservation;

US EPA

- Use urban water systems as a way to promote economic revitalization and prosperity;
- Encourage community involvement through active partnerships;
- Be open and honest, listening to communities;
- Focus on measuring results and evaluation to fuel future success.

In addition to the Federal Partnership principles, the local LA River Watershed pilot project has identified the following goals specific to the LA River Watershed:

- Restore ecosystem functions;
- Balance revitalization with flood avoidance to ensure public safety;
- Reduce reliance on imported water supply;
- Foster sustainable stewardship.

While all of the Action Alternatives in the Draft EIS would provide restoration benefits consistent with the Corps' restoration mission and the purpose and need for the project, the expanded restoration work provided by Alternative 20 would best achieve the national and local Urban Waters Partnership goals. Alternative 20 would provide the most benefits for water quality via improved stormwater management; provide the most benefits for water conservation and local water independence due to greater replenishment of local groundwater supplies; achieve the most for ecosystem restoration, especially in terms of ecosystem connectivity and quality of habitat; and provide opportunities for increased economic value in terms of temporary and permanent job creation.

As discussed in the enclosed Detailed Comments, the benefits associated with greater degrees of restoration do not appear to have been fully considered in the Corps' incremental cost determination. We recommend that the Final EIS more thoroughly quantify the benefits of the Action Alternatives. Such an accounting may reflect more favorably on the increasingly restorative alternatives than the Draft EIS indicates.

Although Alternative 13 has been identified as the "Tentatively Selected Plan", the Draft EIS does not identify a NEPA preferred alternative. Based on our review of the Draft EIS, we have rated all of the action alternatives as *Lack of Objections* (LO) (see enclosed "Summary of EPA Rating Definitions"). In light of the considerations discussed above and in the enclosed Detailed Comments, we encourage the Corps to select Alternative 20, which would maximize the ecosystem benefits of the Corps' action.

We appreciate the opportunity to review this Draft EIS. Should you have any questions regarding our comments, please contact Kathy Goforth at (415) 972-3521, or contact Jean Prijatel, the lead reviewer for the project. Jean can be reached at (415) 947-4167 or prijatel.jean@epa.gov.

Sincerely,

Jared Blumenfeld

Enclosures: Summary of EPA Rating Definitions
EPA Detailed Comments

US EPA

cc: Jon Avery, U.S. Fish and Wildlife Service
Scott Harris, California Department of Fish and Wildlife
Shirley Birosik, Regional Water Quality Control Board – Los Angeles

US EPA

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

US EPA

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR LOS ANGLES RIVER ECOSYSTEM RESTORATION, LOS ANGELES, CA, NOVEMBER 2013

Water Quality

The Draft EIS does not clearly state the increasing environmental benefits that would result from the more restorative action alternatives as more impervious surfaces are removed and larger areas of wetlands and green space are restored. This provides more opportunities for the use of green infrastructure tools. The benefits of green infrastructure include improved water quality as urban runoff – the greatest source of the River's water quality impairments (page 3-25) – is infiltrated into the subsurface, thus reducing pollutant loads to the River.

The Draft EIS does discuss the need for a Clean Water Act Section 401 water quality certification for construction impacts from the Los Angeles Regional Water Quality Control Board. EPA Region 9 would like to be consulted during the application for certification. 1

Recommendation:

We recommend that the Final EIS consider environmental benefits to water quality from increased infiltration and reduced urban runoff in the alternative selection analysis.

We request that the Corps consult with EPA Region 9's Water Division in its application for Section 401 certification.

Groundwater Replenishment

The increased use of green infrastructure tools, including stormwater infiltration, would also result in replenishment of groundwater supplies, thus meeting local objectives of better use of local water resources and reduced reliance on imported water. Local planning efforts with a high priority on improved management of local water resources by increasing stormwater infiltration to replenish groundwater supplies include plans listed in Section 15.14.1: Los Angeles Urban Water Management Plan and the Integrated Regional Water Management Plan. EPA considers enhancement of southern California groundwater supplies to be a very desirable factor in reducing stress on the sources of southern California's imported water, including the San Francisco Bay Delta. 2

Recommendation:

We recommend that the Final EIS consider the benefits from increased groundwater replenishment in the alternative selection analysis.

Habitat Connectivity

Increasing habitat connectivity is one of two primary Specific Planning Objectives for the LA River study area; however, the Combined Habitat Assessment Protocol used to calculate habitat units does not capture benefits of habitat connectivity. The habitat units generated by CHAP were used to calculate the incremental costs per unit to be used in the selection of an alternative. Therefore, increases in habitat connectivity, and resulting increases in habitat quality, may not be adequately considered in the incremental cost analysis, potentially leading to an undervaluation of more restorative alternatives. We note that the Draft EIS states that factors other than habitat units were considered in the evaluation of alternatives, but remain concerned that they are not valued in the incremental cost analysis that prioritized Alternative 13 as the Tentatively Selected Plan. 3

As stated in Appendix G of the document, connections between habitat areas are critical to the resiliency and sustainability of ecosystem restoration. Alternative 20 provides significantly more habitat

US EPA

connectivity to the Verdugo Mountains and Elysian Hills, in addition to increased hydrologic connection to the floodplain in the Piggyback Yard area (also seen in Alternative 16). It is unclear how the significantly greater connectivity in Alternative 20 was considered in the selection of the Tentatively Selected Plan. The preference for Alternative 13 refers to an increase of nodal and regional connectivity of 309%. This calculation is derived from a comparison to the connectivity achieved by Alternative 10. If Alternative 10 is the baseline, it appears that Alternative 20 achieves an increase in connectivity of approximately 1200%. 3

Recommendation:
We recommend that the Final EIS include further discussion of how habitat and hydrologic connectivity are calculated and considered in the selection of a final alternative.

Climate Change
In the No Action Alternative analysis, the Draft EIS mentions that climate change will likely increase the frequency of extreme weather conditions in the future, possibly compounding and increasing watershed peak flows. The document does not explicitly evaluate the potential benefits of restoration for the River's capacity to accommodate potential climate change-induced increases in watershed flows, except to say generally that the project would "enhance stormwater management by creating more pervious surfaces in multiple Reaches, which would increase potential for stormwater to infiltrate into the ground."

In light of the President's November 1, 2013 Executive Order "Preparing the United States for the Impacts of Climate Change," there is a great opportunity with the LA River ecosystem restoration to maximize the climate-resilient elements of restoration and encourage investment in these elements. 4

Recommendation:
We recommend that the Final EIS include a discussion about the benefits to climate change resiliency of each of the alternatives and how such benefits are integrated into the selection of a final alternative. We further recommend that the Corps coordinate findings with the Bureau of ~~Reclamation and its Los Angeles Basin Stormwater Conservation Study, which is also evaluating~~ climate change models in the watershed.

Environmental Justice
The Draft EIS discusses the temporary construction impacts – noise and reduced air quality – to environmental justice communities, and the proposed mitigation measures for those impacts. It also briefly discusses the health benefits of increased open space and access to recreation areas, but does not clearly disclose that there would be increasing degrees of public health benefits to local residents for each alternative as the recreational and open space increases.

The Draft EIS suggests that there may be a reduction in jobs for the local environmental justice community at the Piggyback Yard or other industrial sites, but it does not quantify those jobs or document whether or not those jobs are held by members of the local community. At the same time, the Draft EIS notes that between 2800 and 16,800 construction jobs will be created, and between 630 and 2700 permanent jobs will be created. 5

Recommendation:
We recommend that the Final EIS include a quantitative and qualitative comparison of the jobs held by the environmental justice communities at existing facilities – such as Piggyback Yard –

US EPA

and the jobs to be created under each alternative. With effective programs in place, the project could create employment opportunities that would offset jobs lost by members of the environmental justice community at the Piggyback Yard and other impacted sites. The Final EIS should commit to developing recruitment, training, and job set-aside programs for environmental justice communities impacted by the project.

The Final EIS should also specify how the positive and adverse impacts to environmental justice communities differ among the alternatives. Particularly, the geographic area covered by Alternative 20 is much larger than that of Alternative 13; therefore, a larger number of residents would be affected (Appendix B). Further, the number of jobs created by Alternative 20 is listed as 16,800, as compared to 4000 for Alternative 13. The document should differentiate the impacts and mitigations accordingly. 5

Recreation Plans

The recreation plan (Appendix B) lists proposed recreation features, including "wood deck with railing, benches, interpretive signage, and trash receptacles." EPA has developed a Comprehensive Procurement Guideline program in an effort to promote the use of materials recovered from solid waste. EPA also supports the use of the Sustainable Materials Management approach to using and reusing materials more productively over their entire lifecycles (http://www.epa.gov/smm/basic.htm). The features of the recreation plan provide an opportunity to consider the durability and environmental impact of materials used in those features. 6

Recommendation:

We recommend that the Corps work with the partner agencies responsible for maintenance of recreation areas and establish a commitment to using a Sustainable Materials Management approach, when selecting materials for the recreation plan, and consulting the Comprehensive Procurement Guidelines (www.epa.gov/waste/conserve/tools/cpg/products/index.htm) for product recommendations.

Detailed Comments and Corrections

Page 3-26: The first full paragraph states that pollutant loading from non-point sources "far exceeds point sources." This is incorrect and inconsistent with other statements in this section which correctly describe stormwater runoff as the prominent source of water quality degradation in the Los Angeles River. It appears that this paragraph may be erroneously considering stormwater to be a non-point source. Pursuant to Clean Water Act regulations, stormwater runoff is considered to be a point source, regulated by NPDES permit programs. 7

Page 3-73: Some details in the 2nd paragraph's description of the San Fernando Valley Superfund sites should be revised. The shallow groundwater contamination mentioned in the second paragraph includes VOCs and chromium. For chlorinated VOCs, the basinwide Remedial Investigation referred to in the third sentence is complete, and remedies to address VOC contamination have been operating since 2000. Investigations of chromium contamination are ongoing. 8

Page 3-80: The last paragraph's description of the City's stormwater system is incorrect, as not all flows entering the system are untreated. Although it is true that most flows from the stormwater system enter receiving waters without treatment, the City operates "low-flow diversions" in selected locations which direct dry weather urban runoff from the stormwater system to the sanitary sewer system for treatment. 9

US EPA

A few of these diversions capture flows in the City's stormwater system that would otherwise be directed discharged to the LA River.

Page 4-3: The "increase passive recreation" objective is discussed as a secondary objective in other areas of the document, but is counted here with the primary objectives. It is also has a typographical error listing it as the second number "2" objective. This section should be clarified to mirror the discussion of objectives in other areas of the document. 10

Page 5-39: (bottom of page) Note that the Los Angeles County Municipal Separate Storm Sewer System (MS4) permit was renewed in November 2012 and, among other requirements, includes new provisions related to new development/redevelopment projects. 11

Page 5-40 section 5.4.2, 13th bullet: This description of violations of regulatory standards is apparently intended to address Clean Water Act regulatory matters, but is incomplete. We'd suggest revising it to "Caused regulatory standards to be exceeded, as defined in the applicable NPDES permit or water quality standards in the Los Angeles Regional Water Quality Control Board's Basin Plan." 12

Page 5-41: The discussion of TMDLs in the 2nd paragraph should recognize that TMDL provisions have been incorporated into the renewed LA County MS4 permit. 13

Page 5-71, 2nd full paragraph: This paragraph describes multiple rail lines located at the Piggyback Yard, including passenger rail lines. The last sentence mentions the impact from a "reduction in railyard capacity." It would help to clarify whether this would have any impact on passenger rail lines. 14

Page 5-96, HTRW: In the vicinity of reaches 1-4, it is possible that any groundwater encountered by construction activities will be contaminated with VOCs and/or chromium. Whether groundwater is encountered will depend on the depth of excavations and local hydrogeology. 15

Page 5-97, Approach to HTRW Impacted Groundwater: This should clarify that the SFVSS site sponsor is responsible for management of contaminated groundwater encountered during construction activities. 16

Page 5-101, first line: It is unclear whether this is intended to refer to wastewater treatment requirements of the applicable "POTW" (Publicly owned treatment works or municipal wastewater treatment plants). Reference to the applicable "RWQCB" is unclear, as there is only one RWQCB in the study area. 17

Page 6-31: The discussion of de-watering activities should make it clear that treatment and disposal of contaminated groundwater will be necessary if contamination is encountered during de-watering activities. 18

Appendix K, Page 15: Regarding San Fernando Valley Superfund Site (SFVSS)

- First paragraph, fourth and fifth sentences: "It is currently being remediated by the USEPA via a large series of pump and treatment wells that are strategically located amongst the plume. One such set of wells, the Pollock Well Field, is located approximately less than 1/2 mile northwest from the Taylor Yard G1 and G2 properties."
  The Los Angeles Department of Water and Power (LADWP) operates the wellhead treatment project in the Pollock Well Field. With the existence of LADWP's project, EPA concluded that a Superfund remedy is unnecessary. 19

US EPA

- Second paragraph states that dewatering likely will require pump-treatment and disposal of water. If it is anticipated that contaminated groundwater will be encountered, we recommend that disposal or discharge requirements be identified before determining appropriate treatment.
- Third paragraph discusses the likelihood that contaminant concentrations at the outer edges of the SVFSS plume are lower than concentrations in the rest of the plume. While this characterization is accurate, the information could be misleading. Recent data show the presence of VOCs and chromium near the river at concentrations that exceed safe drinking water standards. We recommend the addition of a statement to clarify that concentrations of VOCs and chromium in this portion of the project area could still exceed drinking water standards and disposal or discharge standards. 19

Members of CA Assembly

MIKE GATTO
ASSEMBLY APPROPRIATIONS CHAIR
ASSEMBLYMEMBER, FORTY-THIRD DISTRICT

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0043
(916) 319-2043
FAX (916) 319-2143

DISTRICT OFFICE
300 EAST MAGNOLIA BLVD.
SUITE 504
BURBANK, CA 91502
(818) 558-3043
FAX: (818) 558-3042

Assembly
California Legislature

JIMMY GOMEZ
DEMOCRATIC WHIP
ASSEMBLYMEMBER, FIFTY- FIRST DISTRICT

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0051
(916) 319-2051
FAX (916) 319-2151

DISTRICT OFFICE
1910 WEST SUNSET BOULEVARD
SUITE 810
LOS ANGELES, CA 90245
(213) 483-5151
FAX (310) 615-3520

September 26, 2013

Lieutenant General Thomas Bostick
Commanding General
United States Army Corps of Engineers
441 G Street NW
Washington, DC 20314-1000

RE: Los Angeles River: Los Angeles River Ecosystem Restoration Feasibility Study, Alternative 20

Dear Lieutenant General Bostick,

I am writing to strongly urge the United States Army Corps of Engineers to select Alternative 20 as the preferred alternative to restore the Los Angeles River. Alternative 20 provides the most extensive restoration of the Los Angeles River and includes restoration measures across the entire river system, to maximize the positive impact on disadvantaged communities throughout the Los Angeles area and create a more functional and interconnected watershed.

The City of Los Angeles has been working closely with the US Army Corps of Engineers for more than seven years to develop a plan to restore and revitalize the Los Angeles River. Out of its work with the City of Los Angeles, the Army Corps has recently released the *Los Angeles River Ecosystem Restoration Feasibility Study*, which provided several alternatives for habitat and stream restoration along 11 miles of the LA River ecosystem to revive the ecological vitality and quality of the river.

I was disappointed to learn that the Army Corps has identified Alternative 13, one of the alternatives with minimal restoration projects, as their preferred alternative. Alternative 20 includes several crucial restoration projects and hydraulic adjustments to the LA River which are excluded in Alternative 13. For example, Alternative 20 includes improvements to the Verdugo Wash and creates the Los Angeles River State Historic Park. Both improvements would add several acres of wetlands to the River system, reestablishing connectivity of historic riparian strand and freshwater marsh habitat to support increased populations of wildlife and enhance habitat connectivity within the Los Angeles Area. These improvements would also create increased connectivity for bikers and pedestrians utilizing the LA River recreation areas. Additionally, although Alternative 20 will cost more, it will also provide over 10,000 more jobs than Alternative 13 and maximizes restoration investment, with the lowest percentage of construction cost attributable to real estate purchase. Improvements will also reach further into the City of Los Angeles, providing greenspace for disadvantaged communities with little

Members of CA Assembly

access to parks and open space. Simply, Alternative 13 doesn't offer an alternative; it puts off the vast majority of work which must be done to restore the Los Angeles River, thereby removing the opportunity to lower the ultimate Federal, state and local cost of the restoration by consolidating work and projects.

For these reasons, I urge you to support Alternative 20 to maximize our investment dollars and restore the Los Angeles River as a functional ecological system and a community resource. Please feel free to contact me or my staff, Katerina Robinson, at (916)319-2043 if you have any further questions.

Sincerely,

Mike Gatto
Assembly Member, 43rd District

Jimmy Gomez
Assembly Member, 51st District

cc:

Assembly Member Richard Bloom, AD-50

Assembly Member Raul Bocanegra, AD-39

Assembly Member Ian Calderon, AD-57

Assembly Member Ed Chau, AD-49

Senator Lou Correa, SD-34

Assembly Member Roger Hernández, AD-48

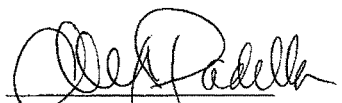
Assembly Member Chris Holden, AD-41

Senator Ted Lieu, SD-28

Senator Carol Liu, SD-25

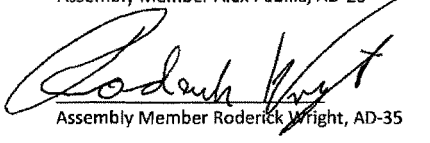
Assembly Member Adrin Nazarian, AD-46

Members of CA Assembly



Assembly Member Alex Padilla, AD-20

Assembly Member Anthony Rendon, AD-63



Assembly Member Roderick Wright, AD-35

Senator Fran Palvey, SD-27

Assembly Member Al Muratsuchi, AD-66

CAPITOL OFFICE
STATE CAPITOL, ROOM 5108
SACRAMENTO, CA 95814
TEL (916) 651-4022
FAX (916) 327-6817

DISTRICT OFFICE
1808 W. SUNSET BLVD
LOS ANGELES, CA 90026
TEL (213) 483-9300
FAX (213) 483-9309

California State Senate

SENATOR
KEVIN DE LEÓN
CHAIR
SENATE APPROPRIATIONS COMMITTEE
TWENTY-SECOND SENATE DISTRICT

De León

COMMITTEES
APPROPRIATIONS
ENERGY, UTILITIES & COMMUNICATIONS
GOVERNMENTAL ORGANIZATION
PUBLIC SAFETY

JOINT COMMITTEE
LEGISLATIVE BUDGET

November 5, 2013

Lieutenant General Thomas Bostick
Commanding General
United States Army Corp of Engineers
441 G Street NW
Washington, DC 20314-1000

RE: Los Angeles River: ARBOR Study – Support for Alternative 20 (RIVER)

Dear Commanding General Bostick:

I am writing to strongly urge the United States Army Corps of Engineers to select Alternative 20 – Riperian Integration via Varied Ecological Reintroduction (RIVER) – as the preferred alternative to restore the 11 miles of the Los Angeles River included in the "Area with Restoration Benefits and Opportunities for Revitalization (ARBOR)" reach study and detailed in the draft Integrated Feasibility Report (IFR). I greatly appreciate the efforts of the City of Los Angeles and the U.S. Army Corps of Engineers to develop a plan to restore and revitalize the Los Angeles River that would be consistent with the goals of the City of Los Angeles' Los Angeles River Revitalization Master Plan for the river. As a strong proponent of efforts to restore the Los Angeles River, I support Alternative 20 (RIVER) as it provides the most extensive restoration of the river and integration into adjacent neighborhoods, the majority of which I represent.

Spurred by the efforts of individuals and organizations, such as the Friends of the Los Angeles River, Los Angeles has witnessed a strong and growing interest to restore and revitalize the river to a more ecological natural state. These efforts have coincided with a greater awareness about the lack of open space in many nearby neighborhoods, which would be well-served by a restored and revitalized Los Angeles River. Unfortunately, the City of Los Angeles has the unfortunate distinction of being one of the largest cities in the United States with the least amount of park and open space.

In response to the glaring need for additional park space in Los Angeles, I have pushed forth state policies to support efforts to provide sorely needed open space and help revitalize the river. My efforts have included helping to channel necessary state funding to key sites along the river, including $21 million for the development of the Los Angeles State Historic Park.

De León

Additionally, I authored legislation, California Senate Bill 1201 (De Leon), that codifies the river's status as a navigable water of the state protected under the State Constitution, which was signed into the law in 2012. This legislation, cited in the ARBOR study, is an important effort by the State of California to recognize the importance of the Los Angeles River as more than just a flood control system.

Alternative 20 (RIVER) best represents the vision of the people of Los Angeles for the Los Angeles River. Unlike the other alternatives, Alternative 20 includes connections to significant key sites along the river, including the Los Angeles State Historic Park and the Verdugo Wash. The Los Angeles State Historic Park, in particular, is a critically important site in the community of Chinatown in downtown Los Angeles. The Los Angeles State Historic Park, known locally as the "Cornfield," was the result of a historic partnership between the Latino and Asian American communities in my district that formed the coalition Chinatown Yard Alliance to prevent the development of this 32-acre site into industrial warehouses. The acquisition of this land by the state of California is renowned as one of the most significant environmental justice victories in Los Angeles, and has served as a catalyst for the revitalization of the Los Angeles River. Selecting an alternative that fails to include this key site would be a disservice to the community. Alternative 20 is the only alternative incorporating the Los Angeles State Historic Park in the revitalization of the river, providing for the restoration of wetlands with a terraced connection from the park to the mainstem of the river.

While other alternatives may be less expensive, the benefits of Alternative 20 (RIVER) best meet the needs of Los Angeles. Alternative 20 (RIVER) ensures the greatest increase in habitat restoration, connection to the neighborhoods, connectivity along the 11 mile stretch of the river, and potential for 10,000 more jobs than Alternative 13. As such, it would be a great disappointment for the US Army Corps to move forward with a preference for Alternative 13, an inadequate representation of the needs and desires of the community.

For these reasons, I urge you to support ARBOR study Alternative 20 (RIVER) to ensure we maximize our federal and local investment dollars and restore the Los Angeles River as a functional ecological system and a resource to the local community. Please feel free to contact me or Nidia Bautista on my staff at (916) 651-4022, if you have any further questions.

Sincerely,

Kevin de León

KEVIN DE LEÓN
Twenty-Second Senate District

De León

Commanding General Bostick --- *ARBOR Study Support for Alternative 20*
November 5, 2013
Page 3 of 3

cc: Honorable Diane Feinstein, United States Senator
Honorable Barbara Boxer, United States Senator
Honorable Xavier Becerra, U.S. House of Representatives (CA – 34th District)
Honorable Lucille Roybal-Allard, U.S. House of Representatives (CA – 40th District)
Honorable Adam Schiff, U.S. House of Representatives (CA – 28th District)
Honorable Jimmy Gomez, California State Assembly (51st District)
Honorable Eric Garcetti, Mayor of Los Angeles
Honorable Gilbert Cedillo, Los Angeles City Council, 1st District
Honorable Mitch O'Farrell, Los Angeles City Council, 13th District
Nancy Sutley, Chair, White House Council on Environmental Quality (CEQ)

CAPITOL OFFICE
STATE CAPITOL, ROOM 4035
SACRAMENTO, CA 95814
TEL (916) 651-4027
FAX (916) 324-4823

DISTRICT OFFICE
5016 N. PARKWAY CALABASAS
SUITE 222
CALABASAS, CA 91302
TEL (818) 876-3352
FAX (818) 876-0802

California State Senate

SENATOR
FRAN PAVLEY
TWENTY-SEVENTH SENATE DISTRICT

cc: Pavley
NATURAL RE
CHAIR
ENERGY, UTILITIES & COMMUNICATIONS
ENVIRONMENTAL QUALITY
HEALTH
TRANSPORTATION & HOUSING

September 27, 2013

Lieutenant General Thomas Bostick
Commanding General
United States Army Corp of Engineers
441 G Street NW
Washington, DC 20314-1000

RE: Comment in support of Alternative 20 (the "RIVER" alternative)
Draft Integrated Feasibility Report, Los Angeles River Ecosystem Restoration Feasibility Study

Dear Lt. General Bostick,

I appreciate and commend the ongoing efforts of the U.S. Army Corps of Engineers, Los Angeles District (Corps) on behalf of restoring and revitalizing the Los Angeles River (river). We share the vision of a river restored to its vital and historic roles of providing riparian habitat and ecosystem support, connectivity between ecological zones, and numerous recreational, economic and cultural opportunities while still maintaining existing flood control capabilities and public safety. My state senate district includes the Sepulveda Basin and the headwaters of the river in Canoga Park, and last year the State Legislature passed the resolution I authored, SCR 101, honoring the commitment and leadership demonstrated by many, including the Corps, in the creation of parks and the restoration of natural habitats along the river and its San Fernando Valley tributaries. I am a long-time supporter of efforts to help re-connect the public with the river, including the kayak tours the last few summers that the Corps was an important partner in. As you know, there is long-standing state support for river restoration efforts, such as the development of adjacent "pocket parks" and the relatively recent creation of two new units of the state park system along the river.

I am writing today to comment on the recently-released Draft Integrated Feasibility Report (report) of the Los Angeles River Ecosystem Restoration Feasibility Study. I join the entire Los Angeles City Council, the Los Angeles River Corporation, political leaders and numerous organizations devoted to the river in believing that Alternative 20 – the more comprehensive "RIVER" alternative – should be the preferred choice of the Corps, not the tentatively selected Alternative 13. Alternative 20, as the Corps acknowledges, meets the "best buy" criterion and provides for maximum river ecosystem restoration at sites including the Arroyo Seco confluence, the Los Angeles State Historic Park ("Cornfields"), Piggyback Yard, the Bowtie and G-2 parcels of the Taylor Yard, and the Verdugo Wash confluence. The report itself acknowledges that future restoration both upstream and downstream of the 11 mile "ARBOR" reach of the river studied is hindered by existing urbanization. Concrete can be removed, water velocities reduced and ecosystems restored in the Glendale Narrows reach that may not be possible elsewhere. It is therefore imperative that the opportunities presented by Alternative 20 be seized. While Alternative 20 is more costly than Alternative 13, the Corps' own projections indicate that significantly more jobs and cumulative impact of redevelopment long-term economic activity are associated

Pavley

with Alternative 20. I urge the Corps to reconsider its tentative selection of Alternative 13 in favor of Alternative 20.

As chair of the Senate Natural Resources and Water Committee and a member of the Senate Environmental Quality Committee, I am aware of the daunting environmental challenges facing the restoration of the river. These challenges are not insurmountable, however, and choosing Alternative 20 is the best step forward to achieving a sustainable river while protecting public safety.

Thank you for your time and consideration.

Sincerely,

Fran Pavley

Fran Pavley
Senator, 27th Senate District

cc: Colonel Kimberly M. Colloton, Commander, U.S. Army Corps of Engineers, Los Angeles Dist.
Josephine Axt, Ph.D., Chief, Planning Division, U.S. Army Corps of Engineers, Los Angeles Dist.
Supervisor Zev Yaroslavsky, County of Los Angeles
Mayor Eric Garcetti, City of Los Angeles
Members, Los Angeles City Council
Gary Moore, City Engineer, City of Los Angeles

Bloom

COMMITTEES
ARTS, ENTERTAINMENT, SPORTS, TOURISM AND INTERNET MEDIA
BUDGET
ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
HIGHER EDUCATION

Assembly
California Legislature

RICHARD BLOOM
CHAIR, BUDGET SUBCOMMITTEE NO. 3 ON RESOURCES & TRANSPORTATION
ASSEMBLYMEMBER, FIFTIETH DISTRICT

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0050
(916) 319-2050
FAX (916) 319-2150

DISTRICT OFFICES
2800 28TH STREET, SUITE 150
SANTA MONICA, CA 90405
(310) 450-0041 AND
(818) 596-4141
FAX (310) 450-6090

E-MAIL
assemblymember.bloom@assembly.ca.gov

October 17, 2013

Mr. Josephine R. Axt, Ph.D.
Chief, Planning Division, U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

Dear Ms. Axt:

I strongly support Alternative 20 as we take the next step in revitalizing and restoring the natural and historic heritage of the Los Angeles River. As someone who has lived near the river for almost my entire life and recently kayaked the river, I am intimately aware of the environmental and recreational benefits of this project.

Only Alternative 20 embraces the vision of an urban waterway that supports wildlife habitat and becomes accessible and usable as a recreational opportunity for everyone in the region, regardless of socioeconomic status. Alternative 20 connects the restored river to the Los Angeles State Historic Park - a key component providing the urban population, particularly the economically disadvantaged, with access to green open space and a natural wildlife corridor. Additionally, Alternative 20 sets in motion the plan for greater federal and local funding coordination that will increase public access through various channel terracing and other improvements. Absent these initiatives, much of the river will still be unconnected to the community which is contrary to the commitment of the federal government's Urban Waters Federal Partnership as well as the primary goals and purpose of the restoration project.

For decades, the surrounding communities have worked hard to make the seemingly impossible a reality. But now, much of that reality rests on the decision before the U.S. Army Corps of Engineers. For these reasons, I ask that you do all that you can, support Alternative 20, and make this project the model urban waterway revitalization project the best in the country.

Thank you for your time and consideration of this matter. Please do not hesitate to contact me if you need anything further.

Sincerely,

RICHARD BLOOM
Assemblymember, 50th District

RECEIVED
OCT 25 2013
PLANNING DIVISION

CDFW

From: Harris, Scott P.@Wildlife [mailto:Scott.P.Harris@wildlife.ca.gov]
Sent: Thursday, November 07, 2013 9:17 AM
To: Jones, Erin L SPL; Birosik, Shirley@Waterboards
Cc: Schmoker, Kelly@Wildlife
Subject: [EXTERNAL] RE: LA River Feasibility Study/EIS/EIR - comments (UNCLASSIFIED)

Hi Erin,

I did not have any substantive comments other than making sure whoever performs the work touch bases with CDFW to determine if they need a Lake or Streambed Alteration Agreement. Sometimes these types of projects involving the COE and local governments, public works, etc. lead to regulatory confusion Down the Road depending on who does the work, owns the property, etc. 1

-----Original Message-----
From: Harris, Scott P.@Wildlife [mailto:Scott.P.Harris@wildlife.ca.gov]
Sent: Tuesday, October 01, 2013 11:19 AM
To: Jones, Erin L SPL
Subject: [EXTERNAL] RE: LA River EIS (UNCLASSIFIED)

Hi Erinn,

I had a question after reading through some sections of the NEPA/CEQA doc for the LA River Restoration Project:

In Volume one Page 5-51 of the Integrated Feasibility Report, I saw a discussion of impacts to waters of the U.S. described under the impact section. Is there a similar discussion of impacts to waters of the state? I did see a reference to CDFW and the Lake or Streambed Alteration Agreement (LSSA) requirement. I know folks in our streambed program will be wondering what these impacts will be and who will be contacting them for the LSAA for the actual work. Will the City if LA and/or LA County be doing the initial restoration work? 2

Also I know shorebirds forage on the algae covered areas of the concrete lined bed of the LA Rive in some stretches. Will this foraging habitats be lost following restoration of the various stretches that may provide this open habitat and is this canalized in the document? Thank you. 3

State of California • Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Angeles District
1925 Las Virgenes
Calabasas, Ca. 91302

Edmu CA Dept Parks & Rec

Major General Anthony L. Jackson, USMC (Ret), *Director*

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Cory of Engineers, Los Angeles District
PO Box 532711
ATTN: Ms. Erin Jones, CES-PD-RN
Los Angeles, CA 90053-2325

RE: Draft Los Angeles Ecosystem Restoration Integrated Feasibility Report (DIFR) for the Los Angeles River Ecosystem Restoration Feasibility Study, Los Angeles County, California

Dear Dr. Axt:

The California Department of Parks and Recreation (California State Parks) has reviewed the above-referenced "Los Angeles River Project" DIFR and appreciates the opportunity to comment.

California State Parks stands with our partner park agencies, the National Park Service and the Santa Monica Mountains Conservancy, in its strong support for Alternative 20. The Los Angeles River Project presents a historic opportunity to reconnect the City of Los Angeles with its natural heritage by linking existing public open spaces, by providing habitat connectivity between the mountains and the river floodplain, and by promoting opportunities for passive outdoor recreation in the most park-poor metropolis in the United States. The community consensus-building and momentum that have resulted from the feasibility study and from other planning efforts over many years call for a bold vision to begin the restoration of what was once a vibrant ecosystem of mountains, rivers and coastal lowlands of almost unequalled biodiversity. 1

Over the past 12 years, California State Parks has invested over $150 million dollars to bring nature to the city by acquiring and developing three parks in urban Los Angeles: Rio de Los Angeles State Park, Los Angeles State Historic Park and the Baldwin Hills Scenic Overlook. Los Angeles State Historic Park and Rio de Los Angeles State Park were designated by Proposition 12 as Los Angeles River parkway projects.

In partnership with local communities, we have succeeded in preserving over one hundred acres of open space in the most park-poor region of the most park-poor city in the nation. These parks have not only attracted thousands of visitors every year, but have contributed to the economic revitalization of the surrounding communities. California State Parks' investment in these properties indicates that they rise to the level of statewide significance. We further recognize the Los Angeles River as a resource of statewide and national significance due to its cultural and historic role in the

CA Dept Parks & Rec

transformation of Los Angeles from a frontier town to the second largest metropolis in the United States. We believe in the river's potential to transform the city once more through positive economic and environmental impacts that would benefit the entire Los Angeles region.

Los Angeles State Historic Park and Rio de Los Angeles State Park are innovative urban parks that serve low-income, park-poor communities that fought for equal access to parks and green space that are more available to more affluent Los Angeles neighborhoods. As reported by the City Project in *Dreams of Fields: Soccer, Community, and Equal Justice,* the community within a five mile radius of Los Angeles State Historic Park is 68% Latino, 14% Asian, 11% non-Hispanic white, and 4% African American. The population surrounding the park is disproportionally low income, with 30% of the residents living in poverty compared to 14% for the State of California as a whole. The community within a five mile radius of Rio de Los Angeles State Park reflects a similar socio-economic demographic with a 56% Latino, 17% Asian, 20% non-Hispanic white, and 4% African American population. Twenty seven percent of that population lives in poverty, with a median annual household income at just 69% of that for the State.

Los Angeles State Historic Park revives the forgotten history of Los Angeles from Native American times to the present, providing passive and active recreational opportunities in this rare swath of open space in the heart of the city. Rio de Los Angeles State Park features cutting edge wetlands restoration, much-needed athletic fields and community activities. Both of these parks are included as part of the National Park Service Rim of the Valley (ROTV) Corridor Special Resource Study, along with significant acreage in the Verdugo Mountains, also under the stewardship of California State Parks. During the public scoping process for the study, the national significance of the Los Angeles River and adjoining parklands, as well as the wildlife and habitat linkages they provide, was highlighted as a top concern by participants. Public comments received on the preliminary alternative concepts for the ROTV study strongly supported Alternative C (Connecting Urban Parks – SMNRA Boundary Adjustment), particularly in regard to the inclusion of the Los Angeles River and Arroyo Seco Corridors. 1

Alternative C of the ROTV Study complements existing Los Angeles River revitalization efforts and river parkway projects, of which Los Angeles State Historic Park and Rio De Los Angeles State Park are primary examples. National Park Service technical assistance and leadership in cooperative conservation efforts, coupled with acquisition and management capabilities, would be beneficial as a variety of city, county, state, joint powers, and local non-profit agencies currently work to leverage resources and connect open space along the river. The parcel G-2, currently held by Union Pacific, has long been considered the "crown jewel" in the emerald necklace of Los Angeles River parkway projects. Federal assistance could prove invaluable in the acquisition

CA Dept Parks & Rec

and protection of this critical Los Angeles River connection. Alternative 20 is fully consistent with the concerns demonstrated by a large portion of the public in the ROTV study, and there is a tremendous opportunity for the Corps to build on this momentum and offer leadership in this comprehensive restoration effort.

After 12 years of extensive planning and public participation, California State Parks is ready to deliver on its commitment to the community and construct the full 32 acres at Los Angeles State Historic Park, beginning in early 2014. The park construction will happen in tandem with the development of the La Noria Water Wheel project, funded by the Annenberg Foundation, adjacent to the park. Echoing the historic waterwheel once located on North Broadway Street, the La Noria project will pump water from the Los Angeles River to the seasonal wetland portion of Los Angeles State Historic Park. The project will re-establish the site's physical connection to the historic Los Angeles River flood plain, and this hydrological connection to the river fulfills the vision laid out in the park's general plan, as stated in the *Declaration of Purpose*:

> "*The purpose of Los Angeles State Historic Park is to provide the public with a place to learn and to celebrate the ethnically diverse history and cultural heritage of Los Angeles, with an emphasis on its evolution to an economic and industrial metropolis of the 21st Century with extraordinary influence throughout the world. The park will contribute to the emerging Los Angeles River Greenway, stretching from the San Gabriel Mountains to the Pacific Ocean. The park will bring a wide range of visitors together to examine and experience the complete story of Los Angeles. It will be a sanctuary from the dense, urban environment that surrounds it. The park will connect abstract historical and social patterns to the personal experiences of Angelenos and visitors from the city, the state, the nation, and the world.*"

1

California State Parks is working in partnership with the City of Los Angeles and the Department of Toxic Substances Control on clean-up of the Bowtie parcel of Rio de Los Angeles State Park to park standard, which has already been identified by the Army Corps through the Los Angeles River Ecosystem Restoration Feasibility Study as the primary location for a demonstration project. The 18.5 acre parcel is large enough to achieve substantial restoration benefits and offers the potential to incorporate riparian bank-to-bank hydrological and habitat connections. The parcel's use for naturalized open space is consistent with the general plan for Rio de Los Angeles and consistent with the Los Angeles River Revitalization Master Plan's designation of the parcel as habitat/open space within the "Taylor Yard Opportunity Area." These projects present a tremendous opportunity for leveraging resources through extended partnerships with the Army Corps and project components offered in Alternative 20. Accordingly, we fully support the funding and implementation of Alternative 20, specifically the direct connection of Los Angeles State Historic Park and a portion of Rio de Los Angeles to the Los Angeles River.

CA Dept Parks & Rec

Biological Resources

Riparian and wetland habitats are among those most impacted, due to damage and conversion associated with transportation, agriculture, water infrastructure and other development. Water quality degradation is also typical as the pollution from upgradient areas collects in these habitats. Yet, riparian and wetlands habitats are vital for the health of local fish and wildlife populations, and provide important resources for feeding, breeding, and resting. They also provide key corridors to local and large-scale animal movement that are necessary to avoid inbreeding depression and local extinctions.

Many unique special status species are associated with riparian and wetland habitats and would benefit from restoration of the Los Angeles River. Alternative 20 is preferable because it provides an additional 131 acres of restored and higher quality habitat compared to Alternative 13.

The long-term health of many fish and wildlife populations is dependent upon their ability to access both local and regional resources for food, mates, and sanctuary. Equally important is access to refuges where animal subpopulations can replenish their numbers and genetic diversity after bouts of disease, extreme weather, and decreased resource availability. These resources are even more crucial in intensely developed areas like Los Angeles, where the isolated patch of open space has even more value due to its relative rarity and the convoluted path to reach it. Adjacent development impacts, also known as edge effects, put greater pressures on native species through increased disturbance, disease, exposure to toxins, invasive species impacts and general habitat degradation. Restoration of the Los Angeles River would restore a key artery to the historic system of animal movement in the region and would not only provide increased options for existing wildlife, but vastly improve the future health and expansion of these populations. 2

The importance of the Los Angeles River for animal movement is supported by National Park Service's ongoing research tracking carnivores through the Santa Monica Mountains. The Park Service has identified the Los Angeles River as an important corridor for animal movement. Mountain Lion P22, among others, would benefit by having access to the Verdugo Hills via the restoration of the Verdugo Wash proposed only by Alternative 20. We believe that Alternative 20 is clearly the preferred alternative for maximizing animal movement and habitat connectivity. Alternative 20 adds 205% connectedness in the Study Area over Alternative 13. It provides the greatest range of connectivity by providing links to the Verdugo Mountains and associated property managed by California State Parks, Santa Monica Mountains Conservancy and the City of Glendale. It also ensures that the Elysian Hills would be connected to the Los Angeles River via Los Angeles State Historic Park. These benefits are not provided by other project alternatives. Alternative 20 therefore provides the best opportunity to protect and enhance existing animal populations at a regional level in both the short and long term.

CA Dept Parks & Rec

The DIFR clearly underlines the importance of maximizing habitat linkages (Appendix G, Section 7.1.2):

> *"In order to benefit the biological integrity of a landscape, corridors should be restored to allow for dispersal between habitat areas. More corridors equal more routes to suitable habitat, creating more opportunities for dispersal. A complex network of nodes and corridors is therefore critical to restoration in an urban environment, as suitable habitat often remains unused if isolated (Hanski & Thomas 1994)."*

2

In *Sections 3.5.4* and *5*, the DIFR does not adequately discuss plant and animal species and unique habitats considered sensitive by the State of California, as required by the California Environmental Quality Act (CEQA). These include California Species of Special Concern, California Fully Protected, and species considered local endemics, among other designations. Just one example of this oversight is the silvery legless lizard (*Anniella pulchra pulchra*). This species is identified as potentially present, and it is a California Species of Concern, yet there is no discussion of how potential impacts to this species could occur during ground disturbing activities, nor is there discussion of how potential impacts be avoided.

We recommend inclusion of the following measures in the section on Best Managment Practies for Biological Resources:

- Conduct standard preconstruction surveys for special-status plants at the time of year when they are most likely to be in bloom or most visible to determine presence
- Conduct special-status animal clearance surveys just prior to construction to relocate animals out of harm's way.

3

The CHAP scoring and CE/ICA does not capture the regional importance of the project. We are concerned that it appears that total cost is the primary reason Alternative 20 has not been selected. This appears to be in part due to consideration of the relationship of cost to total acres restored or Habitat Units created, rather than the ecological *value* of the restored acres or resource areas made accessible. Alternative 20 not only significantly increases the *quantity* of habitat restored compared to Alternative 13, 719 vs. 588 acres, respectively, but creates *and* provides greater access to more higher *quality* habitat. We would like to reference and reiterate Santa Monica Mountains Conservancy's November 5, 2013 comment letter which clearly outlines these concerns. (See the *Importance of Biodiversity, Cost Effectiveness* and *Plan Selection* sections).

4

CA Dept Parks & Rec

Specifically:

- Alternative 13 and 20 give the same credit for 113 acres of restoration associated with the Piggyback Yard, yet the restoration and associated ecological benefits are significantly greater under Alternative 20.
- At the Los Angeles State Historic Park ("Cornfield") location, Alternative 20 has significant ecological improvements over Alternative 13.
- Alternative 20 is identified as a "Best-Buy" in the CE/ICA, and is the only alternative that provides linkages to the Verdugo Mountains and Elysian Hills.
- Alternative 20 is efficient, the most complete, the most effective, and the best alternative at recreating natural processes that are needed to facilitate a self-sustaining system within the project area and throughout the region over the *long term*.
- Alternative 20 best complies with the goal of the Water Resources Development Act of 2007 to develop a plan *"consistent with the goals of the Los Angeles River Revitalization Master Plan published by the city of Los Angeles..."*
- As discussed in *Appendix G, Section 7*, three key project benefits have been excluded from the CHAP analysis: habitat connectivity, hydrologic and hydraulic connectivity of the Los Angeles River to its floodplain and human benefit.

4

Since the basis for the tentative selection of Alternative 13 is the relation of the total Habitat Units resulting from each alternative divided by the total cost, it is unacceptable to exclude habitat and hydraulic and hydrological connectivity from the equation. Incorporation of these factors must occur to provide clarity on the true cost/benefit relationship of the four project alternatives. Potential approaches to modifying the calculation of HUs could include:

- Differentiation of the relative ecological benefits of the restored habitat via modifiers to determine the value of the final restored area.
- Quantification of acres of significant habitat made available via corridor connections.
- Quantification of cumulative length of corridors connected or created or percent increase of corridors provided as an HU input.
- Weighting of HU outputs to consider direct human benefits. Specifically, building upon past investments in the project area, better connecting existing open space areas to the project area, quantified by acres or annual visitors, and direct economic benefits as calculated in the DIFR.

Cultural Resources

5

Los Angeles State Historic Park is designated as Los Angeles Historical Cultural Landmark (HCM) No. 82 River Station Area/Southern Pacific Railroad. Throughout the DIFR document, the property is referred to as the "Cornfields." Although we understand

CA Dept Parks & Rec

that this was a previous nickname for the property, the origins of the name can only be traced back to the 1980's definitively, and thus does not represent the true historical designation. Instead, the study should refer to this area by the current name, Los Angeles State Historic Park, or the historical name, River Station. We believe that these are more appropriate terms and better connect the property to the origins of Los Angeles and the association with the Los Angeles River. 5

The site is historically significant with known significant archaeological resources. Archaeological features in the park, along with adjacent historical properties, are indicative of the importance of this site with regard to the industrial development and the rapid urban expansion of Los Angeles. Cultural resource identification efforts are preliminary at this point, and it is unclear in the DIFR document at what point additional background research, field survey and evaluation are to be undertaken. As a result, it is nearly impossible to provide comment on resource identification level of effort and potential for adverse effects. There should be additional opportunities made available for public comment through the Section 106 process to ensure that project effects on historic properties are being accounted for. 6

We recommend that additional background research efforts include analysis of ethnographic village locations in order to access the potential for encountering buried archaeological deposits within a region that experienced development early in time. This was an issue encountered during construction of the nearby Metropolitan Water District building where both Native American and historic-period archaeological materials were both anticipated and found based on previous research. As well, more detailed sources of historic map data, such as Sanborn fire insurance maps readily available at the City of LA Public Library, should be consulted, in addition to the historic topographic maps thus far consulted. Geomorphic studies of the historic configuration of the riverbed would also assist in determining the potential for encountering subsurface archaeological resources. 7

Additional archaeological testing has been conducted at Los Angeles State Historic Park in recent years in association with planning efforts for the next phase of park development. All of these data can be made available to the cultural resources consultant conducting additional identification efforts for the Los Angeles River restoration project. Additionally, geophysical survey methods, including ground-penetrating radar, magnetometer, gradiometer and resistivity, have proven to be quite successful in identifying subsurface historic-period features at the park, and we encourage the use of these methods in resource identification efforts throughout the developed Los Angeles River project restoration area where historic map data suggest the possibility for encountering features. 8

We believe it is preliminary to make any determinations on the level of potential for encountering cultural resources within all of the analyzed study reaches based on the limited background research conducted to date. As noted in the comments above, and 9

CA Dept Parks & Rec

acknowledged in Section 5.6.4 in the DIFR, substantial additional research, testing, and evaluation will have to be conducted prior to any determination of effects from the proposed alternatives on historic properties with the study Area of Potential Effect (APE). We concur that development of a Programmatic Agreement will help to address some of our concerns noted above. 9

Thank you for the opportunity to comment on this project. Please contact Jamie King, Environmental Scientist at Jamie.King@parks.ca.gov or 818.880.0373, if clarifications are required.

Sincerely,

Craig Sap
State Parks
Angeles District Superintendent

CA State Clearinghouse

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

November 5, 2013

Jim Doty
City of Los Angeles, Public Works, Engineering
1149 S. Broadway, Suite 600
Los Angeles, CA 90015

Subject: Los Angeles River Ecosystem Restoration Study
SCH#: 2008121014

Dear Jim Doty:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on November 4, 2013, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Document Details Report
State Clearinghouse Data Base

CA State Clearinghouse

SCH# 2008121014
Project Title Los Angeles River Ecosystem Restoration Study
Lead Agency Los Angeles, City of

Type EIR Draft EIR

Description The primary purpose of the proposed project and alternatives considered in this study is to restore approximately 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles. This reach is identified as the "Area with Restoration Benefits and Opportunities for Restoration" reach, or ARBOR reach. Restoration would occur by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the River to major tributary confluences and its historic floodplain, while maintaining existing levels of flood risk management. Opportunities for future regional connections to the habitat zones of the Santa Monica, San Gabriel, and Verdugo Mountains would also be created. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within this 11 mile reach of the river.

Lead Agency Contact

Name Jim Doty
Agency City of Los Angeles, Public Works, Engineering
Phone 213 485 5759 **Fax**
email
Address 1149 S. Broadway, Suite 600
City Los Angeles **State** CA **Zip** 90015

Project Location

County Los Angeles
City Los Angeles, City of
Region
Lat / Long 34° 5' 51.72" N / 118° 14' 22.62" W
Cross Streets Zoo Dr. & Riverside Dr.; Fletcher Dr. & Riverside Dr.; E. Cesar E. Chavez Ave & Mission
Parcel No.
Township 1S **Range** 13W **Section** 9 **Base**

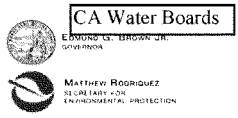
Proximity to:

Highways I-5, 110, SR 2, 134
Airports Burbank Bob Hope
Railways Metrolink, Metro, UPRR
Waterways Los Angeles River, Arroyo Seco, Verdugo Wash
Schools Sonia Sotomayor Learning
Land Use Various, residential, commercial, recreational, riparian

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Economics/Jobs; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Santa Monica Mountains Conservancy

Date Received 09/20/2013 **Start of Review** 09/20/2013 **End of Review** 11/04/2013



Los Angeles Regional Water Quality Control Board

November 15, 2013

Josephine R. Axt, Ph.D., Chief Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

COMMENTS ON THE LOS ANGELES RIVER ECOSYSTEM RESTORATION FEASIBILITY STUDY DRAFT EIS/EIR

Dear Dr. Axt:

Thank you for this opportunity to comment on the draft EIR/EIS for the Los Angeles River Ecosystem Restoration Feasibility Study. As you may know, staff from the Regional Board participated on the Habitat Evaluation Team and provided input on the water quality aspects of the restoration alternatives.

The Regional Board strongly supports restoration work in the Los Angeles River for its water quality and habitat benefits. Restoration of the river as envisioned in the feasibility study will also help achieve a more reliable local water supply and implement the municipal stormwater permit through the increase in permeable area for stormwater retention and infiltration that will recharge groundwater. This is in line with the goals of the Greater Los Angeles County Integrated Regional Water Management Plan and with those of the State's Recycled Water Policy. The Los Angeles Region, its residents, biota, and visitors will all benefit from a restored Los Angeles River.

All of the action alternatives would result in varying degrees of water quality improvement. However, significantly greater water quality improvement would be achieved with alternative 20 due to the larger total area adjacent to the river proposed for restoration and the associated creation of permeable surfaces that would result as compared to the other alternatives. Alternative 20 would be more effective in aiding implementation of Total Maximum Daily Loads (TMDLs) that have been established for the Los Angeles River and its tributaries. This alternative would reduce storm water runoff and result in more storm water infiltration, leading to multiple benefits including augmentation of local groundwater supply and enhancement of multiple beneficial uses found in our Basin Plan including contact and non-contact water recreation, warm freshwater habitat, wetlands habitat, and wildlife habitat. 1

Josephine R. Axt, Ph.D.
U.S. Army Corps of Engineers

CA Water Boards

November 1~~5~~, 2013

Specific Comments

Surface Water Quality, TMDLs, and Municipal Stormwater (MS4) Permits

On Page 3-26, starting on Line 4, there is a discussion of the relative contributions of point and nonpoint sources to total pollutant loads in the greater Los Angeles area that incorrectly lumps stormwater runoff with nonpoint sources. Stormwater discharges are identified as point sources in federal law and regulation. Text should be revised to make this correction. 2

On Page 3-27, the draft feasibility report states that the Los Angeles River metals TMDL is in the implementation phase. In fact, all four of the TMDLs established for the Los Angeles River and its tributaries are in the implementation phase. Implementation plans have been developed and actions initiated by responsible agencies for trash, metals and nutrients; water quality in the Los Angeles River relative to these contaminants is improving. An implementation plan to address elevated concentrations of bacterial indicators has also been developed by responsible agencies and it is anticipated that implementation will begin soon.

Requirements of these TMDLs have been included in the Los Angeles County MS4 (municipal separate storm sewer system) Permit that was reissued in November 2012 (Order No. R4-2012-0175). Discharges of storm water and non-storm water from Los Angeles County unincorporated areas and 84 cities within Los Angeles County are covered by this permit, which is the principal tool to regulate municipal storm water discharges from the urban areas of the Los Angeles River watershed. A similar permit covering the City of Long Beach is scheduled for reissuance in 2014 and will also incorporate requirements of these TMDLs. The TMDLs, MS4 permits, and other NPDES discharge permits in the Los Angeles Watershed are spurring improvements in the water quality of the river and its tributaries. These regulatory tools and the alternatives considered in the Feasibility Study can work synergistically to stimulate progress toward further water quality improvements and overall ecosystem restoration with the ultimate goal of fully supporting all designated beneficial uses of the river and its tributaries. 3

A description of the municipal separate storm sewer system in the greater Los Angeles area begins on Page 3-80, Line 42, and includes a statement that water that enters the system is not treated or filtered. In many cases, this is true; however, a range of BMPs now exist at a number of locations that allow for some treatment of runoff before it enters the system. There are also a few dry-weather diversions installed, which completely remove water from the system and divert it to the sanitary sewer for treatment. 4

Reference to the Los Angeles County MS4 Permit, for instance on Page 5-39, Line 42, should be corrected to reflect the new permit adopted in November 2012 (Order No. R4-2012-0175). This permit includes new provisions related to new development/redevelopment projects. 5

On Page 5-41, Lines 5 through 7: We suggest adding the following language after the sentence discussing impacts of "*Increased population density...*" for clarification: <u>However, measures within the Los Angeles County MS4 Permit are designed to curtail this potential.</u> 6

Regarding text on Page 5-41, beginning on Line 14, as stated previously, several TMDLs have been established and included in the Water Quality Control Plan for the Los Angeles Region (Basin Plan) for the Los Angeles River Watershed for metals (2007), fecal indicating bacteria (2010), nutrients (2003), and trash (2007) including all the reaches addressed in the feasibility 3

study. These TMDLs have been incorporated into the renewed Los Angeles County MS4 permit.

With regards to the text on Page 5-48, Line 20 through 25, under the No Action Alternative and under all the alternatives considered, water quality will continue to improve due to the implementation of these TMDLs and the MS4 permits; however, the additional potential to improve water quality through implementation of the alternatives considered in the draft EIR/EIS would not be realized with the No Action Alternative. We suggest deleting the two sentences in Lines 20 through 22 and replacing with the following language: Under the No Action Alternative, water quality and quantity issues will not be addressed through actions proposed as part of the Los Angeles River Ecosystem Restoration project, while these issues will be addressed to varying degrees by implementation of the other proposed alternatives. 7

Addressing Construction Impacts

Page 5-42, starting at Line 11, should include additional information on the likely requirements of a Section 401 certification and clarification that the projects may require enrollment in the State's General Permit for Discharges of Storm Water Associated with Construction Activity. For example, those lines might read instead:

> "Clean Water Act Section 401 water quality certification and enrollment in the State of California's General NPDES Permit for Discharges of Storm Water Associated with Construction Activity would be required. Before land disturbance of one acre or greater occurs, or less than one acre but part of a larger common plan of development, the project proponent would need to complete and submit a Notice of Intent (NOI) to the State Water Resources Control Board (State Water Board) to obtain coverage under the permit. The SWPPP ~~would be~~ required by the construction permit would need to be prepared by a Qualified SWPPP Developer (QSD) before construction commences and the SWPPP along with a site map would need to be uploaded into the Stormwater Multiple Application and Report Tracking System (SMARTS). The project would then be granted a waste discharge number by the State Water Board upon payment of the required fee(s). Once a waste discharge number is assigned, Regional Board staff would schedule an inspection of the site to ensure the presence and completeness of the SWPPP, relevant records, and the effectiveness of the BMPs implemented at the site. ~~to be obtained by the construction contractor would be developed in accordance with the guidelines of the State of California's NPDES General Construction Permit.~~ A Clean Water Act Section 401 water quality certification would likely be a "technically conditioned" certification, which would identify conditions, or requirements, of certification that may include specific BMPs, water quality monitoring and reporting requirements, to ensure compliance with the applicable provisions of the Clean Water Act and State law. The SWPPP would contain a visual monitoring program, and a water quality monitoring program for non-visible pollutants to determine construction site BMP effectiveness. The SWPPP would list all BMPs to be implemented during construction activities for the control of erosion, siltation, and any ..." 8

Regarding the list of best management practices on Page 5-45, Lines 13 through 18, BMPs applicable in the Los Angeles Region including but not limited to working in the dry season, avoiding work immediately prior to or during precipitation events, and avoiding work during bird nesting seasons, should be added. 9

On Page 6-31, Line 10, the discussion about treatment and disposal of contaminated groundwater should mention that coverage under a general NPDES permit for dewatering will need to be obtained from the Regional Board if groundwater from dewatering is discharged to surface waters. 10

Operational Impacts and Benefits

Page 5-41, Line 31. We suggest adding the following sentence directly after the last sentence of the paragraph: In recognition of the potential for higher water demand in the future, the State Water Resources Control Board adopted a Recycled Water Policy (2009) promoting the increased use of recycled water from local municipal wastewater sources as well as the increased capture and use of storm water. The policy also requires that management measures be developed to protect groundwater basin water quality, which may be impacted by the increase in recycled water use. 11

On Page 5-107, the discussion of environmental justice should recognize the benefits to local communities from the improvement in water quality resulting from implementation of an action alternative. 12

The discussion on Page 6-48, beginning on Line 28, should include recognition of the increased water quality and water supply benefits from alternative 20 through infiltration of additional runoff, leading to decreased stormwater runoff to receiving waters and increased groundwater replenishment. 13

References

Page 14-13, Lines 1 through 8: For citations to the Los Angeles Region Basin Plan and Los Angeles Region TMDLs, the Los Angeles Regional Board is the author. These references should be revised as follows:

> Los Angeles Regional Water Quality Control Board, 2007. Total Maximum Daily Loads for Trash in the Los Angeles River Watershed. California Regional Water Quality Control Board, Los Angeles Region. August 9, 2007.
>
> Los Angeles Regional Water Quality Control Board, 2003. Total Maximum Daily Loads for Nitrogen Compounds and Related Effects in the Los Angeles River and Tributaries. California Regional Water Quality Control Board, Los Angeles Region. July 10, 2003. 14
>
> Los Angeles Regional Water Quality Control Board, 2007. Total Maximum Daily Loads for Metals in the Los Angeles River and Tributaries. California Regional Water Quality Control Board, Los Angeles Region. September 6, 2007.

CA Water Boards

Josephine R. Axt, Ph.D.
U.S. Army Corps of Engineers

November 15, 2013

Los Angeles Regional Water Quality Control Board, 2010. Total Maximum Daily Loads for Indicator Bacteria in the Los Angeles River Watershed. California Regional Water Quality Control Board, Los Angeles Region. July 9, 2010.

Los Angeles Regional Water Quality Control Board, 2010. Los Angeles River and Tributaries Metals TMDLs Final Implementation Plans. Accessed August 2012 http://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/bpa_59_2007-014_td.shtml

Los Angeles Regional Water Quality Control Board,1994. Water Quality Control Plan – Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, June 1994, as amended.

Duplicate references: Page 14-11, Line 21; North East Trees, 2006, is the correct reference for the Arroyo Seco Watershed Management and Restoration Plan. The duplicate reference on Page 14-3, Line 24; California State Water Resources Control Board, 2006, is incorrect and should be deleted. The report is available at http://www.waterboards.ca.gov/losangeles/water_issues/programs/grants_loans/fundings/arroyoseco%20wmrp.pdf on the Los Angeles Regional Board's website. 14

In Line 25 on Page 5-39, "CERES, 2006" is given as a citation for some regulatory aspects of the Water Boards' operations. In the References section, on Page 14-3, Line 22, the full citation refers to a CEQA guidelines website. More relevant sources of information on Water Board regulations and permitting activities can be found at http://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf and http://cfpub.epa.gov/npdes/statestats.cfm.

Line 28 on Page 5-39 includes the citation "California Regional Water Quality Control Board, 2004" which does not exist in the References section.

In conclusion, the Regional Board's participation in the development of this study was a very valuable experience and the opportunity given for that involvement is greatly appreciated. Restoration of water quality and the many beneficial uses of the Los Angeles River and its tributaries is a high priority of the Board and we look forward to continued collaboration in this vein. Should you have any questions concerning this letter, please contact Shirley Birosik at (213) 576-6679 or Shirley.Birosik@waterboards.ca.gov.

Sincerely,

Deborah J. Smith
Chief Deputy Executive Officer

cc: John Kemmerer, USEPA Region IX,
Los Angeles Field Office

SCAQMD

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA USPS AND E-MAIL:
Erin.L.Jones@usace.army.mil

November 18, 2013

Ms. Erin Jones, CESPL-PD-RN
Project Environmental Coordinator
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, CA 90053-2325

Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) for the Proposed Los Angeles River Ecosystem Restoration Integrated Feasibility Report

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final NEPA/CEQA document.

In the project description, the lead agency proposes to restore approximately 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles and to provide recreational opportunities consistent with the restored ecosystem within the 11-mile reach of the river. Construction would begin in July 2016 and end in early 2017.

The lead agency has analyzed four of the 19 original alternatives in the draft NEPA/CEQA document selecting Alternative 13, Arbor Corridor Extension (ACE), as the lead agency's Tentatively Selected Plan. This alternative would restore the river areas by reestablishing the river banks bordering the river along the 11-mile river reach and the freshwater marsh and habitat communities that live on, in or near the project water areas. In addition, the proposed project would reconnect the river to major water sources that join the river and the river's historic flood plain, while still managing for flood control. The proposed project would also connect the river area's habitat zones and provide recreational opportunities within the restored project area. Between the four alternatives, the lead agency estimates that as many as 477 daily truck trips could occur for activities that include excavation, soil movement and debris removal but 338 daily truck trips are specifically projected to be used during Alternative 13. In its analyses, the lead agency has determined that Alternative 13 as well as the other three alternatives substantially exceed the recommended daily regional and localized significance thresholds for NOx, CO, PM10, PM2.5 and ROG emissions. The SCAQMD staff therefore recommends that the lead agency consider additional feasible mitigation measures and incorporate them into the Final EIS/EIR if they are found to be feasible. Details regarding these and other comments are included in the attachment.

Pursuant to Public Resources Code Section 21092.5, please provide the SCAQMD staff with written responses to all comments contained herein prior to the adoption of the Final Environmental Impact Report. The SCAQMD staff is available to work with the Lead Agency to address these issues and any other air quality questions that may arise. Please contact Gordon Mize, Air Quality Specialist – CEQA Section, at (909) 396-3302, if you have any questions regarding these comments.

Sincerely,

Ian MacMillan
Program Supervisor, Inter-Governmental Review
Planning, Rule Development & Area Sources

Attachment

IM:GM

LAC130919-06
Control Number

Air Quality Analysis

1. In the air quality analysis in Appendix F (Table 2.2 Construction Data under Equipment Mix for All Alternatives), the lead agency lists the equipment mixture for all alternatives estimating 11 pieces of equipment per day but the number and types of equipment do not agree with the amounts entered in the CalEEMod modeling inputs for Alternative 13 that shows six pieces of off-road equipment. This discrepancy should be clarified and/or revised in the final NEPA/CEQA document and applicable analyses. 1

Large Operation Notification

2. On page five in Appendix F, the lead agency describes each alternative as a large-scale development project with each size exceeding 500 acres. Should the proposed project fall under the requirements of Rule 403 – Fugitive Dust for large operations according to SCAQMD Rule 403(c)(18), then the lead agency should submit SCAQMD Form 403N (Large Operation Notification Form) to the SCAQMD. Questions concerning Form 403N can be directed to SCAQMD Engineering and Compliance staff at (909) 396-2372. 2

Mitigation Measures – Construction

3. Since the lead agency has determined in the Draft EIS/EIR air quality analysis that construction air quality impacts exceed the recognized air quality significance levels for CO, NOx, PM10, PM2.5, and ROG, the SCAQMD staff recommends the following additional mitigation measures in the Final EIS/EIR pursuant to CEQA Guidelines Section 15126.4 to reduce the project's significant air quality impacts in addition to the Best Management Practices and Impact Avoidance Measures included in the draft document listed on page 19 in Appendix F. The following measures have been determined to be feasible and applicable to past projects within other jurisdictions.[1] 3

    - Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. 4

    - Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export), and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained, the lead agency shall use trucks that meet EPA 2007 model year NOx and PM emissions requirements. 5

[1] For example see the Metro Green Construction Policy at:
http://www.metro.net/projects_studies/sustainability/images/Green_Construction_Policy.pdf

A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. 6

Recommended Additions:

Combustion Emissions from Construction Equipment

- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow. 3
- Provide dedicated turn lanes for movement of construction trucks and equipment on-and off-site.
- Reroute construction trucks away from congested streets or sensitive receptor areas.
- Require the use of electricity from power poles rather than temporary diesel or gasoline power generators.
- Encourage construction contractors to apply for SCAQMD "SOON" funds. Incentives could be provided for those construction contractors who apply for SCAQMD "SOON" funds. The "SOON" program provides funds to accelerate clean up of off-road diesel vehicles, such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/SOONProgram.htm . 7

Fugitive Dust

- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour
- Require frequent street sweeping surrounding the project site to minimize fugitive dust emissions from track-out. All street sweeping shall use alternatively fueled sweepers that are equivalent to those specified in SCAQMD Rules 1186 and 1186.1. 3
- Install wheel washers where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Apply water three times daily, or non-toxic soil stabilizers according to manufacturers" specifications, to all unpaved parking or staging areas or unpaved road surfaces.
- Replace ground cover in disturbed areas as quickly as possible.
- Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).

For additional measures to reduce off-road construction equipment emissions, refer to the mitigation measure tables located at the following website: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html.

NEPA Thresholds and General Conformity

The Draft EIR/EIS includes NEPA thresholds of 50 tons/year for CO, NOx, ROG, SO2, PM10, and PM2.5 to determine significance. SCAQMD staff notes that these thresholds are not equivalent to the General Conformity thresholds.[2] For example, due to our extreme nonattainment status for ozone, the General Conformity threshold is only 10 tons/year for NOx. The lead agency should contact SCAQMD staff at (909) 396-3056 to discuss how General Conformity for this project. In addition, the Final EIR/EIS should discuss General Conformity for all pollutants and how the NEPA thresholds correspond to General Conformity thresholds. 8

Alternative Disposal Methods

A significant fraction of the project's NOx emissions come from hauling soil away from the site using trucks. With the existing rail lines in the area, the project may be able to utilize this resource to replace truck trips. As an example, a recent project being conducted at Taylor Yard by the California Department of Toxic Substances Control[3] is hauling contaminated soils away using a local rail line, thus substantially reducing the number of truck trips. The Final EIR/EIS should evaluate this measure and implement it if found feasible to reduce air quality impacts. 9

[2] Available here: http://www.epa.gov/air/genconform/deminimis.html
[3] http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=19470006

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Parks Make Life Better!"
Russ Guiney, Director John Wicker, Chief Deputy Director

County of LA Parks & Rec

November 18, 2013 Sent via email: comments.lariverstudy@usace.army.mil.

Josephine R. Axt, Ph.D
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones
CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

NOTICE OF AVAILABILITY OF A DRAFT FEASIBILITY STUDY AND ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT FOR THE LOS ANGELES RIVER ECOSYSTEM RESTORATION STUDY

The Draft Feasibility Study and Environmental Impact Statement/Environmental Impact Report for the Los Angeles River Ecosystem Restoration Study has been reviewed for potential impacts on County facilities operated by this Department and we offer the following comments:

A "proposed" County trail, the LA River Trail Extension, is located on the eastern bank of the Los Angeles River beginning at Fletcher Avenue in the north (within the northern limit of the restoration project) and extending south past the downtown area. Please consult with the Department's Trails Section to ensure that a coordinated trails effort takes place.

Thank you for including this Department in the environmental review process. To obtain electronic County trails data, please contact Jeremy Bok in the Trails Section at (213) 351-5137 or jbok@lacounty.gov.

Sincerely,

Kathline King

Kathline J. King, Chief
Planning Division

KK: JAR: JIC/ Response to Los Angeles River Ecosystem Restoration

Enclosure: Proposed County Trail, Los Angeles River Extension

c: Parks and Recreation (N. E. Garcia, J. Rupert, F. Moreno, J. Bok, F. Yee, J. Chien)

LOS ANGELES RIVER RESTORATION
County of Los Angeles | Department of Parks & Recreation
County of L.A Parks & Rec
Legend
L.A County BPR Trails
Trail Type
Los Angeles River Trail
VICINITY MAP

LA DPW

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: WMD-5

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, CA 90053

Attention Ms. Erin Jones

Dear Dr. Axt:

U.S. ARMY CORPS OF ENGINEERS
COMMENTS FOR THE LOS ANGELES RIVER
ECOSYSTEM RESTORATION INTEGRATED FEASIBILITY REPORT

The County of Los Angeles Department of Public Works and Los Angeles County Flood Control District support efforts to improve, restore, and create ecosystems within our watersheds. The Ecosystem Restoration Study (Study) identifies opportunities for open space and parks, which will improve aesthetics of the Los Angeles River (River), provide an environment for passive recreation, and enhance environmental resources along the River consistent with parts of the Los Angeles River Master Plan.

The Study identifies communities within the project limits currently at risk of flooding due to a storm of 100-year frequency. The Study states that a Letter of Map Revision will be filed with the Federal Emergency Management Agency and that the risk will be communicated to the impacted communities. The Los Angeles County Flood Control District supports all efforts to reduce flood risk including education. It is recommended that the U.S. Army Corps of Engineers together with the Cities of Burbank, Glendale, and Los Angeles inform the impacted communities of the associated risk. 1

LA DPW

Also, we did not see any information in the Study on impacts to the interior drainage system resulting from any increased water surface elevations. We recommend this information be included in the final report. 2

If you have any questions or need additional information, please contact me at (626) 458-4300 or ghildeb@dpw.lacounty.gov or your staff may contact Ms. Terri Grant at (626) 458-4309 or tgrant@dpw.lacounty.gov.

Very truly yours,

GAIL FARBER
Director of Public Works

GARY HILDEBRAND
Assistant Deputy Director
Watershed Management Division

KK:sw
P:\wmpub\Secretarial\2013 Documents\Letter\feasibilityreport.doc\C13397

LA DRP

Los Angeles County
Department of Regional Planning

Planning for the Challenges Ahead

Richard J. Bruckner
Director

November 18, 2013

Josephine R. Axt, Ph.D., Chief
Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Dr. Axt and Ms. Jones:

DRAFT INTEGRATED FEASIBILITY REPORT FOR THE LOS ANGELES RIVER ECOSYSTEM RESTORATION STUDY COMMENT LETTER

The Department of Regional Planning (DRP) has reviewed the Draft Feasibility Study and Environmental Impact Statement/Environmental Impact Report for the Los Angeles River Ecosystem Restoration Study (LA River Study) and provides the following comments.

The LA River Study evaluates alternatives for the purpose of restoring 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles, while maintaining existing levels of flood risk management. The DRP is currently in the process of updating Los Angeles County's Significant Ecological Area (SEA) Program, established by the Board of Supervisors in 1980, which applies additional zoning regulations to development in areas containing high quality biological resources that represent the cumulative biodiversity of Los Angeles County. This update includes a substantial expansion of the currently adopted SEA boundaries in order to promote regional habitat linkages and wildlife connectivity.

In light of the aims of the SEA Program, the DRP would like to provide our support for Alternative 20, the most expansive of the LA River Study alternatives. In the words of the study, "this alternative restores the confluence with Verdugo Wash by softening the bed of the stream and significantly widening the mouth of the wash thus providing riparian habitat and an additional connection to the San Gabriels through the

LA DRP

Verdugo Hills."[1] It would also add a freshwater marsh at the downtown Los Angeles Cornfields site.[2] Alternative 20 also incorporates Arroyo Seco plan features from Alternative 13, including the softening of the concrete banks and bed for half a mile along the Arroyo, and the creation of a backwater wetland with more riverbank vegetation at the confluence with the LA River. This connectivity restoration would have immense significance in increasing wildlife linkages and movement between the Griffith Park SEA, the Verdugo Mountains SEA and the proposed Altadena Foothills and Arroyos SEA, by restoring a total of 719 acres of habitat along the 11 mile study reach[3] and would revitalize regional wildlife linkages through one of the County's most urbanized areas, as shown in your study's Figure 6-12, "Alternative 20 Potential Regional Habitat Connectivity with Increase from 16 Shown by the Polygons".[4]

The proposed Altadena Foothills and Arroyos SEA includes important watershed areas that drain from the Altadena Foothills to the stream headlands that flow into the Arroyo Seco. Improvements to the Arroyo's confluence with the LA River will increase the potential upstream connectivity and allow for greater retention and filtration of natural groundwater generated in the proposed SEA. Although the County does not have land use jurisdiction over either the Griffith Park SEA or the Verdugo Mountains SEA, as they are both located within incorporated cities, the connectivity that the restoration proposed in Alternative 20 would create between the three SEAs is extremely important for improving the greater regional linkages between the Santa Monica Mountains SEA to the southwest and the Angeles National Forest to the north. Taken in conjunction with the potential expansion of the Santa Monica Mountains National Recreation Area under consideration in the National Park Service's Rim of the Valley Study, these national efforts represent a significant local opportunity to increase the connection between urban parks and large natural habitat areas surrounding the San Fernando Valley, creating the opportunity for many of the County's urban residents and wildlife to regain greater connections to the larger natural areas located in the Santa Monica Mountains and the Angeles National Forest.

Although the comments of our Department specifically address how Alternative 20 would best align with the objectives of our SEA Program; the larger picture is that the restoration of the Los Angeles River will enhance Los Angeles County in many ways. Alternative 20 has been supported by our Board of Supervisors, the Mayor of the City of

[1] Executive Summary, Los Angeles River Ecosystem Restoration Draft Integrated Feasibility Report , 2013, pg xxvii
[2] Executive Summary, pg xxix
[3] Chapter 6, Los Angeles River Ecosystem Restoration Draft Integrated Feasibility Report,2013, pg 6-23
[4] Chapter 6, pg 6-26

LA DRP

Los Angeles, and numerous local organizations and citizens, who all look forward to the economic, environmental and recreational benefits of a restored Los Angeles River.

If you have additional questions or would like to discuss this matter further, please contact Emma Howard at ehoward@planning.lacounty.gov or (213) 974-6476 between 7:30 a.m. and 5:30 p.m., Monday through Thursday.

Sincerely,

Richard J. Bruckner
Director

RJB:MC
MWG:eh

c: Los Angeles River Revitalization Corporation (Omar Brownson),
Bureau of Engineering, Los Angeles River Project Office (Carol Armstrong)

k:\advance planning\2013 word files\111813_la river comment letter mgedit eh finals.docx

LaBonge

CITY COUNCIL OF THE CITY OF LOS ANGELES

TOM LABONGE
COUNCILMEMBER 4TH DISTRICT

ROOM 480, CITY HALL
LOS ANGELES, CA 90012
(213) 485-3337
FAX (213) 624-7810

October 9, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District;
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, California 90053-2325

Dear Ms. Axt,

After working with activists for decades to raise awareness for the revitalization of the Los Angeles River, I am gratified that the U.S. Army Corps of Engineers is supporting the restoration of the river's natural habitat. I have been an ardent supporter of the City's River Revitalization Master Plan and all-things River. The beautiful Los Angeles River is adjacent to Griffith Park.

I am writing today to urge your selection of Alternative 20 of the Draft Integrated Feasibility Report of the Los Angeles River Ecosystem Restoration Feasibility Study.

My district includes the Glendale Narrows, which is within the ARBOR area, the focus of the feasibility study. Over the past ten years, I have happily watched as blue herons and other bird species, as well as fish and people, have return to this beautiful stretch of the Los Angeles River where I played as a child. The Glendale Narrows gives us a glimpse of the potential for the river as a natural, park-lined waterway where Angelenos from all of Los Angeles can come together to ride horses, fish and ride bikes along the river.

This vision for the river's future inspired me to urge that Alternative 20, the most comprehensive plan outlined in the study, be chosen as the preferred alternative of the report. This alternative provides for the greatest bang for the buck as well as several other significant improvements within my district: widening the soft-bottomed riverbed near Riverside Avenue and Victory Boulevard as well as the restoration of the Verdugo Wash confluence, a critical ecosystem area.

The City of Los Angeles has been eager for decades to work with the Army Corps to restore natural elements of the river while continuing to provide flood control and ensure public safety. We are at a critical moment with tremendous potential for influencing the future growth of Los Angeles. Please continue working with us by selecting Alternative 20 as the preferred plan for the restoration of our river. Thank you.

Sincerely,

TOM LABONGE
Councilmember, 4th District

O'Farrell

Arts, Parks, Health, Aging and
Los Angeles River
Chair

Personnel and Animal
Welfare
Vice-Chair

MITCH O'FARRELL
Councilmember
Thirteenth Council District

Education and Neighborhoods
Member

Innovation, Technology and
General Services
Member

Public Safety
Member

November 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers; Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt,

I have the great privilege to represent many of the communities surrounding the Los Angeles River while also serving as the chair of the Los Angeles City Council's Arts, Parks, Health, Aging and River Committee and I am writing to express my strong support of Alternative 20 contained in the Los Angeles River Ecosystem Feasibility Study, also known as the Alternative with Restoration Benefits and Opportunities for Revitalization (ARBOR) study. I have been closely involved in the development of the Los Angeles River Ecosystem Feasibility Study and know that it reflects years of work and aspiration--from the Army Corps of Engineers (ACE), the City, and countless Angelenos.

The primary goal of the ARBOR study is to restore 11 miles of the LA River from Griffith Park to Downtown by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the river to major tributaries while maintaining existing levels of flood risk management. This project will be one of the largest examples of urban ecosystem restoration, in the nation's second most populous city. I stand with the Friends of the Los Angeles River, the Los Angeles River Revitalization Corporation and the National Resources Defense Council and encourage ACE to ultimately recognize the long term benefits of selecting Alternative 20 as an investment in the future of the LA River. The City's partnership with ACE in this endeavor reflects our confidence in your ability to deliver on this unprecedented opportunity to rectify the environmental damage resulting from the river's channelization.

Connectivity is a key element of the study and Alternative 20 is the only option that connects the LA River to Piggyback Yard. Additionally, the restoration of the Verdugo Wash and the Los Angeles Historic Park, two key river adjacent properties, are critical pieces to connecting the river to the surrounding communities, mountains and streams. Alternative 20 restores the most acreage, resulting in the largest increase in habitat, vegetation and expanse of a naturalized River bottom. This effort will benefit the entire River system.

The remaking of the LA River represents a threshold moment for the City of Los Angeles. The City of Los Angeles is deeply committed to partnering with ACE and will lead the efforts for land assemblage and remediation. The City has already taken bold actions to ensure that the LA River

O'Farrell

is protected through the development of Los Angeles River Revitalization Master Plan and the Los Angeles River Improvement Overlay District. The City has consistently demonstrated a commitment to the revitalization of the entire LA River system.

I will continue to be a leader for the revitalization of the entire LA River system including its tributaries and surrounding lands. The works that has been completed thus far such as the development of multiple parks, the LA River bicycle path and design of two new pedestrian bridges are bringing benefits to the City of Los Angeles. The benefits are directly felt in communities that are lacking green space and live with high levels of pollution caused by freeway adjacency and industrial uses.

In Los Angeles we have thousands of young people growing up in neighborhoods that do not have safe, easily-accessible places to play, exercise, or rest outside. Natural open spaces are the lungs of cities--important for people and wildlife simultaneously. Recreation spaces facilitate better physical and mental health and social cohesion. We are a vast City of immigrants with an incredibly diverse population that makes us stronger every day. Our size makes regional policy-making challenging, but not in the case of the LA River. Never before has our region come together in expressing unified support for such a sweeping transformation of our natural landscape. The restoration of the LA River is an opportunity to bridge communities and create a sustainable Los Angeles.

In conclusion, Alternative 13 does not go far enough in providing the building blocks for biodiversity that are necessary to reconnect our River with its historic floodplain. Alternative 16 goes further in legitimately connecting the Piggyback Yard to the River, but it misses opportunities by ignoring the chance to restore the River's confluence with the Verdugo Wash and the only large-scale western connection between the LA State Historic Park and the River. Only Alternative 20 would accommodate these important connections to existing significant ecological areas in the Verdugo and Elysian Hills.

A major goal of the study was to create important connectivity and the most complete biodiversity across an 11 mile stretch of the LA River, and while Alternative 13 marks significant progress for the LA River, it does not go as far as Alternative 20. I appreciate your consideration and know that Alternative 20 is the most beneficial option for the Army Corps of Engineers and the City of Los Angeles, since it can deliver the largest increase in habitat with more restored acres than any other alternative.

With kind regards,

Mitch O'Farrell

MITCH O'FARRELL
Councilmember, District 13
City of Los Angeles
Los Angeles City Council

CC: Mayor Eric Garcetti
Members of the Los Angeles City Council

LA BAC

Bicycle Advisory Committee of the City of Los Angeles

October 8, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Re: Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Environmental Impact Study, and Environmental Impact Report: Support for Alternative 20

Dear Dr. Axt:

The Bicycle Advisory Committee of the City of Los Angeles ("BAC") was established to serve in an advisory capacity "in the encouragement and facilitation of the use of the bicycle as regular means of transportation and recreation." Our membership consists of four members appointed by the Mayor of Los Angeles, and one member representing each of the City's fifteen council districts.

On October 1, 2013, the BAC voted unanimously to add its voice in support of the attached Resolution adopted by the Los Angeles City Council and approved by Mayor Garcetti, which urges the Corps of Engineers to adopt the most expansive Los Angeles River ecosystem restoration, or Alternative 20.

Very truly yours,

Jeff Jacobberger
Chair, Bicycle Advisory Committee

cc: Nat Gale, Office of the Mayor
Michelle Mowery, Senior Bicycle Coordinator

LA BAC

CITY OF LOS ANGELES
CALIFORNIA

HOLLY L. WOLCOTT
Interim City Clerk

When making inquiries relative to this matter, please refer to the Council File No.

ERIC GARCETTI
MAYOR

Office of the CITY CLERK

Council and Public Services
Room 395, City Hall
Los Angeles, CA 90012
General Information - (213) 978-1133
Fax: (213) 978-1040

SHANNON HOPPES
Council and Public Services Division

www.cityclerk.lacity.org

September 6, 2013

To All Interested Parties:

The City Council adopted the action(s), as attached, under Council File No. 10-0270-S3, at its meeting held August 23, 2013.

City Clerk
io

An Equal Employment Opportunity – Affirmative Action Employer

LA BAC

Mayor's Time Stamp
RECEIVED
2013 AUG 27 PM 1:14
CITY OF LOS ANGELES

City Clerk's Time Stamp
RECEIVED
CITY CLERK'S OFFICE
2013 AUG 27 PM 1:12
CITY CLERK
BY _____ DEPUTY

SUBJECT TO THE CONCURRENCE OF THE MAYOR

COUNCIL FILE NO. 10-0270-S3 COUNCIL DISTRICT _____

COUNCIL APPROVAL DATE AUGUST 23, 2013

RE: A LOS ANGELES RIVER ECOSYSTEM RESTORATION FEASIBILITY STUDY ALTERNATIVE THAT RESULTS IN THE MOST EXPANSIVE ECOSYSTEM RESTORATION

LAST DAY FOR MAYOR TO ACT SEP 06 2013
[10 Day Charter requirement as per Charter Section 231(h)]

DO NOT WRITE BELOW THIS LINE - FOR MAYOR USE ONLY

APPROVED ✓

*DISAPPROVED

*Transmit objections in writing pursuant to Charter Section 231 (h)

DATE OF MAYOR APPROVAL OR DISAPPROVAL 9/04/13

E.G.

MAYOR

IO

CITY CLERK'S OFFICE
2013 SEP -4 PM 1:50
CITY CLERK
BY _____ DEPUTY

10-0270-S3
Related CFS 06-0496
07-1342 & S8

AUG LA BAC
RULES, ELECTIONS & INTERGOVERNMENTAL RELATIONS

RESOLUTION

WHEREAS, any official position of the City of Los Angeles with respect to legislation, rules, regulations or policies proposed to or pending before a local, state or federal governmental body or agency must have first been adopted in the form of a Resolution by the City Council with the concurrence of the Mayor; and

WHEREAS, In 2006, recognizing the environmental degradation occurring in and along the Los Angeles River within the City's boundaries, the City Council authorized the Board of Public Works to execute an agreement with the US Army Corps of Engineers (Corps) for the *Los Angeles River Ecosystem Restoration Feasibility Study* also known as the ARBOR Study (Study), committing the City to a fifty (50) percent share of the cost as local sponsor (C.F. 06-0496), which was increased in 2009 as the total Study cost was raised to nine million seven hundred ten thousand dollars ($9,710,000) (C.F. 07-1342-S8); and

WHEREAS, In 2010, the County of Los Angeles contributed one hundred thirty thousand dollars ($130,000) to the Study because of the Study's role in furthering its Los Angeles River restoration goals (C.F. 07-1342-S8); and

WHEREAS, In 2012, Friends of the Los Angeles River (FoLAR), the longest-standing advocacy group supporting restoration of the river, committed nine hundred seventy thousand dollars ($970,000) to the Study for its completion (C.F. 10-0270-S2); and

WHEREAS, The Study is consistent with the goals of President Obama's America's Great Outdoors initiative, which includes direction to "Reconnect Americans, especially children, to America's rivers and waterways..." and to "Build upon State, local, private, and tribal priorities for the conservation of land, water, wildlife, historic, and cultural resources, creating corridors and connectivity across these outdoor spaces, and for enhancing neighborhood parks..." asking federal agencies to "...determine how the Federal Government can best advance those priorities through public private partnerships and locally supported conservation strategies"; and

WHEREAS, The Los Angeles River watershed was selected as one of only seven nationwide first-phase pilots of the Urban Waters Federal Partnership, an implementation piece of the America's Great Outdoors initiative, which aims to "stimulate regional and local economies, create local jobs, improve quality of life, and protect Americans' health by revitalizing urban waterways in under-served communities across the country" and the Study was selected as the top priority of the Urban Waters Federal Partnership in Los Angeles; and

WHEREAS, In 2013, the Corps has developed a final array of four "best buy" alternatives for the Study and only one of those alternatives includes both significant restoration at the Los Angeles River's confluence with the Verdugo Wash near the City's border with the City of Glendale, and the only substantial western bank connection—providing a profound hydrological link between the Los Angeles State Historic Park (Cornfields site) and the river, leveraging a significant investment made by the State of California toward river restoration; and

WHEREAS, The City's Los Angeles River Revitalization Master Plan identified these two "opportunity areas" as critical opportunities for restoration (C.F. 07-1342);

LA BAC

NOW, THEREFORE BE, IT RESOLVED, that the Council, with the concurrence of the Mayor, by the adoption of this Resolution, endorses a Study alternative that results in the most expansive ecosystem restoration, specifically that in which includes the following priorities for the City of Los Angeles:

- Verdugo Wash Confluence
- Taylor Yard/Bowtie
- Taylor Yard/G-2
- Arroyo Seco Confluence
- Cornfields LA State Historic Park
- Piggyback Yard (Union Pacific Railroad)

Presented By: _____
MITCH O'FARRELL, COUNCILMEMBER 13th District

Gil Cedillo
GIL CEDILLO, COUNCILMEMBER 1st District

Seconded by: _____

AUG 14 2013 Continued to Aug 23, 2013

ADOPTED
AUG 23 2013
LOS ANGELES CITY COUNCIL

FILE COPY

MAYOR WITH FILE

CITY OF LOS ANGELES
CALIFORNIA

BOARD OF PUBLIC WORKS MEMBERS

KEVIN JAMES
PRESIDENT

MONICA RODRIGUEZ
VICE PRESIDENT

MATT SZABO
PRESIDENT PRO TEMPORE

MICHAEL R. DAVIS
COMMISSIONER

BARBARA ROMERO
COMMISSIONER

ERIC GARCETTI
MAYOR

LA Sanitation

BUREAU OF SANITATION

ENRIQUE C. ZALDIVAR
DIRECTOR

TRACI J. MINAMIDE
CHIEF OPERATING OFFICER

VAROUJ S. ABKIAN
ADEL H. HAGEKHALIL
ALEXANDER E. HELOU
ASSISTANT DIRECTORS

NEIL M. GUGLIELMO
CHIEF FINANCIAL OFFICER

1149 SOUTH BROADWAY, 10TH FLOOR
LOS ANGELES, CA 90015
TEL: (213) 485-0587
FAX: (213) 485-3939
WWW.LACITYSAN.ORG

November 15, 2013

Josephine R. Axt, Ph.D., Chief Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

Dear Dr. Axt:

RESPONSE TO USACOE SPL-2013-003-NLH-DRAFT IFR FOR LA RIVER ECOSYSTEM RESTORATION FEASIBILITY STUDY

Los Angeles Sanitation (LA Sanitation) appreciates the opportunity to comment on the U.S. Army Corps' *Los Angeles River Ecosystem Restoration Feasibility Study's "Integrated Feasibility Report"* (Report).

LA Sanitation has worked closely with other key City departments to support the efforts to revitalize the Los Angeles River. Through these efforts, the City of Los Angeles has led a collaborative process to inform the public on the planning, and decision-making related to LA River's habitat and economic revitalization.

We commend the US Army Corps of Engineers for its extensive assessment of the alternatives for LA River in the Report. **In particular, LA Sanitation expresses its support to Alternative 20 as it represents a consistent direction for the City of Los Angeles.**

LA Sanitation in collaboration with other City departments has implemented projects like South LA Wetlands and Echo Park Lake projects as part its Proposition O program for improving the water quality in LA River and other waters in our City. These projects have transformed the surrounding communities by providing them open space, recreation, education, habitat, etc, that they would otherwise have been deprived of. LA Sanitation believes that through integration, innovation, collaboration, and coordination, Alternative 20 provides a unique opportunity for eco-system restoration and implementation of many more projects such as South LA Wetlands and Echo Park Lake throughout the City and the region. LA Sanitation also believes that water quality improvement is an integral part of LA River revitalization that can be achieved through integration with habitat and eco-system restoration.

Recycled water is an essential resource for both the LA River and for the City's water supply. As indicated in the Combined Habitat Assessment Protocol (Appendix G of the Report), recycled water composes the majority of water in the LA River during the dry weather months. We continue to face reductions in the reliability of our imported water supplies and recycled water serves as a vital component of the City's plans to ensure a sustainable local water supply.

Establishing storm water capture as a priority for ecosystem restoration will lead to greater cost effectiveness, and a more sustainable ecosystem restoration.

LA Sanitation commends the work and partnership of the US Army Corps of Engineers on the LA River. We look forward to collaborating closely with your organization in the development of specific projects as part of the selected Alternative to ensure that this critical balance is achieved.

Should you have any questions, please contact Ali Poosti at (323) 342-6228 or Shahram Kharaghani at (213) 485-0587.

Sincerely,

ENRIQUE C. ZALDIVAR, Director
Bureau of Sanitation

SK:sk
WPDCR9077

cc: Ron Nichols, LA DWP – General Manager
Traci Minamide, LA Sanitation – Chief Operating Officer
Adel Hagekhalil, LA Sanitation – Assistant Director
Ali Poosti, LA Sanitation Wastewater Engineering Services
Shahram Kharaghani, LA Sanitation Watershed Protection
Hiddo Netto, LA Sanitation Water Reclamation
Omar Moghaddam, LA Sanitation Regulatory Affairs
Doug Walters, LA Sanitation Wastewater Engineering Services
Deborah Deets, Landscape Architect, LA Sanitation Watershed Protection
Carol Armstrong, Bureau of Engineering, River Project Office
Wing Tam, LA Sanitation Watershed Protection

DEPARTMENT OF
CITY PLANNING
200 N. SPRING STREET, ROOM 525
LOS ANGELES, CA 90012-4801
AND
6262 VAN NUYS BLVD., SUITE 351
VAN NUYS, CA 91401

CITY PLANNING COMMISSION
RENEE DAKE WILSON
PRESIDENT
DANA M. PERLMAN
VICE-PRESIDENT
ROBERT L. AHN
DAVID H. J. AMBROZ
MARIA CABILDO
CAROLINE CHOE
RICHARD KATZ
JOHN W. MACK
MARTA SEGURA

JAMES K. WILLIAMS
COMMISSION EXECUTIVE ASSISTANT II
(213) 978-1300

CITY OF LOS ANGELES
CALIFORNIA

ERIC GARCETTI
MAYOR

EXECUTIVE OFFICES
LA City Planning
MICHAEL J. LOGRANDE
DIRECTOR
(213) 978-1271
ALAN BELL, AICP
DEPUTY DIRECTOR
(213) 978-1272
LISA M. WEBBER, AICP
DEPUTY DIRECTOR
(213) 978-1274
EVA YUAN-MCDANIEL
DEPUTY DIRECTOR
(213) 978-1273

FAX: (213) 978-1275

INFORMATION
www.planning.lacity.org

November 15, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Nox 532711
Attn L Ms. Erin Jones, CESPL-PD-RN
Los Angeles California 90053-2325

Dear Ms. Axt:

The City of Los Angeles Department of City Planning urges the United States Army Corps of Engineers to select ARBOR study Alternative 20, which would serve to revitalize communities and create a more functional and interconnected watershed that will provide a diverse regional ecological system and restore the functionality of the Los Angeles River as a critical natural, cultural and community resource.

The Los Angeles River careens past some of the City's most fascinating ecological, historical and recreational terrain, presenting City residents a wonderful opportunity to connect the principles of healthy living with the goals of producing sustainable and liveable communities. It is a valuable resource that threads through Los Angeles' most diverse and underrepresented communities, crossing boundaries of race, class, and human and physical geography. Providing an intricate and unique landscape for civic engagement, the Los Angeles River offers Angelenos an outdoor place for respite, education, and recreation with family and friends. The River also offers communities and business owners a powerful tool for implementing strategic economic investment that will promote job growth and improve the City's economic climate. Celebrating the values of the River not only ensures a healthier population but also engages members of the public to think about conservation and the importance of outdoor recreational opportunities.

Your selection of Alternative 13 proves your commitment to the Los Angeles River and your understanding of its value as an integral ecological resource for the City of Los Angeles. However, Alternative 13 falls short in meeting the demands of ecosystem restoration and economic development as it does not include two key points of contact between the Los Angeles River and the Verdugo and Arroyo Seco tributaries. Thus, the City Planning Department would respectfully request your further commitment to Alternative 20 as we believe the value of adding the restoration of the Verdugo Wash and the wetlands of the Los Angeles State Historic Park is critical to the restoration efforts of the River, its tributaries and the growth of the City of Los Angeles.

The City of Los Angeles is currently working on a Vision Plan and Economic Development Strategy for the Northeast Los Angeles Riverfront District. The boundaries of this District contain the Verdugo Wash at the northernmost point and the Los Angeles State Historic Park at the southernmost point. This Vision document aims to celebrate the existing Northeast Los Angeles River landscape by creating a continuous, linear, recreational experience, connecting some of Los Angeles' most interesting ecological assets to the communities that surround them in an effort to develop a sense of place and identity. The purpose of the Vision document is to provide a shared community-wide vision framework that informs elected officials along with various City, State and Federal agencies of future economic and recreational investment priorities. The framework largely addresses issues related to physical design and urban form while considering social, environmental, and economic factors. This Vision document also recommends action steps and lays a preliminary implementation timeline for recommended catalytic and prototypical development projects intended to advance the shared community wide vision. The restoration of the Verdugo Wash and Los Angeles State Historic Park would substantially further the City's goal at creating a linear and continuous recreational experience within this portion of the River.

The northern boundary of the Vision and Economic Development study area is the Verdugo Wash. The Verdugo Wash, a 9.4 mile tributary of the Los Angeles River, drains the hills just north of Burbank and Glendale. The intersection of the 5 and the 134 Freeways marks the convergence of the Verdugo and the Los Angeles River. The restoration of the Verdugo wash tributary provides a future connection between the LA River to the Verdugo Mountains, thereby supporting a connection that historically supports a habitat corridor for movement of wildlife. This restoration would also create a linear connection between the City of Los Angeles' efforts within Northeast Los Angeles to the continuing efforts of the City of Glendale and their "Riverwalk" project. This connection is only available within Alternative 20.

The southern boundary of the Vision and Economic Development study area is the Los Angeles State Historic Park. The City and State have invested time and resources in creating a beautiful recreational space within the Chinatown area, with close proximity to the Metro Gold Line, Union Station and Downtown. While this site is adjacent to the Los Angeles River, it does not connect. Connecting the Los Angeles River to the Los Angeles State Historic Park not only provides a critical ecological connection to a highly alluvial point of contact between the Los Angeles River and potentially the Arroyo Seco River, but also will provide critical open space and greenway pedestrian/bicycle connections from Glendale and Northeast Los Angeles to the State Historic Park, and thereby connections to the Metro Gold Line, Union Station and Downtown. This provides an immeasurable social and economic opportunity for City residents that would only be realized within Alternative 20.

In addition to the Northeast Los Angeles Vision and Economic Development Plan, the Department created a River Implementation Overlay District (RIO) which is a special use district that requires developers to design projects which are ecologically compatible to and sensitive of the Los Angeles River and its watershed. The RIO Ordinance is expected to receive Council approval in late 2013 or early 2014. The City has also prioritized open space connections to the River within the City's Bicycle Plan, thereby creating a network of green, non-vehicular, multi-modal transportation

opportunities along the River. The Plan is expected to receive approval in early 2014. The value of having a linear ecological interface that connects different communities within the City via the Los Angeles River is critical to our mobility goals. Alternative 20 reinforces our efforts at utilizing the River as not only a critical form of flood protection but as a means of non-vehicular transportation, economic development, passive and active recreation and connection between communities.

The City of Los Angeles has made substantial efforts and utilized a multi-disciplinary approach towards the revitalization of the Los Angeles River. From zoning to wildlife restoration to multi-modal transportation, the City has partnered with multiple agencies to ensure that every aspect of river revitalization is taken into consideration and approached in a holistic manner. Please consider the Department of City Planning's request for an increased commitment from Alternative 13 to Alternative 20 for its ecological value as well as its proposed social and economic value in promoting and creating healthy, sustainable, and well-connected communities surrounding the Los Angeles River. Should you have additional questions, please contact Christine Saponara via telephone at (213) 978-1363 or via email at Christine.Saponara@lacity.org.

Sincerely,

ALAN BELL, AICP
Deputy Director of Planning

BOARD OF RECREATION AND PARK COMMISSIONERS

BARRY A. SANDERS
President

W. JEROME STANLEY
Vice President

LYNN ALVAREZ
SYLVIA PATSAOURAS
JILL T. WERNER

LATONYA D. DEAN
Commission Executive Assistant II

JON KIRK MUKRI
General Manager

CITY OF LOS ANGELES
CALIFORNIA

ERIC GARCETTI
MAYOR

DEPARTMENT OF RECREATION AND PARKS
LA Rec & Parks
221 N. FIGUEROA STREET, SUITE 100
LOS ANGELES, CA 90012

(213) 202-2681
FAX - (213) 202-2612

MICHAEL A. SHULL
Assistant General Manager
Planning, Construction and Maintenance Branch

Josephine R. Axt, Ph.D.
Chief Planning Division
U.S. Army Corps of Engineers
Los Angeles, District
P.O. Box 532711
Los Angeles, CA 90053-2325

Attention: Ms. Erin Jones, CESPL-PD-RN

Dear Ms. Axt:

LOS ANGELES RIVER ECOSYSTEM RESTORATION INTEGRATED FEASIBILITY REPORT

The Department of Recreation and Parks has reviewed the Draft Integrated Feasibility Report (IRF) dated September 2013. The various alternatives discussed, including the Corps' Tentatively Selected Plan, Alternative 13, would physically impact various recreational sites within Griffith Park under the jurisdiction of the Department, particularly along Reaches 1 through 4 of the Los Angeles River.

The environmental restoration measures proposed, including habitat corridors and riparian plantings along the riverbanks, diversion of riverflows into side channels, and daylighting of storm drains, along with the development of recreational facilities within the restored areas, would affect the following recreational sites within Griffith Park:

- Pollywog Area
- Martinez Arena
- Los Angeles Equestrian Center
- Bette Davis Park
- Pecan Grove Picnic Area
- Ferraro Fields
- Wilson and Harding Golf Courses
- Los Feliz Golf Course

Consequently, once a restoration alternative is decided upon, it is critical to involve the Department as early as possible in the project design process to address any potential recreational and operational conflicts within Griffith Park from the environmental restoration approaches, desired construction staging areas, and other aspects of the project.

LA Rec & Parks

Josephine R. Axt, Ph.D.
Chief Planning Division
January 14, 2009
Page 2

Finally, there are some edits required in the second paragraph of page 7-7: "Table 1" in the first line should be changed to "Table 7-2", and "Table 7-2" in the second line should be changed to "Table 7-3".

We appreciate the opportunity to comment on the IRF. Please contact Darryl Ford of my staff at (213) 202-2682 if you have any questions on this matter, as well as to facilitate coordination when the project design efforts get underway.

Sincerely,

MICHAEL A. SHULL
Assistant General Manager

MAS/DA:es

cc: Darryl Ford, Management Analyst II, RAP. MS 682
Reading File

CITY OF LOS ANGELES
CALIFORNIA

JAN PERRY
INTERIM GENERAL MANAGER

ERIC GARCETTI
MAYOR

LA EWDD

ECONOMIC AND WORKFORCE DEVELOPMENT DEPARTMENT
1200 W. 7TH STREET
LOS ANGELES, CA 90017

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Attn L Ms. Erin Jones, CESPL-PD-RN
Los Angeles California 90053-2325
E-mail: comments.lariverstudy@usace.army.mil

SUBJECT: ECONOMIC AND WORKFORCE DEVELOPMENT DEPARTMENT SUPPORT LETTER FOR ARBOR STUDY ALTERNATIVE 20

Dear Ms. Axt:

The City of Los Angeles Economic Workforce Development Department (City sponsoring agency of the Northeast Los Angeles Riverfront Collaborative project) urges the United States Army Corps of Engineers to select Alternative 20, which would best restore the natural ecosystem habitat of the river area that directly impacts the quality of life of the Northeast L.A. riverfront communities of Atwater Village, Cypress Park, Elysian Valley, Glassell Park, and Lincoln Heights. Furthermore, the expansive ecosystem restoration proposed in Alternative 20 provides the greatest value to a greater NELA region of over 330,000 residents that not only includes the riverfront communities but spans other L.A. neighborhoods and neighboring cities in the region such as Glendale, Burbank, and Pasadena.

We particularly would like the ARBOR study document to insert language abouth the investment that the Federal government and City of Los Angeles is making in the ARBOR Study Area that is directly situated in Northeast Los Angeles. The EWDD is home to a $2.25 million dollar HUD-DOT-EPA Partnership for Sustainable Communities challenge planning grant called the Northeast Los Angeles Riverfront Collaborative. The goal is to build off the river revitalization efforts of the last 15 years and ensure that the adjacent riverfront neighborhoods co-benefit alongside the revitalization of the L.A. River. The collaborative is made up of a multidisciplinary partnership of federal and local government agencies, non-profits, universities, private firms, and public media all directed to collaborate and engage the local community toward the NELA RC policy goals. The current planning efforts include a city-sponsored NELA RC Vision Plan and Economic Development Implementation Strategy that is currently garnering input from the local community on how best to improve their neighborhoods and the river that they abut. Through numerous door-

to-door resident and small business surveys and a series of community workshops with the NELA neighborhoods that are directly in the ARBOR study area, it has been concluded that many residents see the value of increased green space and natural habitat as an outcome that would motivate the local community to use the L.A. River more often. This further supports the need to approve Alternative 20 as this particular alternative presents the best case scenario for a riverfront ecosystem habitat that benefits the green space poor communities of NELA.

Additionally, Alternative 20 provides four times more jobs than the other proposed alternatives within the ARBOR study. As a department that focuses on workforce development, we recognize that more jobs have the potential of benefiting the local NELA population whose annual household income is lower than the average L.A. County household. We would work to ensure that the jobs being produced are quality living wage jobs and accessible to the local NELA population.

The commitment of the Army Corps of Engineers to take on the ARBOR study shows the dedication that the Corps and the Federal government has to Los Angeles's urban waterways and watershed. We hope that the most expansive option, Alternative 20, is adopted. Alternative 20 will provide the most sustainable pathway that will ensure environmental, social, economic, and cultural benefits to the Northeast L.A. Riverfront communities and the entire L.A. City and County region. Should you have additional questions about the EWDD and NELA RC work within the ARBOR Study area, please do not hesitate to contact EWDD Administrative Manager Gerardo Ruvalcaba at Gerardo.Ruvalcaba@lacity.org or NELA RC Project Manager George Villanueva at govillan@usc.edu or (213) 509-1849.

Sincerely,

JAN PERRY
Interim General Manager

JP:GR

LADWP

Los Angeles Department of Water & Power

ERIC GARCETTI
Mayor

Commission
MEL LEVINE, *President*
WILLIAM W. FUNDERBURK JR., *Vice President*
JILL BANKS BARAD
MICHAEL F. FLEMING
CHRISTINA E. NOONAN
BARBARA E. MOSCHOS, *Secretary*

RONALD O. NICHOLS
General Manager

November 18, 2013

Josephine R. Axt, Ph.D., Chief Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

Attention: Ms. Erin Jones, CESPL-PD-RN, Los Angeles, CA 90053-2325

Dear Dr. Axt:

The Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to comment on the U.S. Army Corps' *Los Angeles River Ecosystem Restoration Feasibility Study's "Integrated Feasibility Report"* (Report). As the nation's largest municipally-owned utility, LADWP understands the challenges associated with developing large-scale public infrastructure projects. We serve a city of nearly four million people, and deliver water and power to our customers through extensive transmission and water infrastructure systems across the West and Southwest.

For more than a decade, LADWP has worked closely with key city departments to support the efforts to revitalize the Los Angeles River. Through these efforts, the City of Los Angeles and its city departments have led a comprehensive and collaborative public process to inform the planning, design, and decision-making related to the River's habitat and economic revitalization.

Today, we are at a critical juncture for the future of the LA River. We commend the US Army Corps' Report for its extensive assessment of the alternatives for the river. **And it is our view that Alternative 20 represents a consistent direction for the City of Los Angeles and is supported by LADWP.** 1

As the LA River's revitalization efforts continue, LADWP will play an active role. LADWP has significant interests along the river specifically related to recycled water and power transmission rights-of-way.

Recycled water is a valuable resource for both the LA River and for the City's water supply. As indicated in the Report's Combined Habitat Assessment Protocol (Appendix G), recycled water composes the majority of water in the LA River during the dry weather months. We continue to face reductions in the reliability of our imported water supplies, 2

111 N. Hope Street, Los Angeles, California 90012-2607 *Mailing address:* Box 51111, Los Angeles, CA 90051-5700
Telephone: (213) 367-4211 www.LADWP.com

LADWP

and recycled water serves as a vital component of the City's plan to ensure a sustainable local water supply[1].

In Appendix G of the Report, LADWP concurs with the water constraints identified by the Army Corps. There is a real potential for river flow modifications resulting from the strategies in the City's 2006 Water Integrated Resources Plan to 1) reduce dry weather flows, 2) implement stormwater capture projects, and 3) increase water recycling. We further agree with the Report's finding that the lack of a more significant, reliable water source for the study area could pose constraints on the ability to sustain functions of stream, riparian, and wetlands habitat, both existing and those proposed in the Report's alternatives. 2

Despite these anticipated water constraints, the Report's "Water Budget" (Table 8, Appendix E) shows the projected future summer flows for the alternatives as the historical dry-weather river flows. In the upper reaches of the Study area, these dry-weather flows are primarily recycled water from the City's Water Reclamation Plants. The Army Corps' projections will need to be reviewed and confirmed to verify the future summer flows that will be available on a sustained basis, consistent with other planned uses for the water. LADWP is prepared to work with the Army Corps so that we carefully balance our future plans for water supply, including increased recycled water use, with river restoration objectives. 3

In addition to recycled water, LADWP owns assets, both "in-fee" and through easements, along the LA River. The primary purpose of these assets is to deliver reliable water and power to the rate payers. These assets include the power transmission infrastructure located within the LA River corridor. The power transmission lines are an integral component to provide electric power to the City of Los Angeles and other local communities. Their use is under the jurisdiction of the Federal North American Electric Reliability Council (NERC). Safety and protection of critical facilities are the primary factors used to evaluate secondary land use proposals. The rights of way serve as platforms for access, construction, maintenance, facility expansion and emergency operations. 4

As specific projects are developed under the Study's alternatives, **LADWP will work in coordination with city departments and other stakeholders to ensure these critical planning and operational issues are evaluated and addressed.** 5

[1] LADWP has plans to expand recycled water use citywide from about 8,000 acre-feet per year (AFY) [7 million gallons per day (MGD)] to 59,000 AFY (53 MGD), and is proposing the implementation of a groundwater replenishment project in the San Fernando Groundwater Basin using purified recycled water.

LADWP

LADWP commends the work and partnership of the USACE on the LA River. We support the implementation of a viable plan that balances the Report's river restoration objectives with LADWP's mission to "deliver reliable water and power to LA in a customer focused, efficient and environmentally responsible manner." We look forward to collaborating closely with the Army Corps in the development of specific projects as part of the selected Alternative to ensure this critical balance is achieved. 5

Should you have any questions, please contact me at (213) 367-1405 or Ms. Evelyn Cortez-Davis of the LADWP Water Resources Division at (213) 367-2360.

Sincerely,

Ronald O. Nichols
General Manager

RP:lz

c: Mr. Enrique Zaldivar, Director, Department of Public Works Bureau of Sanitation
Ms. Carol Armstrong, Department of Public Works Bureau of Engineering, River Project Office
Ms. Evelyn Cortez-Davis

LAUSD

BENNETT KAYSER
Board Member

October 17, 2013

Ms. Josephine R. Axt, Ph. D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Attn: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Subject: Alternative 20

Dear Dr. Axt,

As an elected official serving one million-plus children and adult students and over 4.5 million constituents covering 770 square miles, I am writing in resounding support of Alternative 20. The Los Angeles River (LAR) runs right through my Los Angeles Unified School District (LAUSD) Board, District 5. Its value and potential value to the communities I represent is immeasurable.

The LAUSD encompasses much of the Los Angeles River. In fact, the LAUSD has an camp site in the Angeles Crest Mountains named Clear Creek and another outdoor education site at Point Fermin on the San Pedro peninsula; bookends to the story of water in Los Angeles.

I want to further engage the children of LAUSD with the LAR. There are one hundred and twenty-five schools within an easy mile's walk from the river. It is my dream that this generation of LAUSD students will grow up with an ever improving river and that they be an integral part of those changes. I want our students to use the river and its ecosystems for study, recreation, transportation, and career opportunities.

As stated in the movie *Field of Dreams*, "If you build it, they will come". I urge the U.S. Army Corps of Engineers to change course and support the best option for future generations of Los Angeles, Alternative 20.

Sincerely,

Bennett Kayser
Board Member
District 5

LOS ANGELES UNIFIED SCHOOL DISTRICT • BOARD OF EDUCATION
333 South Beaudry Avenue, 24th Floor, Los Angeles, California 90017 • TEL. (213) 241-5555 • FAX (213) 241-8467
E-MAIL: BoardDistrict5@lausd.net

LAUSD

Los Angeles Unified School District

Office of Environmental Health and Safety

JOHN E. DEASY, Ph.D.
Superintendent of Schools

ENRIQUE G. BOULL'T
Chief Operating Officer

JOHN STERRITT
Director, Environmental Health and Safety

November 18, 2013

Josephine R. Axt
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053

ATTN: Ms. Erin Jones, CESPL-PD-RN

SUBJECT: COMMENTS ON THE LOS ANGELES RIVER ECOSYSTEM RESTORATION PROJECT – DRAFT INTEGRATED FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

Presented below are public comments submitted on behalf of the Los Angeles Unified School District (LAUSD), Office of Environmental Health and Safety (OEHS), regarding the Draft Integrated Feasibility Report (IFR) prepared for the above project. The IFR presents several Alternatives, all which provide varying levels of restoration to an 11-mile segment of the LA River. The project does not appear to have direct construction impacts on District property or school sites. However, the potential benefits for the District's students and educational community vary greatly by Alternative.

The District has approximately 125 schools within a one-mile radius of the LA River and has several schools located in close proximity to the banks and walls of the river basin. The District views the LA River improvements as providing positive environmental benefits related to riparian habitat and water quality while balancing the need for safety by providing flood control to the region. Even though a secondary purpose of the project, the addition of passive recreational opportunities is of great benefit to the students and families of the District. The creation of unique ecological corridors and places to interact with the riparian habitat would also provide a learning platform for educating youth on sustainability – an important District policy that it endorses and implements in its own operations and facilities.

As such, the District endorses IFR Alternative 20, because it generates the greatest environmental benefits in the areas described above.

It should be noted that the LAUSD Board of Education will vote on November 19, 2013, on a resolution entitled, "Resolution in Support of the Selection of Alternative 20 for the Los Angeles River."

Thank you for the opportunity to comment on this important project. If you need additional information please call me at (213) 241-3913.

Sincerely,

Timothy Popejoy
OEHS

LAUSD

Board Member Resolution For Action

Mr. Kayser, Ms. García - Resolution in Support of the Selection of Alternative 20 for the Los Angeles River (Noticed November 12, 2013)

Whereas, Within the Los Angeles Unified School District, the Los Angeles River is the single thread that ties all twenty-six cities and parts of the County of Los Angeles together in this seven hundred and fifty square mile school district;

Whereas, The District is home to the Clear Creek camp site in the Angeles Crest Mountains and a second outdoor education site at Point Fermin on the San Pedro peninsula; truly bookends to the story of water in Los Angeles;

Whereas, The District has approximately one hundred and twenty five (125) schools within a one mile walk of the river and has several schools located along its banks/walls;

Whereas, The District is committed to lessening its impact on the environment and to helping to inform the next generation about their responsibilities to our shared environment;

Whereas, The District is a driving force on sustainability efforts through our solar energy installations and energy and water conservation programs;

Whereas, For more than decade, we have been transforming the District's educational environment by completing 130 new schools to high performance environmentally friendly standards;

Whereas, The District is actively engaged in testing new technology, improving methods of conservation and developing programs on the importance of conserving energy and water resources;

Whereas, It is of the utmost importance that outside of our schools and in the community we have more green space, and revitalize the L.A. River so that it can be a tool for educating youth on sustainability;

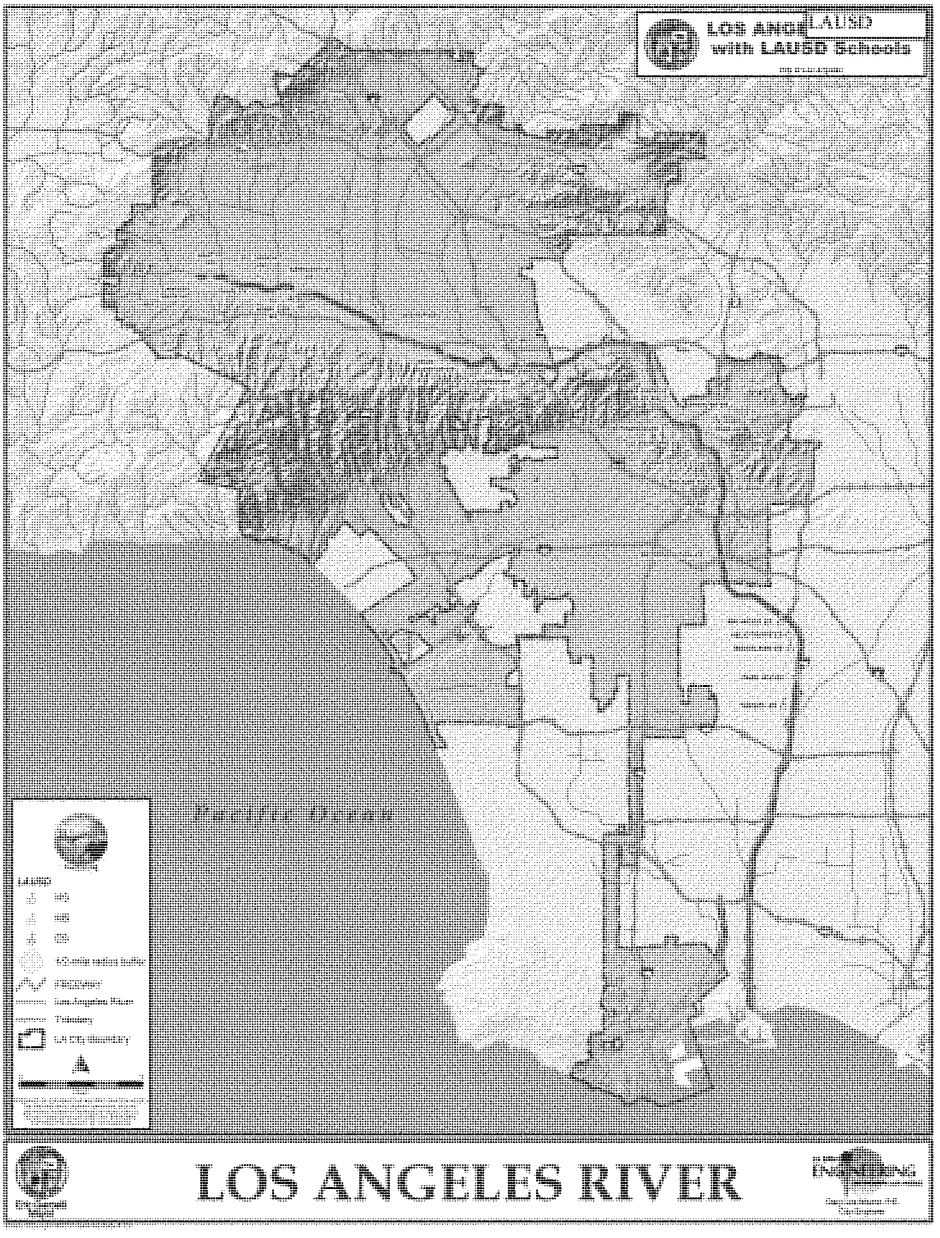
Whereas, Only Alternative 20 includes both significant restoration at the Los Angeles River's confluence with the Verdugo Wash near the City's border with the City of Glendale, and the only substantial western bank connection-providing critical wildlife habitat connectivity and a hydrological link between the Los Angeles State Historic Park and the river;

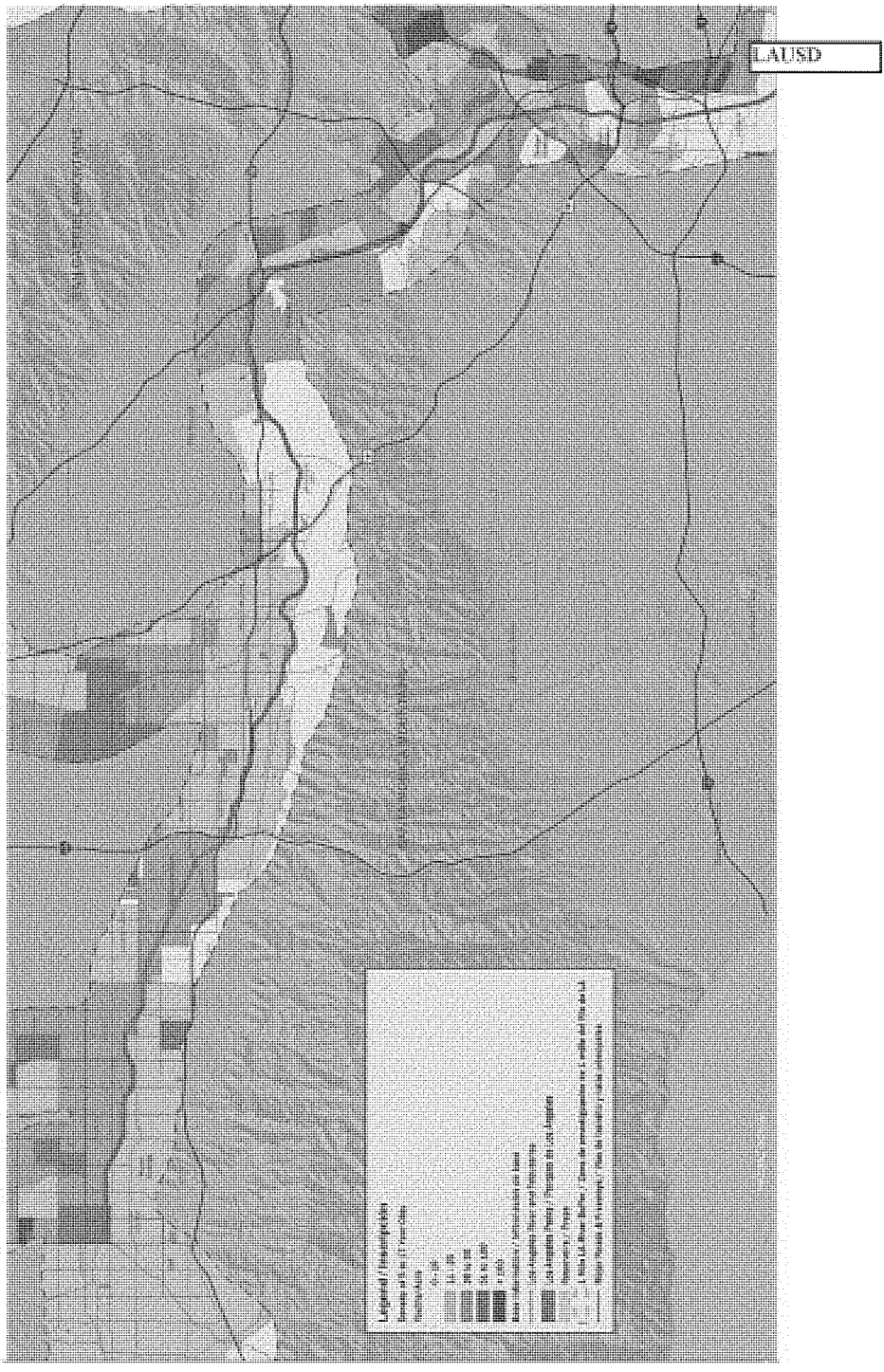
Whereas, With approval of Alternative 20, District students can make far greater use of the river and its ecosystems for study, exploration, recreation, transportation, and career opportunities; and

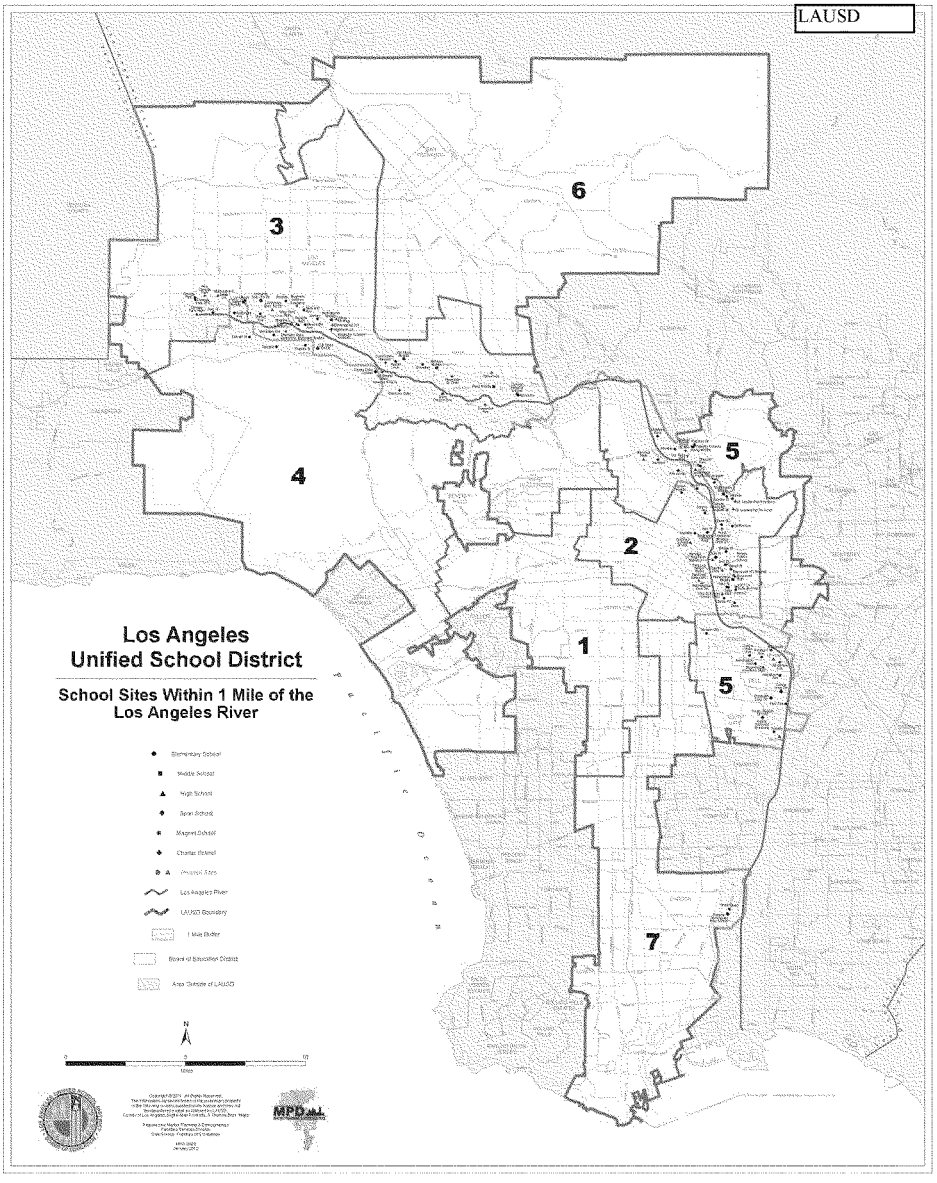
Whereas, Alternative 20 provides the most robust ecosystem restoration outcomes while also providing four times more jobs than the Corps-preferred alternative, and will thereby most appropriately redress historic environmental injustices that resulted from the river's channelization—providing new public access to natural open spaces, expand educational opportunities, improving public health, stimulating regional and local economies, and enhancing the quality of life in Southern California; now, therefore, be it

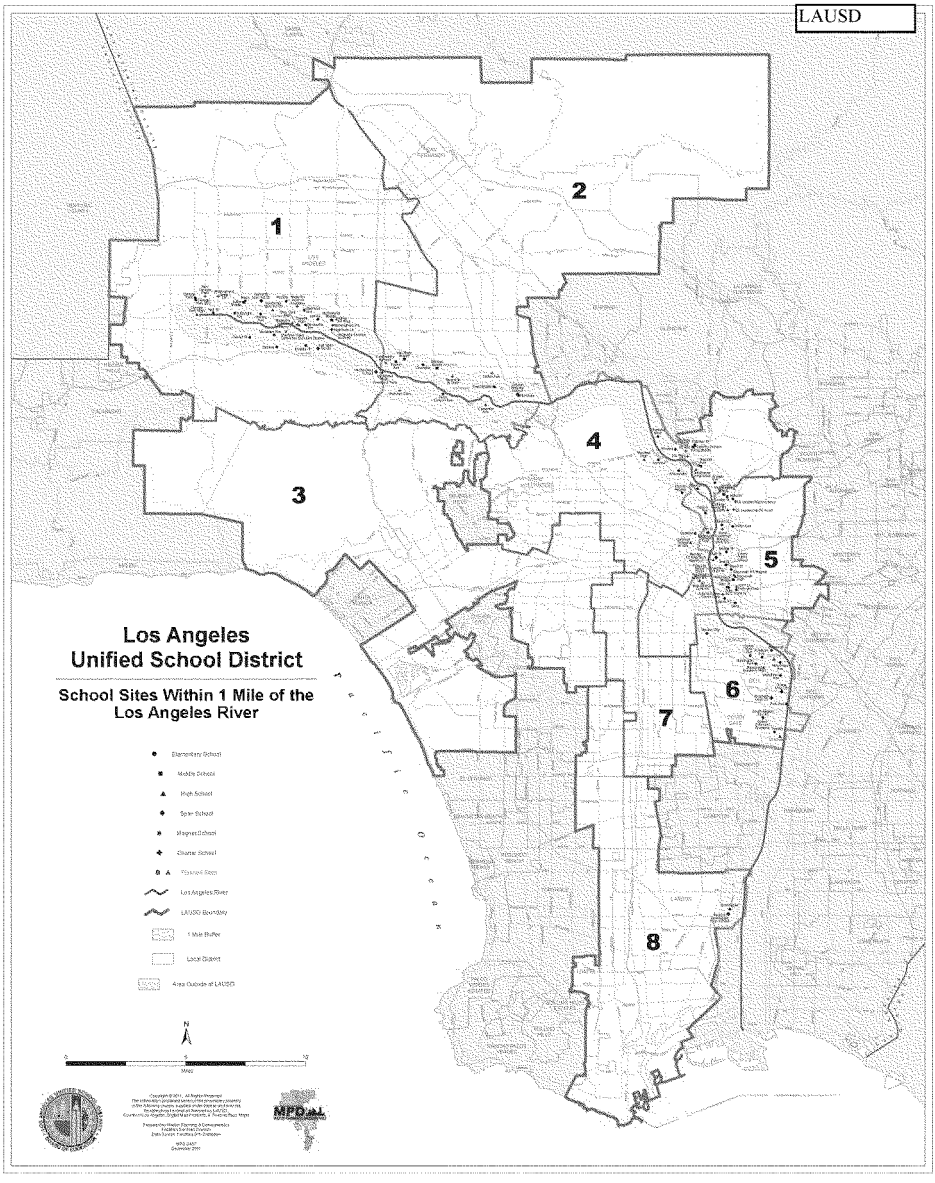
LAUSD

Resolved, That the Governing Board of the Los Angeles Unified School District urges the United States Army Corps of Engineers to change its current course and support the best option for future generations of Los Angeles Unified School District students and their families, Alternative 20.


LOS ANGE
with LAUSD Schools
LAUSD
Pacific Ocean
LOS ANGELES RIVER


LAUSD


LAUSD
6
3
4
5
2
1
5
7
Los Angeles
Unified School District
School Sites Within 1 Mile of the
Los Angeles River
Elementary School
Middle School
High School
Span School
Magnet School
Charter School
Los Angeles River
LAUSD Boundary
1 Mile Buffer
Board of Education District
Area Outside of LAUSD
N
MPD


LAUSD
1
2
3
4
5
6
7
8
Los Angeles
Unified School District
School Sites Within 1 Mile of the
Los Angeles River
Elementary School
Middle School
High School
Span School
Magnet School
Charter School
Planned Sites
Los Angeles River
LAUSD Boundary
1 Mile Buffer
Local District
Area Outside of LAUSD
N
MAP

City of Burbank
CITY OF BURBANK
COMMUNITY DEVELOPMENT DEPARTMENT
150 North Third Street, P.O. Box 6459, Burbank, California 91510-6459
www.ci.burbank.ca.us

November 18, 2013

Ms. Josephine Axt
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Attn: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

VIA EMAIL TO: comments.lariverstudy@usace.army.mil

Re: Comments on Draft Integrated Feasibility Report for the Los Angeles River Ecosystem Restoration Study

Dear Ms. Jones:

The City of Burbank has reviewed the Draft Integrated Feasibility Report (IFR) for the Los Angeles River Ecosystem Restoration Study, and respectfully submits the following comments. Due to the proximity of the project site to the City of Burbank, the City has concerns about the project and the impacts it may have on Burbank streets, residents, and businesses.

Burbank2035 General Plan

On February 19, 2013, the Burbank City Council certified an Environmental Impact Report and adopted the Burbank2035 General Plan. All references in the IFR to the draft Burbank2035 General Plan and its contents should be updated. The City additionally requests that the IFR include a more thorough analysis of the proposed project's consistency with Burbank2035 goals and policies relating to land use, mobility, parks and open space, noise, and safety. Throughout the document, a thorough analysis of impacts to the City is deferred, with the rationale being that a comprehensive update to the General Plan is in process. The Burbank2035 General Plan has been adopted and its contents are being implemented in the community. Staff asserts that the IFR should reflect this. 1

Additional information related to existing conditions in the City at the time the Burbank2035 General Plan was prepared can be found in a Technical Background Report. The Corps may wish to utilize these resources when preparing the Final IFR, specifically information regarding the City's population, socio-economic characteristics, and parks inventory and acreage. All documents are available for review online at www.burbank2035.com.

Recreation & Trails

The City recognizes that recreation is a secondary benefit of this project. Although the project includes features having the least impact on the ecosystem such as wildlife viewing and walking, the City believes that any recreational transportation facilities, such as bicycle, pedestrian, or 2

equestrian paths or trails connect to existing and planned facilities in the City of Burbank. In particular, the project should identify locations for potential connections to facilities identified on the City's Bicycle Master Plan and Burbank2035 General Plan. The plan should also ensure that existing equestrian trails along the LA River in and near Burbank are maintained, and new opportunities for equestrian connections to appropriate recreational areas are included where feasible. 2

Traffic & Circulation

Section 5.7.2, Significance Criteria, states that the City of Burbank does not have CEQA traffic significance thresholds for use in evaluating the traffic impacts of projects. The City has thresholds for traffic "operational" impacts. These thresholds are contained in the City's Interim Traffic Study Guidelines and are attached to this letter. The IFR should estimate the number of weekday AM and PM peak hour trips that will be generated by the proposed recreational uses and show that these uses do not cause a significant impact on any intersections within the City of Burbank. The IFR asserts that no weekday peak hour trips will be generated by the proposed recreational uses but does not provide any supporting information or assumptions that support this assertion. 3

Construction Hours

The Burbank Municipal Code specifies that construction for which a permit is issued may occur Monday through Friday from 7:00 a.m. to 7:00 p.m. and Saturday from 8:00 a.m. to 5:00 p.m. Construction is not allowed on Sunday and City holidays. Any construction and/or construction staging related to the proposed project, occurring in or adjacent to the City of Burbank, should be limited to these hours. 4

Potential Temporary Construction Staging Areas

The IFR designates that an area generally located along SR 134 and Riverside Drive may be utilized as a temporary construction staging and/or parking area for workers and equipment. Under Alternative 13, construction would occur over 282 days and it is anticipated that the temporary construction staging area would be used for a similar length of time. In addition, the report states that areas having aesthetic, recreational, open space, or habitat value would be avoided to the extent possible. The City has concerns about utilizing an area near single-family residences for construction staging and/or parking. In addition, the City asserts that the proposed temporary staging area is highly valued by residents of the Rancho Equestrian neighborhood. It serves as an equestrian corridor and is frequently used by nearby residents to exercise their horses. The City believes this area should be avoided for construction staging and/or parking. 5

Construction of Traffic & Utility Management Plan

The IFR indicates that a construction traffic management plan will be prepared and submitted to LADOT for review and approval prior to project implementation to ensure that construction impacts are minimized. The plan would include: 6

- Designated haul routes and access points for construction vehicles and equipment,

City of Burbank

- Any turning movement restrictions,
- Travel time restrictions to avoid peak travel periods on selected roadways, and
- Designated staging and parking areas for workers and equipment.

To ensure construction impacts to City streets, intersections, or bike lanes are minimized, staff believes the construction traffic management plan should be submitted to the City of Burbank Public Works Director for review and approval prior to project implementation. Similar to the traffic management plan, the IFR specifies preparation of utility and stormwater management plans, prior to construction, to ensure that impacts are less than significant. Staff asserts that these plans should be circulated to the City for review to ensure that no adverse impacts to public utilities facilities owned and/or operated by the City occur. 6

Selection of Preferred Alternative

The City understands that the U.S. Army Corps of Engineers (Corps) has determined that Alternative 13 is the most cost effective option when compared to the benefit received. While Alternative 13 has been tentatively selected, the Corps has the ability to alter their selection at the conclusion of the public comment period. Should the Corps elect to proceed with a different Alternative, the City believes the Draft IFR should be recirculated to afford all interested parties with an opportunity to review the project in light of the new alternative selected. 7

Thank you in advance for your attention to the concerns raised in this letter. Should you have any question or concerns, please contact Tracy Steinkruger, Senior Planner at (818) 238-5250 or TSteinkruger@burbankca.gov.

Sincerely,
Community Development Department

Tracy Steinkruger
Senior Planner

Cc: Joy Forbes, Community Development Director
Carol Barrett, Assistant Community Development Director

Attachment: Interim Traffic Study Guidelines

Attachments are on file at USACE, LA District. Available upon request.

Adopted
10/29/13
Friedman/Sinanyan
Abstain: Najarian
Noes: Weaver

City of Glendale

RESOLUTION NO. 13-194

A RESOLUTION OF THE COUNCIL OF THE CITY OF GLENDALE, CALIFORNIA RECOMMENDING THE SELECTION OF ALTERNATIVE 20 IN THE LOS ANGELES RIVER ECOSYSTEM RESTORATION INTEGRATED FEASIBILITY REPORT AS THE RECOMMENDED/NATIONAL ECOSYSTEM RESTORATION (NER) PLAN

WHEREAS, the City of Glendale has nearly a mile of river frontage on the north and east banks of the Los Angeles River stretching from Bette Davis Park in the City of Los Angeles on the west to the Verdugo Wash in the City of Glendale on the south; and

WHEREAS the City of Glendale has completed Phase I of the Glendale Narrows Riverwalk project which includes one-half mile of pedestrian-bicycle path, two parks, and an equestrian facility along the banks of river; and

WHEREAS the City of Glendale has funding in place for Phase II of the Glendale Narrows Riverwalk project which will include a connection to Phase I, a river overlook, and a pedestrian-bicycle path that will lead to a park at the confluence of the Verdugo Wash and the Los Angeles River; and

WHEREAS, the State of California, the County of Los Angeles, and the City of Glendale have made significant investments in the City's Riverwalk Project totaling nearly $4 million; and

WHEREAS, when the project is completed, Glendale will have devoted one hundred percent of its river frontage to restoration and passive recreation; and

WHEREAS, the U.S. Army Corps of Engineers has released the Los Angeles River Ecosystem Restoration Integrated Feasibility Report which evaluates alternatives for the purpose of restoring eleven miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles, while maintaining existing levels of flood risk management; and

WHEREAS, restoration measures considered include creation and reestablishment of historic riparian and freshwater marsh habitat to support increased populations of wildlife and enhance habitat connectivity within the study area, as well as to provide opportunities for connectivity to ecological zones, such as the Verdugo Mountains and San Gabriel Mountains which lie within the City of Glendale; and

WHEREAS, the Study presents a final array of alternatives which include Alternatives 10, 13, 16, and 20 and has indicated that its Tentatively Selected Plan is Alternative 13; and

WHEREAS, only Alternative 20 includes significant restoration at the Los Angeles River's confluence with the Verdugo Wash near Glendale's border with the City of Los Angeles; and

WHEREAS, only Alternative 20 will create a truly functional and interconnected watershed that will restore the functionality of the Los Angeles River as a critical natural, cultural, and community resource.

City of Glendale

NOW THEREFORE, BE IT RESOLVED that the Council of the City of Glendale hereby endorses Alternative 20 of the Los Angeles River Ecosystem Restoration Integrated Feasibility Report and urges the United States Army Corps of Engineers to select Alternative 20 as its Recommended/National Ecosystem Restoration (NER) Plan

Adopted this 29th day of October, 2013

Mayor

ATTEST:

City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES)SS.
CITY OF CLENDALE)

I, ARDASHES KASSAKHIAN, City Clerk of the City of Glendale, do hereby certify that the forgoing Resolution No. 13-194 was adopted by the Council of the City of Glendale Californa, at a regular meeting held on the 29th day of October, 2013, and that same was adopted by the following vote:

Ayes: Friedman, Quintero, Sinanyan

Noes" Weaver

Absent: None

Abstain: Najarian

City Clerk

APPROVED AS TO FORM

City Attorney

DATE 10/14/13

City of Lakewood

Todd Rogers
Vice Mayor

Diane DuBois
Council Member

Jeff Wood
Council Member

Ron Piazza
Council Member

Steve Croft
Mayor

October 2, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles California 90053-2325

ATTN: Ms. Erin Jones, CESPL-PD-RN

Re: Draft Los Angeles River Ecosystem Restoration Integrated Feasibility Report
City of Lakewood Comments

Dear Dr. Axt:

The City of Lakewood appreciates the opportunity to comment on the Draft Los Angeles River Ecosystem Restoration Integrated Feasibility Report (IFR). We are part of southeastern Los Angeles County, located in the area known as the Gateway Region. As such, we are impacted by any developments along the Los Angeles River, and we are particularly concerned with how these developments may affect the flood conveyance capabilities of the river.

As you know, the Los Angeles River originally was a meandering body of water whose course ran freely across the flood plain that is now present day Los Angeles, Long Beach, and other cities. The river's path changed from year to year, with its mouth moving from as far south as Seal Beach to Santa Monica Bay to the north. The 1938 flood killed 115 people and caused $40 million in damages *(compared to today's standards that equates to $643 million in a rural area).* This disaster prompted the U.S. Army Corps of Engineers to channelize the river for flood control measures. Since then, its primary purpose has been to serve as a flood control channel for the greater Los Angeles/Long Beach area.

At this early stage, the IFR does not yet address how the selected alternative (Alternative 13) will affect the flood control capabilities of the Los Angeles River. Section 5-39, lines 3-12, states: *"Any work that may affect flood elevations will be coordinated with FEMA (Federal Emergency Management Agency)."* We are especially concerned with anything that affects the flood control capabilities of the river because on two occasions (2002 and 2012), the federal government tried to impose costly flood insurance on federally backed mortgages in "residual risk" areas (of which Lakewood and other communities along the river were a part) even though these areas already have 100-year protection in place. Compromising the river in any way would be costly to our residents.

Alternative 13 proposes to restore an 11-mile stretch of the river from Griffith Park to downtown Los Angeles, including removing concrete from the river bottom at its confluence with the Arroyo Seco and widening the river by 300 feet to form a freshwater marsh in an area known as Taylor Yard, near Glassell Park. While the impact of such a change seems minimal in terms of the river's total length of 48 miles, at this stage it is still unknown if and how the proposed changes will affect the flood control capabilities of the river. In addition, combined with FEMA's penchant for unilaterally attempting to impose flood insurance requirements and their scheduled updating of the West Coast flood maps in 2016, we are very concerned with how those factors will negatively affect flood insurance rates in the future. We request that you minimize or even eliminate any probable changes to the flood control capabilities of the Los Angeles River as Alternative 13 is further developed.

If you have any questions about the City's feedback on the draft Integrated Feasibility Report, please feel free to contact Paolo Beltran at 562/866-9771, ext. 2129 or pbeltran@lakewoodcity.org.

Sincerely,

Steve Croft
Mayor

AIA Los Angeles

AIA Los Angeles
A Chapter of the American Institute of Architects

November 12, 2013

Josephine Axt, Ph.D., Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053-2325

Re: **Support for Alternative 20 in the USACE LA River Ecosystem Restoration Feasibility Study**

Dear Dr. Axt:

As the Director of Government and Public Affairs for the Los Angeles chapter of the American Institute of Architects (AIA|LA), I am writing to share our profound support for Alternative 20 of the US Army Corps of Engineers (USACE) Los Angeles River Ecosystem Restoration Feasibility Study (Study).

Alternative 20 will deliver the best return for our investment and faciliates the greatest potential for catalyzing long-lasting benefits to our economy and well-being as citizens.

The Study area focus on a key 11-mile stretch of the 51-mile river near Downtown LA, which includes some of the region's most historically-underserved neighborhoods, will magnify investments already being made and attract future partnerships like never before. We know that large-scale investments in improving and strengthening our multi-benefit public infrastructure—like the LA River—send a strong message to people in communities throughout our region: that they deserve world-class public service and waterway revitalization worthy of a great global destination.

USACE has built a remarkable flood protection system that includes the LA River, but the environmental damage and community blight resulting from the river's channelization have become obvious. While the mission of the Study is ecosystem restoration and the USACE-preferred Alternative 13 minimally meets the Study objectives, Alternative 20 will clearly provide the most ecosystem restoration and will also provide *four times more jobs* and *three times more income* for only twice the investment as Alternative 13. Alternative 20 would provide over 9,000 direct jobs and add more than $1 billion direct dollars to the gross national product. Moreover, the Study estimates that, including effects from redevelopment, over 16,000 jobs and nearly $5 billion will result. Alternative 20 also reflects a more equitable cost-sharing partnership—with the local sponsor paying approximately 50% versus Alternative 13, which requires the local sponsor to pay almost 70%.

This Study has taken seven years to complete—at a cost of nearly $10 million—and its recommended project will take many more years to implement. However, we must now decide the extent of our commitment so that we may initiate the grassroots work it takes to achieve the most meaningful, expansive restoration in partnership with the federal government. We will not have another chance to make such a bold, sweeping statement in bringing nature back to our post-industrial laudscape.

An investment in the Study is an investment in our people—our residents, our workers, our students, our businesses, our families, and the community institutions that serve them. Because of this, AIA|LA supports Alternative 20 as the most appropriate plan. Fundamentally, we understand that transformation of the LA River will result in an improved regional quality-of-life and that its successes will be felt here and abroad for many years to come. AIA|LA looks forward to being a partner in that transformation.

Very truly yours,

Will Wright
Director, Government & Public Affairs
AIA Los Angeles

ARC

Alliance of River Communities

Arroyo Seco NC | Atwater Village NC | Boyle Heights NC
Eagle Rock NC | Elysian Valley Riverside NC | Glassell Park NC
Greater Cypress Park NC | Greater Echo Park Elysian NC
Historic Highland Park NC | LA 32 NC | Lincoln Heights NC
Los Feliz NC | Rampart Village NC | Silver Lake NC

October 25, 2013: Press Contact: Hector Huezo, H.L.Huezo@gmail.com

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

At a regular meeting of the Neighborhood Council Alliance of River Communities, the member representatives of the alliance consented on submitting the following resolution regarding U.S Army Corps of Engineers Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report:

WHEREAS, the Los Angeles River is the lifeblood of our community and a vital resource to be restored and protected; and

WHEREAS, in 2006, the Los Angeles City Council approved an agreement with the US Army Corps of Engineers (Corps) for the Los Angeles River Ecosystem Restoration Feasibility Study (Study); and

WHEREAS, in 2013, the Corps has developed a final array of four alternatives for the Study, and only Alternative 20 includes both significant restoration at the Los Angeles River's confluence with the Verdugo Wash near the City's border with the City of Glendale, and the only substantial western bank connection- providing a profound hydrological link between the Los Angeles State Historic Park and the river; and

WHEREAS, these two areas provide critical wildlife habitat connectivity to the Verdugo and Elysian Hills, respectively, and are included in the five key opportunity areas of the City Council-adopted Los Angeles River Revitalization Master Plan, which the US Congress directed the Corps to consider; and

WHEREAS, ***Alternative 20*** provides the most robust ecosystem restoration outcomes while also providing four times more jobs than the Corps-preferred alternative, and will thereby most appropriately redress historic environmental injustices that resulted from the river's channelization—providing new public access to natural open spaces, improving public health, stimulating regional and local economies, and enhancing the quality of life in Los Angeles

NOW, THEREFORE BE IT RESOLVED, that the Alliance of River Communities supports the selection and full implementation of Alternative 20 by the United States Army Corps of Engineers to restore our Los Angeles River.

Sincerely,
The Neighborhood Council Alliance of River Communities, ARC

Facebook.com/ARCLosAngeles | @ARCLosAngeles | ARC@EmpowerLA.org

Alternative Apparel

From: Emily Nerad
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] Alternative Apparel comment letter for Los Angeles River Ecosystem Study
Date: Sunday, November 17, 2013 8:31:07 PM

Sunday, November 17, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD -RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

My name is Emily Nerad and I am writing on behalf of the LA based brand Alternative Apparel. Earlier this year we met Karin Flores of Friends of the LA River who guided our design team on an educational tour of the River. After our first visit it became evident that the LA River is a truly special part of the community, culture and spirit of our hometown. We knew we wanted to do everything we could to educate our friends and partners about this hidden gem and put our efforts behind its revitalization in any way possible. We even chose to utilize the beautifully diverse setting of the River as the location to photograph our Spring 2014 lookbook, emphasizing the importance of embracing one's community.

This fall we hosted a presentation by Lewis McAdams of FoLAR, Dr. Carol Armstrong and the architects' collective behind the Piggyback Yard project at our DTLA Design Studio. We invited our friends, neighbors, press and colleagues to learn about the history of the river, their plans for revitalization and what Alternative 20 would mean for not only the LA River but also its surrounding communities. We now know the incredible impact these plans would have on recreational areas in current park poor neighborhoods, connectivity between waterways and ecosystems, native wildlife, and jobs, and we are dedicated to creating a better balance of our environment and urban community.

We appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. We're thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration. After receiving an introduction to the proposals from Dr. Carol Armstrong and reviewing the report in detail, we are providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, we found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with national initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership that recognize the importance of the LA River to habitats, species and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. city

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal and hydrology (205% greater than 13)

- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7,015 more jobs and $386 million more in wages during construction
    - Creates 3,700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1,094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to our City and us! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Emily Nerad on behalf of Alternative Apparel

Alternative Apparel
833 S. Spring Street, 4th Floor
Los Angeles, CA 90014
www.alternativeapparel.com

--

IMPRINT PROJECTS
EMILY NERAD

LOS ANGELES
436 NORTH FAIRFAX AVENUE
LOS ANGELES, CA 90036

NEW YORK
215 CENTRE STREET, 2ND FLOOR NEW YORK, NY 10013

T:(323) 782 9142 **M:**(213) 925 7485 **F:**(917) 591 6188

HTTP://IMPRINTPROJECTS.COM

ALI

ARIDLANDSINSTITUTE
@ Woodbury University
DESIGN INNOVATION AT THE NEXUS OF WATER, ENERGY, AND CLIMATE CHANGE

7500 Glenoaks Boulevard
Burbank, CA 91510
818. 394 3335 T
818. 767 8851 F

aridlands@woodbury.edu
www.aridlands.woodbury.edu

Friday, November 15th, 2013

Josephine Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, CA 90053-2325

ATTN: Ms. Erin Jones, CESPL-PD-RN

Re: Support for Alternative 20 in the USACE LA River Ecosystem Restoration Feasibility Study

Dear Dr. Axt:

The Arid Lands Institute (ALI) is a research, education, and outreach center of Woodbury University dedicated to water scarcity and design of the built environment. ALI's mission is to train design professionals and citizens to innovate in the face of hydrologic variability brought on by climate change. Our vision is an inspiring water-smart built environment in the US West serving as a model for drylands globally.

Nowhere is the opportunity for water-smart design leadership greater, or more necessary, than in our hometown of Los Angeles. ALI strongly supports Alternative 20 of the US Army Corps of Engineers (USACE) Los Angeles River Ecosystem Restoration Feasibility Study (Study).

As others have argued, Alternative 20 offers the greatest advantages in terms of ecosystem restoration and economic opportunity within the study area. From our vantage point as researchers and designers, it also offers the highest long-term potentials for transforming civic space and hydrologic function, city-wide. We support Alternative 20 for the following reasons:

1. Quality Public Space

As design professionals and educators working with architects, landscape architects, urban designers, planners, and public artists around the world, we recognize that Alternative 20 offers something no other alternative offers: the potential for high quality public space.

Alternative 20 offers continuity and connectivity across a ribbon of LA River and adjacent land that Alternative 13 does not. Continuity is critically important if the LA River is to realize its potential as a catalyst for healthy, accessible, attractive open space at the heart of the city, rather than as a series of disconnected nodes. Many cities, from Seoul to San Antonio to Providence, have transformed their economies, their civic identities, and their pride of place through continuous linear, riparian projects

running through their historic urban core. Likewise, New York's HighLine is oft-cited as a precedent for the kind of successful public space the river could support. Obviously none of these projects could have attained the success they did if realized as disconnected nodes. Public investment in Alternative 20 will be benefit Los Angelenos through increased mobility, access, and equity in historically important and ecologically sensitive stretches of the city, many of them underserved and isolated from open space access. Alternative 20 offers greater opportunity than other alternatives for small-scale micro development of neighborhood-scale public spaces to grow from it in the future.

2. Climate Adaptation and Sustainable Hydrologic Function:
Alternative 20 is the option that makes long-term sense in the context of resilience planning and climate adaptation. As climate change reduces snow pack levels that are the basis of LA's imported water supply, stormwater once perceived as waste and/or flood threat will be embraced as asset, a source of groundwater augmentation. Of the one-million acre-feet of stormwater that runs off LA's urban surfaces each year, less than half is captured for groundwater recharge; 520,000 acre-feet are sent as discharge to the Pacific Ocean each year.

ALI recently completed high-resolution geospatial modeling of the Upper Los Angeles River Watershed, commissioned by the World Water Forum and MWD. The study area focuses on the San Fernando Valley basin, the largest catchment area feeding into the LA River. ALI's model identifies precise locations across 200 square miles of the San Fernando Valley where stormwater can be plausibly harvested, stored, infiltrated, and treated using low-impact best management practices. The peer-reviewed model, using 30-year precipitation averages, suggests that 92,000 acre-feet can be harvested. (This is more conservative than the 120,000 acre feet suggested by the groundwater augmentation model developed by the U.S. Department of Interior, Bureau of Reclamation and Council for Watershed Health). This figure is significant not only in terms of water supply—92,000 acre-feet would meet the needs of 500,000 citizens, or half the population of the Valley, at current usage rates. It is also significant in terms of flood control: it represents a 20% reduction of stormwater loads on LA's flood control system as a whole.

The transformation of the LA River to a more permeable cityscape is one important part of a basin-wide climate adaptation strategy. More so than any other alternative, Alternative 20 will catalyze and accelerate LA's long-term investment in resilience—a more absorbent city, a less flood-prone city, and a city of vibrant public space adapted to life in drylands, one that models best practices for water-stressed environments globally.

Sincerely,

Hadley Arnold, Executive Director
Peter Arnold, Research Director

Arroyo Seco

ARROYO SECO FOUNDATION

570 W. Avenue 26, Suite 450, Los Angeles, California 90065-1011
(323) 405-7326 | www.ArroyoSeco.org

November 15, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

Re: Comments on Los Angeles River Ecosystem Restoration Feasibility Study

Dear Dr. Axt:

The Arroyo Seco Foundation is writing to express our strong support for Alternative 20 of the Los Angeles River Ecosystem Restoration Feasibility Study. We are a 501(c)(3) nonprofit organization in the Arroyo Seco subwatershed of the Los Angeles River, and our work strives for the preservation and enhancement of local waterways through watershed management projects, advocacy and community engagement. Initially founded by Charles Fletcher Lummis more than one hundred years ago, our current leadership has been actively championing sustainable natural resource management since the 1980s. Our members and supporters include experts of diverse backgrounds, including hydrology, biology, ecology, water resource management, and urban planning. We applaud the U.S. Army Corps of Engineers (USACE) for recognizing the importance of the Arroyo Seco Confluence for Los Angeles River restoration in the three major alternatives presented; however, we must consider the Study holistically, and only Alternative 20 succeeds in meeting the evaluation criteria.

The Area with Restoration Benefits and Opportunities for Revitalization (ARBOR) is situated in one of only three biodiversity hotspots in the United States, the California Floristic Province, which has been severely diminished by extensive urban and agricultural development. Biodiversity is key to ecological resiliency, and multiple current trends such as global climate change and population growth call into question how wildlife will adapt to future conditions in the nation's second largest city. It is vital to the health of our region that open space projects are designed to take into account and mitigate losses in biodiversity, and we need to promote conditions where more diverse species populations can thrive. Alternative 20 is the only alternative that includes both major confluences in the ARBOR, the Arroyo Seco and Verdugo Wash, and creates a direct hydrological linkage between the river and Los Angeles State Historic Park. The variety of habitat conditions created by Alternative 20 will best prepare the Los Angeles region for future climatic conditions by most completely and effectively restoring the ecological integrity of the Los Angeles River.

The Los Angeles River underwent sever ecological degradation as a result of the USACE's construction of a concrete-lined channel to reduce flood hazard risk by containing flood flows within

the main river channel. Today, after more than eighty years of neglect, the river still has immense potential to foster abundant biodiversity and provide habitat connectivity throughout the Los Angeles Basin and surrounding mountainous regions, while maintaining the same protecrion against flood hazards.

Concrete removal reconnects the river with soil and restores ecological processes dependent upon this condition. The reestablishment of wildlife corridors for birds and land animals addressed in the other alternatives is important, but we feel that all the niches and natural processes that create healthy ecosystems also need to be addressed. The hydrological interface between the river and Piggyback Yard introduced in Alternative 16 is a step in the right direction, but Alternative 20 more completely reconnects the river with its natural bed by restoring the Verdugo Wash Confluence and connecting 32 acres of existing parkland to the river. Alrernative 20 will also enhance the biological connection between Los Angeles State Historic Park on the west side of the Los Angeles River with the Arroyo Seco and its watershed on the east side. Alternative 20 is the only option that allows wildlife corridors to cross the river, breaching barriers such as the existing vertical channel walls and railroad facilities, and providing terrestrial linkages between the Los Angeles River, the Arroyo Seco and the Santa Monica Mountains.

As part of our program, the Arroyo Seco Foundation engages with community members to educate them about our natural heritage, ecology, and the need for sustaining healthy water resources. The Los Angeles River Watershed is home to remarkable socioeconomic disparity, with the communities in and around the ARBOR being some of its most disadvantaged and deficient in open space. We have found that this disconnection from nature fosters an environmentally careless society, and intervention is often necessary to instill environmental stewardship. Access to wildlife area is the most effective tool to accomplish this. Particularly with youth, exposure to uatural habitat through passive recreation and educational programs promotes a lifelong bond with nature that changes behavior. We envision new development paradigms that fulfill human needs in environmentally sensitive manners and move us away from a pattern of trying to undo the past, but we cannot expect to see that dream realized if our future decision-makers are raised in environments that alienate them nature. Alternative 20, with sites accessible from the urban centers of Los Angele and Glendale, is most effective and complete in moving us closer to that goal.

The picturesque landscape that the ARBOR occupies has historically attracted residents from all over the world; however, modern economic conditions and sociological phenomena have fueled a return to our urban cores, and Los Angeles is no exception. Proximity and a variety of sustainable transportation options make the ARBOR a place that will be both conveniently accessible and, more importautly, socially equitable in relation to changing land-use and transportation paradigms.

The ARBOR overlaps with other project areas rhat would magnify its environmental benefits and vice versa. The Santa Monica Mountains Conservancy's Rim of the Valley Corridor, now being studied by the National Parks Service for federal status, already connects the ARBOR with important wilderness areas in Sonthern California, including the Santa Monica Mountains, the Verdugo Mountains, and the Angeles National Forest. Likewise, the Juan Bautista de Anza National Historic Trail, which connects with Los Angeles State Historic Park, brings recreational users to the

ARBOR and, under Alternative 20, would present them with a river experience much closer to that of De Anza's expedition. The Los Angeles River Revitalization Master Plan and the Cornfields Arroyo Seco Specific Plan invite new development to the ARBOR and surrounding communities and underscore the need for the enhancement of open space and habitat restoration in the area.

Additionally, the USACE is preparing a similar ecosystem restoration feasibility study for the adjacent Arroyo Seco Watershed, which will restore eleven miles of the Arroyo Seco River. These restoration programs have the potential to restore a combined 22 miles of urban river, connecting the wildlife corridors of the San Gabriel Mountains directly with the Santa Monica Mountains, the Verdugo Mountains and downtown Los Angeles. Alternative 20 takes full advantage of the potential for ecosystem restoration and connectivity in an area that has seen severe environmental degradation over the past century. With the restoration of the Verdugo Wash Confluence, which is only available in Alternative 20, these two programs will complete a loop of habitat and wildlife connectivity.

Alternative 20 is the only complete, effective, efficient, and acceptable plan under consideration. Los Angeles Mayor Eric Garcetti and the Los Angeles City Council have expressed enthusiastic willingness to invest half a billion dollars in ARBOR restoration, and community support for river restoration is at an all-time high. On behalf of our members and all those who love the Los Angeles River, the Arroyo Seco Foundation calls on the USACE to approve Alternative 20 and authorize the funds required to make it a reality for millions of Angelenos and generations to come.

Sincerely,

Tim Brick

Tim Brick
Managing Director
tim@arroyoseco.org

Scott Cher

Scott Cher
Watershed Coordinator
scott@arroyoseco.org

Enclosures (2)
Rim of the Valley Study Area
Connectivity Concept Framework

Rim of the Valley Corridor Special Resource Study Area
National Park Service
U.S. Department of the Interior
Study Area
Arroyo Seco
Study area
Santa Monica Mountains National Recreation Area
Existing public lands
0
2.5
5
10 Miles

Arroyo Seco

4.1 CONCEPT FRAMEWORK

1. RECOVERING

- *Recovering the river corridor for providing an outline and structure for the infrastructure of green space.*

2. INTEGRATING

- *Integrating natural systems and building green streets for linking with the mountains and the river.*
- *Reconnecting the city and people to the river. Give the people access to a new, green, natural water's edge.*

Prepared by Yinglun Hu
yinglunh@usc.edu

Arthur Golding & Assoc.

ARTHUR GOLDING AND ASSOCIATES

ARCHITECTS URBAN DESIGNERS

15 November 2013

Josephine R. Axt, PhD, Chief, Planning Division
US Army Corps of Engineers, Los Angeles District
PO Box 532711
ATTN: Ms. Erin Jones CESPL-PD-RN
Los Angeles, California 90053-2325

via email: comments.lariverstudy@usace.army.mil

Reference: Los Angeles River Ecosystem Restoration Feasibility Study
Draft Integrated Feasibility Report

Dr. Axt:

I offer the following comments on the ARBOR study report. At the end of this letter I append a brief summary of my involvement over the past 25 years with the Los Angeles River and the double watershed of the Los Angeles and San Gabriel Rivers.

Resilience

While habitat restoration and connectivity is the principal focus of the present study (E.5.PlanningObjectives, 1.1.1 Purpose), flood protection remains a critical mission of the US Army Corps of Engineers (Corps) and a critical function of the river system. For the last 25 years, river advocates have proposed revitalizing the River while maintaining the existing level of flood protection, and this is a premise of the Los Angeles County Los Angeles River Master Plan of 1996 and of the City of Los Angeles Los Angeles River Revitalization Master Plan of 2007. The ARBOR study draft report also adopts this premise (1.1.1 Purpose). 1

Now in the context of climate change, with the proliferation of severe weather events, it is prudent to think beyond simply maintaining the current level of flood protection, and to seek ways to augment it. The existing channelized River is inflexible; its flood protection capacity is fixed. A reconfigured River with many open spaces, large and small, designed to accept stormwater and to reconnect the River to portions of its historic floodplain (1.1.1 Purpose) can also be designed to augment capacity to accommodate more severe and more frequent storms.

Implementation of any level of ecosystem restoration in the ARBOR reaches will be a multi-year undertaking, and during the next decade, both the Corps and the Flood Control District of the County of Los Angeles may well need to revisit their design storm assumptions. So, while maintaining the existing level of flood protection is the stated prerequisite for restoration in the draft report, including the potential to enhance flood protection is likely to be not only desirable but necessary. As land acquisition and design move forward, augmented flood protection can be incorporated into the reconfigured River. Alternative 20, which includes significantly more land acquisition and additional flood plain areas connecting to key tributaries, offers the best path toward a more resilient river system. 2

Here it is important for planners and policymakers to look forward. As large an undertaking as the proposed ecosystem restoration is, even under the most extensive alternate under consideration, it is only a beginning.,

2548 NORTH CATALINA STREET SUITE B LOS ANGELES CALIFORNIA 90027 213 622-5955 FAX 622-7615

Page Two

15 November 2013
Josephine R. Axt, PhD

Future ecological restoration and development of recreational open spaces incorporating flood management along the tributaries, at the estuary, in the upper reaches of the mainstem and even along some of the lower urbanized reaches, as rail operations evolve, will offer additional opportunities to revitalize the River while enhancing flood protection. Restoration along the Rio Hondo can offer flood risk mitigation for the lower reaches, reducing design flood flows and facilitating reconfiguration of portions of the channel and restoration of habitat. If one looks only at the four final alternatives identified in the ARBOR study, Alternative 20 may look large. If one looks at the magnitude of the task of revitalizing the River, it looks small. 3

Habitat Restoration and Connectivity

Both the Common Ground open space plan of 2001 and the Los Angeles River Revitalization Master Plan of 2007 call for continuous greenways and habitat connectivity along the River. While achieving this goal will require major investments over a long period of time, the ARBOR study and the implementation projects that will follow it represent the most significant opportunity to begin restoring habitat. Alternative 20 proposes more and larger habitat areas as compared with Alternative 13, and Alternative 20 includes restoration at the confluence of Verdugo Wash, which will enable valuable connectivity from the Verdugo Hills to Griffith Park. 4

Consistency with Local Plans

The Los Angeles County 1996 Los Angeles River Master Plan identifies the confluence with each tributary as a special site and calls for open spaces at each. The City of Los Angeles 2007 Los Angeles River Revitalization Master Plan calls for a continuous greenway along the entire River, as did the Common Ground open space plan of 2001. Only Alternative 20 addresses all the confluences within the study area and the extent of greenways adequately. 5

The 2004 Los Angeles River Master Plan Landscaping Guidelines and Plant Palettes, published by Los Angeles County and subsequently adopted by the City of Los Angeles, identifies a "short list" of 59 indigenous native plants for use along the River corridor and identifies native plant communities for consideration in adjacent restoration areas and other open spaces. The plant lists in the Design appendix of the draft report, while including some of the same species, do not appear consistent with Landscaping Guidelines document. 6

I strongly support Alternative 20, and I urge the Corps to reconsider its recommendation of Alternative 13. 7

Sincerely,

Arthur Golding AIA LEED AP

ARTHUR GOLDING AND ASSOCIATES

ARCHITECTS URBAN DESIGNERS

Arthur Golding AIA LEED AP

Arthur Golding first became involved with issues concerning the Los Angeles River in 1988, as part of a LA City Planning Department design charette for the City North area between Chinatown and Union Station. Working with other river advocates, he subsequently organized charettes for both the Taylor Yard and the Cornfields sites, involving dozens of design professionals. He was a founding board member of the Council for Watershed Health (nee Los Angeles and San Gabriel Rivers Watershed Council) and has served on the board continuously since 1996. He was a member of the planning team for the Common Ground: From the Mountains to the Sea open space plan for the double watershed of the Los Angeles and San Gabriel Rivers (2001), for the first Arroyo Seco Restoration Feasibility Study (2002), and for the Ballona Creek Watershed Management Plan (2003). He served as a member of the advisory group for the Los Angeles County Los Angeles River Master Plan of 1996, both during the planning phase and afterward. He served as a peer reviewer for the City of Los Angeles 2007 Los Angeles River Revitalization Master Plan. He has taught urban design studios focused on the Los Angeles River at the USC School of Architecture.

Arup

November 12, 2013

Josephine Axt, Ph.D., Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053-2325

Re: **Support for Alternative 20 in the USACE LA River Ecosystem Restoration Feasibility Study**

Dear Dr. Axt:

Arup is the creative force at the heart of many of the world's most prominent projects in the built environment and across industry. Founded in 1946 with an enduring set of values, our unique trust ownership fosters a distinctive culture and an intellectual independence that encourages socially and environmentally conscious project decision making. Arup has been contributing to the Southern California community since 1986 and sustains a mission to *Shape a Better World*.

On behalf of Arup, and as a recent resident of California, I pledge our support for Alternative 20 of the US Army Corps of Engineers (USACE) Los Angeles River Ecosystem Restoration Feasibility Study (Study) because it offers the greatest potential for catalyzing long-lasting benefits to our people and our local, regional, and national economies.

The Study area focus on a key 11-mile stretch of the 51-mile river near Downtown LA, which includes some of the region's most historically-underserved neighborhoods, will magnify investments already being made and attract future partnerships like never before. Our organization has seen how investments in infrastructure rooted in social wellness, like the New York City High Line Park, can have compounding benefits from future private investment and we believe this project offers the same benefits.

USACE has built a remarkable flood protection system that includes the LA River, but the environmental damage and community blight resulting from the river's channelization have become obvious. While the mission of the Study is ecosystem restoration and the USACE-preferred Alternative 13 minimally meets the Study objectives, Alternative 20 will clearly provide the most ecosystem restoration and will also provide *four times more jobs* and *three times more income* for only twice the investment as Alternative 13. Alternative 20 would provide over 9,000 direct jobs and add more than $1 billion direct dollars to the gross national product. Moreover, the Study estimates that, including effects from redevelopment, over 16,000 jobs and nearly $5 billion will result. Alternative 20 also reflects a more equitable cost-sharing partnership—with the local sponsor paying approximately 50% versus Alternative 13, which requires the local sponsor to pay almost 70%.

This Study has taken 7 years to complete—at a cost of nearly $10 million—and its recommended project will take many more years to implement. However, we must now decide the extent of our commitment so that we may initiate the grassroots work it takes to achieve the most meaningful, expansive restoration in partnership with the federal government. We will not have another chance to make such a bold, sweeping statement in bringing nature back to our post-industrial landscape.

An investment in the Study is an investment in our people—our residents, our workers, our students, our businesses, our families, and the community institutions that serve them. Because of this, Arup supports Alternative 20 as the most appropriate plan. Fundamentally, we understand that transformation of the LA River will result in an improved regional quality-of-life and that its successes will be felt here and abroad for many years to come. Arup looks forward to being a partner in that transformation.

Arup

Sincerely,

Keith Greville, P.Eng (Ontario), C.Eng (Ireland)

Associate, Arup

12777 West Jefferson Boulevard, Building D,

Los Angeles, California 90066

keith.greville@arup.com

Mobile – 206.228.7066

Audubon Center
Audubon
CENTER AT DEBS PARK

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

November 18, 2013

Dear Dr. Axt:

I am the director of the Audubon Center at Debs Park. The Audubon Center at Debs Park, operated by the National Audubon Society, is an environmental education and conservation center serving the greater Los Angeles area, with a primary focus on the communities of Highland Park, El Sereno, Lincoln Heights, Hermon, Cypress Park and Boyle Heights. Our mission is to provide Angelenos with opportunities for people to experience, understand, and care for the natural world. At Audubon we believe that where birds thrive, people prosper. Through our 15 years of work in this region of Los Angeles, we know, first-hand, the need for enhanced habitat and passive recreational spaces in this part of town, particularly along the Los Angeles River. Nowhere is the opportunity greatest to create a better place for wildlife and people than the Los Angeles River.

I appreciate the time and effort the United State Corps of Engineers and City of Los Angeles have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, Audubon believes this alternative to lack the comprehensive approach to ecosystem restoration that would provide the best quality and quantity of riparian and wetland habitat, while increasing habitat connectivity, ecosystem function, and recreation in balance with conservation.

Audubon believes that Alternative 20 provides the best ecosystem restoration of globally rare habitats. By its scope alone, Alternative 20 provides much more alteration of existing conditions than Alternative 13. The length of area restored channel is 2 times greater, with more than 3 times the concrete removed, and creating 131 more acres of restored habitat. In areas where little habitat has remained, these increases are very meaningful for native wildlife species, including birds. Additionally, by restoring a higher quantity of habitat, there is a reduction in the distance between the habitat

4700 North Griffin Avenue / Los Angeles, CA 90031 / Phone (323) 221-2255 / Fax (323) 221-2444 / debspark.audubon.org

nodes, which greatly enhances the effectiveness of the restoration, allowing for better movement between nodes.

Alternative 20 provides the best opportunities for connecting larger pieces of habitat within the Los Angeles River Watershed system. Inclusion of the Cornfields site and Verdugo Wash Confluence are vital corridors for the movement of both plants and animals. The Verdugo Wash Confluence connects the Verdugo Mountains with the Santa Monica Mountains and brings them together at the River. Already Los Angeles County Significant Ecological Areas, Griffith Park and the Verdugo Mountains will be greatly enhanced by this critical connection. Additionally, by including the Cornfields Site, further connections can be made between three of the City's largest urban, regional parks, Griffith Park, Elysian Park, and Debs Park. Debs Park along the Arroyo Seco is located only a few miles away from the confluence of the Arroyo Seco and the Los Angeles River, and provides connectivity to the Angeles National Forest, while Elysian and Griffith provides connectivity to the Santa Monica Mountains. These connections are critical for the health of the overall ecosystem.

From a hydrological perspective, we believe that the projects proposed in Alternative 20 are better for a variety of reasons. Firstly, these projects restore more hydrologic function by widening the main channel and tributaries at the Verdugo Wash confluence. Alternative 20 also widens the main channel in Glendale Narrows by converting trapezoidal walls to vertical on right bank, and terracing the left bank. Additionally, there is enhances hydrological connectivity at the Cornfield and Piggyback Yard sites that are not achieved in any other presented Alternative. The wetlands associated with both the Piggyback Yard and Cornfields will also provide great opportunities for improved water quality and groundwater recharge.

Through all of the described improvements, Alternative 20 provides the most and best habitat restoration by enhancing actual riparian functions and habitat values. Specifically, the Piggyback Yard treatment in Alternative 20 includes the elevation of the railroad segment to increase hydrologic and wildlife connections. The Cornfields site includes higher value habitats by terracing the bank and creating freshwater marsh. Overall, we believe that Alternative 20 is more sustainable and resilient over Alternative 13 because of the increased habitat size, quality, and connectivity. Alternative 20 presents a scenario where birds, and other wildlife, will thrive.

The Los Angeles River runs through some of the most park-deficient and low income communities in the City. The restoration of the Los Angeles River will benefit the people of Los Angeles. At Audubon, we believe that all Angelenos deserve to have access to nature in their neighborhood. We know that a connection to the natural world is vital to physical health, through recreational opportunities and improved air quality, and mental wellbeing. There are also numerous schools located along the River that could use new outdoor spaces to make classroom learning come to life, particularly about

Audubon Center

science. We know that this type of learning increases student productivity and improves test scores. All of these improved interactions also lead to greater civic engagement and lead to strong community connections. Alternative 20 provides the most possibilities for improved quality of life. Additionally, Alternative 20 by far provides the strongest economic improvements for Los Angeles, by increasing job opportunities. Alternative 20 will help the people of Los Angeles prosper, physically, mentally, and economically.

Although we strongly support Alternative 20, for any restoration scenarios and projects we offer this suggestion. Audubon has recognized 1,000 acres of Lower Los Angeles River, downstream from the ARBOR Study area, as an *Important Bird Area*. The Important Bird Areas Program, administered by the National Audubon Society in the United States, is part of an international effort to designate and support conservation efforts at sites that provide significant breeding, wintering, or migratory habitats for specific species or concentrations of birds. Sites are designated based on specific and standardized criteria and supporting data. 2

This 7-mile stretch of concrete channel along the LA River through north Long Beach, Compton and Paramount is one of the most important shorebird stopover sites in southern California.

Surveys conducted in 1999 and 2000 documented been 8000-15,000 birds per day between July and October, peaking in August and early September. NOTHING that is done upstream in the river should be allowed to compromise this critically important shorebird habitat that functions only because the water flow in the channel is not too much and not too little.

Restoration of the Los Angeles River is important for both the people and wildlife of Los Angeles! The communities that are found along the Los Angeles River, and the population, as a whole, deserve places that connect them with nature. We believe that Alternative 20 provides the best opportunity to restore this amazing urban ecosystem, leading to increased vitality of our communities. We urge the Corps and City to select Alternative 20 because it provides the best opportunity to re-envision our City and the nature found within.

Sincerely,

Jeff Chapman
Center Director, Southern California Conservation Leader
Audubon Center at Debs Park

Big Brand Water

From: Dan-Big Brand Water
To: Bergmann, Kathleen M SPL
Cc: Jones, Erin L SPL; SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Wednesday, September 25, 2013 1:06:00 AM

I am reviewing your publication entitled NLH Draft IFR for LA River Eco. Rest. Study that was posted on 9/13/2013.
My concerns with the project are improved water quality in the discharge water that reaches the oceans.

I have been selling water treatment equipment for about 20 years. The US ACE has been a valued customer of mine for many years.

My understanding is that there are four different alternatives being evaluated.
I am trying to understand from the documents here
http://www.spl.usace.army.mil/Media/PublicNotices/tabid/1320/Article/17994/spl-2013-003-nlh-draft-ifr-for-la-river-eco-rest-study.aspx

How each of the alternatives will improve water quality.

The report outlines the various sources of contaminants such as TSS (total suspended solids), PCE, TCE, selenium, pesticides, etc. in section 3.4.3.

I see constructions impacts on air quality outlined in the report.
Maybe I have overlooked key sections of the report. What I am trying to glean from the data provided is how each of the four methods plans to treat the contaminants in the water. The treatment technologies that will be used, and if we will be taking some or all of the urban runoff and putting them through some sort of purification process in both low flow and storm conditions. How much we project levels of these EPA regulated contaminants will be reduced in both low flow normal daily situations and in high flow storm situations.

Regards
Dan Saltsburg
Big Brand Water Filter, Inc.
2088 Anchor Court #B
Newbury Park, CA 91320
(888) 426-9488 ext. 101
(805) 480-1900 ext. 101
http://www.bigbrandwater.com

Please be advised that this email may contain confidential information. This email may contain proprietary information and/or copyright material. This email is intended for the use of the addressee only. Any unauthorized use may be unlawful.

Big Brand Water

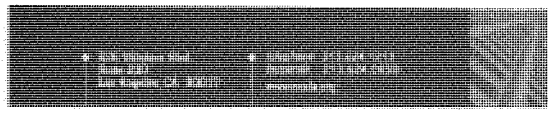
If you are not the intended recipient, please do not read, copy or re-transmit this email. If you have received this email in error, please notify us by email by replying to the sender and by telephone (call us collect at +1 818-340-7258) and delete this message and any attachments. Thank you in advance for your cooperation and assistance.

In addition, Big Brand Water Filter, Inc. and its subsidiaries disclaim that the content of this email constitutes an offer to enter into, or the acceptance of, any contract or agreement or any amendment thereto; provided that the foregoing disclaimer does not invalidate the binding effect of any digital or other electronic reproduction of a manual signature that is included in any attachment to this email.

CNPS

From: DODSON, SNOWDY D
To: SPL Comments LA River Study
Subject: [EXTERNAL] CNPS LA/SMM Chapter LA River Plan Comments
Date: Monday, November 11, 2013 2:22:34 PM

Nov. 11, 2013
Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
comments.lariverstudy@usace.army.mil
Dear Dr. Axt:
I am writing on behalf of the California Native Plant Society (CNPS), Los Angeles/Santa Monica Mountains Chapter to urge support for Alternative 20 outlined in the Army Corps of Engineers' Los Angeles River Ecosystem Restoration Feasibility Study which will determine the long term fate of restoration activity along an 11 mile stretch of the River from Forest Lawn through the Glendale Narrows and into downtown. Although several of the alternatives would widen the channel and increase habitat, we feel that number 20 will go for the gold and do the project to the fullest extent by connecting the River to the Los Angeles State Historic Park (aka the Cornfields) as well as to the Piggyback rail yard in Lincoln Heights and to the Verdugo Wash near Glendale. This will allow for not only more open space for human use but also provide for an expanded natural wildlife corridor and restored wetlands. Alternative 20 would provide the River area with the greatest amount of restored habitat resulting in the largest number and variety of native plants and also the most extensive removal of non-native plant species.
The California Native Plant Society (CNPS) is a non-profit organization of over 9,000 laypersons and professional botanists with 33 statewide chapters. Our mission is to increase the understanding and appreciation of California's native plants and to conserve them and their natural habitats through education, science, advocacy, horticulture and stewardship. The restoration of the Los Angeles River to a less degraded and more natural condition so that it has a large variety of native plants together with non-native species removal is a project that we have been involved in for many years. This opportunity to revitalize the River to the fullest extent will come around once, and we know that Alternative 20 will give the River the best possible chance at being a more functioning ecosystem.
Sincerely
Snowdy Dodson, Chapter President
Snowdy.dodson@csun.edu 818-782-9346



CCA

November 18, 2013

Josephine Axt, Ph.D., Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053-2325

Re: **Support for Alternative 20 in the USACE LA River Ecosystem Restoration Feasibility Study**

Dear Dr. Axt:

Established in 1924, the Central City Association (CCA) is Los Angeles' premier business advocacy association whose 450 members employ over 350,000 people in the Los Angeles region. On behalf of our members, I would like to express our support for Alternative 20 of the U.S. Army Corps of Engineers (USACE) Los Angeles River Ecosystem Restoration Feasibility Study (Study). This proposal offers the greatest potential for catalyzing long-lasting benefits to our residents as well as our local, regional, and national economies.

The project will restore hundreds of acres of habitat along an 11-mile stretch of river near Downtown Los Angeles. Alternative 20 envisions the most expansive ecosystem restoration of the L.A. River, and provides the greatest potential for economic development in the study area. It will create *four times more jobs* and *three times more income* for only twice the investment as Alternative 13, provide over 9,000 direct jobs, and add more than $1 billion of direct dollars to the gross national product. After taking into account the redevelopment of surrounding neighborhoods such as Downtown, it is estimated that over 16,000 jobs and nearly $5 billion in positive economic impact will result.

Furthermore, with Downtown Los Angeles in the midst of its own economic and cultural revitalization, this proposal will help solidify our city center into a regional destination for recreation and tourism. Alternative 20 is a more comprehensive program to integrate the waterway into city life, and will improve our quality of life by providing our growing residential community with more usable green space and parkways.

We look forward to partnering with you in the transformation of the L.A. River, and urge you to move Alternative 20 forward. Thank you for your consideration.

Sincerely,

Carol E. Schatz
President & CEO

CHATTEN-BROWN & CARSTENS
2200 PACIFIC COAST HIGHWAY
SUITE 318
HERMOSA BEACH, CALIFORNIA 90254
www.cbcearthlaw.com

TELEPHONE:(310) 798-2400
FACSIMILE: (310) 798-2402

E-MAIL:
DPC@CBCEARTHLAW.COM

November 18, 2013

Via E-mail (comments.lariverstudy@usace.army.mil)

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053–2325

Re: Support for Alternative 20 of the Draft Los Angeles River Ecosystem Restoration Feasibility Report

Dear Ms. Axt:

We provide these comments on the Draft Integrated Feasibility Report ("Feasibility Report"), which includes a Draft Feasibility Study and Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Los Angeles River Ecosystem Restoration Study.

Over many years, we have worked with various groups such as the Friends of the Los Angeles River, The River Project, and the Natural Resources Defense Council to revitalize and protect the Los Angeles River through inclusive planning, education and wise stewardship. We have helped them in their efforts to protect the few remaining natural portions of the Los Angeles River and to restore and enhance the remainder of the River and adjoining properties, while providing increased flood protection. Separately, we have joined these groups and others in a comment letter submitted today in support of choosing Alternative 20 in the Draft Integrated Feasibility Report.

We also join Mayor Garcetti and the Los Angeles City Council, along with the written comments submitted by Heal the Bay, the Trust for Public Land, the National Wildlife Federation, and Friends of Griffith Park, in support of Alternative 20. In considering the alternatives proposed, one must focus on the purpose of the Project:

> The primary purpose of the proposed project and alternatives considered in this Study is to restore approximately 11 miles of the Los Angeles River from Griffith Park to Downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the River to major tributaries, its historic floodplain, and the regional

> habitat zones of the Santa Monica, San Gabriel, and Verdugo mountain ranges while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem.

(Feasibility Report, p. 1-1.)

Unfortunately, Alternative 13, which has been identified in the Feasibility Report as the Tentatively Selected Plan, fails to provide adequate ecosystem restoration of the Los Angeles River. Alternative 13 does not restore vital wildlife corridors, as it does not provide a connection for wildlife between the Santa Monica Mountains, the Verdugo Mountains, and the San Gabriel Mountains.

Additionally, Alternative 13 fails to promote environmental justice for underserved communities in Los Angeles, as it does not bring open, green space to these neighborhoods. Alternative 20, on the other hand, would provide a hydrological link to the Los Angeles State Historic Park, and connect this park and the river with wetlands and habitat.

While the purpose of the Project is to restore 11 miles of the Los Angeles River, the Feasibility Report does not propose measures to address water quality. The Feasibility Report specifically states, "This project is not proposing measures to address water quality; any improvements will be ancillary to the project." (Feasibility Report, p. 2-20.)

Conclusion

We urge the U.S. Army Corps of Engineers to carefully reconsider its tentative selection of Alternative 13 and instead choose Alternative 20.

Pursuant to Public Resources Code Section 21092.2, we hereby request notification, by mail or e-mail, of any notices regarding this Project. Thank you for your time and consideration in this matter.

Sincerely,

Josh Chatten-Brown
Douglas P. Carstens

C.A.C.A.

From: Rick Eng
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comments on Los Angeles River Ecosystem Restoration Draft Integrated Feasibility Report
Date: Monday, November 18, 2013 11:11:19 PM

To: Josephine R. Axt, Ph.D., Chief, Planning Division, U.S. Army Corps of Engineers, Los Angeles District

Dear Dr. Axt:

Water is the source of life on Earth and rivers have made vital contributions to the growth and evolution of human communities as well as provide sustenance for the planet's ecosystems.

Since 1912, the Los Angeles Lodge of the Chinese American Citizens Alliance (C.A.C.A.), the nation's oldest civil rights and social advocacy organization serving Chinese American communities, has taken strong interest in the health and well-being of one of the world's most diverse and dynamic cities.

C.A.C.A. Los Angeles strongly supports the revitalization of Los Angeles River as envisioned through the U.S. Army Corps of Engineer's Alternative 20—the reintroduction of the 51-mile-long river into the fabric of the city as a cohesive presence that strengthens balance and expresses harmony between its natural and urban environments.

C.A.C.A. joins myriad environmental and community organizations, municipal agencies and civic leaders in support of the most complete revitalization of the Los Angeles River and the best hope for the people of Los Angeles and its environs. Alternative 20 includes measures in all eight reaches with channel widening at Verdugo Wash, Arroyo Seco, Cornfield/LA State Historic Park, and Piggyback Yard. Supporting the most robust river restoration proposal will ensure that conservation efforts can produce a viable water supply safe for recreational uses and consumption.

Returning the river to the Cornfield/LA State Historic Park holds significant importance for C.A.C.A. Los Angeles Lodge because it was one of the major groups to spearhead the efforts to preserve 32 acres of open space from commercial development for public enjoyment.

Historically, rivers and waterways elevated many of the world's great cities to economic and political prominence. The Seine and Paris, Thames and London and the Potomac and Washington, D.C. come to mind. C.A.C.A. Los Angeles hopes the revitalization project will help earn Los Angeles and its river similar deserved recognition.

The Los Angeles River restoration through Alternative 20 is major undertaking which we believe is worthy investment for the City of Los Angeles and its future generations of human and inhabitants.

Thank you for your attention.

Sincerely,

Rick Eng
Secretary
Chinese American Citizens Alliance (C.A.C.A.) Los Angeles Lodge
website: www.cacala.org

--
Rick Eng
email: rickeng562@gmail.com

CCS

November 15th, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Dr. Axt:

I am writing on behalf of Community Conservation Solutions (CCS) to urge your selection of Alternative 20 from the choices presented in the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report. CCS is a conservation organization dedicated to solving the complex challenges that occur where people and nature intersect. I led the acquisition and conversion to park space of the very first parcels of land along the L.A. River beginning in 1994, and CCS has a deep interest in the overall revitalization of the L.A. River.

We are particularly focused on the integrated goals of restoration of native habitat along the L.A. River, establishment of a connected trail system, and creation of easily accessible, regional public access to the river. Alternative 20 best achieves all of these goals, and best reflects the creative vision we in Los Angeles County have for the L.A. River. Your recommendation of Alternative 13 does not.

Alternative 20 is the best choice because it emphasizes "smart" green Best Management Practices, best reflects ecosystem restoration and re-creation based on historic habitats and would provide far greater amounts of restoration area as Alternative 13. Alternative 20 is also the best choice because it:

- Emphasizes connectivity between the L.A. River, Elysian Park, the Verdugo Wash, the Verdugo Mountains and the San Gabriel Mountains
- Includes Piggyback Yard, which will create wetlands, increase hydrologic and wildlife connections, and is truly restoration in the highest sense of that term
- Emphasizes restoration of the Cornfields site with badly-needed higher-value native habitats
- Would provide twice as much linear length of revitalized river, with a total of 6.4 miles
- Creates 131 more acres of restored habitat that Alternative 13
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives

We urge the Army Corps to select Alternative 20 as the final choice, because it provides the highest restoration value for the L.A. River and in an ecosystem-based way, best serves the communities of Los Angeles County, and best reflects long-term sustainability goals.

Sincerely,

Esther Feldman
President
Community Conservation Solutions

Council for Watershed Health

Council for Watershed Health

November 16, 2013

Dr. Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

ATTN: Ms. Erin Jones, CESPL-PD-RN

SUBJECT: Draft Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Dear Dr. Axt,

On behalf of Council for Watershed Health, I am pleased to submit our comments on the SPL-2013-003-NLH-Draft IFR for LA River Ecosystem Restoration Report dated September 2013. The Report is a much-needed analysis of ecosystem restoration for our iconic Los Angeles River. The Council is grateful to the United States Army Corps of Engineers for the time and consideration evidenced in the comprehensive Report.

At its September 26, 2013, meeting of the board of directors, Council for Watershed Health took a formal position in support of Alternative 20. Alternative 20 provides the maximal benefits and opportunities for ecosystem restoration for the Los Angeles River Watershed and we respectfully request the adoption by the federal government of this as the preferred Alternative. 1

Our knowledge of the aquatic and riparian habitat in the Los Angeles River Watershed is gained through our management, since 2007, of the Los Angeles River Watershed Monitoring Program. The program provides managers and the public with a more complete picture of conditions and trends in the Los Angeles River watershed. The objectives are to develop a watershed scale understanding of the status of surface waters and improve the coordination and integration of monitoring efforts for both regulatory compliance and ambient watershed condition. 2

Although monitoring results are reported annually, in 2013 the Council completed a comprehensive report of the first five years of monitoring. The Executive Summary highlights

700 N. Alameda St., Los Angeles, CA 90012
www.watershedhealth.org
Phone: 213.229.9945
Fax: 213.229.9952

several findings.[1] Relevant to the US Army Corps of Engineers Report, we found that biological communities in concrete-lined channels are highly degraded relative to the more natural sites in the upper watershed, also notably at the confluence points that are called out by the program as sites of significant interest. Importantly, the presence and condition of the surrounding riparian habitat was a stronger influence on river condition than water chemistry or toxicity. Thus, a comprehensive revitalization plan that includes maximal additional riparian habitat area, specifically at the confluences, is strongly supported. Increase in riparian area will have significant positive impact on the proximate aquatic habitats, multiplying the ecosystem benefit of the restoration. 2

In addition, water quality is one of many benefits that should be considered when restoring ecosystems. Alternative 20 outperforms Alternative 13 by virtue of its greater acreage of wetland marsh that would provide a cleansing effect on stormwater flow. Alternative 20 provides almost 50% more acreage of freshwater marsh habitat, and would therefore be more effective in helping to meet TMDL wet-weather targets especially for heavy metals (copper, lead, and zinc) and bacteria. 3

Following are some additional comments in support of our position. The Council looks forward to a Final Report that recommends Alternative 20 and, ultimately, to implementation of this very important ecosystem restoration project that will benefit the ecosystems and people of Los Angeles.

Sincerely,

Nancy L.C. Steele, D.Env.
Executive Director

[1] http://watershedhealth.org/Files/document/839_LARWMP_Four-page%20Summary_web.pdf

Specific Comments and Supporting Information:

I. Watershed-specific restoration and biological benefits: As stated in the Habitat Evaluation, Appendix G[2], "Restored ecosystems should mimic, as closely as possible, conditions that would occur in the area in the absence of human changes to the landscape and hydrology. Indicators of successful restoration include the presence of a large variety of native plants and wildlife, the ability of the area to sustain larger numbers of key indicator species or more biologically desirable species, and the ability of the restored area to continue to function and produce the desired habitat benefits with a minimum of continuing human intervention." We concur with this characterization and urge the US Army Corps of Engineers to take necessary steps toward this goal:

A. A multiyear effort to control highly invasive plants (e.g. *Arundo donax, Washingtonia filifera,* and *Pennisetum setaceum*) will be required to meet habitat restoration goals. Because there are significant infestations of invasive plants in the restoration area as well as upstream from the restoration area and because seed and rhizomes of these plants move downstream in heavy flows, attempts to establish native plants to meet the ecosystem restoration goals will fail if an invasive control program is not in place. Mapping, control, and monitoring should occur in both the Report area and infested headwater areas, and should occur prior, during, and post project development. 4

B. The listed Wetland and Riparian and Buffer/Transitional plants (Design: Appendix A[3]) do not thoroughly reflect the native plant communities that would have "occurred in the area in the area in the absence of human changes." As approved by the City of Los Angeles and referenced in the *Los Angeles River Revitalization Master Plan*[4], the *Los Angeles River Master Plan Landscape Guidelines and Plant Palettes*[5] details the watershed specific plant species that are native to this watershed. These vetted lists of native plants appropriate for habitat restoration are based on plant material records accessioned in herbaria. We request that the plant lists be modified to include species identified in the *Los Angeles River Master Plan Landscape Guidelines and Plant Palettes*. 5

C. The Council urges the US Army Corps of Engineers to require the use of plant material propagated from local historic populations (ecotypes), in particular because of the adjacency of the Report to Significant Ecological Areas, as identified by Los Angeles County. This best practice protects existing native plan populations from outbreeding depression by preserving 6

[2] Draft Habitat Evaluation Appendix G, page 10
[3] Draft Design Appendix A. Table 3.1 and 3.2
[4] City of Los Angeles, *Los Angeles River Revitalization Master Plan,* April 2007.
[5] Los Angeles County Department of Public Works. *Los Angeles River Master Plan Landscape Guidelines and Plant Palettes*. 2004.

genetic integrity. The Society for Ecological Restoration *Guidelines for Developing and Managing Ecological Restoration Projects*[6] states,

> *"Care should be taken to ensure that regional ecotypes of biotic resources are obtained to increase the chances for genetic fitness and to prevent introduction of poorly adapted ecotypes."*

The US Forest Service and the Genetic Resources Conservation Program at UC Davis have developed guidelines for selecting genetically appropriate plants for restoration projects.[7] Further justification for local requiring local ecotypes is outlined in a US Department of Agriculture Forest Service paper entitled *Is Genetic Management Important in Urban Landscapes?*[8] This document states that, "many animal species are sensitive to not only the species of plants that they use for food or other purposes, but to specific qualities of certain populations... some animals are selecting, and perhaps are co-adapted with, genetically based features of the plant species – features that vary across a natural range." Requiring local ecotypes is referenced in Section 7.0 of *Los Angeles River Master Plan Landscape Guidelines and Plant Palettes* and should be made explicit in the final Repot. 6

D. Council for Watershed Health leads the *Native Seed Resources Coalition*, which in March 2012 initiated an effort to strengthen the reliable supply of locally native plants for restoration and public landscaping projects in Southern California, especially the Los Angeles River. The Coalition comprises ecologists, horticulturists, land managers, landscape architects, engineers, planners, seed collectors, and native plant nurseries that are working to increase availability of watershed-specific native plants. We encourage the US Army Corps of Engineers to participate in this Coalition in order to learn from practitioners in the field and participate in proposing improved policies for the Los Angeles River Watershed. 7

II. Regional Economic Development benefits. We understand that Regional Economic Development (RED) benefits are often examined in less detail for most water resources planning projects than National Economic Development (NED) benefits or National Ecosystem Restoration (NER) benefits. However, a more recent Corps narrative and indeed one of the objectives for revising the Principles & Guidelines is for greater emphasis on non-traditional factors in the planning of water resources projects, with greater consideration for the environment, social effects, and public safety by using "assessment methods that reflect the 8

[6] Society for Ecological Restoration. *Guidelines for Developing and Managing Ecological Restoration Project,* 2nd Edition. December 2005.

[7] Montalvo, Arlee M., Rogers, Deborah L., *Genetically Appropriate Choices for Plant Materials to Maintain Biological Diversity.* December 31, 2004.

[8] United States Department of Agriculture, 2006. Is Genetic Management Important in Urban Landscapes? http://www.fs.fed.us/wildflowers/nativeplantmaterials/documents/genetics_Vol_12.pdf

value of projects for low-income communities."[9] Indeed, a US Army Corps of Engineers Engineering Circular, EC 1105-2-409, "Planning in a Collaborative Environment," places a much greater emphasis on the broad range of considerations in planning besides the NED effects,[10] and, ostensibly, besides the NER effects. To this end, the results of the RED analysis are included in the Report but don't seem to be used in the decision of a Tentatively Selected Plan (TSP). The RED comparisons between Alternative 13 and Alternative 20 are actually staggering (all figures approximate, drawn from Table 8-49 of Appendix B of the Report):

a. In the category of construction impacts related to ecosystem features, there is an approximate increase of 450%: in Jobs from 2,000 to 9,000, in Labor Income from $114M to $518M, in Sales from $274M to $1.2B, and in the Gross Regional Product from $160M to $724M.

b. In the category of construction impacts related to redevelopment, there is an approximate increase of 400%: in Jobs from 1,280 to 5,100, in Labor Income from $85M to $336M, in Value from $116M to $460M, and in Output from $193M to $767M.

c. In the category of long-term economic impacts related to redevelopment, there is an approximate increase of 400%: in Jobs from 675 to 2,675, in Labor Income from $965M to $3.8B, and in Local Taxes from $5.8M to $23M.

8

In today's economy, with the Administration calling for increased spending on infrastructure because it "creates jobs, it puts people to work,"[11] this differentiation in RED benefits among the alternatives must not be ignored.

III. Other Social Effects benefits. EC 1105-2-409, "Planning in a Collaborative Environment," mentioned above, also puts a greater emphasis on the importance of social factors in plan selection. The Draft Report contains a paragraph indicative of the importance of the Other Social Effects (OSE) account:

9

> "Social effects in a general sense refer to a concern for how the constituents of life that influence personal and group definitions of satisfaction, well-being, and happiness are

[9] US Army Corps of Engineers, 2011. *Regional Economic Development (RED) Procedures Handbook.* Institute of Water Resources Report 2011-RPT-01. March, 2011.
[10] Ibid.
[11] New York Times, 2013. *"Obama, Under Health Law Cloud, Hits Road to Push New Public Works."* Article by Campbell Robertson, published November 8, 2013. http://www.nytimes.com/2013/11/09/us/politics/obama.html?_r=0

affected by some condition or proposed intervention. Well-being is an ensemble concept composed of multiple dimensions. While economic factors are very important in characterizing well-being there are many more factors which come into play. In particular the distribution of resources; the character and richness of personal and community associations; the social vulnerability and resilience of individuals, groups, and communities; and the ability to participate in systems of governance are all elements that help define well-being."[12]

Per the Corps of Engineers' guidance in applying OSE analyses to plan selection,[13] the Draft Report also contains numerous examples where these social effects—health and safety, economic vitality, social connectedness, community identity, community participation, and recreational activities—are improved across the array of alternatives. Admittedly more difficult to model quantitatively, this Report nevertheless includes a myriad of examples and investigative data supporting the connection and relevance of habitat, environmental health, and recreation to the very factors considered in an OSE analysis. It is clearly stated that the scale of the respective alternatives supports the differentiation between them. And so, the increases in economic development, mentioned above, as well as an increase of 22% in the amount of habitat alone from Alternative 13 to Alternative 20, provides support for determining that Alternative 20 would result in the greatest increase in OSE benefits. 9

IV. Use of IWR-Plan as a sole indicator of economic benefits. Alternative 20 is a "Best Buy," according to the IWR-Plan terminology. The additional cost of Alternative 20 over Alternative 13, however, still produces a valid return on the investment albeit with diminishing returns. This is typical of incremental analyses, of course, but doesn't mean that Alternatives 16 or 20 are not cost effective. We would expect that even if only IWR-Plan were used as a criterion for decision-making, as it appears to have been, the additional value of larger alternatives that were still cost-effective would provide justification for their selection. Through review of the alternative matrix and additional plan formulation information in the Report, there were numerous other "Best Buy" and cost effective alternatives that were identified, e.g., tunneling and underground storage, but that were discounted due to reasons including cost considerations. Because of this, Alternative 20 does not truly rank as "the most expensive alternative" and should not be viewed as such. 10

V. Specific recommended technologies. We are concerned with call-outs for the use of specific technologies, which may be supplanted by competing or improved technologies in the future. We recommend the Final Report identify the recommended outcome and allow specific 11

[12] Draft Economic Appendix B, page 93.

[13] US Army Corps of Engineers, 2013. *Applying Other Social Effects in Alternative Analysis.* Institute for Water Resources, Report 2013-R-03. April 2013.

technologies to be selected as part of the design process. As an example, the Report recommends the use of turf reinforcement mats (TRM) or other permanent non-biodegradable geotextile fabrics in habitat restoration projects. Where we have seen these used in non-turf environments, the plastic netting often becomes exposed when mulch and topsoils degrade. They are unsightly, easy to trip on, and birds, small mammals often get snagged and die in the material. Temporary biodegradable rolled erosion control products provide significant benefits without the potential cost to aesthetics, public safety, or wildlife and provide the necessary erosion control while deep-rooted native plants are established. 11

DLANC

DLANC Downtown Los Angeles Neighborhood Council

Erin Jones
Biologist
U.S. Army Corps of Engineers
Los Angeles District
erin.l.jones@usace.army.mil

Dear Ms. Jones,

The Joint River Oversight Committee, a standing committee of both Boyle Heights and Downtown LA neighborhood councils, held an open public meeting Mon Oct 28, 2013. The two neighborhood councils represent both sides of Downtown LA and the accompanying bridges.

The four main proposals from the 500 page Draft IFR were presented to the public in a manner similar to your multimedia presentation on Oct 17 at FOLAR. We showed the Southern California ecosystem and explained the reasons you support Alt 13 and the Mayor supports Alt 20.

Our committee collected public comments and a neighborhood "vote". Here are our findings for your review:

1) After seeing the complexity of the review materials, the public felt that the comment period is prohibitively short and did not allow for a proper assessment of the 4 plans. Therefore, we agreed to focus on Alt 13 and Alt 20. 1

2) We noted that Alt 13 does not come to Downtown LA; therefore there would be no direct impact on our area. We noted that the 6th street Bridge project is a companion federal project, and will have GREAT impact on this area--therefore we noted there is a troubling disconnect between Alt 13 and the "local" River (bridge) project. Even Alt 20 barely addresses Downtown LA's complex situation. 2

4) We noted that Alt 20 is the only plan which ties together a true, connected ecological restoration of the Southland AND the remarkable social capital and 2nd hand benefits of increased tourism and media activity along the proposed restored areas. We also noted that "social capital" was NOT listed as an ecological benefit, meaning your graphs and cost breakdowns were unintentionally weighted *against* it and therefore inaccurate.

5) We noted that the matching funds in the larger proposal correspond more closely with the typical 50-50 fed/local splits that happen in other projects of this type. That said funding will take place over time, giving LA and Federal Government opportunities to "grow back" the money and make this a true infrastructure investment.

6) The committee also was in unanimity that the consensus to support the broader Alternative 20 best represented all communities and the political leadership and environmental groups. 3

7) We also discussed that Alternative 20 is the only proposal that would enhance the ties between the river and Los Angeles State Historic Park by creating wetlands and a marsh that connect the river to the park.

8) After reviewing the materials, we voted in favor of supporting Alt 20. We feel that Downtown LA, and the entire Southern California area, would benefit from the increased flood control and wildlife activity. This is in addition to the social capital that would indirectly be accrued.

With this in mind, the Downtown LA Neighborhood Council Board and the Boyle Heights Neighborhood Council Board jointly support the Mayor's office, and River Proposal Alternative 20.

This letter was approved by the DLANC Board of Directors on November 12, 2013.

Thank you for your time.

Patti Berman
President
DLANC

Joint River Oversight Committee
Geza Gedeon, Chair

Drennan Enterprises
Drennan Enterprises
4635 Atoll Avenue
Sherman Oaks, CA 91423
310 384 8240
michael@mdrennan.com

November 17, 2013

Dr. Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325Dr.

ATTN: Ms. Erin Jones, CESPL-PD-RN

SUBJECT: Request to Select Alternative 20 in the Draft Los Angeles River Ecosystem Restoration Feasibility Report

Dear Dr. Axt:

Thank you for your tremendous effort over the past several years in bringing the subject report to fruition. The importance of the restoration of the ecosystem of the Los Angeles River cannot be overestimated, for the region, or the nation. This river feeds and drains the most populous county in the United States. Over 10 million people who are a part of this ecosystem will benefit from the vision your plan clearly defines.

I believe the report should be concluding with a selection of Alternative 20 as the recommended alternative. It appears the recommendation for Alternative 13 is completely based on the economic analysis of costs per habitat unit. Throughout the report, tables and graphs indicate respective outputs as the planned features incrementally increase across the alternatives. I understand how the graphs show that the bulk of the habitat units—almost 6,000 average annual habitat units (AAHU)—are realized by $21M in annual cost, and that less than 1,000 AAHU more would cost an additional $30M in annual cost. I agree that—purely through the use of the incremental analysis tool, IWR-Plan—the larger alternatives appear to be less cost effective. However, I suggest the Corps of Engineers has not considered numerous other indicators in your decision-making as outlined below.

As the owner of a small business within Los Angeles, I strongly encourage you and your organization to reconsider your recommendations, and select Alternative 20, for the following reasons:

1) Regional Economic Development benefits. I understand that RED benefits are often examined in less detail for most water resources planning projects than National Economic Development (NED) benefits or National Ecosystem Restoration (NER) benefits. However more recent Corps narrative and indeed one of the objectives for revising the Principles & Guidelines is for greater emphasis on non-traditional factors in the planning of water resources projects, with greater consideration for the environment, social effects, and public safety by using "assessment methods that reflect the value of projects for low-income communities."[1] Indeed, your own Engineering Circular, EC 1105-2-

Drennan Enterprises
Drennan Enterprises
4635 Atoll Avenue
Sherman Oaks, CA 91423
310 384 8240
michael@mdrennan.com

409, "Planning in a Collaborative Environment," places a "much greater emphasis on the broad range of considerations in planning besides the National Economic Development (NED) effects," and, ostensibly, besides the NER effects. To this end, the results of the RED analysis are included in the report but don't seem to be used in the decision of a Tentatively Selected Plan (TSP). The RED comparisons between Alternative 13 and Alternative 20 are actually staggering (all figures approximate):

a. In the category of construction impacts related to ecosystem features, an increase in Jobs from 2,000 to 9,000, in Labor Income from $114M to $518M, in Sales from $274M to $1.2B, and in the Gross Regional Product from $160M to $724M – *all representing a 450% increase.*
b. In the category of construction impacts related to redevelopment, an increase in Jobs from 1,280 to 5,090, in Labor Income from $85M to $336M, in Value from $116M to $460M, and in Output from $193M to $767M – *all representing an approximate 400% increase.*
c. In the category of long-term economic impacts related to redevelopment, an increase in Jobs from 2,670 to 675, in Labor Income from $965M to $3.8B, and in Local Taxes from $5.8M to $23M – *all representing an approximate 400% increase.*

In today's economics, with ongoing discussion of additional stimulus authorities, and with the Administration calling for increased spending on infrastructure because it "creates jobs, it puts people to work,"[2] this differentiation in RED benefits among the alternatives cannot be ignored.

2) Use of IWR-Plan as a sole indicator of economic benefits. All of the final array alternatives including Alternative 20 are indeed cost effective—"Best Buys," in fact, according to the IWR-Plan terminology. So the additional cost over Alternative 13 still returns a valid return on the investment albeit with diminishing returns. This is typical of incremental analyses, of course, but doesn't mean that Alternatives 16 or 20 are not cost effective. I would expect that even if only IWR-Plan were used as a criterion for decision-making, as it appears to have been, the additional value of larger alternatives that were still cost-effective would provide justification for their selection. Through review of the alternative matrix and additional plan formulation information in the report, there were numerous other "Best Buy" and cost effective alternatives that were identified, e.g., tunneling and underground storage, but that were discounted due to reasons including cost considerations. Because of this, Alternative 20 does not truly rank as "the most expensive alternative" and should not be viewed as such.

3) Other Social Effects benefits. EC 1105-2-409, "Planning in a Collaborative Environment," mentioned above, also puts a greater emphasis on the importance of social factors in plan selection. The Draft report contains a paragraph exactly indicative of the importance of the Other Social Effects (OSE) account:

> "Social effects in a general sense refer to a concern for how the constituents of life that influence personal and group definitions of satisfaction, well-being, and happiness are affected by some condition or proposed intervention. Well-being is an ensemble concept composed of multiple dimensions. While economic factors are very important in characterizing well-being there are many more factors which come into play. In particular the distribution of resources; the character and richness of personal and community associations; the social vulnerability and

Drennan Enterprises
Drennan Enterprises
4635 Atoll Avenue
Sherman Oaks, CA 91423
310 384 8240
michael@mdrennan.com

resilience of individuals, groups, and communities; and the ability to participate in systems of governance are all elements that help define well-being."

Per the Corps of Engineers' guidance in applying OSE analyses to plan selection, the Draft Report also contains numerous examples where these social effects—health and safety, economic vitality, social connectedness, community identity, community participation, and recreational activities—are improved across the array of alternatives. Admittedly more difficult to model quantitatively, your report nevertheless includes a myriad of examples and investigative data supporting the connection and relevance of habitat, environmental health, and recreation to the very factors considered in an OSE analysis. It is clearly stated that the scale of the respective alternatives supports the differentiation between them. And so, the increases in economic development, mentioned above, as well as an increase of 22% in the amount of habitat alone from Alternative 13 to Alternative 20 provides support for determining that Alternative 20 would result in the greatest increase in OSE benefits.

4) Water Quality. While not a direct mission of the Corps, water quality is of course of concern. Here, again, Alternative 20 outperforms Alternative 13 by virtue of its greater acreage of wetland marsh that would provide a cleansing effect on surrounding stormwater flow. It provides almost 50% more acreage of freshwater marsh habitat, and is more effective in helping to meet TMDL wet-weather targets especially for heavy metals (copper, lead, and zinc) and bacteria. The percentage of constituent concentration reduction required to meet TMDL targets that is achieved by in-stream freshwater marsh habitat is expected to be approximately 75% higher in Alternative 20 compared to Alternative 13. This truly speaks to multi-objective planning.

Thank you very much for your consideration. I look forward to hearing of the final decision, and look forward to a change in the Tentatively Selected Plan to Alternative 20.

Sincerely,

Michael Drennan

Michael Drennan
President
Drennan Enterprises, Inc.

Ecotone Studios
ecotone studios

2272 Colorado Boulevard #1366
Los Angeles, CA 90041
(323) 739-6054
info@ecotonestudios.com
www.ecotonestudios.com

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District, P.O. Box 532711

RE: Los Angeles River Ecosystem Restoration Study

Dear Josephine R. Axt,

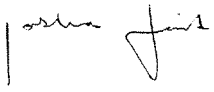
I am writing in regards to the *Draft Integrated Feasibility Report* for the *Los Angeles River Ecosystem Restoration Study* released on September 13, 2013. I have admittedly only glanced through the lengthy document so I do not have detailed comments related to specific content. Rather, I do have a few general comments I would like to submit.

The implementation of the selected design alternative should not preclude, impede, or in any way hinder the future purchase, donation or other acquisition of river-adjacent lands for purposes of floodplain expansion. While habitat restoration is admirable and of great importance, restoring watershed function is the more significant issue facing the Los Angeles region and, in addition to habitat restoration, includes increased flood protection, sediment transport, local water supply, etc., especially in the wake of future climate change. It is clear that the City is interested in encouraging development along the River corridor as mentioned in *Item 3.1.1* on *Page 11* of the *Draft Economic Appendix*. Given my concerns mentioned earlier in this paragraph, I would hope that the Corps might recommend against future development in the L.A. River floodplain, especially in currently "under-developed" areas adjacent to the channel, if not for the sake of flood protection alone. 1 2

Also of concern is public access to the River. While browsing through the document, I noticed a number of proposed channel wall modifications, particularly in the Elysian Valley reach. This area saw a very successful pilot season for kayaking this past Summer and any modifications that would preclude such access and recreation would ultimately be detrimental to ongoing restoration efforts and to the education of many future River enthusiasts. 3

Thank you very much for accepting my comments and I look forward to following the further development of this study.

Sincerely,



Joshua Link, Principal
ASLA | LEED AP | PLA #5503

Office: (323) 739-6054
Mobile: (626) 862-6774
Email: j.link@ecotonestudios.com

EVAC

2041 BLAKE AVENUE, LOS ANGELES, CA 90039 323-664-0202 EIN: 35-234623 www.evartscollective.com

BOARD OF DIRECTORS

TRACY STONE, PRESIDENT PATRICIA PEREZ, VICE PRESIDENT ALLEN ANDERSON, TREASURER EDWINA DEDLOW, SECRETARY

BOARD MEMBERS: KATRINA ALEXY, DAVID DEDLOW, BILL LAGATUTTA, HELEN LEUNG, DAIN OLSEN, DAMIAN ROBLEDO

November 17, 2013

Josephine R. Axt, Ph.D; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Attn: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
Comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

I am writing to you as a 10-year resident of Elysian Valley, and as the President of the Board of Directors of the Elysian Valley Arts Collective (EVAC). I both live and work in Elysian Valley, one block from the Los Angeles River. I operate my architecture business, Tracy A. Stone Architect, at the corner of Knox and Blake Ave.

The EVAC is an educational and professional Association formed to promote the arts and the profession of those arts in Elysian Valley, CA.; to organize and manage the Frogtown Artwalk, a yearly self-guided tour of the artist/artisans' studios in Elysian Valley; to promote knowledge of, and to stimulate interest in and appreciation of, the creative arts in the community; and to encourage interest in the arts for our youth. The EVAC is comprised of over 50 individuals and businesses located in Elysian Valley. We identify strongly as a river-front community, and we work hard to raise awareness of the importance of the health of the river to our residents and businesses.

I appreciate the time and efforts the Corps and the City have expended to prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am so happy that the Corps and the City have worked with the community to restore the river.

The EVAC has reviewed the report, and we understand that each of the proposals under consideration have the same intent with respect to habitat restoration in our neighborhood. However, we are writing to express support for the Alternative 20 presented in the document. This alternative offers more comprehensive restoration that will benefit the river as a whole, and therefore ALL the neighborhoods bordering the river.

We believe that Alternative 20 is superior to Alternative 13 for the following reasons:

- Better connectivity for wildlife migration, seed dispersal and hydrology
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh

EVAC

2041 BLAKE AVENUE, LOS ANGELES, CA 90039 323-664-0202 EIN: 35-234623 www.evartscollective.com

BOARD OF DIRECTORS

TRACY STONE, PRESIDENT PATRICIA PEREZ, VICE PRESIDENT ALLEN ANDERSON, TREASURER EDWINA DEDLOW, SECRETARY

BOARD MEMBERS: KATRINA ALEXY, DAVID DEDLOW, BILL LAGATUTTA, HELEN LEUNG, DAIN OLSEN, DAMIAN ROBLEDO

- Cornfields provides connection to the Elysian Park
- Reduction of distances between habitat nodes
- It is more similar to the ecosystem that historically existed prior to the channel
- More concrete is removed
- More acres of restored habitat
- More likely to be sustainable and resilient over the life of the project
- Provides more jobs

Restoration of the Los Angeles River is crucial to us as a city, and to our neighborhood specifically. It will help to redress the intense destruction and overdevelopment in our city.

We urge the Corps and the City to select Alternative 20 because it provides the best restoration and the most sustainable project for the future.

Sincerely,

Tracy Stone AIA LEED AP BD&C

President
Elysian Valley Arts Collective

Enterprise

Enterprise®

November 18, 2013

Josephine R. Axt, Ph.D., Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711, ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
Via email at comments.lariverstudy@usace.army.mil

Re: Comments on Los Angeles River Ecosystem Restoration Draft Integrated Feasibility Report

Dear Ms. Axt and Ms. Jones:

I am writing on behalf of Enterprise Community Partners to join our mayor, our political leaders, fellow members of the Federal Urban Waters Partnership, numerous other organizations, and fellow citizens to express our unified voice in advocating for the selection of Alternative 20 as presented in your draft feasibility report.

Enterprise Community Partners is a mission-driven nonprofit with more than 30 years of success investing in community development that achieves a sustainable balance between urban and natural systems, at the parcel level for real estate projects, but also more broadly at the scale of water resource protection, watershed health and the network of habitat corridors impacted by urban development. Our investments include a number of projects along the Los Angeles River and in the feasibility report study area, and we see first hand how a coordinated effort at restoration could integrate the river into existing green space, provide vital support for endangered species and ecosystems, and connect those of us who live and work nearby to a resource that uplifts and even heals Los Angeles' diverse community of human residents as well. By studying options for a much-needed upgrade of stormwater infrastructure, we also see a once in a lifetime opportunity to do more than address flood control and stormwater management. We have a chance to act comprehensively to restore the multitude of functions that healthy waterways can play in our urban areas. Today, because of the functional success of our current flood control system, the Los Angeles River acts to divide, isolate, and interrupt the natural flow and access to potentially abundant natural resources within the region. Upon reviewing your study, we believe that Alternative 20 is our best chance to change that.

While not the primary objective of restoration, we cannot deny the enduring economic and community benefits that Alternative 20 offers, both in terms of jobs, but also as an opportunity to redress some of the environmental and social injustices that have resulted from the paving of the river in the past. Alternative 20 will lift up both the natural habitat and people of Los Angeles, and we look forward to joining the Army Corps for once in a lifetime leadership in doing just that.

Sincerely,

Jeff Schaffer
Vice President
Southern California Market Leader
ENTERPRISE COMMUNITY PARTNERS, INC.
600 Wilshire Boulevard ▪ Suite 600 ▪ Los Angeles, CA 90017 ▪ 213.833.7988
101 Montgomery Street▪ Suite 1350 ▪ San Francisco, CA 94104 ▪ 415.395.9405
www.EnterpriseCommunity.org

EN

Environment Now®
Action. Results. Change.

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

November 15, 2013

Dear Dr. Axt:

I write on behalf of Environment Now (EN). EN is a family foundation based in Los Angeles since 1989 and dedicated to seeing measurable improvement in ecosystem protection and restoration. We have worked with partners for over twenty years to improve water quality in the LA River and to reduce our region's dependency on source waters. We have found that as Angelenos become more connected to their local waterways, they become more conscientious about where their water comes from and how to best conserve water. Additionally, our staff and partners enjoy the river as a recreational area, an urban wildlands attraction, as well as a reclamation and potentially water re-use channel. We are dedicated to creating a better balance of our environment and urban community.

EN appreciates the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. We are thrilled that the Corps and City have worked with local water advocates to be on the same side of the Los Angeles River Ecosystem Restoration! Our colleagues have reviewed the report in detail and developed comments, which we endorse in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, EN found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat

EN

- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
- The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to EN and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

FilmL.A. Inc.

November 7, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711,
Los Angeles, CA 90053-2325
ATTN: Ms. Erin Jones, CESPL-PD-RN
comments.lariverstudy@usace.army.mil

RE: Comment on Los Angeles River Ecosystem Restoration Feasibility Study

Dear Dr. Axt,

FilmL.A. is a private, 501(c)4 not-for-profit organization established for the public benefit. We coordinate and process permits for on-location motion picture, television and commercial production under contract to public-sector clients including the City of Los Angeles and the County of Los Angeles. FilmL.A. was created when the City and County of Los Angeles decided to privatize their film permit offices. FilmL.A. is funded primarily by permit coordination fees paid by production companies

The Los Angeles region is considered the entertainment production capital of the world. Much of the region's film production takes place not on a sound-stage, but rather in one of L.A.'s many diverse neighborhoods. Your agency knows, of course, that the Los Angeles River is a common shooting location.

FilmL.A. endorses Alternative 20 for the L.A. River Ecosystem Study as the most appropriate plan for the future of the Los Angeles River and consequentially, the economy of the region. We believe that habitat restoration and new and improved passive recreation areas will create many new locations to entice filmmakers, and that the resulting media images will have a positive effect of nurturing local environmental stewardship as well as boosting tourism to the region. Our own FilmL.A. employees have volunteered to pull trash at the annual river cleanup event for the past few years. Many of them live in the Los Angeles River watershed and feel passionately about improving it.

Recently, the beautiful, natural-bottom areas of the river have begun to appear in featured in films, television, and music videos. We encourage the choice of Alternative 20 to make the river a beautiful natural backdrop for increased on-location filming in Los Angeles, increased tourism, and improved public health for Angelenos.

Sincerely,

Paul Audley
President

6255 Sunset Blvd., 12th Floor, Hollywood, CA 90028 T. (213) 977 8600 F. (213) 977 8610 www.FilmLA.com

FoLAR-1

Friends of the Los Angeles River

November 18, 2013

Josephine R. Axt, Ph.D.;
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Dr. Axt

On behalf of the Friends of the Los Angeles River (FoLAR), I am pleased to submit these comments on the Draft Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report ("Report"). [1] We commend the Corps for preparation of this comprehensive and professional evaluation of the option for restoration of the Los Angeles River. The restoration will be a major step forward, not only for the river and its wildlife, but for the people of Los Angeles.

FoLAR has been advocating for river restoration for over 25 years. During this period FoLAR has conducted scientific studies, run an ongoing educational program for Los Angeles students focused on the river and its ecology, prepared and advocated plans for river-related improvements, and advocated for public use of the river, including obtaining of passage of state legislation assuring the public's right to use the river for recreation and educational purposes. Legislation. FoLAR has approximately 10,000 members, supporters and other associated individuals and groups with a strong interest in the Los Angeles River. Each year about 4,000 people participate in FoLAR's river cleanup, the *Gran Limpieza*.

To prepare comments we have drawn on this experience and expertise and that of other organizations with an interest in the river. To support our review we have also retained experts in wildlife and river policy, convened a group of scientists at the Los Angeles Natural History Museum, and worked with others with related expertise.

[1] http://www.spl.usace.army.mil/Media/PublicNotices/tabid/1320/Article/17994/spl-2013-003-nlh-draft-ifr-for-la-river-eco-rest-study.aspx

FoLAR-1

While we appreciate the extensive effort which has gone into this report, we find that the Corps selection of Alternative 13 as the Tentatively Selected Plan falls far short of what is needed for adequate restoration of the river. As detailed in these comments, we believe the analysis and findings of the Report clearly support Alternative 20 rather than Alternative 13 as the Selected Plan. Alternative 13 lacks the comprehensive approach of Alternative 20, and falls short of meeting the Corps' own objectives for the restoration. In short, the Corps has selected a Preferred Alternative/Tentatively Selected Plan which fails to meet some of its own objectives and only marginally satisfies others.

These comments focus on two major, interrelated analytical problems with the conclusion reached in the Report that Alternative 13 adequately addresses the overall objectives of the Corps' study:

- The Corps has set numerical objective performance criteria for adequacy of the restoration which are artificially low compared with the stated objectives of the study. (Discussed in Section I of these comments)
- In rejecting Alternatives 16 and 20 because the "incremental costs" of these alternatives were too high relative to their additional benefits, the Corps decision failed to capture and quantify important ecosystem improvements. This led to a finding that these alternatives are inefficient, a finding which we do not believe is supportable when all benefits are considered. (Discussed in Section II of these comments)

We then examine in more detail three specific areas of environmental benefits which were inadequately valued in reaching a decision on the Tentatively Selected Plan.

- The value of habitat connectivity, by the criteria in the Report a critical component of restoration and essential to its success, was either ignored or seriously undervalued in reaching a decision. (Discussed in Section III of these comments)
- Creation of the large nodes essential to adequate habitat and other values, such as hydrology, connectivity and aesthetics, was minimized in reaching the decision (Discussed in Section IV of these comments)
- The importance of the restoration benefits to the human environment, a factor which we believe must be given weight in a restoration project in a dense urban environment such as Los Angeles with inadequate open space and recreational opportunities, is an important decision factor. (Discussed in Section IV of these comments)

FoLAR submits that both the descriptive material and the analysis in Draft Study support Alternative 20. While this provides the most aggressive of the alternatives in the Report, *it is important to note that substantially more comprehensive restoration plans were evaluated and rejected: even Alternative 20 is weaker than what many participants in the study process recommended.*

FoLAR-1

I. Important Numerical Decision Criteria Are Set At Minimal Levels Inconsistent With The Report's Stated Objectives And Findings

A. Context for Ecosystem Restoration

Prior to channelization the Los Angeles River occupied a 52 mile flood plain. From old photographs and maps, the flood plain varied in width from several times the river channel itself to sections south of downtown Los Angeles where it meandered over extensive acreage.[2] The original floodplain in its entirety does not necessarily equate with the river's original ecosystem at the time of channelization as some areas of floodplain were already occupied by commercial and agricultural uses. However, most of the floodplain was a continuous 52 mile ecosystem, in that the physical environment of the river and flood plain functioned together as a unit with the numerous living organisms occupying or connected to it, including the people who use it. This ecosystem essentially ceased to exist with channelization. As the Report states, "Due to habitat conversion, natural riparian communities persist only as isolated remnants of what was once a vast, interconnected system of rivers, streams, marshes, and vegetated washes." (Report pp. 1-9, Figure 1-5)

The study initially focused on the 32 miles of river within the City of Los Angeles. In deciding to focus on the 12 mile stretch from Griffith Park to downtown, the Corps determined that the remainder of the river was unsuitable for restoration, primarily because of the unavailability of adjacent land due to existing development. However, applying the same logic to the remaining 20 miles of the river beyond the city boundaries, this determination means that it is highly unlikely that restoration can or will be pursued on 80% river. *Thus, the relatively small feasibility study reach is acting as a surrogate for the entire river,* and environmental values *should be maximized in this one restoration opportunity.*

Even within the study area, restoration is highly constrained by infrastructure which itself was enabled by channelization. Subsequent to channelization, the I-5 Freeway through the Glendale Narrows, the 134 Freeway north of Griffith Park, the 110 Freeway south of downtown, and additional railroad tracks were constructed and now occupy substantial areas of the original floodplain. *These infrastructure elements could not have been built without a channelized river.* They greatly reduce the acreage available for restoration and seriously limit creation of a continual ecosystem within the study area.

1

The guiding principal for Corps ecosystem restoration is stated clearly in various places in the Report: Restored ecosystems should mimic, as closely as possible, conditions that would occur in the area in the absence of human changes to the landscape and hydrology. [Appendix G, p 10]. As pointed out below, establishing low threshold criteria for what is adequate restoration is inconsistent with this objective. Frequently stating that "one" of a particular type of restoration is sufficient results in adoption of an alternative which fails to mimic preexisting conditions except in very limited stretches of the study area. This hardly represents a restoration which brings the

[2] See Creason, G., *Los Angeles In Maps*, Rizzoli International, 2010,

river "as closely as possible" to preexisting conditions. This is particularly apparent as the study reach represents only about 20% of the total river, and is the only area where this type restoration is feasible.

For natural communities and habitats, this deficiency is even more glaring. While the report did an admirable job of outlining existing habitats along the river, virtually nothing was said about its historical condition – were there vernal marshes, or alkali meadows along the river, and if so, where, and do any of the Alternatives propose to re-introduce them (or to provide conditions so that they could establish on their own)? California maintains a list of "priority habitats", tracked by the California Natural Diversity Data Base, [3]many of which were historically present in the study area, and which could be re-established. 1

The Report itself recognizes these constraints on restoration, and in effect states that *any* of the alternatives proposed provide very limited restoration relative to the original river ecosystem. Given these constraints, the Corps' final decision should seek to *maximize* restoration of ecosystem values in the study area.

B. Artificially Low Objectives Performance Criteria

Instead, within this limited study area, the Report established numerical criteria which allowed the Corps decision makers to adopt a preferred alternative which *minimizes* restoration relative to other alternatives. Referred to as "Objectives Performance Criteria", these are used to determine whether a particular alternative is adequate to meet the overall study goals and the three specific planning objectives of the study.[p. 4-4] 2

The Report does not discuss how or why these numerical criteria were adopted. Nor does there appear to be a scientific or technical basis for these. The criteria, in fact, seem to be arbitrary. To the contrary, a number of findings of the Report suggest that these *de minimis* criteria are in fact too low.

The following examines key numerical objective performance criteria in relation to discussion in the Report. (Non-numerical criteria are not discussed.)

1. "*Restore a minimum of two aquatic habitat nodes with a natural hydrologic connection to the river and riparian communities with a minimum distance of 150 meters from the water's edge to create areas capable of functioning as core habitat and refuge for native reptiles and amphibians* [Criteria 1.a, p. 4-4] 3

Discussion:

Section IV of these comments discusses the importance of large nodes in more detail. Alternative 13 includes just two habitat areas: Taylor Yard and the much smaller Arroyo Seco mouth, whereas Alternative 20 effectively has six, adding Verdugo Wash, Piggyback Yard and

[3] http://www.dfg.ca.gov/biogeodata/cnddb/

FoLAR-1

Cornfields, with substantial channel widening effectively adding an additional "large node". (note that the Cornfields connection also provides connectivity to the large habitat area in Elysian Park.) Considering this, as shown on Table 3 in Section IV, showing the incremental habitat acreage by habitat node which would be added by each Alternative, *Alternative 20 would create almost three times the large node acreage of Alternative 1.*

a) Specific Planning Objective No. 1 [Sec. 4.2.1], calls for restoration within the ARBOR reach in order to achieve restored ecological processes and biological diversity, a more natural hydrologic regime, reconnection to historic floodplains, and other hydrologic improvements. This suggests that the preferred alternative should maximize the amount of acreage which can be reasonably restored. The Effect of Alternative 13, which includes only two large nodes, is to minimizes restoration. Alternative 20 restores about half (58%) of the river channel within the ARBOR area as opposed to less than a third in alternative 13 (29%). [4]

b) The same planning objective means that new habitat nodes should be provided, to the extent feasible, within the entire study reach. Alternative 13 provides no new large habitat nodes for reaches 1-7, the northern two-thirds of the study area. While there are smaller restoration components north of Taylor Yard, the acreage is small relative to the pre-channelization habitat. Creating meaningful new habitat in this northern area can be done only by including the Verdugo Wash.

3

c) Alternative 13 also fails to meet the USACE guidance that ecosystem restoration should mimic as closely as possible conditions which would occur in the absence of human changes. Failure to add any significant new habitat in two-thirds of the study area means the preferred alternative fails to meet the Corps' own objectives.

d) Alternative 13 also misses the only opportunity to establish new habitat on the west or southwest south side of the river, by opening a connection to the Cornfields (Los Angeles State Historical Park) and thereby create connectivity to Elysian Park.

Alternative 20 adds a significant new habitat node in the northern segment, in addition to greatly improving regional connectivity as discussed below. The Verdugo Wash area would be the only important new river habitat in the vicinity of Griffith Park, where, prior to channelization, the river's flood plain provided an extensive riverine habitat directly connected to the park and the mountains. Not only does the Verdugo Wash addition add important wildlife habitat, it greatly improves other benefits including hydrology, air quality, groundwater and the human environment as discussed in more detail in Section II, below. It also allows for a direct connection without entering the river channel between the areas north of the River at Griffith Park (Betty Davis Park) and the study reaches to the south, which would not exist under Alternative 13

[4] Geographical analysis of extent of restoration provided to FoLAR and available upon request.

FoLAR-1

2. *Restore structurally diverse riparian habitat consisting of herbaceous (e.g., herbaceous vine cover), shrub (e.g., shrubby willow thicket), and tree (e.g., mature cottonwood-willow trees) layers in a minimum of five reaches resulting in three contiguous reaches.* [p.4-4, emphasis added]

Discussion:

The analysis in the Report does not state whether this objective has been met. [See Table 6-3 and related text] Our review suggests that it has not been met. Based on the discussion in Chapter 7 , Details of the Tentatively Selected Plan, (Section 7.1), the following appears to be the type of riparian habitat *restored* by Alternative 13:

Reach 1:	Shrubs and Trees
Reaches 2-7:	Shrubs Only
Reach 8	Shrubs and Trees

4

Shrubs are added in all reaches, and trees are definitely added in two reaches. There is a possibility that trees are planned in several more reaches, but these are not referenced in the discussion in Chapter 7. It is also appears that Alternative 13 does not restore three contiguous reaches of riparian habitat with both trees and shrubs. (Although not part of the restoration, existing riverine habitat may effectively result in habitat continuity among some reaches.).

Only Alternative 20 would meet this criteria. Alternative 20 (including Alternative 16) includes additional major restoration areas, along with a number of smaller areas. While the report does not provide specific data on the type of vegetation to be restored in these, illustrations suggest a combination of both shrubs and trees.

3. *Restore a minimum of one habitat node with a minimum width of 250 meters (820 feet) to support high frequencies of the Federally endangered least Bell's vireo*

Discussion

The Report states: "A riparian strand with a width greater than 250 meters can only be achieved at the Piggyback Yard site, where these river adjacent parcels can support larger scale restoration and sustain enough riparian habitat to support high frequencies of least Bell's vireo." The Piggyback Yard restoration in Alternative 13 is isolated from the river, with a hydrologic connection, if any, through culverts. Thus, the habitat created at the Piggyback Yard by Alternative 13 while Riparian in nature, does not involve a riparian strand, which generally means a shoreline or river bank. A riparian strand is only created by breaking out the concrete in the 250 meter stretch. This is only achieved by Alternatives 16 and 20.

5

FoLAR-1

Thus, by the standard set in the Report, alternative 13 does not meet this criteria. Note also that the Report says this is important for other bird species, not just the least Bell's vireo. [Report, p. 2-2]

4. There are two criteria for hydrology which are closely related and which have inadequate minimum criteria:

   Restoration of natural channel geomorphology in at least one concrete reach support refugia [sic] for native fish including the Federally threatened Santa Ana sucker.

   Expand River hydrology into at least one large, contiguous river adjacent area within the study area that promotes natural hydrologic connections to the floodplain and overbank areas.

   Connect river hydrologically (with assistance through culverts or naturally) to overbank with at least one such connection per reach

Discussion:

The overarching objective here is to provide "a more natural hydrologic and hydraulic regime". This is important, not just for habitat, but for overall appearance of the restoration and the ultimate appeal of the restoration reach to the public. The Report emphasizes that hydrologic restoration is extremely important [Report Section 2.1.3] Among the numerous points the Report makes to emphasize the importance of hydraulic restoration: 6

- Ecosystems are completely dependent on hydrology; the hydrologic patterns are integral to this dynamic physical environment [and] hydrology provides connectivity between ecosystems that is critical to regional ecological functioning
- The natural hydrologic pattern is important for maintaining the form of the channel and floodplain, habitat diversity, ecosystem productivity, and biodiversity, and supporting aquatic processes such as exchange of sediment, nutrients, and energy between the river and floodplain.
- Maintaining ecological and evolutionary processes includes natural disturbance regimes, hydrologic processes, nutrient recycling and biotic interactions which can only be achieved with reconnection of the river to its floodplain.
- Reconnection of the river to the floodplain increases the flood carrying capacity of the river, restore a dynamic floodplain and supports diverse riparian and in stream are more beneficial to flood risk management.

These important attributes cannot be reconciled with decision criteria which specify that *only one such occurrence in the study area is adequate*. Alternative 13 is said to meet these criteria

by some channel widening in Reach 6 (24 feet), and significant widening (544 feet) in Reach 6, and Reach 7 (Arroyo Seco). However, hydrologic restoration is not significantly enhanced unless Alternatives 16 and 20 are included. These would add the only significant changes in the upstream reaches (2 and 3), and Reach 5. Major channel restoration occurs only with addition of channel widening in the Piggyback Yard (500 feet) and elsewhere in Reach 8 (1,000 feet).

The same conclusion results with respect to expansion of river hydrology, and hydrologic connections. With the exception of one minimal connection in Reach 4 and one in Reach 3, essentially a stream daylighting under the 134 Freeway, Alternative 13 again relies primarily on the Taylor Yard area to meet this criteria. Upstream and downstream opportunities are underplayed until Alternatives 16 and 20, which would vastly increase hydrologic connectivity and river expansion in both upstream and downstream reaches, and be in accord with the stated objectives of the Report. 6

While these comments should not be taken in any way to diminish the importance of the Taylor Yard and Arroyo Seco restoration, the emphasis on only these two sites means that hydrologic restoration in the remaining reaches of the ARBOR study area is minimal to nonexistent,

5. *Restore riparian and wetland aquatic wildlife habitat at tributary confluences to create habitat connectivity to similar upstream habitats on the tributaries with ultimate nodal connection to the aquatic habitats in the San Gabriel and Verdugo Mountains (at least one major tributary connection should be restored.)*

Discussion:

The single major tributary connection in Alternative 13 at the Arroyo Seco is inadequate based on the Report's finding that the Verdugo Wash restoration provides, a connection that historically supported a habitat corridor for movement of wildlife and finds that: "Urbanization has eliminated this habitat corridor, and without restoration of the confluence at Verdugo Wash reconnection of the river to the Verdugo Mountains could not be realized. Restoration at the Verdugo Wash confluence would restore the opportunity for passage to the Verdugo Mountains, a 26 square mile area serving as a 19 stepping stone to the western San Gabriel Mountains." [Report p. 6.27; Figure 6-12, emphasis added] This directly contradicts the Report's finding that Alternative 13 would provide adequate connectivity to the Verdugo Mountains. 7

This also shows the inadequacy of the arbitrary criteria of restoring "at least one" such area. Only the Arroyo Seco can provide access to the San Gabriel Mountains, and only the Verdugo Wash can provide access to the Verdugo Mountains (absent a serious stretch of the imagination). 8

In addition, the Report states that connectivity to Elysian Park is an important element of connectivity. The Report in numerous spots mentions the importance of connectivity to the

FoLAR-1

habitat in the Elysian Hills. It is in fact a major planning objective of the study (See Criteria 2): "Increase habitat connectivity between the river and the historic floodplain, and increase nodal connectivity for wildlife between restored habitat patches and nearby significant ecological zones such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains within the ARBOR reach throughout the period of analysis." [Page xxiii; see also discussion at pp.4-3, 4-55, 6-3, 6-27]

Alternative 13 fails to meet this planning objective. Connectivity to the 575 acre habitat of Elysian Park is only achieved through Alternative 20 via connection of the river to the Cornfields site. The hills of Elysian Park via the Cornfields is the closest large habitat area to the River, and present a unique opportunity to reestablish pre-channelization habitat in a highly urbanized area close to downtown Los Angeles. Connectivity of Elysian Park to other major mountain habitats, such as the Santa Monica Mountains, through the restored river will provide the opportunity to bring new species to Elysian Park and greatly enhance the urban experience. 9

6. There are closely related criteria for habitat connectivity within the study area itself:

   Lengthen the extent of contiguous vegetated pathways for reptile and small/medium mammal movement (currently limited to Reaches 4 to 6), to achieve upstream and/or downstream connections to at least one additional tributary or habitat area that is currently isolated from the soft-bottom reach.

   Reconnect natural hydrology between the river and at least one main tributary to support regional habitat connectivity to nearby significant ecological areas.

   The Report also sets out an "ideal" criteria, is to "*[p]rovide habitat connectivity (via contiguous or near-contiguous vegetated movement pathways) between all of the reaches within the study area.* 10

Discussion:

Considering these criteria, full habitat connectivity within the study area is essential. The Report states the full connectivity among all 8 reaches is achieved by Alternative 13 [Report Table 6-3]. However, this finding is not supported by the connectivity map for Alternative 13 [Report Figure 6-5] Connectivity gaps appear to exist in reaches 1-3 and 7-8. Alternative 20 appears to close these gaps with the possible exception of a small gap in Reach 2.

The Report also discusses the importance of connectivity, not only to major tributaries, but to "*other smaller tributaries*" [Report, pp. 4-5] Alternative 13 basically provides for a single tributary connection, leading to the question that if tributary connections are so important, how is that a single connection (Arroyo Seco) is sufficient? There appear to be a number of missed opportunities to reconnect with historic tributaries, for example Golf Creek which is a major drainage to the River from Griffith Park. While we understand that it is not be feasible to

FoLAR-1

connect with each tributary, connection with smaller tributaries such as existed in the Piggyback Yard is the only way to satisfy criteria.

Alternative 20 adds both Piggyback Yard and Verdugo Wash. But it's important to consider that historically there were many more smaller tributaries in the study area. It appears that stream daylighting in the vicinity of Ferraro Fields and Taylor Yard will possibly open additional smaller tributaries, (although this is not mentioned in the analysis in Chapter 6 [Table 6-3]) Given this context, the restoring hydraulic connectivity to support habitat connectivity through only one historic tributary is inadequate and fails to meet the Corp's own criteria. Maximum feasible habitat connectivity within the study area is essential to meet the study objectives 11

II. Considering Only Immediate Habitat Improvements Seriously Underweights The Benefits of Alternative 20 In The Incremental Cost Analysis.

The principal basis for rejection of Alternatives 16 and 20 as stated in the Report rests on analysis showing that the incremental costs of these two options are significantly higher than for Alternative 13. Referring to Alternative 20: "It is the most expensive of the four final alternatives and is substantially less efficient than Alt 13 ACE due to a significantly higher incremental cost per gain in output (HUs)." The problem with this conclusion is that in measuring the benefits of the alternatives, the Corps used a methodology that, as stated in the Report, is incomplete. It captures quantitatively only specific habitat values for smaller animal species, which through a complex process are converted to the quantitative measure of Habitat Units. (HU). These values are laid out in Appendix G, and appear to be based almost exclusively on the types of vegetation, i.e., HUs equal primarily the post restoration *vegetative* environment of shrubs and trees. 12

There is, of course, much more required to sustain wildlife habitat than just vegetation, and there are substantially more benefits from restoration than just the resulting plant life habitat. *If in addition to the habitat values captured by the model, these additional benefits are adequately considered in the final decision, it will be apparent that the incremental benefits of Alternative 20 will be much higher relative to its additional costs, supporting Alternative 20 as the preferred alternative plan for going forward. I.e., FoLAR submits that, as discussed in more detail below, when these other restoration benefits are fully considered, the incremental benefits of Alternative 20 are approximately the same as Alternative 13, making both alternatives about equally efficient* 13

It is also important to note that the incremental cost analysis looks at the gross acreage of the project under the three alternatives, with 16 and 20 being only somewhat higher than 13, thus making the per acreage incremental costs of these appear much higher We are unable to ascertain from the Report exactly how these acreages were calculated, but regardless we

FoLAR-1

believe that it is more appropriate to give substantially more weight to the large habitat nodes as explained in Section IV of these comments. This is a more meaningful way to examine the comparative or incremental costs because these larger nodes:

- Provide larger areas of sustainable habitat;
- Require breaking out of concrete with greatly improved hydrology and hydraulics;
- Greatly enhance connectivity both with the ARBOR area and to critical outside habitats;
- Allow greatly enhanced human interaction with the river;
- Allow for much greater groundwater interface and stormwater treatment;
- Come closest to reproducing the original appearance of the river.

13

Table 4, page 21, show that Alternative 20 results in roughly three times the area of large nodes than Alternative 13, with consequent benefit to each of these considerations.

A. Limitations Of The CHAP Model

FoLAR acknowledges the difficulty of quantifying environmental benefits. an area of environmental science and technology which has been evolving for many years. The Corps elected to use the CHAP model, discussed in detail in Appendix G. CHAP appears to be professionally accepted and quite comprehensive in evaluating the wildlife habitat, primarily the vegetation, immediate to a particular site or "polygon" on a site-specific basis, but does not capture a number of important ecosystems and other environmental values, particularly in an urban environment such as Los Angeles.

Our major concern is that the value of the ecosystem restoration appears to have been determined solely using the CHAP model. The Report itself recognizes that CHAP is not designed to capture other important ecosystem benefits, pointing out that the model does not capture values for restoring wildlife connectivity (one of the 3 main objectives of the study) Likewise, it does not capture values for restoring hydrologic connectivity, critical to achieving resilient and sustainable ecosystem restoration, does not properly consider the richness of this biodiversity hotspot, the rarity of the region's Mediterranean climate, nor the intense habitat destruction and overdevelopment in the second-largest city in the United States.

14

Further, the model appears not to capture ecosystem values for such key items as surface water quality improvements, stormwater runoff treatment, improved groundwater infiltration to enhance water supply, air quality improvements, carbon capture, and the extensive improvements to the human environment. These are values that were essentially eliminated when the Los Angeles River was channelized, and must be considered in reaching a decision on a meaningful ecological restoration alternative. Pre-channelization values can be and need to be recreated.

15

Considering these limitations in the model, while the document compares the alternatives, we did not find evidence to support selection of Alternative 13 over Alternative 20 except the

incremental cost differential. This points to an inherent shortcoming in using CHAP as the tool on which to base a decision. In fact, as detailed below, we find much evidence in the document that supports selection of Alternative 20 when considering the other benefits that are not captured in the CHAP model.

Under the Corps' own guidance, the fact that CHAP does not quantify these other important values is not an acceptable reason for not considering them when reaching a decision as to the preferred alternative. The report states that "Corps guidance requires that the ecosystem related benefits of proposed alternatives be subjected to detailed economic analysis, allowing an explicit comparison of the costs and benefits associated with the alternatives. Comparing the alternatives in this manner facilitates the determination of the most cost-effective restoration alternative that meets restoration goals (USACE 2000)". [Appendix G, pp. 10-11, emphasis added]" This guidance does not limit the decision to just vegetative improvements in habitat, but implies that all ecosystem benefits should be considered. 16

B. Other Environmental Values Which Should Be Considered

The following discusses other significant ecosystem benefits which will result from the proposed restoration. FoLAR understands that there is no single quantitative model which incorporates these. However, there are means of weighing these values which can be employed by the Corps in making its decision as to the preferred alternative. Virtually every major decision affecting the environment requires an evaluation of this type, made by one means or another.

This frequently requires subjective judgments by experts as to the importance of different factors. Even a model as sophisticated as CHAP relies heavily on giving weight to factors which are difficult or impossible to quantify. CHAP required subjective judgments by both the scientists designing the model, and the scientists in the field when evaluating individual field factors in the 172 polygons, translating these judgments into numerical values or weights.

Thus, we believe it is possible and important to have a process which gives weight to the various benefits not captured by CHAP. To illustrate this, and to show the effect of weighing other factors on the incremental cost benefit analysis, we have prepared Table 2 and a brief discussion of each of the ecological improvements which we believe must be considered. We have done this by 17

(1) assigning a percentage weight to each unquantified value relative to the total average annual habitat units. We have used the term "units" for these additional values *For example*, we have assumed that habitat connectivity has roughly 40% the importance of the vegetative habitat itself, thus creating a "connectivity value" in Alternative 13 of 1,948 "connectivity units."

(2) Then to reach a value for Alternative 20, we have assumed based on the Report that this alternative provides roughly three times as much connectivity as Alternative 13, yielding 7,082 "habitat connectivity units" for Alternative 20.

FoLAR-1

Each of the additional values was considered as follow. To arrive at these, we have used discussion in the Report, input from other public responses, and information provided by experts consulted for these comments.

1. Habitat (Wildlife) Connectivity:

This is one of the three principal objectives of the ARBOR restoration, and is discussed in detail in Section III of these comments. Habitat restoration in the absence of reasonable connectivity among the restored units and between restored units and other habitats, such as the Verdugo Hills and San Gabriel Mountains, will render the ARBOR project significantly less meaningful. *Thus we have assumed that connectivity should be valued at 40% of the base HU's.*

Our determination that the enormous befits of connectivity were not valued or weighted in the model is verified in Section 6.3 Objectives Comparison of Alternative Plans, page 6-8 and in Appendix G: Habitat Evaluation (CHAP), page 61, Section 9.0, the last paragraph, which recognizes the "*Additional benefits not captured in CHAP were used to evaluate and compare the final array of alternatives. These benefits include hydrologic connectivity to support biotic and abiotic functions, and nodal connectivity to support wildlife movement and dispersal. An assessment of these benefits is applied outside of the CHAP analysis as part of the environmental impact analysis.*" 17

Based on the discussion and maps in Section 4 [pp. 4-42 et seq.] Alternative 16 adds limited connectivity, primarily by river bank modifications and addition of several restored strips. Alternative 20 adds major connectivity through Verdugo Wash, Cornfields to Elysian Park, enhanced in-river connectivity, and improved Piggyback Yard connectivity. *We have assigned a wildlife connectivity weight of 1.6 to Alternative 16, and 4.5 to Alternative 20.*

2. Hydraulics and Hydrology

This category encompasses hydraulic connectivity, principally between the large restoration nodes and the river, groundwater interface for restoration nodes, river expansion and widening, and achieving a more natural appearance. The Report discusses this as an important element of restoration. Report Section 2.1.3] Without significant hydrological improvements, the restoration will be less effective and the appearance of the river will not be as desirable to the community and to river users. *Thus we have assumed that hydraulics and hydrology should be valued at 20% of the base HU's.* 18

Specific aquatic connectivity increases are discussed in Report Tables 6-2 and 6-3 and related text as pertains to restoration nodes. Expansion of restoration nodes with related hydraulic expansion and connectivity occurs somewhat in Alternative 16, and is substantially greater is great in Alternative 20. The same applies to river widening. *We have assigned a hydraulics and hydrology weight of 1.5 to Alternative 16, and 3.0 to Alternative 20.*

FoLAR-1

3. Water Quality.

The Report highlights that improved surface and ground water quality are important results of restoration, a highly desirable environmental benefit. The introductory letter to the Report states that restoration "reduces flow velocities, increases infiltration, improves natural sediment processes, and improves water quality". However, there is little if any discussion of water quality specific improvements by alternative, nor does it appear to be a factor which was weighed in selecting the appropriate alternative. The Report only states that water quality benefits are "ancillary" and thus not considered. [Report P. 2-20]

Maintaining enhanced water quality is in fact highly important to sustain habitat. The report discusses in some detail the Los Angeles regional Water Quality Control Board's program for establishing pollutant levels and regulations through Total Maximum Daily Load [TMDL's] for the river and other related water quality regulations. In addition, to the extent groundwater infiltration is enhanced in both quantity and quality, the, project lead to greater quantities of groundwater available for public use. 19

While we understand the difficulty in quantifying these improvements, we believe they must be considered in evaluating the beneficial value of each alternative. *Thus we have assumed that hydrology and hydraulics should be valued at 15% of the base HU's.*

Both surface water quality improvements, such as reduced sedimentation and possible other pollutant reduction, will result from the ARBOR project. Improvements also will be expected to ground water quality. These are to a great extent dependent upon establishing large habitat nodes consisting primarily of wetlands, i.e., the increase will be proportional to the amount of wetlands created in new nodes, vegetative interface with surface water flows in these areas, and the ability of these restored areas to capture and infiltrate storm water. *We have assigned water quality a weight of 1.3 to Alternative 16, and 2.8 to Alternative 20.*

4. Species Diversity and Large Mammals.

The CHAP model excludes the habitat benefits related to large mammals and extirpated species. It is limited specifically to resident and migratory birds, including raptors, reptiles, amphibians, small mammals and fish [Appendix G, pp. 12-13]. Recent work as part of the Griffith Natural History Survey study [See P. 17] has found that the river is also important for larger mammals such as mule deer, coyotes, bobcats and possibly mountain lions.

Other than a list of federally and state endangered species in one of the appendices, the Report presents no analysis of dozens of species that once occurred in the ARBOR area, or more widely along the river, whose populations could be restored by various alternatives, including California Native Plant Society rare plants, California Species of Special Concern, or other lists normally used in environmental review. It is possible that such a reintroduction could only occur at the largest, most hydrologically connected patches of restored habitat, such as those envisioned in Alternative 20. 20

FoLAR-1

The same applies to extirpated birds –the Federally Endangered least Bell's vireo is mentioned repeatedly, but no information is provided as to where it is still persisting along the river, what local habitat requirements it might have within the watershed, nor where individuals have been observed attempting to set up territories along the river. Similarly, the western pond turtle (California Species of Special Concern), persists in remarkably urban areas, but which has been eliminated from the entire lowland portion of the river. *Thus we have assumed that species diversity and large mammals should be valued at 10% of the base HU's.* 20

A combination of large patch size *and* retained hydrological connectivity, such as provided only in Alternative 20, would provide an additional major benefit for large mammals and species diversity. *We have assigned these a weight of 1.5 for Alternative 16, and 3.0 for Alternative 20.*

5. Air Quality

The Report addresses air quality primarily as a consequence of project construction and operation, but does not count air quality improvements among the objectives and benefits of the project. The problem of greenhouse gasses, particularly carbon dioxide, is a matter of great public policy concern, and to the extent that greenhouse gas reduction is a benefit of restoration, it should be considered in the final decision. Considering the difficulty in measuring these improvements, *we have valued air quality improvement at 5% of the base HU's.*

Carbon capture is well understood to result from increases in the amount of vegetation in any given area, and benefits will be proportional to the amount of vegetation added by each alternative. Because there is no calculation of this in the Report, we are assuming that potential carbon absorption through an increases in plant life in the ARBOR area to a substantial extent will be proportional to the large habitat nodes, and have *assigned water quality a weight of 1.2 to Alternative 16, and 23.8 to Alternative 20* 21

6. Human Environment

While also difficult to quantify, the benefits of restoration to the human environment from the ARBOR project nevertheless should be considered in the final decision. These benefits are detailed in Section V of these comments. The essential point is that in a dense urban area such as the ARBOR study area reaches of the river, the human environment cannot be ignored in a restoration decision. The people living in the vicinity of the river and those using the river and otherwise benefiting from, are an integral part of the riverine environment.

Prior to channelization, the river was essentially open to public uses and was easy to access, i.e., the human environment was an integral part of the river ecology. The river and its floodplain represented a major area of open space for its entire 51 mile length. With channelization, what was left of the river was fenced off from the public except a small segment in the Sepulveda Basin. Since then, the city with many varied communities has grown immensely, crowding up against the river in many locations. During this same period, open space has steadily diminished. 22

FoLAR-1

The report does consider the benefits from enhanced recreation, which are more quantifiable that other human benefits. However, it does not appear that recreational benefits were incorporated into the incremental cost benefit analysis. Considering this, in our analysis *we have assumed that improvements to the human environment from restoration should be valued at 20% of the base HU's.*

We also have assumed that the human benefits are roughly in proportional to the extent of large node restoration, as these will provide the greatest opportunities for involving people with the river, and the greatest aesthetic benefits, and the most concentrated improvements to air and water quality. For example, the benefits of the Piggyback Yard to an open space-starved area like downtown and east Los Angeles are probably greater than they are in Griffith Park. *We have assigned the human environment a weight of 1.5 to Alternative 16, and 3.0 to Alternative 20, representing the approximate level of restoration.* 22

TABLE 1

Ecological Benefit	Unit Value As % Increase of HU Base	Alt. 13 Units	Alt 16 Multiplier (To Alt. 13)	Alt. 16 Units	Alt 20 Multiplier (to Alt 13)	Alt. 20 Units
Total Average Habitat Units (HU Base) (Source: Table ES-1)		5,902		6,509		6,782
Habitat Connectivity Units	40%	2,361	1.6	3,777	4.0	9,443
Hydrology/Hydraulics Units	20%	1,180	1.5	1,771	3.0	3,541
Water Quality Units	15%	885	1.3	1,151	3.0	2,656
Large Mammals/Species Diversity	10%	590	1.5	885	3.0	1,771
Air Quality Units	5%	295	1.2	354	2.5	738
Human Environment Units	20%	1,180	1.5	1,771	3.0	3,541
TOTAL UNITS		12,394		16,218		28,472

23

FoLAR-1

To illustrate how this affects the incremental costs of Alternatives 13, 16 and 20 , we have used a simple comparison of the total units with the total cost of each alternative as used in the Report [Table ES-1]

TABLE 2

	Alt. 13	Alt 16	Alt 20
Total Units	12,394	16,218	28,471.9
Cost	$442,000,000	$757,000,000	$1,040,000,000
Cost/Unit	$35,662	$46,677	$36,527

23

Thus, Alternative 13 approximately equal in efficiency in this illustration. We understand there can be disagreement as to exact details and factors used in the illustrative case we've presented above. We have been reasonably conservative in our assumptions; however even adjusting the assumptions to be more conservative still results in an incremental cost of option 20 that is much lower than projected in the Report and reasonable close to Alternative 13. Option 13 certainly is by no means twice as efficient (or one-half the incremental cost per unit) as determined by the Report. In light of this, we submit that Alternative 20 should not be rejected on inefficiency based on incremental costs.

III. The High Value Of Connectivity

The key paragraphs supporting the selection of the more robust connectivity in Alternative 20 state:

> *"Generally, nodes have a greater overall interaction when they are larger and closer together (Linehan et al 1995). Well-connected systems prevent inbreeding depression and disease, and have a lower extinction rate as populations can more easily colonize if they are highly connected (Noss 1983; Schippers et al 1996). Without connections between habitat areas, isolation and loss of genetic diversity is imminent (Hobbs & Saunders 1990)."*

24

> *"In order to benefit the biological integrity of a landscape, corridors should be restored to allow for dispersal between habitat areas. More corridors equal more routes to suitable habitat, creating more opportunities for dispersal. A complex network of nodes and corridors is therefore critical to restoration in an urban environment, as suitable habitat often remains unused if isolated (Hanski & Thomas 1994)."*

A. Importance.

A well-balanced ecosystem needs these mountainous connections to be sustainable genetically and in terms of food, cover, refuge, and territories for the flora and fauna that once thrived in

FoLAR-1

and along the Los Angeles River. Connectivity greatly influences the distribution of species on the landscape, the distribution of a single species, and the distribution of genetics or gene flow. Discontinuous pieces or nodes of habitat change the organisms and their relationships, especially in the food chain. The connectivity to other large expanses of habitat ensures ecological resiliency and long term sustainability. It is precisely these types of historic connections and corridors provided in Alternative 20 that could enable the reintroduction of Steelhead and other native species into and adjacent to the river by restoring the historic aquatic habitat that once existed in this area.

Improving the habitat and the connections to the river, particularly transitions to large open space areas is important. Habitats on both sides of the river, tributaries, and other expanses of land create corridors that mammals, birds, reptiles, and other species heavily utilize. Medium and large mammals cross the Los Angeles River and are monitored in studies by the Los Angeles Natural History Museum. The habitats, substrate, and hydrology in those corridors play important roles in the connections these animals use. 24

Since 2011, the Griffith Park Natural History Survey has been conducting research into wildlife usage in and out of Griffith Park, including into the Los Angeles River channel in the ARBOR area. The results of this research have been presented in numerous articles and at lectures over the past two years, and have been posted on the Friends of Griffith Park website for many months. In it, the study documents mule deer, bobcat and coyote using tunnels, culverts and bridges to move into and/or over the Los Angeles River channel adjacent to Griffith Park. These were not cited or discussed in the report. [5]

B. Specific Areas With High Connectivity Importance

1. Verdugo Wash. The Verdugo Wash confluence with the river is arguably the most critical movement area for wildlife between Griffith Park and the Verdugo/San Gabriel Mountains via the Los Angeles River. Restoration there would have a major, landscape-level influence over wildlife populations in both areas by restoring historical gene flow between the two areas with respect to both common species and scarce species. The Verdugo Wash tributary to the Los Angeles River northeast of Griffith Park connects both of these waterways to the San Rafael Hills and the Verdugo Mountains. The river corridor to the mountains provides life-supporting connections for the animals in the ecosystem. During times of biological stress caused by urbanization, fires, floods, and climate change, the survivability of plant and animal life and sustainability of the ecosystem depends on the large expansive connections of the rivers and mountains. The benefit of connectivity of the Verdugo Wash to the mountains is a critical component of any ecosystem plan and must be included in the Federal project. 25

[5] http://www.friendsofgriffithpark.org/GPNHS/Griffith.htm

2. Piggyback Yard. The Piggyback Yard, with a restored river connection, would serve as a habitat anchor for species moving south along the river, where currently it is a "dead end" with a barren cement channel south of I-5. Since Piggyback is so isolated by industrial development, there is something of a "water in the desert" effect for any restoration action there, which could be weighted higher than simply augmented existing habitat areas.

The Piggyback Yard is important in the ecosystem restoration because it connects the Los Angeles River with over 100 acres of open space by removing concrete from the channel and replacing it with terracing and new riparian habitat in a highly urbanized area of the City. Alternative 20 removes the concrete channel wall retained in Alternative 13. Without removal of the wall the Piggyback Yard is limited in use to only birds or creatures that can fly. The value to the ecosystem is again the biodiversity created and the ability of species to find refuge in biologically stressed situations. Piggyback Yard is therefore extremely important to sound ecosystem restoration.

Beyond just connectivity, The Piggyback Yard is an excellent example of the improved quality of habitat created through Alternative 20 versus Alternative 13. Both alternatives claim the 113 acres for restoration of the Piggyback Yard. Alternative 13 does not include channel modifications but uses the existing storm drains in the channel wall to convey flows from the historical wash. In Alternative 20 (Page 4-58) *"the historical wash would be restored through the property with a riparian fringe as well as other side channels, and river flows would be diverted out of the River into* [the] *Piggyback Yard creating a large wetland area. A railroad trestle would be included with this alternative to allow the described restoration to occur and allowing for the connection of the river channel and the adjacent restored areas."* 25

The Los Angeles River would primarily connect birds to the site because mammals, reptiles, and other wildlife that cannot fly will not be able to scale the wall to connect to the restored Piggyback Yard. The minimal connections through the storm drains in Alternative 13 do not perform the same value or quality of restoration as Alternative 20. Alternative 20 removes the concrete wall and then restores the hydrological connection in a more natural way than the culverts through the concrete wall. Alternative 20 reintegrates the hydrology and biology from the Piggyback Yard with the Los Angeles River.

3. Los Angeles State Historical Park. The hydrologic connection from the Cornfields site would be restored with terracing to the Los Angeles River. Wetlands would be restored at this site. Los Angeles State Historic Park lies at the southern terminus of a crucial zone for native wildlife south of Griffith Park – the patches of open space extending through Franklin Hills and Elysian Park. Restoring the river at this location would "complete the loop" here, allowing wildlife to disperse south from Elysian Park into the river, and back to Griffith Park (or vice-versa). [Report p. 6-27]

FoLAR-1

The Cornfields site is another good illustration of the quality of restoration. In Alternative 13, Reach 7, the channel wall remains in place with vegetation being planted on the top of the bank in planter boxes. This will improve the aesthetics, but will not improve the habitat and wildlife value much, nor support connectivity. Whereas in Alternative 20, the wall is removed and replaced with terracing, freshwater marsh or wetlands are restored and connected under a railroad trestle to the main channel of the Los Angeles River. This reconfiguration costs more and results in a far greater quality of habitat than Alternative 13. Higher valued habitats are achieved because of the restored hydrologic connection and the redesign of the habitat connections through terracing and streams. Thus, both the quantity and quality of restoration is greatly enhanced in Alternative 20.

Summary

Alternative 20 provides the greatest connectivity of the final four plans. Alternative 20 adds 205% connectedness in the Study Area over Alternative 13. The restoration of a more natural connection to Verdugo Wash substantially enhances the benefits of the ecosystem restoration by providing connectivity for wildlife and plants into the historic floodplain of the Verdugo Wash and into the Los Feliz Golf Course, the Verdugo Mountains, and the San Gabriel Mountains.

25

As stated in of the Report: [p. 6-2

> *"Restoration of the Verdugo Wash confluence would also provide* [a] *34 acre habitat node in the Study Area, with connectivity to the Los Feliz Golf Course via existing habitat in the Glendale Narrows (Figure 6-11) and connectivity through the downstream reaches… [and], …in addition to the regional connectivity in Alternative 13, provides a future connection between the LA River and the Verdugo Mountains, a connection that also historically supported a habitat corridor for movement of wildlife.*
>
> *"The added restoration at the Cornfields site in Reach 7 provides a 9 acre riparian habitat node that decreases the distance between habitat nodes in the resource poor downtown area (Figure 6-11).*
>
> *In Alternative 20, local habitat connectivity would increase 120% within the study area over Alternative 16, through restoration of the natural hydrology and habitat at the Verdugo Wash site and its connection to Taylor Yard via existing in-channel habitat in the Glendale Narrows, as well as through restoration of hydrology and habitat at the Cornfields site, which adds a habitat node and decreases distance between nodes in the resource poor downtown area."*
>
> *Additional habitat in the community of San Rafael Hills could also be incorporated into the movement corridor as a regional habitat node. Regional habitat connectivity is further improved by restoring connections between the river and the 575-acre habitat node at Elysian Park via restoration of the Cornfields site."*

Connections to large areas of land such as nearby mountain areas create connectivity of habitats and species. By providing connections between habitat areas, corridors enable wildlife

migration and breeding of plants and animals. As a general rule, the wider the corridor, the better. Wider corridors suffer fewer impacts from adjoining land uses and have fewer edge threats from invasive weeds and predators. Additionally, the multiple large habitat areas provided in Alternative 20 will enable populations to survive and repopulate after disasters impacting the mainstem of the Los Angeles River. Thus, the habitats and species will be more resilient and self-sustaining over the life of the project. 25

IV. The Tentatively Selected Plan Fails To Create The Large Nodes Essential To Adequate Restoration

A. Large Nodes Created.

There are only four large (>5-acre) nodes or patches of riparian/wetland habitat that would be created or connected to the river under any alternative:

- Verdugo Wash confluence
- LAR State Park/Taylor Yards
- LA State Historic Park/Cornfields (north end)
- Piggyback Yard

We also consider that the channel widening in Alternative 20 effectively creates a new, in-channel, habitat node. 26

TABLE 3
New Habitat Nodes Created with True Hydrologic Connectivity to River
(Acres)

	Verdugo Wash	Taylor Yard	Arroyo Seco	Piggyback Yard	Cornfields	Widen Channel (note 2)	**Total** (note 3)
Alt. 13	0	119	14	0	0	0	**133**
Alt 16	0	119	14	112	0	45	**290**
Alt 20	34	119	14	113	9	45	**334**
Alt 20+	34	119	14	113	41 (note 1)	45	**366**

Source for Acreage of Habitat Nodes: Report, Chapter 6, Connectivity Maps

1. Assumes that with hydrologic connectivity, entire Cornfields effectively becomes habitat as per the Report, p. 6-27 . Also, this allows connectivity to Elysian Park, 575 Acres which would not otherwise exist.
2. New in-channel habitat
3. Table 7-1 shows a total of 588 acres restored in Alternative 13, but per Chapter 6, about 1/3 of this would be considered "new large habitat nodes".

Of these, three would remain unconnected to the river if Alternative 13 were chosen over 20.

FoLAR-1

B. Benefit of Large Nodes.

Specific patch or node size requirements of common and characteristic wildlife are typically not found in published literature, but are often well known to local experts who observe species through years of fieldwork in a given area. Years of restoration has occurred at pocket parks and, passively, along the channel bottom; yet, many species of native and special status wildlife still cannot live along the river, including any native fish, most amphibians, and most riparian-obligate birds

In the Los Angeles area, native small mammal, terrestrial bird and reptile/amphibian species such as Audubon's cottontail, western toad, and California Quail simply cannot move through inhospitable habitat like the (existing) Los Angeles River channel or residential neighborhoods, and would only be found at large nodes. (Several of these would likely require a semi-natural flood regime as would be enabled only through bank-widening and restoration of hydrologic connectivity).

Unfortunately, only the baseline conditions of the un-restored river were analyzed and emphasized in the report, resulting in statements like the following, which constitutes the *entire discussion* of the study area's current and potential mammal usage: 27

> "Because of the study area's scarce vegetation, minimal connection to other habitat areas, and extremely limited riparian communities, wildlife species that are the most tolerant of human activity and the extremely modified landscapes inhabit the study area. Common mammals include opossum (*Didelphis virginiana*), black rat (*Rattus rattus*), raccoon (*Procyon lotor*), California ground squirrel (*Spermophilus beecheyi*), fox squirrel (*Sciurus niger*), striped skunk (*Mephitis mephitis*), coyotes (*Canis latrans*), and several species of bats (CDFW 1993)." (3-39)

An increase in habitat patch size and connectivity along the river through large habitat nodes subject to regular natural flow – as maximized in Alternative 20 – would obviously result in a major increase in species diversity beyond the other Alternatives proposed; but without any current species data presented from the area or reviewed, it appears this was never quantified.

Most robust habitat restoration plans include a discussion of indicator (or target/focal) species. This is essential for project evaluation and success. Indicator species along the Los Angeles River include those that are currently dependent on certain riparian/wetland habitats that would expand their ranges variously with the different restoration Alternatives. Some analysis was suggested in the Report: 28

> "Within 5-10 years of construction, restore and maintain dense, structurally diverse riparian habitat sufficient to maintain survival and reproductive needs of wildlife. Restore a minimum of one habitat node with a minimum width of 250

meters (820 feet) to support high frequencies of the Federally endangered least Bell's vireo (Kus 2002)." (Report p. 4-4)

However, the thresholds were so low (e.g., "a minimum of one habitat node") as to negate the potential benefit of expanding multiple restoration areas under various alternatives – at times, despite the same report's own claims in different sections of the same report:

> "The project would restore large nodes of riparian habitat that would support the Federally endangered least Bell's vireo...Restoration of large nodes of riparian habitat could also support yellow breasted chat and yellow warbler (State Species of Concern)." (2-3)

28

Undoubtedly, "nodes" are better than "node", particularly to the rare native species the plan intends to support. Yet, the *relative value* of two plans that restore (through hydrological connectivity) four versus one node of such habitat, to various target species, appears to have not been quantified the CHAP process.

C. Large Nodes and Hydraulic Connectivity

Alternative 20 is the only alternative that allows for river water to directly wash over and "passively restore" three of the four large blocks or nodes of open space proposed for restoration: Verdugo Wash confluence, Los Angeles State Historic Park, and Piggyback Yard.

The report's own wording appear to strongly make the case for capturing and elevating the importance of hydrologic connectivity:

> "Maintaining ecological and evolutionary processes includes natural disturbance regimes, hydrologic processes, nutrient recycling and biotic interactions (EPA 1999). This can only be achieved with reconnection of the river to its floodplain...Biogeochemical interactions between the river and terrestrial sources are not as vital to riparian systems as overbank flow from floodplain connections (Hein 2003)...The larger sites are more beneficial to flood risk management. Without channel widening in the proposed locations...opportunities to restore a comprehensive, sustainable ecosystem would be limited." [Report Section 2.1.3] Emphasis added]

29

Portions of the plan recognize the critical need to maximize the ability for water to flow overland at multiple points along the river channel – that is, to restore hydrological connectivity from the river into *upland* areas by removing areas of concrete. Yet, the value in having this occur at multiple locations seems to have been lost in the analysis.

D. Importance for Wildlife.

The Integrated Feasibility and EIS/EIR does not cite important local studies authored by highly respected biologists and others. The Feasibility Study concludes that few Federally-listed

30

species are found in the Los Angeles River area. No State species of concern are listed. However, it is important to examine the species whose range is biogeographically in the surrounding areas, mountains, and tributaries. These will all benefit from the creation of large habitat nodes on the river. Habitat loss and fragmentation lead to a breakdown in ecological processes such as wildlife migration, seed dispersal, pollination of plants, and other natural functions that are essential for ecosystem health.

The result is decline in biodiversity (biological diversity) and local extinction of sensitive species. Habitats should be created and managed to enable the reintroduction of the native species that once inhabited the Los Angeles River basin. The studies show there are many species that are progressively "blinking out" or being extirpated from the LA River system because channelization and urbanization have diminished their habitat so dramatically over the last 50 years. The Corps has the opportunity now to lead the way to substantial and meaningful restoration for many of these species by implementing Alternative 20. 30

The Natural History Museum is currently conducting a biodiversity study along the Los Angeles River near the downtown and Griffith Park area. This 3-year study will perform continuous sampling of multiple variants on a weekly basis for 30 stations. The study will address the biodiversity along the river in an urbanized environment. The NHM study will provide baseline conditions with which to compare biodiversity along the river with the implementation of Alternative 20.

V. Restoration Benefits To The Human Environment Must be given Substantial Weight

The effectiveness of an urban ecosystem restoration project should not rely solely on the cost effectiveness of the creation of habitat units, but must also consider its relationships to the people and communities it serves.

A. System of Accounts

Congress in the 1970 Flood Control Act identified four equal national accounts for use in water resources development planning - national economic development (NED); regional economic development (RED); environmental quality (EQ); and social well-being (OSE), other social effects). As the report states, 31

"The four categories, known as the System of Accounts as suggested by the U.S. Water Resources Council, address long-term impacts and are defined in such a manner that each proposed plan can be easily compared to the No Action plan and other alternatives. Collectively, the four accounts are required to include all significant effects of a plan on the human environment" (Page 6-31).

FoLAR-1

The selection process of Alternative 13 over Alternative 20 does not appear to have given proper significance to all the categories of the System of Accounts – specifically, the RED and OSE accounts – especially with regards to "effects of a plan on the human environment." The measurement of the effectiveness of an urban ecosystem restoration plan is not just habitat units. The measurement must include its interaction with the people and communities it will serve now and into the future. 31

B. Demographic Factors and Jobs.

Appendix B: Economics of the report indicates that nearly 129,000 residents live within a half mile of the footprint of Alternative 20 – considerably higher than Alternative 13 given its lesser size (Page 14). Specific to Alternative 20 is its ecosystem restoration development in connection with the Los Angeles State Historic Park, an area referred to as Chinatown-Cornfields. This general area, south of the SR-110 freeway, has nearly 26,000 residents that are not particularly served by Alternative 13. According to Table 3-4 of the appendix the overall poverty rate of this area is 22 percent. Further, Table 3-1 indicates this population is a minority population with it being 92 percent non-white. As common in an urban area of low income/minority population the availability of parks is scarce. This area covered by City Council District 1 ranks 9th out of the city's 15 districts with less than 5 acres of parkland per 1,000 residents (Page 106). Alternative 13 does little to address the concerns of this area. 32

The selection of Alternative 13 looks to have not fully recognized the difference with Alternative 20 on a RED basis. Table 6-8 of the report indicates that the construction period of Alternative 20 would produce 9,001 jobs with wages of over $500 million in comparison to Alternative 13 with its 1,986 jobs and $114 million in wages. But these numbers are only for construction.

Ecosystem restoration provides the "seed capital" for revitalization. The RED analysis of Appendix B shows Alternative 20 would spur redevelopment creating over 5,000 jobs with wages in excess of $336 million over the long-term as compared to Alternative 13 with nearly 1,300 jobs and $85 million in wages (Appendix B, Table 8-49).

Along with this redevelopment come permanent jobs. Businesses and houses that are constructed are not intended to be vacant. Appendix B, Table 8-53 displays the difference between Alternative 13 and Alternative 20 on an average annual basis over the life of the project. Alternative 20 is estimated to have 1,464 permanent jobs (nearly 1,100 more than Alternative 13) with wages of $83 million (a wage differential of $62 million over Alternative 13) on average for each year of the analysis. Of additional significance to these numbers is where the majority of the difference comes. Tables 8-43 thru 8-46 of Appendix B reveal the Chinatown-Cornfields area as the primary source for Alternative 20's greater impacts. Potential long-term economic improvements in this challenged area should be considered when comparing Alternative 20 to Alternative 13.

FoLAR-1

Table 4

Redevelopment Long-Term Average Annual Impacts		
	Alternative 20	Alternative 13
Jobs	1,464	370
Labor Income	$83,046,000	$20,990,000

32

C. Health and Social Benefits

Appendix B reports:

"In a recent Environmental Science and Technology article the authors report that there is evidence that urban residents living in greener environments may be significantly healthier than those living in environments with less green space, and the presence of water may create even greater health improvements. Most notably for low-income and minority residents, inequitable urban development and the privatization of natural amenities has contributed to environmental injustices in the distribution of green space and water features. Collectively, this can cause disparities in health-related behaviors and obesity." (B-95)

As documented in Appendix B, the CCPHA found the total annual estimated cost to California for overweight, obesity and physical inactivity was $41.2 billion with $20.2 billion of this amount attributable to physical inactivity. (B-97) The appendix also indicates in Figure 9.5 that obesity for minority children as compared to whites can be 70 percent higher for Hispanics and nearly 50% for African Americans.

33

The Centers for Disease Control and Prevention supports the goal of creating or enhancing access to places for physical activity, the enhancing physical education and activity in schools, and supports urban design, land use policies to encourage physical activity. The additional and upgraded ecosystem restoration features of Alternative 20 should be considered, especially as there is nearly double the number of schools for this plan and it physical coverage also double as to Alternative 13.

Additional trails, access points, parking areas, and bridges are included in the alternatives. These would provide linkage and connectivity to the restoration areas as well as to existing parks, thereby improving community cohesion. Benefits would be seen under the alternatives and would provide a common place for residents of various socio-economic backgrounds to recreate and interact. This would help create a sense of community and belonging. In turn, these beneficial social effects would potentially influence the enhancement of surrounding areas to conduct similar activities. Alternative 20 with its larger scope will produce a greater connectivity with the people and communities of the study area.

FoLAR-1

VI. Conclusion

Ecosystem restoration projects provide valuable quality and quantity of aquatic and riparian systems. The selection of the final plan should be determined by using multiple factors. The CHAP model and CE/ICA are only some of the tools that should be used in the selection process.

A. Properly Applied Decision Criteria Support Alternative 20

The Corps set numerical decision criteria for adequacy which are artificially low and led to selection of the "low hanging fruit" for restoration rather than a plan that truly restores the historic values for species, habitat and people. The study narrowed its focus on an 11 mile stretch of the 32 mile river running through LA that has the best chance for restoration. Alt 13 reduces the length of restoration to only 3 miles. This minimal criterion is inconsistent with the stated objectives of the study and seems to be based only on the costs without comprehensively addressing the significantly greater benefits for species and habitat in Alt 20. 34

NEPA utilizes the perspective of *significance* of resources to address impacts. Alternative 20 exhibits the most short term impacts primarily because of additional construction of the larger plan. None of these impacts rise to a level of significance. However, Alternative 20 generates the most beneficial impacts for the biological, human and physical environment. The long term beneficial impacts caused by Alternative 20 are significant based on institutional, public recognition, and technical recognition criteria. Implementing Alternative 20 will have profound positive impacts on the biological resources, hydrological and hydraulic resources, air quality, water quality and recharge, education, recreation, health, economics, human ecology, disadvantaged communities, environmental justice, and the general sense of wellbeing in the urbanized area.

These positive benefits in the Integrated Feasibility Report are greatest in Alternative 20. The USACE was the first to lead the nation in addressing Environmental Operating Principles in water resources planning process and decision making. Alternative 20 is the embodiment of those principles! Given all these reasons, the USACE should support Alternative 20 as the Federally Selected Plan.

B. Alternative 20 Is No Less Efficient That Alternative 13.

The Integrated Feasibility Report itself supports selection of Alternative 20 except in the conclusions based on the cost of Average Annual Habitat Units and total cost. But as we have shown, when all restoration benefits are considered, this does not make Alternative 20 any less "efficient" on an incremental cost basis that Alternative 13. In fact, Alternative 20 achieves true restoration for the impacts caused by channelization of the river. Alternative 20 is practical and can be implemented as the Federal project. Implementing Alternative 20 will substantially restore the river in this 6.4 mile segment. Alternative 20 is the opportunity to select the Best 35

FoLAR-1

Buy plan that provides the best scenario for long term success and sustainability of the habitat, species, environment, and people in the urbanized Los Angeles River study area and beyond.

While costs are a consideration, Alternative 20 is the most costly of the four best buy plans (Table 4-10 Final Array Costs and Outputs, page 4-47) because it restores more habitat and major connectivity to large blocks of land than just the relatively "low hanging fruit" restored in Alternative 13. Alternative 20 requires more land acquisition, much more concrete removal, raising a railroad trestle, and restoring several additional hydrological and biological connections to the Los Angeles River. These actions are indeed costly, but create tremendous benefit by restoring an ecosystem that can survive indefinitely because of its size and robust connectivity. These elements were not valued in the CHAP model, CE/ICA, or the selection of the TSP. 35

C. Alternative 20 Meets All Performance Targets

Performance targets for ecosystem restoration were established for the two major objectives: *Objective 1: Restore Valley Foothill Riparian and Freshwater Marsh Habitat* and *Objective 2: Increase Habitat Connectivity*. In Section 4.12 SELECTION OF THE FINAL ARRAY Table 4-8 and Table 4-9 analyzed all the alternatives to determine which ones meet the 19 specific targets developed for the two objectives. Alternative 20 meets every one of the 19 targets developed for the two objectives with the highest score and often with an incremental increase. Alternative 13 does not.

Utilizing the USACE Planning Guidance (ER 1105-2-100) objectives stated in Section 6.3 (Page 6-8), Alternative 20 is clearly the superior choice of plans. Alternative 20 comes the closest to mimicking the natural conditions and processes that would have occurred had the Los Angeles River not been channelized. It exhibits the best ability *"to continue to function and produce the desired outputs with minimum of continuing human intervention"* because of the size, regional and local connectivity, and restored hydrological and biological connections that create the ecosystem and enable a high degree of self-sustainability of landscape and species. Additionally, the document states: 36

> *"Restoration projects should be conceived in a systems context ... in order to improve the potential for long-term survival as self-regulating, functioning systems...Considerations should be given to the interconnectedness and dynamics of natural systems..."*

Again, these criterion and objectives lead to the selection of Alternative 20.

D. Costs Related to Effects

Cost is a factor in today's constrained economic environment, but any real ecosystem restoration plan will take several decades to implement. Real estate costs are a major factor in any development in an urban area, including ecosystem restoration developments. Land acquisitions in the City of Los Angeles will be expensive. However, the scarcity of habitat and 37

ecosystems in an urban area are far more valuable than in other parts of the nation because of that scarcity.

The City of Los Angeles is the second largest city in population in the U.S. The value of the ecosystem should be valued even higher in light of the dearth of such habitat in the area. We cannot take a shortsighted view of today's economics for this vital long-term plan. The Verdugo Wash and other components of Alternative 20 capture the long-term watershed value by linking the Los Angeles River to multiple large corridors and refuges in the mountains and along the river banks. In so doing, we will provide benefits in restoring a balance for the species in the ecosystem and the public within an urban setting.

Alternative 20 significantly increases the amount of habitat restored. Alternative 13 restores 588 acres of habitat compared to 719 acres restored in Alternative 20. More importantly, the quality of the restoration is significantly superior in Alternative 20 than in Alternative 13. As pointed out earlier, the creation of large habitat nodes is even more important than the total acreage of restoration. Alternative 20 provides almost three time the acreage of new large habitat nodes. 37

According to the estimated quantities for demolition of concrete presented in the Appendix C: Cost, Alternative 20 removes 117,918 cubic yards of concrete while Alternative 13 only removes 36,891 cubic yards. Thus, Alternative 20 removes 3.2 times more concrete than Alternative 13. Alternative 20 restores 6.4 miles of habitat or 58% of the ARBOR length, which is two times the length of habitat restored in Alternative 13 (3.2 miles or 29% of ARBOR).

E. Alternative 20 Fully Satisfies All Decision Criteria And Is The Most Effective

The Principles and Guidelines, as shown in Section 6.5.5 (Page 6-42), identified four decision criteria to be used in selecting measures and plans. The criteria are effectiveness, completeness, efficiency, and acceptability.

Alternative 20 *"is judged to be the* ***most effective*** *of the four final alternatives. It maximizes contribution toward achievement of the planning objectives, including key nodal connections for wildlife and habitat. It also maximizes the potential for near and long term RED and OSE benefits."*

Alternative 20 is the most complete by virtue of including the maximum connectivity to large land areas, the most acres for restoration, the most substantial and natural hydrologic connections, and the greatest length of restoration. These same factors render it the most resilient for long term benefits, survivability, and sustainability. 38

Alternative 20 is efficient and all features are cost effective. It is the most expensive but is essentially as cost efficient as Alternative 13. The higher cost is because Alternative 20 is truly the "game changer" for ecosystem restoration

Alternative 20 is the most acceptable alternative. All four alternatives are acceptable, but 20 most fully meets the requirement of the authorization in the Water Resources Development Act

FoLAR-1

of 2007 to develop a plan *"that is consistent with the goals of the Los Angeles River Revitalization Master Plan published by the city of Los Angeles..."* Alternative 20 is also the plan that is most acceptable to the public because it is the farthest reaching restoration plan and provides the most benefits to the physical, cultural, and human ecology.

Comparing the ranking of the four criteria for the four final plans shows Alternative 20 to be ranked first in three of the four evaluation criteria with 1 being the best. 38

Table 5

Criteria	Alt 13	Alt 20
Effectiveness	3	**1**
Completeness	3	**1**
Efficiency	2	**3**
Acceptability	3	**1**

In summary, Alternative 20 has major additional benefits when compared with Alternative 13 which must be considered in a decision as to the preferred alternative::

- Removes three times more concrete;
- Doubles the length of restoration;
- Adds more than triple the value by including additional tributary and large expanses of open space into the plan;
- Includes about three times the area of essential large habitat nodes.
- Provides substantially more connectivity which remedies the extreme biological stress caused by urbanization, fires, floods, and climate change;
- Significantly improves societal benefits such as environmental justice, recreation, water quality, public health;
- Greatly widens the main channel and tributaries at key locations;
- Creates substantially more wildlife and hydrological connectivity. 39
- Is superior in its compatibility with the numerous initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the Los Angeles River to habitats, species and people.

The current trend of more people moving into cities worldwide gives Los Angeles the opportunity to be the model of how cities can create places for habitats and people in an urban setting, a type of holistic ecology. The City of Los Angeles continues increasing densities in the downtown area to reduce urban sprawl, reliance on automobiles, and reduction of air pollutants. Alternative 20 represents the last significant amount of open space and habitat found along the river and we must collectively and collaboratively preserve and restore it now. The approval of Alternative 20 could result in the Corps and the City developing the model for other major cities throughout the U.S. and the world in how to create places for meaningful habitat and people to coexist in ecological balance.

FoLAR-1

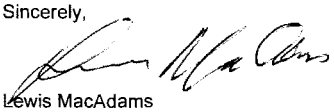
FoLAR Comments – ARBOR Draft Report
Page 31

As I was quoted in a Los Angeles Times Editorial: "The only remaining issue is whether the Army Corps will be content to go only halfway and leave the rest of the job to some future generation, or whether it will instead restore a greater amount of ecosystem and provide a greater amount of human accessibility, so that Angelenos now living will see the full benefit of the dreams, the plans and the work."

39

We urge the Corps to select Alternative 20 as the final Federal plan. As Angelenos we will do our part to shoulder our cost-sharing responsibilities. This is the right plan for restoring the ecosystem values lost by the construction of the Los Angeles River and for the people of our great City.

Sincerely,



Lewis MacAdams
President

FoLAR-2

From: Karin Flores
To: SPL Comments LA River Study
Cc: "Carol Armstrong"; leweve@gmail.com; "Andrea White-Kioss"
Subject: [EXTERNAL] Press articles re: SPL-2013-003-NLH-Draft IFR for LA River Eco. Rest. Study
Date: Monday, November 18, 2013 4:17:20 PM

Hello,

Friends of the Los Angeles River (FoLAR) submits below, for the official record, links to press articles written about the Los Angeles River Ecosystem Restoration Integrated Feasibility Study. We provide this list in addition to our previously submitted technical comments.

Karin Flores
Director of Outreach & Communications
Friends of the Los Angeles River
570 West Avenue 26, Suite 250
Los Angeles, CA 90065
Tel: (323) 223-0585
www.folar.org

http://www.latimes.com/local/la-me-garcetti-la-river-20131030,0,441450.story#axzz2jG13FWrv

http://www.latimes.com/opinion/commentary/la-oe-macadams-los-angeles-river-20131027,0,5767168.story#axzz2kmOTQ4AY

http://www.latimes.com/opinion/editorials/la-ed-river-20131017,0,3559669.story#axzz2kg0NuOwk

http://articles.latimes.com/2013/sep/14/local/la-me-0914-la-river-20130914

http://www.latimes.com/entertainment/arts/culture/la-et-cm-la-river-notebook-20130724,0,6530579.story?page=1#axzz2kg0NuOwk

http://www.dailynews.com/government-and-politics/20131029/mayor-eric-garcetti-calls-dc-meet-greets-fruitful-for-la-river-project

http://www.dailynews.com/environment-and-nature/20131010/mayor-managers-and-nonprofits-envision-a-greener-la-river

http://www.dailynews.com/environment-and-nature/20130913/critics-say-plan-for-la-river-restoration-doesnt-go-far-enough

http://www.ladowntownnews.com/opinion/l-a-river-keep-up-the-push-for-alternative/article_00943dfc-4020-11e3-9700-001a4bcf887a.html

http://www.ladowntownnews.com/news/l-a-river-proponents-take-their-billion-dollar-message-to/article_f4ec1d36-34f7-11e3-8ea4-0019bb2963f4.html

http://www.glendalenewspress.com/news/tn-gnp-glendale-city-council-supports-la-river-wetlands-plan-20131031,0,6752004.story

http://www.glendalenewspress.com/news/tn-gnp-glendale-councilwoman-urges-verdugo-wash-support-at-los-angeles-river-rally-20130930,0,3980831.story

http://www.glendalenewspress.com/news/tn-gnp-glendale-residents-asked-to-step-up-lobby-for-los-angeles-river-restoration-20130913,0,1457161.story?track=rss

http://www.laweekly.com/2013-09-05/news/la-river-restoration-plan/

FoLAR

http://www.lamag.com/citythink/citythinkblog/2013/10/29/mr-garcetti-goes-to-washington

http://www.losfelizledger.com/2013/10/mayor-local-officials-go-all-in-for-l-a-river-restoration/

http://lbpost.com/news/2000002872-op-ed-los-angeles-river-restorations-should-start-at-the-end#.UoatKieeaAZ

http://www.kcet.org/socal/departures/lariver/confluence/river-notes/weighing-in-on-la-river-arbor-study-part-five-alt-20-restores-2x-as-much-as-alt-13.html

http://www.kcet.org/socal/departures/lariver/confluence/river-notes/weighing-in-on-la-river-arbor-study-part-four-unanimous-support-for-alt-20.html

http://www.kcet.org/socal/departures/lariver/confluence/river-notes/weighing-in-on-la-river-arbor-study-part-three-public-meeting-this-week.html

http://www.kcet.org/socal/departures/lariver/confluence/river-notes/more-weigh-in-on-la-river-arbor-study-comment-period-extended.html

http://www.kcet.org/socal/departures/lariver/confluence/river-notes/gamechanging-la-river-study-released-442-million-plan-recommended.html

http://www.kcet.org/socal/departures/lariver/confluence/river-notes/an-introduction-to-the-la-river-ecosystem-feasibility-study.html#more

http://www.kcet.org/socal/departures/lariver/confluence/river-notes/councilmen-ofarrell-and-cedillo-rallies-city-in-support-for-comprehensive-changes-to-la-river.html

http://www.kcrw.com/news/programs/ww/ww130917restoring_the_la_riv

http://www.scpr.org/blogs/politics/2013/10/28/15070/mayor-eric-garcetti-heads-to-dc-seeking-public-tra/?slide=1

http://archive.kpfk.org/mp3/kpfk_131002_160001johnwiener.MP3

http://www.latalkradio.com/Hilldale.php

http://www.annenbergradio.org/segments/2013/10/la-river-flows-washington

http://prospect.org/article/reviving-los-angeles-river

http://archpaper.com/news/articles.asp?id=6903

http://losangeles.cbslocal.com/2013/09/13/army-corp-of-engineers-to-release-plan-to-restore-la-river-habitat/#.UjMxWdAWzgM.twitter

http://www.theeastsiderla.com/2013/09/army-of-corps-of-engineers-backs-453-million-plan-to-restore-the-l-a-river/

http://la.curbed.com/archives/2013/10/why_cant_la_have_a_big_comprehensive_la_river_restoration.php

http://la.curbed.com/archives/2013/09/huge_la_river_restoration_report_recommends_453mm_plan.php

http://la.curbed.com/archives/2013/07/3_plans_on_the_table_for_major_la_river_revitalization.php

http://switchboard.nrdc.org/blogs/ggoodstefani/_last_thursday_night_the.html

http://commonthread.alternativeapparel.com/the-future-of-the-la-river/

GPIA

GLASSELL PARK IMPROVEMENT ASSOCIATION

WORKING TO BETTER OUR COMMUNITY SINCE 1968

14 November 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Attn: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, California 90053-2325

Dear Dr. Axt:

I am writing on behalf of the Glassell Park Improvement Association, a long-time active voice for the betterment of our community, Glassell Park.

It is hard to imagine a greater improvement to our area than the restoration of our river, and we appreciate the many years of effort put forth by the U.S. Army Corps of Engineers to study and prepare such a detailed and thoughtful report.

While Glassell Park's southwest border lies alongside the River within the report's "geomorphic reaches" 5 and 6, which benefit from Alternatives 13, 16 and 20; we believe that only Alternative 20 can provide the highest level of connectivity--between wildlife habitats and hydrology, of course; but also, between people and communities--that is crucial for successful, sustainable restoration.

Glassell Park is an area of middle-income individuals and families, many of whom are members of minority groups. The jobs created by adopting Alternative 20 will greatly improve the lives of our neighbors.

Like many communities along the 11-mile stretch of the River that the report covers, Glassell Park has long been ignored or dismissed when plans for improvements come along. Finally, we are perfectly situated to participate in perhaps the greatest improvement of this generation.

Therefore, the Glassell Park Improvement Association encourages you to select Alternative 20. Not only is it the most comprehensive, the most inclusive, and the most effective plan, but it is far and away the most beneficial to the people & wildlife who live here.

Sincerely,

Alisa Smith,
President GPIA

cc: Mayor Eric Garcetti
Councilmember Gil Cedillo
Councilmember Mitch O'Farrell
Councilmember Jose Huizar

Glendale Rancho NA

From: Joanne Hedge
To: SPL Comments LA River Study
Subject: [EXTERNAL] L A River Restoration-Alt. 20
Date: Monday, November 18, 2013 11:29:32 AM

This is to urge that the Alternative 20 re Los Angeles River restoration by U S Army Corps of Engineers be adopted and implemented. I spoke at the microphone for the public record at the L A River Center event, and herein again urge same. Residents and city staff supported a decade of effort to bring the Glendale Narrows Riverwalk Park to fruition, whose river trailhead is steps from our home near the Riverside Drive Bridge (also due for retro fit in spring 2015), and that project would be enhanced for future users and generations by a comprehensive plan for the best conservational, recreational, and safety measures that 20 embodies.

Joanne Hedge, President
GLENDALE RANCHO NEIGHBORHOOD ASSOCIATION
1415 Garden Street, Glendale CA 91201
818-244-0110
hedgegraphics@earthlink.net

The information transmitted is intended only for the person or entity to which it is addressed and may contain **confidential and/or privileged material**. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender and delete the material from any computer.

Great Ecology

GREATecology
ENVIRONMENT + DESIGN

1020 Prospect St, Suite 310
La Jolla, CA 92037
greatecology.com

P: 858.750.3201
F: 858.750.3205

November 18, 2013

JOSEPHINE R. AXT, PH.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Comment Letter in Support of Alternative 20 of the U.S. Army Corps of Engineers Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Dear Dr. Axt:

As the Founder and President of Great Ecology, a national ecological consulting and habitat design firm specializing in creating and enhancing the nation's public parks, wetlands, and waterfronts, I welcome the opportunity to comment on the U.S. Army Corps of Engineers (USACE) Draft Integrated Feasibility Report (DIFR) for the Los Angeles River Ecosystem Restoration Study. Great Ecology has reviewed the DIFR, released in September 2013, and offers this letter in support of Alternative 20 as the preferred alternative.

Although the USACE has identified a suite of potential alternatives to restore the LA River based on the goals set out in the Los Angeles River Revitalization Master Plan, it has indicated a preference for Alternative 13 as the most cost-effective alternative. Alternative 13, as it now stands, relies heavily on the cost-evaluation metric; however, it discounts the value and importance of the more robust ecological Alternative 20. In comparison, Alternative 20 offers optimal ecological functionality, deeper and wider connections to surrounding habitat and wildlife corridors, and the likelihood of real, long-term benefit for the Los Angeles community. 1

As an industry leader whose ecological designs are proven to deliver the highest ecological value at the least risk and cost to public and private clients nationwide, we offer our perspective in the remainder of this letter. In summary:

- Alternative 20 offers a holistic and synergistic approach that is more consistent with the Los Angeles River Revitalization Master Plan goals for enhancing ecological function, improving water quality and flood storage, and increasing connectivity.
- Alternative 20 is a robust, ecologically superior plan with wide reaching environmental and community benefits that extend far beyond the immediate boundaries of the LA River corridor for people, plants, and wildlife.
- The USACE analysis of the alternatives (using the CHAP approach) does not consider habitat connectivity and the expansion of in-channel habitat as significant factors in Habitat Unit valuation, and would benefit from incorporating a Graph Theory approach to more accurately capture the value of Alternative 20's enhancements. 2

ALTERNATIVE 20 IS MORE CONSISTENT WITH THE LARRMP GOALS

The Los Angeles City Council adopted the Los Angeles River Revitalization Master Plan (LARRMP) in 2007 as a framework for restoration of the River to its former ecological, social, and commercial significance in the city landscape.[1] Multiple studies referenced in the LARRMP and the DIFR have documented that the River corridor and its surrounding area have suffered from urban development. The once abundant southwestern riparian ecosystems are now scarce; channelization has diminished biodiversity and natural hydrology regimes within the River; and interference with wildlife and aquatic corridors from man-made structures and pollution has fragmented habitats within the watershed. The LARRMP identifies specific goals for increasing ecological function, including enhancement of flood storage, improving water quality, and restoring a functioning riparian ecosystem.

The DIFR presents options to accomplish these goals and addresses additional problems identified by various studies conducted in and around the River. The ecological problems facing the LA River are interrelated. Alternative 20 takes a holistic approach and includes multipurpose design and management strategies that have the best chance of success. For example, restoration of natural flow regimes will bring needed water to the floodplain that allows for the establishment of native vegetation, which in turn will lead to an increase in flood attenuation capacity and a reduction in nutrient loads in the LA River. This vegetation will attract and host native riparian wildlife species that form the basis of a natural riparian ecosystem. The result of this multilayered approach will be an increase in the floral biodiversity on the LA River, which will facilitate the enhancement of faunal biodiversity.[2] Additionally, wide, contiguous stretches of restored riparian habitat represent ideal habitat corridors for wildlife movement, restoring connections between disconnected habitat nodes.[3,4] 1

Alternative 20 is a holistic and synergistic approach with exponential benefits.

Because Alternative 20's enhancement elements are interconnected, removing a piece of this restoration plan, or limiting the plan's scope, significantly diminishes its effectiveness. Doing so would also increase the risk of functional failure, add costs related to fixing failures, and decrease the likelihood that the River's restoration project will achieve all of its ecological goals.

ALTERNATIVE 20—AN ECOLOGICALLY SUPERIOR PLAN

Alternatives 13 and 20 differ significantly in their plans for four of the eight reaches. Alternative 20 expands on the core elements of Alternative 13, providing enhancements that primarily involve restoring habitat connectivity and expanding in-channel and wetland habitat. A restored habitat, however, only functions if the flora and fauna it is intended to support are able to reach it. Alternative 20, with its emphasis on connectivity, offers additional elements that amplify the ecological benefits and significantly improve environmental performance of the River and the watershed.

---

[1] City of Los Angeles. 2007. Programmatic environmental impact report/environmental impact statement for the Los Angeles river revitalization master plan. Prepared by the City of Los Angeles, Department of Public Works, Bureau of Engineering and the U.S. Army Corps of Engineers, Los Angeles District, Planning Division, with technical assistance from Tetra Tech, Inc.

[2] Krueper, D.J. 1995. Effects of livestock management on southwestern riparian ecosystems. *In*: Desired future conditions for southwestern riparian ecosystems: bringing interests and concerns together. General Technical Report RM-GTR-272. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 359 pp.

[3] Gilbert-Norton, L., R. Wilson, J.R. Stevens, and K.H. Beard. 2010. A meta-analytical review of corridor effectiveness. Conservation Biology 24:660-668.

[4] Beier, P., D.R. Majka, and W.D. Spencer. Forks in the road: choices in procedures for designing wildland linkages. Conservation Biology 22:836-851.

Reach 2—Bette Davis Park area of Griffith Park—Alternative 20 proposes additional restoration along the overbanks, soft bottom habitat creation through channel modifications, and restructuring the banks to support overhanging vines. This will enhance the hydrologic connectivity between the River and its floodplain by an additional six acres as compared to Alternative 13. Soft bottom habitat is the natural state of the River, and a vertical slope along the channel allows fish and other aquatic life to take advantage of shade provided by the proposed overhanging vegetation. This makes the river corridor a more desirable movement pathway.

Reach 3—the Ferraro Fields area of Griffith Park—The most significant Alternative 20 enhancement is a channel mouth widening in the Verdugo Wash confluence, which presents an opportunity for connection to a Significant Ecological Area in the Verdugo Mountains. These regional connections are vital to ensure the success of any revitalization effort as Significant Ecological Areas contain populations of species that will benefit most from restoration.

Reach 7—the Arroyo Seco/LA State Historic Park—Alternative 20 is the only alternative to propose a profound hydrological connection between the River and the LA State Historic Park. This area represents a refuge from the lower value urban environment, and provides important breeding and foraging grounds for any species traversing the River corridor. 1

Although Alternative 13 proposes to soften and stabilize feeder streams to enhance hydrologic connectivity in this reach, Alternative 20 also includes the creation of marsh habitat. Marshes not only serve as nutrient sinks and provide significant wildlife habitat, but also are critical floodwater attenuators for the downstream river reaches that face greater pressure from stormwater inflows, especially during storm events.

Reach 8—Piggyback Yard—Alternative 20 proposes major improvements that focus on connectivity, habitat expansion, nutrient removal, and flood management. The proposed river diversion into Piggyback Yard, turning the reach into soft bottom habitat and extending freshwater marsh habitat within this region, augments the Alternative 13 proposed restoration of an historical wash and biodiversity enhancements through planting.

Ultimately, the more robust enhancements of Alternative 20 in these four reaches will yield wide reaching ecological and environmental benefits that extend far beyond the immediate boundaries of the LA River corridor, for people, plants, and wildlife.

USACE METHODOLOGY

In accordance with agency guidelines, the USACE subjected the ecosystem-related benefits of each alternative to a detailed economic analysis, allowing for an explicit comparison of costs and benefits. To this end, USACE used the Combined Habitat Assessment Protocol (CHAP) approach to quantify the environmental benefits of the various alternatives, and determined Alternative 13 to be the preferred option. The output from the CHAP approach is Habitat Units (HUs), which represent the per-acre value of a habitat. However, it is difficult to place a monetary value on many ecosystem services due to a lack of market value for them.[5] 2

[5] Gómez-Baggethun, E. and M. Ruiz Pérez. 2011. Economic valuation and the commodification of ecosystem services. Progress in Physical Geography 35:613-628.

While the CHAP approach accounts for a many factors relevant to assessing the efficacy of certain restoration measures (e.g., it considers hundreds of species, habitats, and habitat functions to arrive at the HUs for each restoration measure), this methodology has key shortfalls noted by the USACE.[6] The HUs—the basis of the USACE's Cost Effective/Incremental Cost Analysis—do not fully capture the value of specific habitat enhancement measures. The CHAP does not feature a weighting mechanism for more valuable in-channel habitat, and does not address hydrologic connectivity or habitat connectivity related to wildlife movement.

We recommend the use of a Graph Theory to address CHAP shortfalls in valuing connectivity. Graph Theory analyzes network connectivity and has gained traction in landscape management and planning literature in the recent decade.[7] It provides a mathematical, quantitative method to address spatial questions such as, *what conservation and restoration strategies will provide the most cost-effective and efficient way to connect two isolated populations of a species to one another?* 2

The DIFR specifically alludes to Graph Theory, referring to different parts of the restoration reaches as habitat *nodes* and discussing the importance corridor restoration in terms of movement potential. A typical analysis using Graph Theory assesses the nodes (i.e., habitat patches) and the paths (i.e., corridors) connecting them. The number of paths that pass through a node is dependent on certain criteria that make it more *desirable* for movement and the path *easier* for an individual to travel along. Ecological planners typically determine these criteria based on life history characteristics and basic habitat requirements for relevant species. This allows planners to add a weighting mechanism to account for the higher value of in-channel habitat within certain nodes or along paths.

Ultimately, nodes are ranked on the basis of how many paths cross through them; in this manner, one can assess the ease of movement (i.e., connectivity) between patches at multiple spatial scales. If USACE cannot incorporate graph theory into its CHAP approach, it should consider conducting a separate Graph Theory analysis and assessment to identify benefits of certain restoration measures beyond those simply identified by the CHAP HU analysis.

CONCLUSION

Alternative 20, the most ecologically robust plan, offers a true synergistic approach to restoring the LA River—all of its design features and restoration strategies build upon one another and focus on multiple aspects of connectivity, biodiversity enhancement, flood control, and nutrient removal. Alternative 20 aligns seamlessly with the ecological goals established in the Los Angeles River Revitalization Master Plan, and provides more ecological performance at a lower risk of functional failure than what might be achieved by the more limited restoration scopes described in Alternative 13. With its enhanced emphasis on connectivity, Alternative 20 cultivates an urban ecological network that can facilitate wildlife (both terrestrial and aquatic) and human movement throughout the region by substantively linking to Significant Ecological Areas, such as the Verdugo Mountains, as well as signature public recreational spaces like the LA State Historic Park. 1

The USACE analysis of the alternatives (using the CHAP approach) does not consider habitat connectivity and the expansion of in-channel habitat as significant factors in Habitat Unit valuation. There are additional methods that can accurately value these vital factors. For example, incorporating a Graph Theory approach to assess connectivity and capturing the value of restoration actions. Had these methods been used, Alternative 20 would be deemed a more cost-effective alternative relative to the ecological benefits it will provide. 2

[6] U.S. Army Corps of Engineers. 2013. Draft integrated feasibility report. 505 pp.
[7] Saura, S. and L. Rubio. 2010. A common currency for the different ways in which patches and links can contribute to habitat availability and connectivity in the landscape. Ecography 33:523-537.

Economic considerations aside, **Alternative 20 unequivocally offers the most ecological value.** While Alternative 13 provides a suite of ecological improvements, it does not fully address connectivity in the region, and as a result, carries a greater risk of failure on the level of overall ecosystem function. Alternative 20, with a heavier focus on measures that enhance connectivity to outlying natural regions, represents the best alternative to fully revitalize the hydrological, chemical, biological, and ecological character of the LA River. 1

We applaud the USACE's efforts and commitment to revitalize the LA River and appreciate your consideration of our comments.

Sincerely,

Mark S. Laska, Ph.D.
President and CEO

Jeffrey T. Harlan, Esq., LEED AP
Senior Planner

Heal the Bay

1444 9th Street
Santa Monica CA 90401
ph 310 451 1500
fax 310 496 1902
info@healthebay.org
www.healthebay.org

November 14, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
Via email: comments.lariverstudy@usace.army.mil

Re: Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Feasibility Study and Environmental Impact Statement/Environmental Impact Report

Dear Ms. Axt,

On behalf of Heal the Bay, a non-profit environmental organization with over 15,000 members dedicated to making Southern California coastal waters and watershed safe, healthy, and clean for people and aquatic life, we submit the following comments on the *Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Feasibility Study and Environmental Impact Statement/Environmental Impact Report* ("Restoration Study"). We appreciate the opportunity to provide comments.

Heal the Bay has been intimately involved in efforts to restore beneficial uses to the Los Angeles River and its Tributaries for over two decades. Our Science and Policy staff routinely advocate for the development and implementation of policies and regulations to improve water quality and habitat in the Los Angeles River. For example, we were closely involved in the development of municipal and regional low impact development ordinances, and more recently, the reissuance of the Los Angeles Municipal Separate Storm Sewer System Permit ("MS4"), which includes numerous Total Maximum Daily Loads ("TMDLs") or pollutant limits for the Los Angeles River. In addition, Heal the Bay's education programs have engaged with community members in the Los Angeles River Watershed so that residents can better understand the value of maintaining a healthy Los Angeles River. Based on these experiences, Heal the Bay sees great value in drawing the much-needed attention to the Los Angeles River through the Restoration Study effort.

As stated in the Restoration Study, the primary purpose of the alternative plans is to restore ecosystem services to an 11-mile reach of the Los Angeles River. The secondary purpose is to provide recreational opportunities consistent with the restored ecosystem. Of the alternatives presented in the Restoration Study and keeping the stated goals in mind, Heal the Bay believes that Alternative 20 is the best option. Alternative 20 adds substantial freshwater marsh restoration in Piggyback Yard and restores larger riparian areas than several of the alternatives. Alternative 20 also includes restoration of riparian and marsh habitat at the Verdugo Wash confluence and Cornfields sites. Alternative 20 would provide more freshwater marsh habitat and more support for fish by reconnecting the channel directly to Piggyback Yard and restoring habitat. Alternative 20 would restore additional freshwater marsh at the Los Angeles State Historic Park. It would add to the life requisites for the endangered least Bell's vireo.

1

1444 9th Street
Santa Monica CA 90401
ph 310 451 1500
fax 310 496 1902
info@healthebay.org
www.healthebay.org

However, we are concerned that none of the alternatives presented addresses improving water quality in the Los Angeles River. In fact, the Restoration Study says that any water quality improvements are only "ancillary" to the project. Heal the Bay strives to ensure that our local waterbodies including the Los Angeles River are safe, healthy, and clean for people and aquatic life. State and Federal agencies such as the Los Angeles Regional Water Quality Control Board and the United States Environmental Protection Agency also have a goal of improving the water quality of the Los Angeles River to meet standards and have established regulations that require water quality improvement. As a result, municipalities around Los Angeles County are currently focused on developing suites of projects to improve water quality and augment local water supply. The Restoration Study misses an important opportunity to comprehensively manage the Los Angeles River resource and leverage the efforts of the MS4. 2

There has been a movement in California over the last decade to manage water resources in a more "integrated" manner and at the watershed-scale to help leverage funds and create the greatest positive change. Traditional water management planning did not always adequately consider the impacts on communities and the surrounding environment. The old planning paradigm also did not consider the relationship between wastewater, water and storm water, and the potential for mutually beneficial approaches in the context of watershed planning. Unfortunately, the goals and alternatives set forth in the Restoration Study do not take an integrated, "full picture" look at the Los Angeles River Watershed.

We are also concerned that climate change adaptation is not adequately considered in the Restoration Study. Climate change adaptation is gaining attention in the realm of water management, as storm intensity and frequency are likely to change and our imported water supply is placed at risk. Climate change projections also put riparian habitat under threat. Climate change adaptation analyses have been conducted to inform other long-term restoration projects in the region, such as the Ballona Wetlands Restoration Project, for which a climate change assessment was conducted to inform restoration design. We also see efforts underway in Los Angeles, such as Adapt LA and Los Angeles Regional Collaborative for Climate Action and Sustainability, to help our region better prepare for climate change. Again, these efforts could be leveraged in terms of the Restoration Study. 3

In sum, goals to enhance water quality, augment local water supplies and address climate change adaptation potential are glaringly absent. Alternative 20 is a start, but our decision-makers need to push us further to meet all of these goals and truly put the Los Angeles River Watershed on the path to meeting beneficial uses. Additional questions and concerns with the Restoration Study are as follows:

Flow

Reducing peak flow should be a component of the Restoration Study. The Restoration Study states: "The alternatives requiring the most extensive and expensive engineering interventions, such as the creation of underground detention/retention basins or very large bypass culverts or tunnels, were determined to be infeasible because of their cost and because they only 4

Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1500
fax 310 496 1902

info@healthebay.org
www.healthebay.org

exacerbated or moved the problems with the current channelized system and deferred important decisions about what needs to occur regarding peak flow reduction in the river's watershed." The Restoration Study also discusses altered hydrology that increases runoff is a primary stressor on habitat. Further, the Restoration Study acknowledges that current climate change studies have indicated a likely increase in the frequency of extreme weather conditions in the future and that these extreme weather events could compound and increase watershed peak flows (5-41). How do the project alternatives address peak flow reduction? Designing a project that maintains the same flood management regime does not fully address impacts to the Los Angeles River. 4

Stormwater

The Restoration Study has outdated information regarding local regulations that should be updated (5-39). The MS4 was reissued in December 2012. It includes a program for developing Watershed Management Plans and Enhanced Watershed Management Plans that should be considered in the context of the Restoration Study. In addition, the MS4 includes all TMDLs in effect for the Los Angeles River Watershed. 5

Construction Period

The Restoration study states that "It is assumed that instream construction and modification of the project reaches would be conducted in dry weather months (April 15 - October 31) to avoid wet weather storm flows, or that work areas would be adequately protected and not affect flood conveyance." (5-42). Project proponents should state definitively that construction will only take place in the dry weather months to minimize impacts, including downstream impacts. Have potential impacts due to a decrease in flows from potential construction-period diversions been evaluated (both in the project reaches and downstream)? 6

Maintenance

Currently with many ACOE "maintenance" projects we see a complete disregard for habitat and beneficial uses when conducting these activities. In fact, on October 31, 2013 the Los Angeles Regional Board issued a Notice of Intent to Sue to the ACOE for unpermitted disturbance of beneficial uses and impacts to water of the state. The Restoration Study states that "current [maintenance] operations would be expected to continue into the future without the implementation of the proposed project. Authorized maintenance includes clearing of all vegetation and scraping of the channel to maintain the purpose of flood risk management, which may be implemented in the future as funding allows...Without implementation of the proposed project, removal of all vegetation in the channel would remain an authorized maintenance activity." (5-48). There are several issues with this statement. First, why does ACOE find it prudent to pursue this type of maintenance operations in the Los Angeles River or elsewhere, as it is in complete conflict with the goals of this restoration project that ACOE is asking stakeholders and government funders to support? Second, how do we ensure that current channel clearing practices aren't utilized after this billion dollar restoration effort? Finally, who will fund the maintenance in perpetuity to ensure the restoration efforts hold? 7 8

Heal the Bay
1444 9th Street
Santa Monica CA 90401
ph 310 451 1500
fax 310 496 1902
info@healthebay.org
www.healthebay.org

No Action Alternative

The Restoration Study states that "Under the No Action Alternative, poor water quality and quantity issues will continue to degrade the existing river ecosystem. The excessive trash that accumulates within existing habitat will not be removed, and will continue to degrade riparian and wetland habitats. Most dry season flow in the channel is due to wastewater releases from the upstream Tillman Treatment Plant or runoff from irrigation or industrial practices. If the climate of Southern California becomes drier, as some climate models predict, pressure on any available water supply will increase. Over time, this could result in greater water conservation measures as well as reuse of treated wastewater, which would reduce flows in the channel. Reduced flows could result in diminished wetland and riparian habitat as well as open water habitat. With degraded habitat conditions and invasion by non-natives, use of habitats by wildlife species is also expected decline." This statement does not appear fully substantiated. First, how do any of the proposed alternatives directly address water quality and trash issues? Also, what is the source used to assert that that reduced flows from Tillman due to water recycling would negatively impact habitat? We have not seen any studies that identify a volume of water discharge necessary to maintain habitat in the River. This is another area were integrated water management is important. 9 10

***

While we see moving forward with Alternative 20 as a step in the right direction, we are alarmed that other critical water management concerns such as water quality, water supply and climate change adaptation were not considered concurrently to leverage this opportunity. We hope that ACOE will work with agencies and stakeholders to address these other concerns and potential opportunities for collaboration. Thank you for your consideration of these comments.

Kirsten James
Science and Policy Director, Water Quality

HISTORIC HIGHLAND PARK NEIGHBORHOOD COUNCIL
Post Office Box 50791
Los Angeles, CA 90050
http://www.highlandparknc.com
Certified as NC #33 May 28, 2002

OFFICERS
Monica Alcaraz PRESIDENT
Hector Huezo FIRST VICE PRESIDENT
Aaron Salcido SECOND VICE PRESIDENT
Joan Potter TREASURER
Brandin Engersbach SECRETARY

DIRECTORS AT LARGE
Paul Bonsell, Teresa "Teri" Bonsell, Randy Carrillo, Gloria Trejo, Alheli Hernandez, Gretchen Knudsen, Aracely Lozano, Violeta Mendoza, Johanna Sanchez, Harvey Slater, Fernando Villa, Ofelia Zuniga

CITY OF LOS ANGELES
CALIFORNIA

DEPARTMENT Historic Highland Park NC
Los Angeles, CA 90012
Telephone: (213) 978-1551

COMMITTEE CHAIRS
Joan Potter BUDGET and FINANCE
Monica Alcaraz EXECUTIVE
Harvey Slater, LAND USE
Gretchen Knudsen OUTREACH
Hector Huezo RULES

November 8, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
ATTN: Ms Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053-2325

Dear Dr. Axt:

At a regular meeting of the Historic Highland Park Neighborhood Council, the board voted to submit the following resolution regarding U.S Army Corps of Engineers Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report:

WHEREAS, the Los Angeles River is the lifeblood of our community and a vital resource to be restored and protected; and

WHEREAS, in 2006, the Los Angeles City Council approved an agreement with the US Army Corps of Engineers (Corps) for the Los Angeles River Ecosystem Restoration Feasibility Study (Study); and

WHEREAS, in 2013, the Corps has developed a final array of four alternatives for the Study, and only Alternative 20 includes both significant restoration at the Los Angeles River's confluence with the Verdugo Wash near the City's border with the City of Glendale, and the only substantial western bank connection-providing a profound hydrological link between the Los Angeles State Historic Park and the river; and

WHEREAS, these two areas provide critical wildlife habitat connectivity to the Verdugo and Elysian Hills, respectively, and are included in the five key opportunity areas of the City Council-adopted Los Angeles River Revitalization Master Plan, which the US Congress directed the Corps to consider; and

Historic Highland Park NC

WHEREAS, ***Alternative 20*** provides the most robust ecosystem restoration outcomes while also providing four times more jobs than the Corps-preferred alternative, and will thereby most appropriately redress historic environmental injustices that resulted from the river's channelization—providing new public access to natural open spaces, improving public health, stimulating regional and local economies, and enhancing the quality of life in Los Angeles

NOW, THEREFORE BE IT RESOLVED, that the Historic Highland Park Neighborhood Council supports the selection and full implementation of Alternative 20 by the United States Army Corps of Engineers to restore our Los Angeles River.

Sincerely,

M. Alcaraz

Monica Alcaraz, President
Historic Highland Park Neighborhood Council

i2 Capital Group

i2 Impact Investing

November 12, 2013

Josephine Axt, Ph.D., Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053-2325

Sent via Email to: comments.lariverstudy@usace.army.mil

Re: **Support for Alternative 20 in the USACE LA River Ecosystem Restoration Feasibility Study**

Dear Dr. Axt:

i2 Capital Group is an impact investment merchant banking firm with a mission to finance businesses with positive environmental or social impact. We would like to pledge our support for Alternative 20 of the US Army Corps of Engineers (USACE) Los Angeles River Ecosystem Restoration Feasibility Study (Study), as we believe it offers the greatest potential for catalyzing long-term benefits to the City of Los Angeles and its environment.

As the Study indicates, Alternative 20 would provide over 9,000 direct jobs and add more than $1 billion direct dollars to the gross national product of the region. Moreover, the Study estimates that, including effects from redevelopment, over 16,000 jobs and nearly $5 billion will result. Alternative 20 also reflects a more equitable cost-sharing partnership—with the local sponsor paying approximately 50% versus Alternative 13, which requires the local sponsor to pay almost 70%. As a representative of the private finance sector, we see Alternative 20 as the most attractive for generating attention from this community.
We look forward to being a partner in that transformation.

Sincerely,

Ashley M. Allen
Founder and Chief Executive Officer
i2 Capital Group, Inc.

KAISER PERMANENTE®

Kaiser Permanente

Kaiser Foundation Hospitals

November 14, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, California 90053-2325

RE: Los Angeles River Ecosystem Restoration Feasibility Study, Alternative 13

Dear Dr. Axt:

Kaiser Permanente is aware that the Army Corps of Engineers and community organizations are working to reclaim natural habitat in the Los Angeles River. Kaiser Permanente supports efforts to restore and conserve the natural environment. We understand that the plans for this beneficial project are in their preliminary stages. While the possible restoration of the river is positive news, Kaiser Permanente would like to express concerns regarding an aspect of the Los Angeles River Ecosystem Restoration project's Alternative 13.

The reason for our concern is the reference to Kaiser Permanente's Regional Service Center, located at 4580 Electronics Place, Los Angeles, CA 90039. According to the map on page 450 of the report, a strip of undeveloped land at the rear of Kaiser Permanente's property is suggested as a temporary construction staging area during the project.

There are two primary concerns with regards to the possible use of this property by construction crews during river restoration construction. First, the Regional Service Center houses eyeglass manufacturing operations and our regional Genetics Laboratory which handles specialty laboratory specimen processing, both which require precision instrumentation. In addition, our Medical Imaging Testing Laboratory, also located at this address, tests all mobile imaging systems, testing on average 20 systems each week.

The Regional Service Center employs 228 employees who produce 1,300 pairs of eyeglasses and perform about 460 genetic laboratory tests every day—seven days a week, 365 days a year. Over 70 pieces of testing equipment and over 100 auxiliary pieces of equipment run every day to meet the needs of our members. The potential of vibrations and dust from large construction equipment being staged, and potentially frequently moved, could affect our overall operations and so, our 3.6 million Southern California members who rely on us for these products and services.

Secondly, Kaiser Permanente has not determined a permanent use for this undeveloped land along the river which could impact Kaiser Permanente if a need were to arise for our use of this property during the time period for the river restoration construction.

Kaiser Permanente will continue to monitor this project and, as the plans evolve, we will continue to offer input regarding possible negative impacts at the Regional Service Center. Rita Speck, our Regional Director of Government and Community Relations, can he reached at (626) 405-5533 and welcomes the opportunity to discuss this issue with you. Thank you for your consideration, and we look forward to hearing from you soon.

Sincerely,

Scott S. Wendling
Regional Executive, Support Services
Kaiser Permanente Health Plan, Inc.
Southern California Region

cc: The Honorable Mitch O'Farrell, Los Angeles City Councilman
John Yamamoto, Kaiser Permanente, Vice President & Regional Counsel
Skyler Denniston, Kaiser Permanente, Land Use Manager
Rita Speck, Director, Kaiser Permanente Government & Community Relations
Michael Cook, Director, Kaiser Permanente Regional Operations & Property Management

Walnut Center
Pasadena, California 91188

LACBC

From: Eric Bruins
To: SPL Comments LA River Study
Subject: [EXTERNAL] LACBC supports Alternative 20
Date: Monday, November 18, 2013 3:07:33 PM

The Los Angeles County Bicycle Coalition (LACBC) supports Alternative 20. We believe in a bold vision for the future of Los Angeles that integrates open space, recreation, transportation, and restoration in a revitalized Los Angeles River corridor. Our comments were included in KCET's coverage of the ARBOR study:

Eric Bruins, planning and policy director for the Los Angeles County Bicycle Coalition (LACBC)

[We're supporting] Alternative 20 (the most advanced). The L.A. County Bicycle Coalition isn't shy about dreaming big. Just as we're reimagining how Angelenos get around, we recognize the need to reimagine our relationship with the L.A. River. And just as with our streets, half-measures don't cut it if you want the full benefits of new investments.

How would the Alternative you've chosen affect the organization?

LACBC's annual River Ride is one of the signature events that happens along the river. Each June, over 2,000 bicyclists explore the river from Griffith Park to Long Beach, traveling through the lush Glendale Narrows, dystopian industrial zones, beautiful riverfront parks, and the brilliantly restored Dominguez Gap wetlands along the way. Our riders truly see the best and worst of the river and the diversity of communities along the way.

For this year's 13th Annual River Ride, we partnered with the River Revitalization Corporation to announce Greenway 2020, a campaign to make all 51 miles of the river, from Canoga Park to Long Beach, walkable and bikeable. We look forward to celebrating at our 20th Annual River Ride when our century route will truly include the entire river. Alternative 20 best captures this vision for a different L.A. River, one that connects L.A.'s communities with opportunities to walk, bike, and enjoy nature without leaving the city.

What would you say to the Army Corps backing Alternative 13 (ACE) option?

Now is not the time to be timid. We have one chance to get river restoration right, and this is it. *Is there an issue you think the Army Corps should have focused more on in the study?*

Ecosystems in urban areas have incredibly high value for the services they provide. It's not all about acreage when the acres here can cleanse stormwater, attenuate flooding, and absorb air pollutants, all while providing respite to city dwellers. We can mitigate environmental injustices while meeting the Corps' mandate for habitat restoration. Alternative 20 will restore human habitat for Angelenos.

--
Eric Bruins
Planning & Policy Director
Los Angeles County Bicycle Coalition
t: 213.629.2142, x127 / f: 213.629.2259

www.la-bike.org

Help build a better, bike-able L.A. County:
Become an LACBC member today!

LAKC

From: Charles DeRosa
To: SPL Comments LA River Study
Cc: Anthea Raymond; Paul Macey; Katherine Macey
Subject: [EXTERNAL] Los Angeles Kayaking Club for Alt. 20
Date: Wednesday, November 13, 2013 3:58:08 PM

Dear Dr. Axt.

My name is Charles DeRosa. I live in the Echo Park neighborhood of Los Angeles about half a mile from the Glendale Narrows stretch of the Los Angeles River. Personally, I'm an American Canoe Association (ACA) Certified River Kayaking Instructor and Swift Water Rescue Technician. I've been whitewater kayaking for over 20 years and spent seven years leading whitewater trips and teaching students for the Nantahala Outdoor Center in Bryson City, North Carolina. I am writing to you on behalf of the Los Angeles Kayaking Club (LAKC) and it's 110 members. I assure you that the LAKC members have a deep seated interest in what is best for the Los Angeles River and are dedicated to creating a better balance between our river environment and urban community.

I attended the community meeting with the Corps on October 17 and would like to reiterate the appreciation we all have for the time and work that the Corps has put into the river project. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration. I have reviewed the report in detail and I am providing **comments in support of Alternative 20** presented in the document. While Alternative 13 has been identified in your study as theTentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Bloom River.

Beyond the ecosystem concerns I would like to also address the issue of passive recreation on the Los Angeles River, a topic in which kayakers have a vested interest and expertise. Specifically, I feel any undertaking to improve the LA river should strive to create an environment conducive to facilitating the public's interaction with the river's ecosystem. Alternative 20 is (as the IFR points out) clearly the best road forward in terms of providing the people of Los Angeles with a meaningful recreation experience. Additionally, Alt 20's investment in river reclamation will provide an increased draw to people traveling to the LA area, resulting in increased economic activity for the local community.

As a kayak teacher I assure you that few pursuits increase environmental education opportunities to a river the way kayaking does. Kayaking the Los Angeles river is a unique experience and provides a virtually impact free immersion into the river's ecosystem. Therefore, I want to vigorously urge the Corp to select Alt 20 as the best plan for the Los Angeles river. Alt 20's investment in restoring ecological processes, biological diversity and natural hydrology are undoubtedly worth the increased cost. Simply put - the larger investment in the LA river provides greater opportunities for eco-immersion. The Verdugo Wash improvement, Arroyo Seco's restored riparian habitat, and Reach 2's additional modifications all would be of considerable benefit to the whitewater community. **Alt 20's investment in ecosystem, combined with a robust passive recreation program, is the right solution for restoring an environmental, communal and cultural resource to the people of Los Angeles.**

Sincerely,
Charles DeRosa
Los Angeles Kayaking Club
American Canoe Association Instructor

Paul Macey
Westwood
Associate Dean for Information Technology and Innovations
Co-Founder, Los Angeles Kayak Club
pmacey@gmail.com

Katherine Macey
Westwood
Owner, Organize to Excel
Co-Founder, Los Angeles Kayak Club
katherine@katherinepaul.com

Anthea Raymond
Elysian Valley
Journalist and Social Media Manager, LA River Expeditions
British Canoe Union Certified Sea Kayaking Coach
anthea.raymond@gmail.com

Sam Raskin
Sacramento
Former Head, LAKC Whitewater Programs
Coordinator, UC Davis Intercollegiate Athletic Tutoring Program
sraskin@gmail.com

Chris Whitesides
Los Angeles
UCLA Class of 2013
California State Northridge Outdoor Adventures Graduate Assistant
cwhitesides@ucla.edu

Brendan Nelson
Hollywood
Production Coordinator, CBS
Kayak Instructor, UCLA Marina Aquatic Center
brendan.nelson@tvc.cbs.com

Francis Roix
Altadena
Propmaker, IATSE Local 44
Safety Chair, River Touring Section, Sierra Club of Southern California
fjroix@gmail.com

Brett Harding Duxbury
Attorney
Kernville
brettduxbury@mac.com

Jonah Grubb
Pomona College Class of 2016
Outdoor Educator Center Coordinator
Founder, "First Descent," the Claremont Colleges Whitewater Kayaking Club
jonahgrubb@gmail.com

Andrew Webberly
Burbank
Lighting Console Programmer
druuka@earthlink.net

Leslie Wilson
Santa Monica
TV Production

wilson@mac.com

Ge Wu
China
Businessman
Member, LAKC Kayak Polo Nationals Team

Eileen Finkelstein
Los Angeles
Editor, Television
roadways80@sbcglobal.net

Liz Brackbill
Oceanside
Applications Programmer/Analyst
lizbie3@yahoo.com

Dayuan Fu
New York
Designer/M.Arch.I, UCLA
fudayuan@gmail.com

Barbara Winckler
Sherman Oaks
Office Manager, Craft Restaurant
BarbaraWinckler@gmail.com

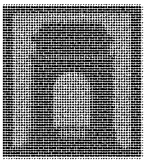
Larry St. George
Santa Clarita
Student

Garrett McDermid
San Diego
Film Student, UC San Diego

Rae Perroneau
Santa Monica
Sales Executive
raeperonneau@mac.com

Chang Long Yeo
Singapore
UCLA Class of 2016
yeochanglong@gmail.com

Tiemeng Cui
Irvine
IC Engineer
tedcui87@gmail.com



LARABA

LOS ANGELES RIVER ARTISTS AND BUSINESS ASSOCIATION

To: Dr. Josephine R. Axt, Ph.D., Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
and comments.lariverstudy@usace.army.mil.

CC.: Lewis MacAdams, FOLAR
570 W. Avenue 26, Suite 250
LA, CA 90065
contact@folar.org

Omar Brownson, LA River Revitalization Corporation
570 W. Avenue 26, Suite 475
LA, CA 90065
obrownson@larivercorp.com

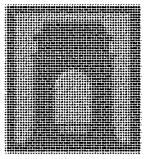
Martin Schlageter, Policy Director for Councilman Huizar, 14th District
LA City Hall
200 N. Spring St., Room 465
LA, CA 90012
martin.schlageter@lacity.org

Dear Dr. Josephine R. Axt,

The Los Angeles River Artist and Business Association (LARABA) supports Alternative 20 of the recently released ARBOR Feasibility Study by the Army Corps of Engineers because it provides the most extensive yet cost-effective restoration of our area. The 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles directly borders on the Arts District area at 1st Street where we live and work.

Alternative 20 while maintaining existing levels of flood risk management includes a much needed connection to the LA River in the State Historic Park as well as 30 acres of Verdugo Wash, and extensive reparation of what can become a large, mixed-use parkland and newly added floodplain in the PiggyBack Yards area.

In our area, we are working toward connections along the river in walking/cycling paths that, in turn, can extend the intentions of the ARBOR study area by linking the downtown area south of 1st Street to existing LA River pathways upstream from us. We see the results of the ARBOR Study as exciting support toward those efforts.



LARABA

LOS ANGELES RIVER ARTISTS AND BUSINESS ASSOCIATION

The Los Angeles River Artist and Business Association (LARABA) is a 22-year-old community betterment association for the Downtown Arts District. The Los Angeles River forms our eastern border, the ARBOR reach at 1st Street is our northern border, and so our community strongly favors restoring habitat for a usable river and adjacent green space.

Cost is a factor in today's constrained economic environment, but any real ecosystem restoration plan will take several decades to implement. We cannot take a shortsighted view of today's economics for this vital long-term plan. The Verdugo Wash and other components of Alternative 20 capture the long-term watershed value by linking the Los Angeles River to multiple large corridors and refuges in the mountains and along the river banks. In so doing we will restore a balance for the species in the ecosystem and the public within an urban setting.

We urge support for Alternative 20.

Sincerely,

J. Pitruzzelli

Joseph Pitruzzelli, President of LARABA

Deborah Meadows, co-chair of LARABA's LA River committee

Yuval Bar-Zemer, co-chair of LARABA's LA River committee

800 East 3rd St Los Angeles CA 90014 • 415-290-1307 • LARABA.org

LA River Expeditions

LA River Expeditions · 32 Grand Blvd, #32, Venice, CA 90291 · 310.822.9941 · info@LARiverExpeditions.org

November 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
ATTN: Ms Erin Jones, CESPL-PD RN, P.O. Box 532711
Los Angeles, CA 90053-2325

RE: Support for Alternative 20

Dear Dr. Axt:

We've been fortunate these last couple years to have Army Corps staff in Los Angeles who have opened up a new chapter in terms of how the Corps approaches the LA River situation.

I urge you and the senior staff in D.C. to align yourselves with the spirit of that activity and to do everything reasonably possible to support Alternative 20, the most robust of the options that have been presented. We understand that Alt 20 was not even the most expensive of the plans proposed by experts in the environmental community, but it seems to be a bold plan nonetheless that will more dramatically alter the river's fate and lead us toward being an increasingly sustainable city — which we see not as a choice of luxury but one of necessity.

We like that this option allows for an equitable share of the expenses between local and federal funding. We're not asking for handouts.

We also like that it resonates with what most Angelenos are saying they want, and we know this not from guessing but from what we've heard while working with the Corps as a partner and leading thousands of people on guided kayaking trips on the river over the past three years. Allowing increased access has proven to not only create jobs and utilize the public commons better (we're the largest park-starved big city) but also to have statistically decreased crime in the areas where recreational-educational activities have been given the opportunity to flourish. Instead of worrying about the bottom-line sticker price of this type of building project, we'd prefer that you and yours focus on the actual and societal costs of inaction; in hindsight, even ten years from now, the cost of Alt 20 will be seen as a small price to pay for all the benefits it can bring.

And finally, success in Los Angeles isn't just a provincial benefit — the LA River's iconic status (lowly as it has been at times) is a powerful symbol nationally and internationally. If we can succeed in an ambitious planned revitalization, then there is really no waterway in the world that couldn't take inspiration from our situation here and use it to improve their own waterway — and USACE can then take great pride in shaping those perceptions and creating positive change in the world. This kind of rags-to-riches story has win-win written all over it.

Regards and thanks for your consideration in this matter!

Executive Director
LA River Expeditions
310.801.0151

LA River Revitalization Corp.-1

BOARD MEMBERS

Daniel Tellalian
Chair

Harry B. Chandler
Vice Chair

Bruce Saito
Treasurer

Barbara Romero
Secretary

Allan Abshez
Member

Monica Dodi
Member

Steve English
Member

Cynthia Hirschhorn
Member

René Jones
Member

Howard Katz
Member

Jordan Kerner
Member

Dennis R. Martinez
Member

Brian Moore
Member

Christopher Rising
Member

Gary Ross
Member

Daphne Zuniga
Member

November 13, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

Dear Dr. Axt and fellow Army Corps of Engineers,

We are writing you today to strongly encourage the selection and implementation of Alternative 20 of the U.S. Army Corps of Engineers Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 would ensure that the LA River is a civic legacy of the 21st century and create a publicly accessible, cherished, and celebrated public space for Los Angeles and the region. This is the only option that will allow access to our terraced banks, and a hydrologic link to LA Historic Park -- opening access to our downtown green space, inspire our imaginations, build positive community investment and grow our regional economy.

Though the Corps' selected Alternative 13 in its Draft Report, we believe Alternative 13 is unacceptable, as it does not meet the range of the Corps' study objectives. We further believe that Alternative 13 is substandard, underperforms for the investment, and should be set aside. This is a once-in-a-lifetime opportunity to create a public destination for future generations, and Alternative 13 squanders that opportunity.

In addition to restoring the environment, fuller restoration of the river as provided by Alternative 20, will create a recreational destination, and again allow the community to gather and enjoy the river, improving the quality of life for residents. When we fully restore a wildlife habitat, we are also building healthier spaces to improve quality-of-life--where families can ride bikes, play in parks, and breathe fresh air along the open water. Only Alternative 20 will fully realize the River's potential to bring green space to park poor, underserved neighborhoods because of the link to the LA Historic Park serving downtown and Chinatown. We must bring environmental justice to our community and Alternative 20 does that.

The chosen Alternative 13 inadequately meets the Study's full objectives of ecosystem restoration and economic development. According to the Corp's own analysis, full restoration of the river, represented by Alternative 20, will provide 16,833 economic redevelopment jobs versus 4,014 jobs for Alternative 13. Further, Alternative 20 provides $4.7 billion in economic redevelopment income versus $1.2

COURSE THE CHANGE LA

LA RIVER REVITALIZATION CORPORATION

LA River Revitalization Corp.-1

Billion for Alternative 13. Alternative 20 is head and shoulders above Alternative 13 in every possible category and must be embraced.

The Corps Plan must also include restoration of the Verdugo Wash Confluence, Taylor Yard/Bowtie, Taylor Yard/G-2, the Arroyo Seco Confluence, and the Piggyback Yard, all of which are broadly supported by the community and will enable us to reverse the rapid loss of biodiversity and provide sustainable habitat restoration and open space for the city. Only Alternative 20 includes the Verdugo Wash Confluence, which links the LA River to the Verdugo Mountains -- a valuable wildlife corridor that has been lost since the river was channelized and provides the only habitat capable of supporting restoration for the federally endangered Least Bell's Vireo.

We are also asking the Corps to expedite completion of the Chief's Report by June of 2014, rather than September, given the need to authorize the project and move forward with construction.

Given the Administration's selection of the LA River as one of 7 areas chosen in the first-phase of the Urban Waters Federal Partnership, which seeks to implement the Americas Great Outdoors Initiative, the Corps must select a plan that fully restores the river, which is the only option for meeting the goals of the Administration's AGO to stimulate regional and local economies, create local jobs, improve the quality of life, and protect Americans' health by revitalizing urban waterways in under-served communities.

Thank you for your consideration of Alternative 20, which, we believe, provides the best possible return to the American people.

Sincerely,

Daniel Tellalian
Board Chair

Omar Brownson
Executive Director

CC: Valerie Jarrett
Senior Advisor and Assistant to the President Office of Public Engagement and Intergovernmental Affairs Eisenhower Executive Office Building
Lieutenant General Thomas Bostick, Commanding General and Chief of Engineers
Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works)

LA River Revitalization Corp.-2

From: Omar Brownson [mailto:info@larivercorp.com]
Sent: Tuesday, September 24, 2013 09:04 AM Pacific Standard Time
To: Demesa, Eduardo T SPL
Subject: [EXTERNAL] Demand a Destination Worthy of this City

Eduardo --

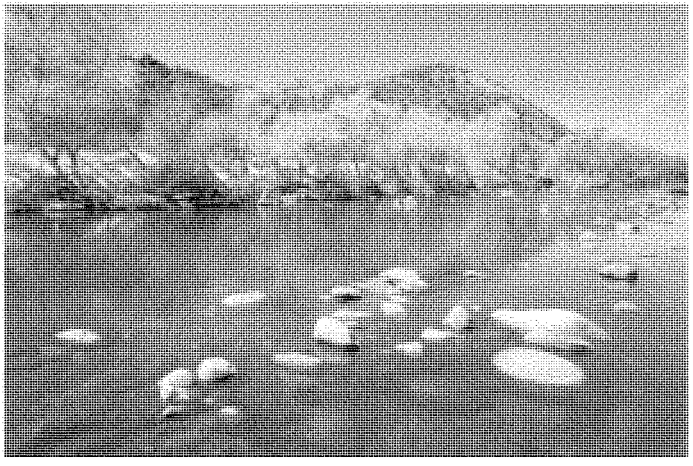
We work every day to change the course of LA. But right now, we have a unique opportunity to have our voices heard and make real change.

Last week, the U.S. Army Corps of Engineers, selected Alternative 13, the second cheapest of four options detailed in the much-anticipated Los Angeles River Ecosystem Restoration Study. This option is not the best choice for the ecosystem restoration and economic development needs along our river. We don't want to make incredible investments in the river and then still have incredible barriers to accessing it.

Alternative 20 is the only option that will create a publicly-accessible, cherished, and celebrated natural resource in our world-class city.

The Los Angeles Times Editorial Board agrees it is inadequate and wrote their support for an alternative that includes terraced walkways. And Patagonia gave a $5,000 donation to build a grassroots movement for the best alternative from the Army Corps study. Let's match their support.

Click here to donate $5 or more to help the Los Angeles River Corp in our work to demand an alternative that would inspire our imaginations, build positive community investment and grow our regional economy.



LA River Revitalization Corp.-2

The Army Corps' LA River Ecosystem Restoration Study's 11-mile scope from Griffith Park to Downtown is a vital component of LA River Corp's Greenway 2020 movement to complete a continuous 51-mile Greenway adjacent to the LA River.

If we restore the Los Angeles River to the full potential of Alternative 20, we will be miles closer to a destination worthy of Los Angeles that everyone can access and enjoy.

You can show your support by coming out this Saturday to learn more about the LA River Alt 20 study or sign our petition here.

Thank you for your ongoing support. It means the world to us.

Omar Brownson

P.S. To submit for public comment, write in your support here.

-=-=-

LA River Revitalization Corporation · 570 W Ave 26, Suite 475, Los Angeles, CA 90065, United States
This email was sent to eduardo.t.demesa@usace.army.mil. To stop receiving emails, click here.
You can also keep up with LA River Revitalization Corporation on Twitter or Facebook.

-=-=-

Created with NationBuilder, the essential toolkit for leaders.

LA Waterkeeper

LOS ANGELES WATERKEEPER®

November 18, 2013

Josephine R. Axt, Ph.D., Chief
Planning Division, U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

VIA EMAIL: comments.lariverstudy@usace.army.mil

RE: Comments on the DRAFT Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Dear Ms. Axt:

Thank you for the opportunity to provide comments on the Draft Los Angeles River Ecosystem Restoration Integrated Feasibility Report ("ARBOR Study"). These comments are submitted on behalf of Los Angeles Waterkeeper ("Waterkeeper")[1] and our hundreds of California members and supporters who have a vital interest in restoring and protecting the Los Angeles River for the improvement of ecosystem and community health.

Waterkeeper commends the U.S. Army Corps for moving forward on a plan to restore the Los Angeles River. We have long supported the City of Los Angeles' River Revitalization Master Plan, and the efforts of numerous municipalities and organizations to implement green infrastructure and stormwater control projects along and near the LA River. Our organization has also worked hard over its 20 years to reduce industrial and municipal pollution from contaminating the river through our advocacy for strong pollution limits and Clean Water Act enforcement actions. Waterkeeper supports the most extensive restoration alternative currently in the ARBOR Study – Alternative 20. We believe this alternative provides the most comprehensive opportunity to transform the 11 miles of river into a thriving ecosystem that supports fish and wildlife, while providing enormous community benefits for recreation, fishing, and health. 1

Despite our support of Alternative 20, however, we do have concerns with the limited scope and evaluation included in the ARBOR study. In particular, the lack of focus on potential water quality impacts and benefits[2] in this project seems shortsighted. Rather 2

[1] Founded in 1993, Waterkeeper's mission is to ensure water quality protections in waterways throughout L.A. County through enforcement, fieldwork, and community action. www.lawaterkeeper.org.

[2] Although the ARBOR study mentions water quality in several places, it explicitly states that "[t]his project is not proposing measures to address water quality; any improvements will be ancillary to the project." ARBOR Study at 2-20.

than avoiding or ignoring water quality impacts assessment, the ARBOR study should embrace the goal of water quality improvement as one of the cornerstones of the LA River revitalization and restoration. In fact, to do otherwise will undoubtedly represent yet another missed precious opportunity to help the river and Angelenos.

The current state of the LA River is defined not only by its concrete siding and lack of adequate vegetation and habitat, but also by the polluted runoff and discharges that plague it every day. It is impossible to evaluate the river's current health and discuss restoration without taking a hard look beyond the riparian zone at the land uses that surround it and those uses' impact on water quality.

The LA River, like all water bodies throughout Los Angeles, is designated as impaired under the federal Clean Water Act because its water quality does not meet state and federal water quality standards.[3] As a result, the river is unable to support its beneficial uses, which serve both human recreation and ecosystem functions.[4] Although pollution and channelization have drastically altered the natural ecosystem, LA water bodies like the Los Angeles River, are still essential habitat for dozens of fish and bird species, as well as macro-invertebrate and invertebrate species. In addition, the public's use of LA waterways for water contact recreation, including kayaking, and fishing exposes many people to fecal bacteria, including E. coli, toxic metals, nutrients and other contaminants. Non-contact recreational and aesthetic opportunities, such as wildlife observation, are also impaired by polluted discharges. 2

Alternative 20 provides the greatest opportunity for water quality improvements by maximizing tributary connectivity and expanding freshwater marsh restoration in some of the more industrial urban runoff impacted sections of the river. Providing freshwater marshes and connection to the major tributary Verdugo Wash will recover ecosystem services including water purification and filtration. Freshwater marshes protect water quality by trapping sediment and retaining excess nutrients and other pollutants common

[3] 42 U.S.C. § 1313(d).

[4] The Los Angeles Regional Water Quality Control Board ("Regional Board") issued the *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura County* ("Basin Plan"), which identifies the "Beneficial Uses" of the portions of the Los Angeles River. These Beneficial Uses include: water contact recreation (REC 1), non-contact water recreation (REC 2), warm freshwater habitat (WARM), wildlife habitat (WILD), wetland (WET), estuarine habitat (EST), freshwater habitat (FRSH), marine habitat (MAR), commercial fishing (COMM), industrial (IND), rare, threatened, or endangered (RARE), migration of aquatic organisms (MIGR), and spawning, reproduction and/or early development (SPWN). *See* Basin Plan, Table 2-1. According to the 2010 303(d) List of Impaired Water Bodies, different Reaches and tributaries of the Los Angeles River and the LA River Estuary are impaired for pollutants such as copper, lead, Zinc, pH and oil. Polluted discharges from these facilities cause and/or contribute to the degradation of these already impaired surface waters and aquatic dependent wildlife. Other impaired waterbodies in the City of Los Angeles include Santa Monica Bay, Compton Creek, Ballona Creek and Ballona Estuary, Dominguez Channel, Los Angeles Harbor and Long Beach Harbor, and San Pedro Bay and its beaches.

LA Waterkeeper

LOS ANGELES WATERKEEPER®

in urban LA runoff such as heavy metals. These functions are especially important when surface waters are connected to ground water or waters used for swimming, fishing, and drinking and in turn these functions are critical for healthy fish and wildlife habitat.

Some of the worst threats to surface water quality in LA are pollution from industrial facilities such as scrap metal recycling yards, waste transfer stations, auto dismantlers, and sites that use preproduction plastics. Hundreds of these facilities are located in the Los Angeles River Watershed, including the area considered in the ARBOR Study. For example, the Piggyback Yard is surrounded by rail-associated industrial uses. Any restoration and revitalization efforts should include green infrastructure that helps reduce industrial runoff and addresses pollution at its source, instead of channeling it directly towards the river via the region's elaborate storm drain system. Similarly, the area around the Los Angeles State Historic Park/Chinatown presents opportunities for cleaning up nearby industrial activities. The ARBOR Study can and should focus on water quality improvements for these two areas and should evaluate water quality impacts associated with the restoration of the river. 2

In the past, our region has taken the approach of addressing one problem at a time. We have addressed challenges such as flood control, transportation, water supply, ecosystem restoration and water quality, separately. A piecemeal approach has often resulted in the solution for one issue causing problems for another. For example, the impressively engineered flood control system in LA has become a one-way conduit for pollutants and otherwise useful water resources to the ocean, while simultaneously importing freshwater from hundreds of miles away. Similarly, concentrating efforts on importing water from faraway places has diverted focus from developing efficient and clean local sources of drinking water here in LA. The only path forward is to integrate our approaches to water management and community development in Los Angeles. The restoration of the Los Angeles River presents a tremendous opportunity to transform that vision into reality.

Waterkeeper urges the Army Corps to adopt Alternative 20 and consider and *prioritize* approaches that result in multiple benefits, including water quality, as it moves forward in restoring the Los Angeles River.

Thank you for your consideration.

Sincerely,

Liz Crosson
Executive Director
Los Angeles Waterkeeper
liz@lawaterkeeper.org

LA World Airports

Los Angeles
World Airports

October 31, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers-Los Angeles District
P.O. Box 532711
Los Angeles, California 90053-2325

LAX
LA/Ontario
Van Nuys
City of Los Angeles
Eric Garcetti
Mayor
Board of Airport Commissioners
Sean O. Burton
President
Valeria C. Velasco
Vice President
Gabriel L. Eshaghian
Jackie Goldberg
Beatrice C. Hsu
Matthew M. Johnson
Dr. Cynthia A. Telles
Gina Marie Lindsey
Executive Director

Re: **Los Angeles River Ecosystem Restoration Feasibility Study**
Draft Integrated Feasibility Report (Feasibility Study/Environmental Impact Statement/Environmental Impact Report)
Los Angeles County, California

Dear Dr. Josephine Axt:

Los Angeles World Airports staff from the Environmental Services Division (ESD) has reviewed the Los Angeles River Ecosystem Restoration Feasibility Study Draft Integrated Feasibility Report. We understand that the Draft Integrated Feasibility Report (IFR) for the Los Angeles River Ecosystem Restoration Feasibility Study evaluates alternatives for the purpose of restoring 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles while maintaining existing levels of flood risk management; and that this project does not have any impact on LAWA airport operations. ESD has no comments.

Sincerely,

Robert D. Freeman
Airport Environmental Manager II

RDF:CL:sts

Los Encinos School

Los Encinos School
17100 Ventura Boulevard, Encino, CA 91316
818.990.1006 818.990.0142 www.losencinosschool.org

November 25, 2013

Ilene Reinfeld, Director of Schools

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles
P.O. Box 532711
Att: Ms. Erin Jones CESPL-PD-RN
Los Angeles, CA 90053 -2325

Dear Dr. Axt,

As third graders we are learning about our community. One of our service projects is with The Village Gardeners of the L.A. River. This organization works tirelessly to beautify the path around the cement embankment of the LA. River in the area at Valleyheart and Longridge in Sherman Oaks. Our school specifically helps by purchasing approximately 25 native plants. Then we go as a third grade group, meet with Rick Rabins, President of the Board of The Village Gardeners, and start planting. Recently, we read about Mayor Garcetti's interest in restoring the habitat along the river. With this in mind, we thought you might like the perspective of the third graders. This ABC Book is comprised of their impressions from their recent visit.

It is very important to make a difference in our community, be global citizens, and change agents. We look forward to learning more about Alternative 20 and the Los Angeles River Ecosystem Feasibility Study. We hope that our ABC Book gives you additional information.

Sincerely,

Jenny Lapidus
Service Learning Advisor

Sheridan Geller
Teacher

Jennie Kim
Associate Teacher

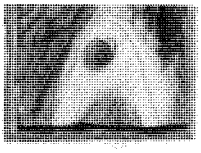
Evan
Dante
Cash
Isabella
Benson
Kate
Natalie
Carter

Ben
Jaely
Zahra
Quinn
Kyle
Dylan

Dustin
Audrey
Brianna
Owen
Alexandra
Matthew
Sophia

Ella
Finn
Jacoca
Ruby
Alex

Accredited by the California Association of Independent Schools
A Non-Profit, Tax Exempt Corporation

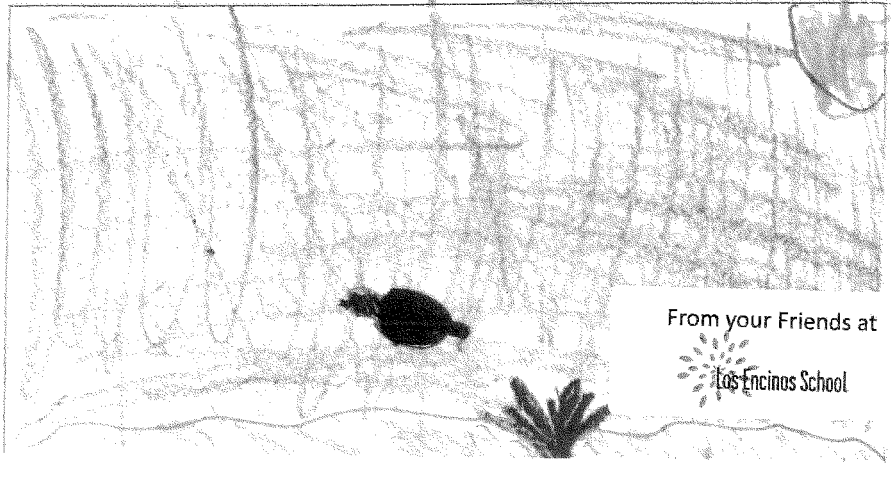


xo

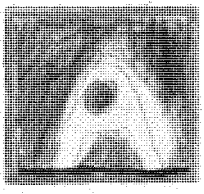
Los Encinos School

about the L.A. River

Book



Los Encinos School

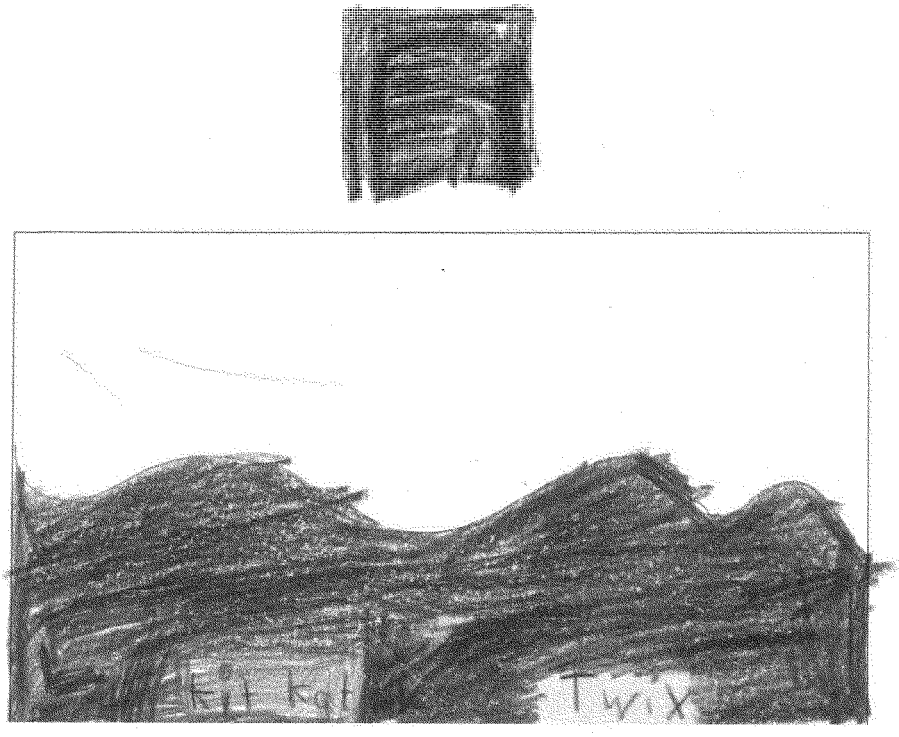


Awesome

By Evan

The path along the L.A. River is an awesome place to bring your family. You can bring your dog too. There is a lot of nature to see.

Los Encinos School

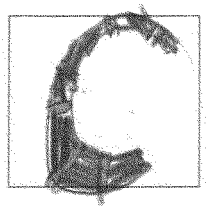


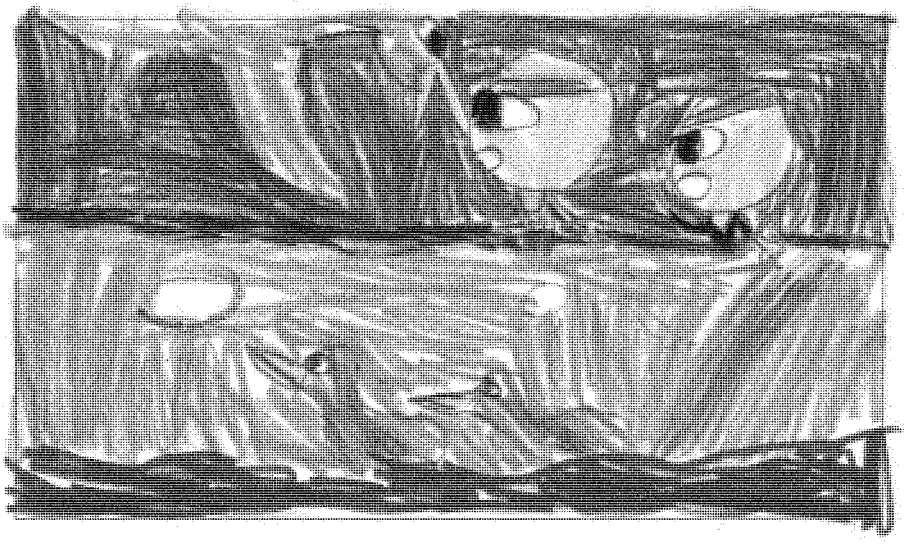
Bad Pollution

By Alex

Things like plastic forks, Twix candy wrappers, and toilet paper cause a lot of harm to the fish, birds, and ducks. On my visit I saw the items I mentioned floating in the L.A. River.

Los Encinos School



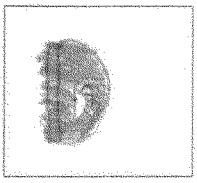


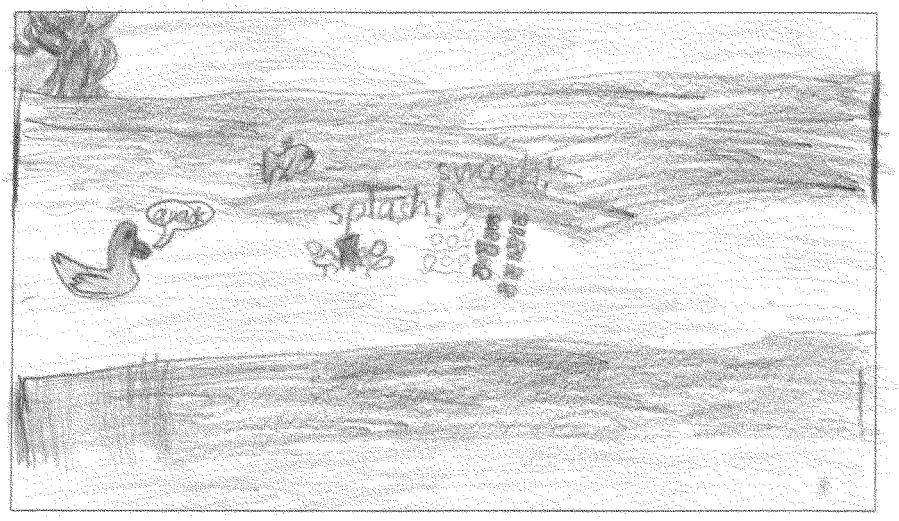
Care

By Dylan

I really care about the L.A. River. I am worried because the pollution makes it hard for the wildlife. The L.A. River needs people to help it stay clean.

Los Encinos School



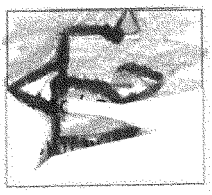


Dead Branches

By Dustin

I saw dead branches on trees. The branches need to be cut off so that the trees can stay healthy. I also saw a dead squirrel and a dead duck. I hope they did not die because of pollution. If the dead branches are removed, the path along the L.A. River will be prettier and then there will be more oxygen and that would be good.

Los Encinos School

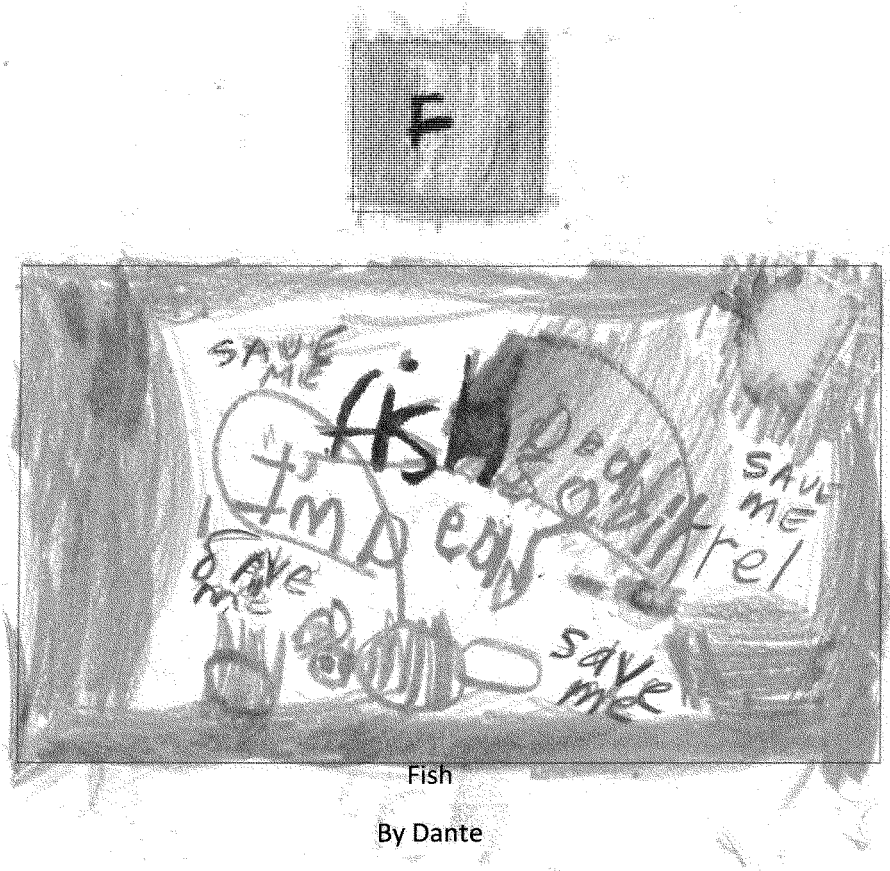


Egrets

By Matthew

The egrets are amazing to watch and they are different from any other kind of bird I have ever seen. I think it is great to bring your family because of the egrets and because you get to be outdoors.

Los Encinos School

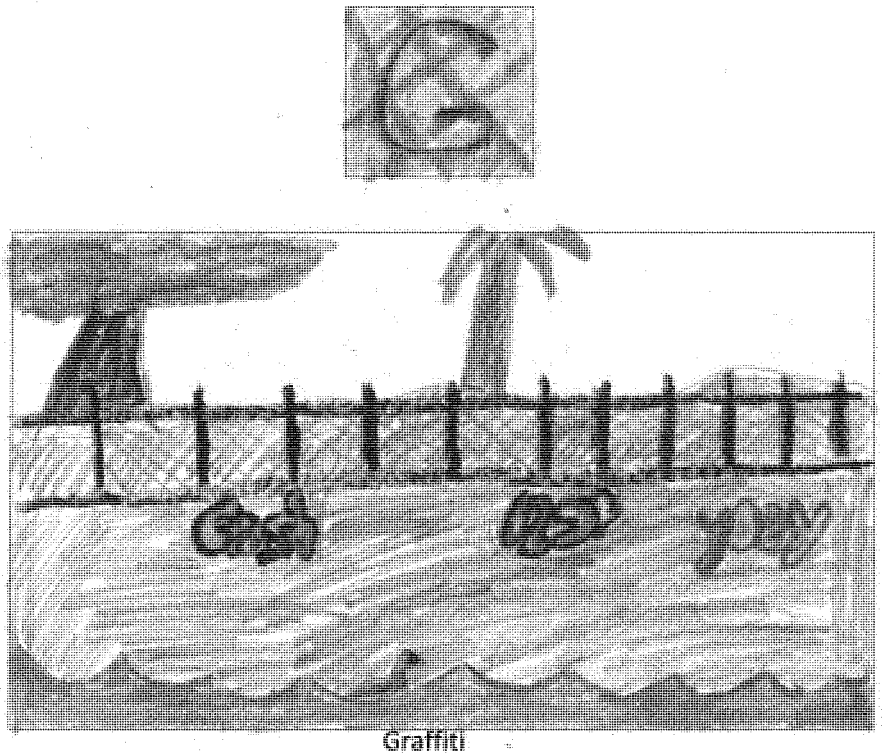


Fish

By Dante

There are fish like tilapia swimming in the L.A. River. The fish are important and hard to see. They need to be protected. I hope that the fish don't die from pollution.

Los Encinos School

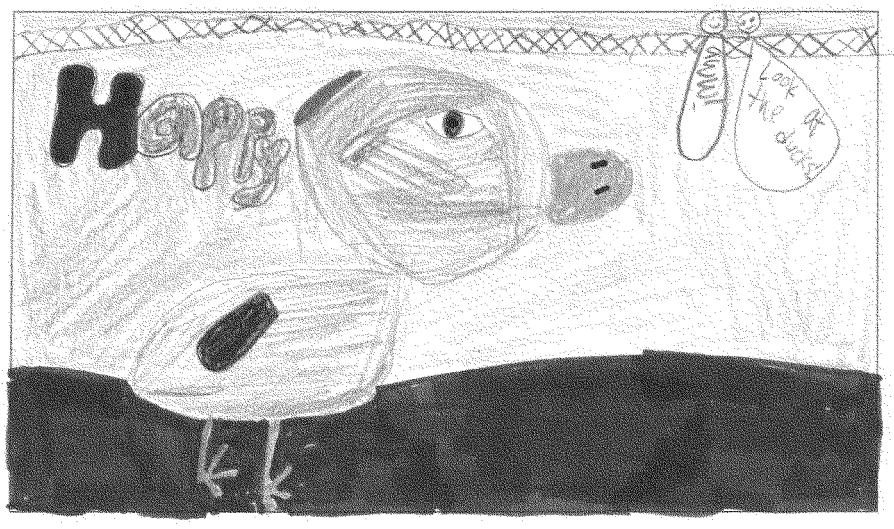


Graffiti

By Sophia

Graffiti makes me really sad and I saw some at the L.A. River. I want people to stop ruining the L.A. River. I hope that I can go back and the graffiti will be gone. I know it costs money for workers to remove all the damage. I think it is important to spend the money to keep the L.A. River a place for families to enjoy.

Los Encinos School

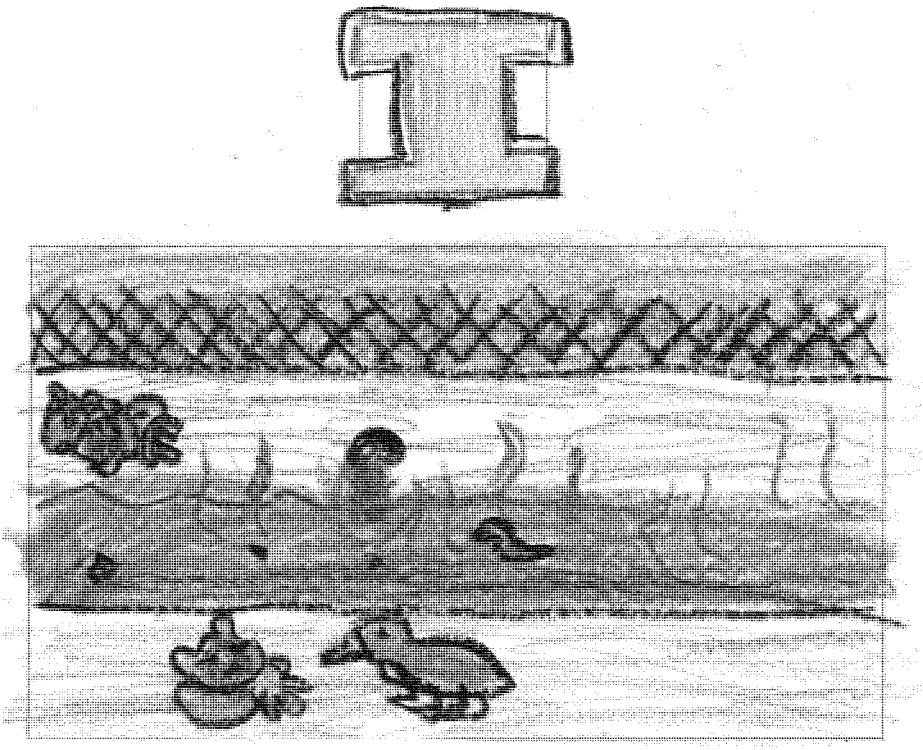


Happy

By Ella

The ducks seemed really happy to me at the L.A. River. But if they eat trash they might die or get really sick. I think it is important to remove the trash so that the ducks will stay extra healthy.

Los Encinos School

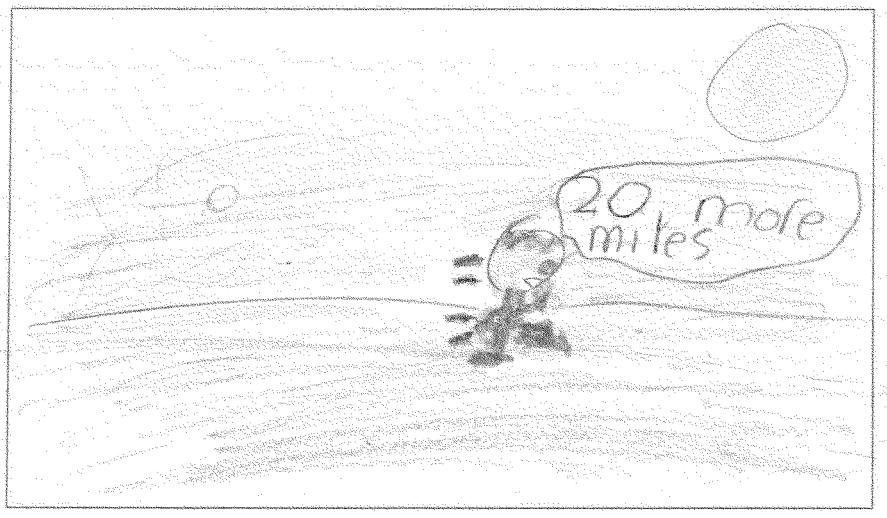


Icky

By Finn

The water looked icky on the day I was there. That is because it hasn't rained in a long time. I worry about the fish and the ducks if the water is not clean.

Los Encinos School



Joggers

By Quinn

I saw joggers having a great time along the path of the L.A. River. The path is a fantastic place for exercise and there is great scenery. I think more people should go there. The only thing that is sort of ugly is the cement wall around the river and I hope that plants could be planted to make it more beautiful.

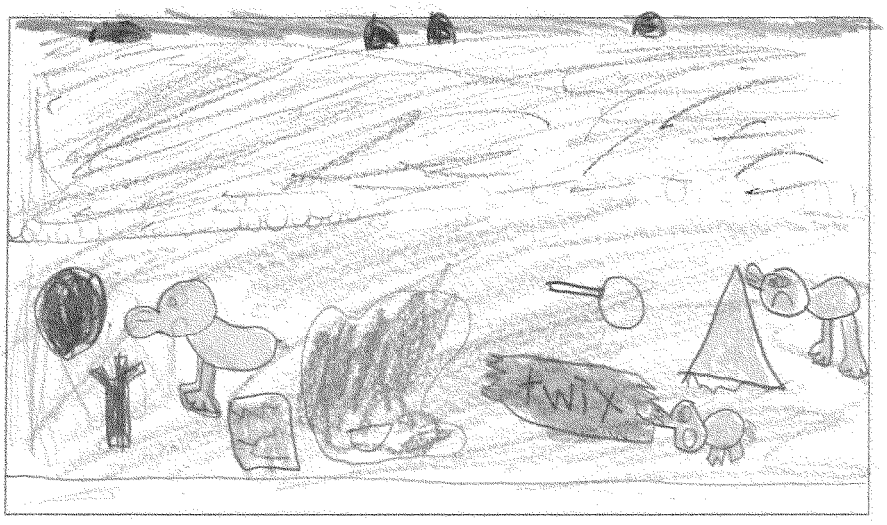
Los Encinos School

Kit Kat Candy Wrapper

By Audrey

There was a Kit Kat candy wrapper in the L.A. River. This can harm fish, ducks, and other wildlife that comes to the river. I wish people would stop polluting the river so that the animals can survive and have a peaceful and happy life.

Los Encinos School

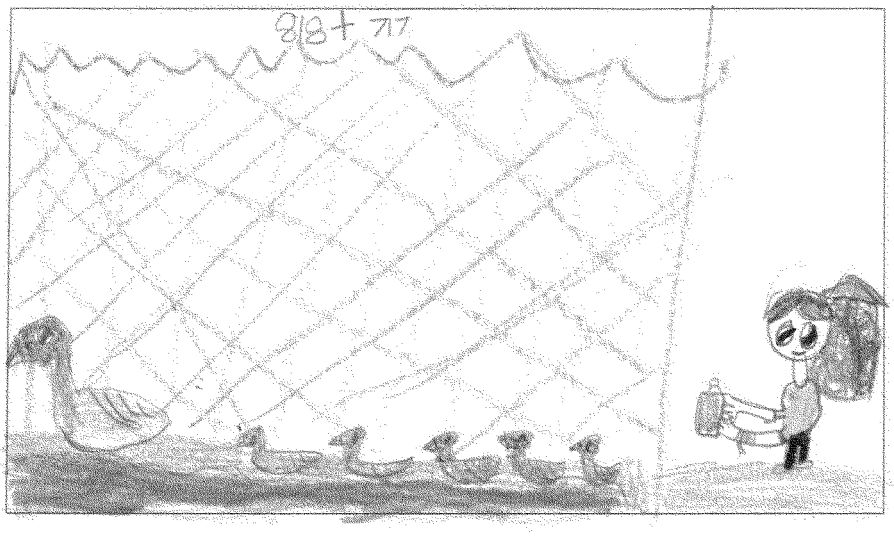


Love

By Natalie

I love the L.A. River and I am so glad that I planted native plants there to make it more beautiful. I wish I could come again and plant native plants on the concrete wall. I wish that the concrete wall could be changed. It is not very pretty. I also think if it was more beautiful people would respect it more.

Los Encinos School

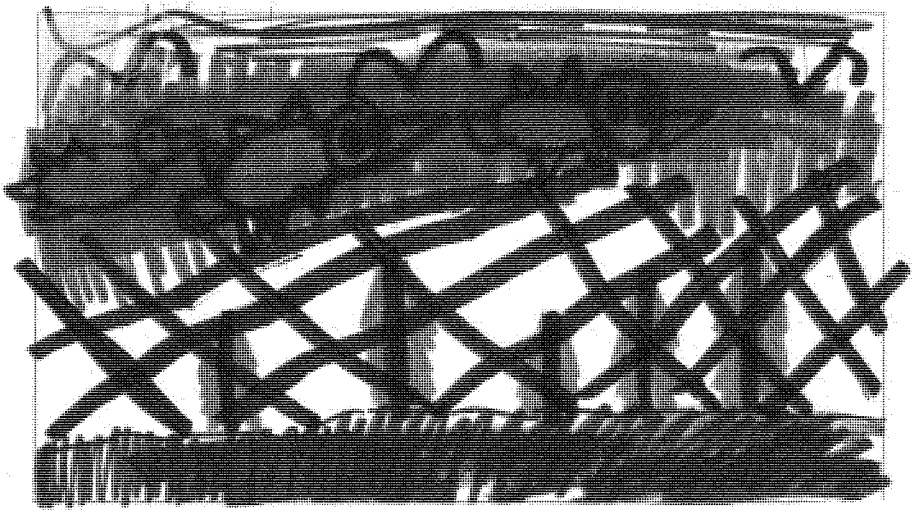


Mallards

By Zahra

Mallards are beautiful! They were sunning themselves when I was there. They were very close to harmful trash. I am very worried that they are going to eat dangerous trash. I also think that the people who go to the path at the L.A. River are very lucky to see mallards and other waterfowl and birds.

Los Encinos School

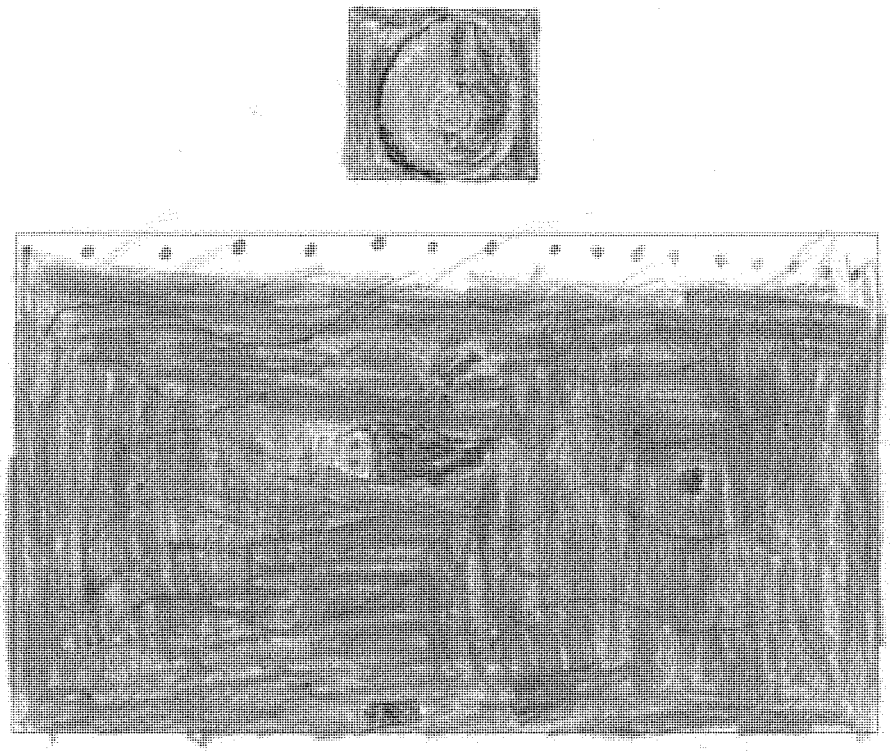


Nice and Native

By Kate

The L.A. River is a nice place for your family and while you are there you can notice birds and fish and ducks. I suggest you come with your dog and a picnic lunch. It is okay to bring a stroller if you have a baby. Just remember to pick up your trash. Also remember to notice the native plants because they are better for our environment.

Los Encinos School

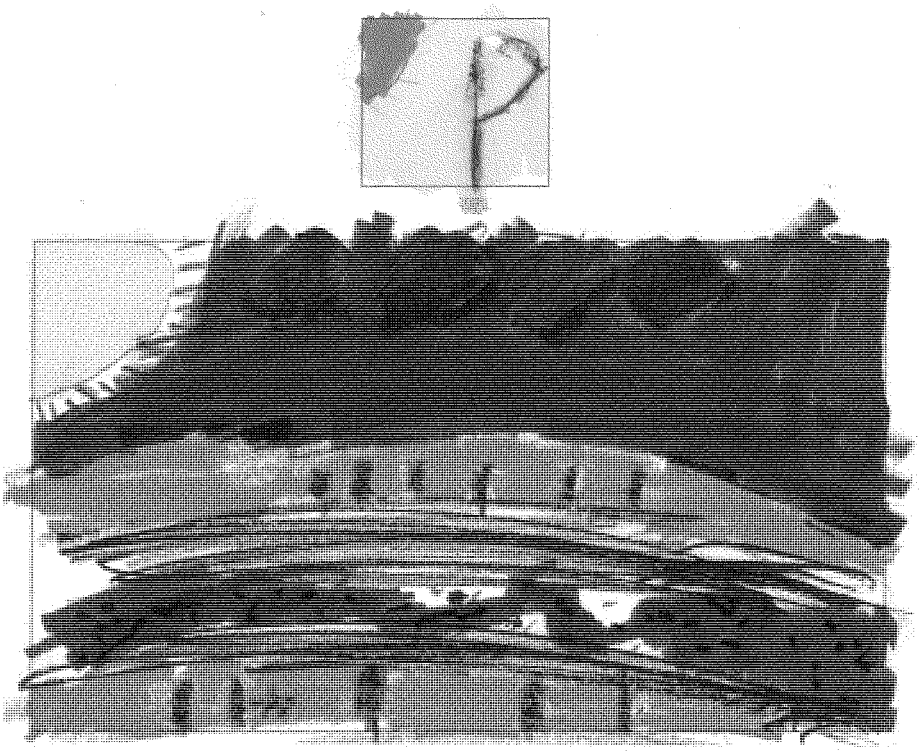


Ocean

By Kyle

The L.A. River flows into the Pacific Ocean. That is why it is important that we don't allow pollution in the river because it would end up in the ocean. My class planted native plants along the seating area. I hope you can visit one day.

Los Encinos School

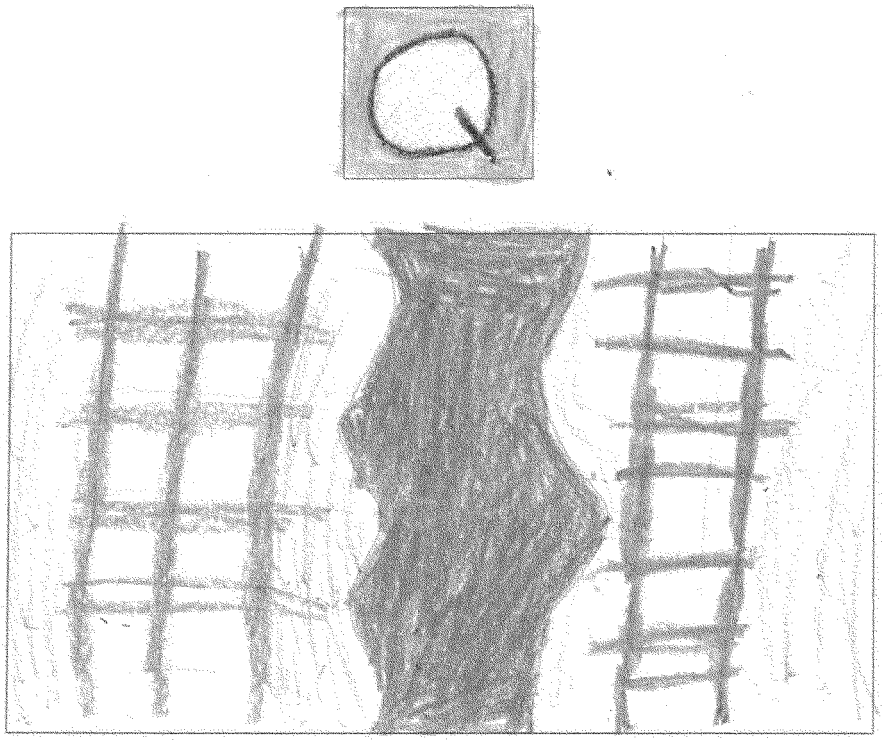


Pollution

By Carter

We should have a dam built to stop the trash that I saw in the L.A. River. All the fish and animals need a cleaner river. The natural resources along the river include water, fish, trees, and birds. I think we should take down the cement walls to keep everything more natural.

Los Encinos School

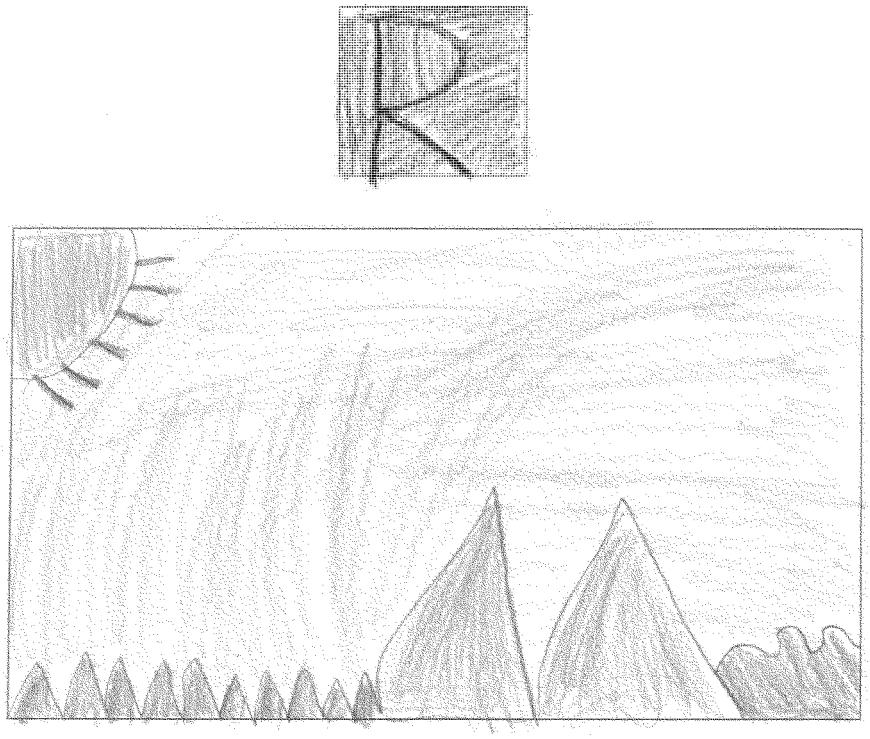


Quiet

By Joely

It is really quiet by the L.A. River. It is peaceful and beautiful but the trash is not fun to see. I hope that when I visit again the trash is gone.

Los Encinos School

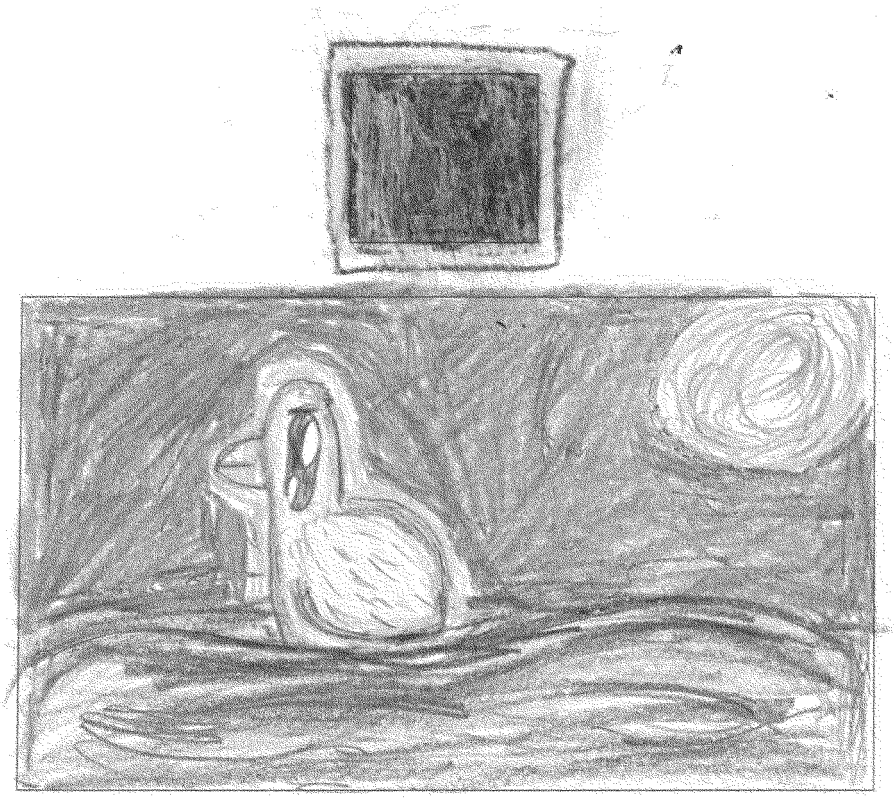


Mr. Rick Rabins, Volunteer

By Isabella

Mr. Rabins is a hero to the river. He is president of The Village Gardeners of the L.A. River. He does not get paid. My school thanks him for all he does to keep this special place very safe for the animals and birds that visit the river. He also keeps it looking beautiful for the people who visit.

Los Encinos School



Super Cute Duckies

By Cash

I was so surprised by the path and river! They are bigger than I thought. I was really surprised to see 50 ducks in the water. I really liked watching them and learning how they survive. I hope that the river can stay clean, so the ducks won't eat the trash that I saw and get sick.

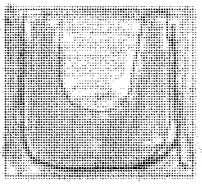
Los Encinos School

Trash

By Ruby

The trash at the L.A. River needs to be cleaned up. I am 9 years old and I would never throw trash anywhere. I think it is disrespectful that people throw trash without even thinking about what they are doing.

Los Encinos School

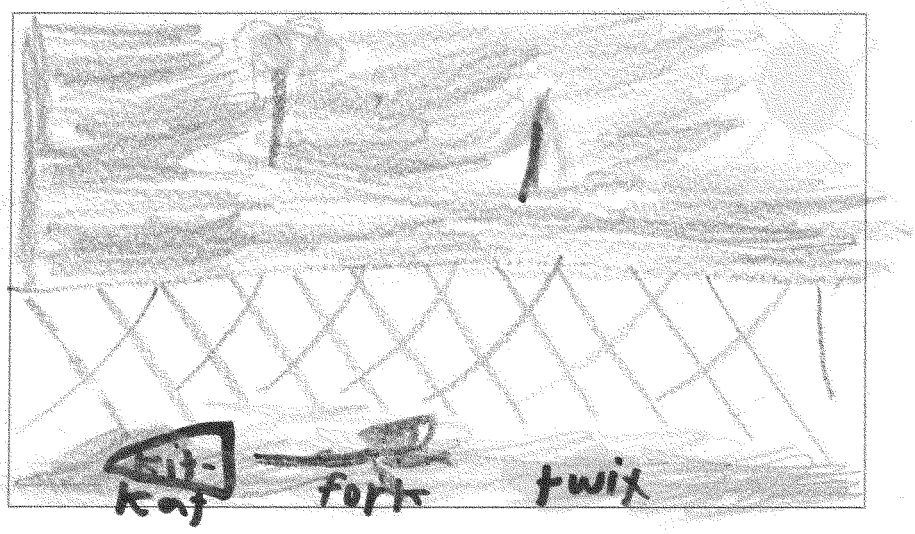


Unusable

By Benson

I think the L.A. River should be beautiful with native plants and trees surrounding it, and no concrete walls beside it. It should be like a beautiful park where you can go to see ducks and it shouldn't be unusable when you get there because of the trash.

Los Encinos School

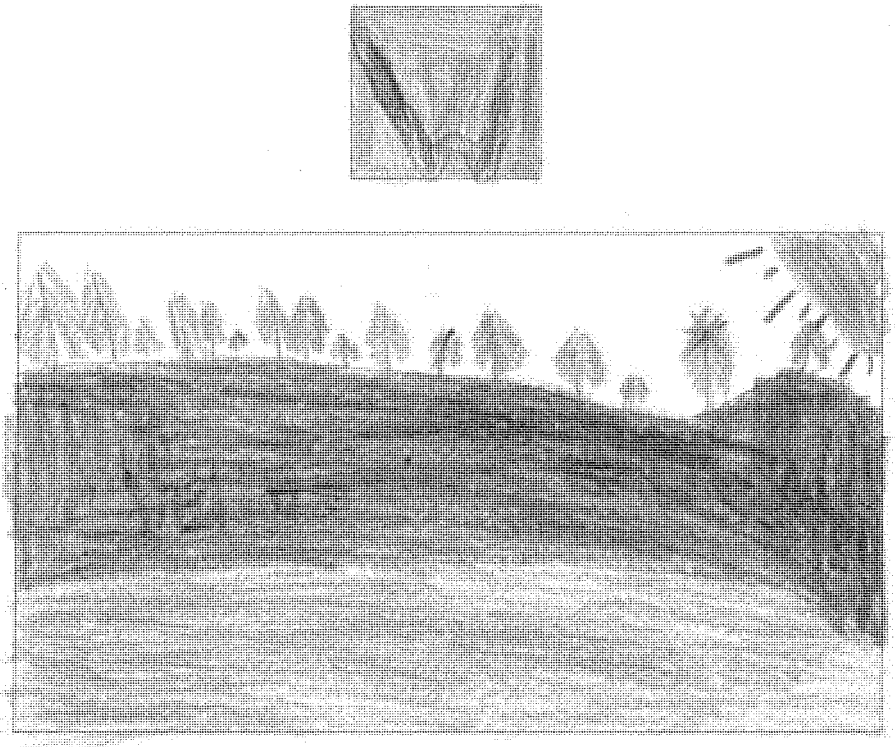


Variety

By Ben

There is a variety of things you can do at the L.A. River. You can walk on the path and look at beautiful birds, ducks, and fish. I think people sometimes don't go there because there is trash and it is not clean. I think if plants covered the cement walls more people would go because it would look nicer.

Los Encinos School

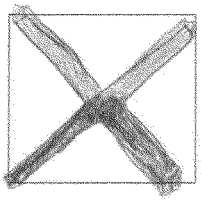


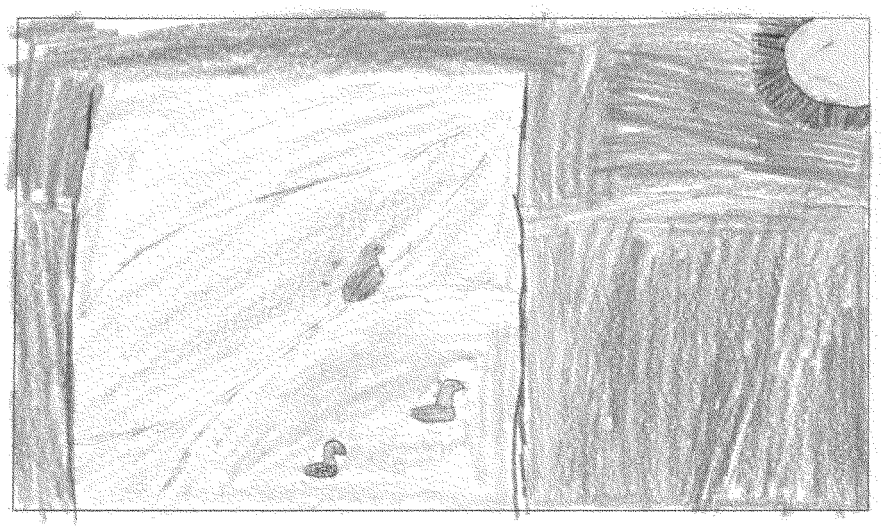
WORDS

By Jaccoa

Water, Walking trail, Weeds, Waddle, Wonderment, Wall, Watering Can, Web-footed, Weekday, Weekend, Welcome, Welfare, Wet, Wildlife, Workers, Wingspan, Wrappers...Come to The Village Gardeners of the L.A. River and you will see why I chose all of these words, especially Wonderment!

Los Encinos School



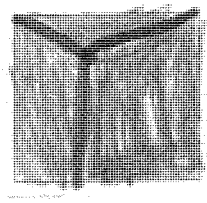


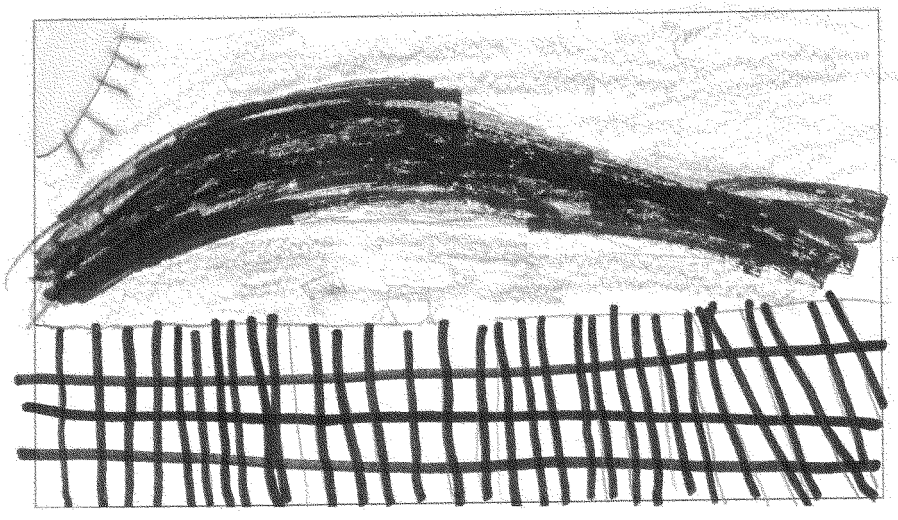
X Marks the Spot

By Brianna

X Marks the Spot! My picture is about the ducks swimming in the river. It is important that they have a safe place to live. It is up to people to make a good environment for the ducks because a duck can't know the difference between a piece of plastic and a piece of food. I promise to keep going there. I want to help the river look more beautiful and get rid of pollution.

Los Encinos School



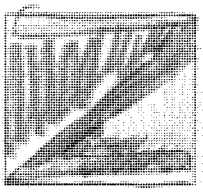


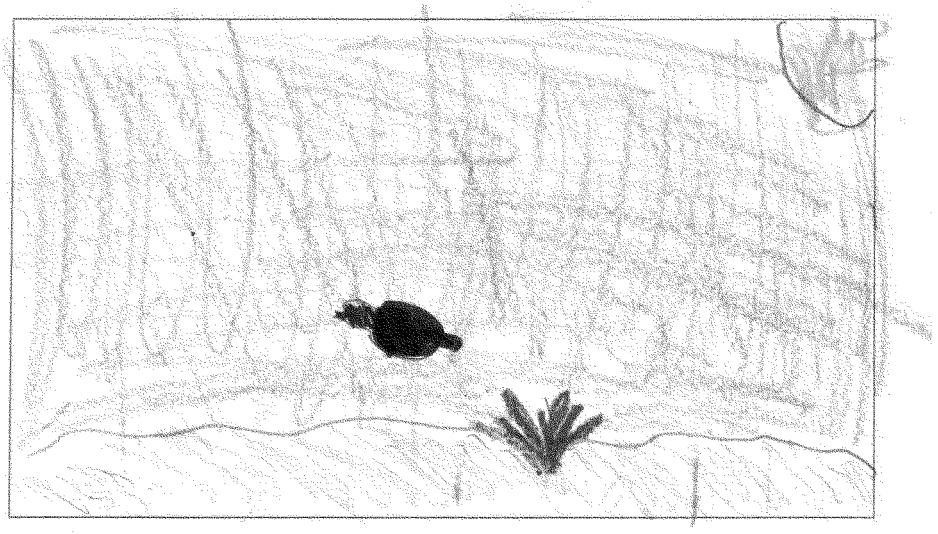
Years Ago

By Alexandra

Years ago the river would keep changing directions. If it rained too much houses and streets were flooded. To fix this, a cement wall was built. I went to see the wall. There are no flowers growing on it and there is a fence. I would like to see the wall have more nature around it because if it does, it would attract more insects. Insects would come for the pollen from the flowers, and this would help our environment.

Los Encinos School





Zig Zag

By Owen

If you really watch the water in the river you can see it zig zag in different directions. Sometimes when the duck goes in the water it pushes the water in different directions. It is neat to watch the water.

Since 1916

Officers
2013-2014

President
CHRIS LAIB

First Vice-President
DEMIAN WYMA

Second Vice-President
MARTA ALCUMBRAC

Coordinating Secretary
DONALD SELIGMAN*

Recording Secretary
DEBBIE SIMONS

Treasurer
DONNA KOLB

Directors
Nyla Arslanian
Laura Balverde
Stella Balesh
Marilyn Bush*
Dennis Chew
Jean Daley
Marian Dodge*
Barbara Ferris
Faith Ford
Monique Frese
Philip Gasteier
Rafik Ghazarian
Lynne T. Jewell
Michael Locke
Rob Menz
Randy Myer
Tess Nelson
George Pao
David Roberti
Joel Rochlin
Patricia Ruben
Paul Schiada
Mary Beth Sorensen
Angela Stewart
Mark Stong
June Teal
Ron Valdez
Valerie Vanaman
Gail Zaritsky

*Past President

Los Feliz Improvement Assn.

Los Feliz Improvement Association

P.O. Box 29395, Los Angeles, CA 90029
(323) 660-1914
www.LFIA.org

October 16, 2013

Josephine Axt, Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053-2325

Re: Support Alt. 20, Los Angeles River Ecosystem Restoration Feasibility Study

Dear Ms. Axt:

The Los Feliz Improvement Association, founded in 1916, represents more than 800 households in the Los Feliz District of Los Angeles. Los Feliz is just west of the Los Angeles River adjacent to Reach 3 and 4 and south of Griffith Park. We urge that the Army Corps recommend Alternative 20 because it is the most effective of the four alternatives under consideration.

Alternative 20 is the only alternative that would restore wetlands at the Verdugo Wash. This is a critical confluence of the Los Angeles River and the Verdugo Wash that used to be a wildlife corridor providing wildlife connectivity from the Santa Monica Mountains to the Verdugo Hills and to Angeles National Forest. It was lost to the interchange of the I-5 and State Route 134 and flood control concrete walls. Wildlife in the Santa Monica Mountains is already exhibiting signs of genetic isolation because of loss of habitat and loss of access across freeways and the river to the many nearby national forests. The restoration of the natural sediment buildup and wetlands will help to restore the original natural connectivity.

Over all, the LFIA concurs with Mayor Eric Garcetti in supporting the widest possible implementation of the restoration project. In the long run, we see it as the best option, ecologically, recreationally and economically. Looking toward the future, Alternative 20 is the best option for Los Angeles as a whole.

It would be unconscionable to only partially restore the river ecosystem. It was the Los Angeles River that nourished the development of the great City of Los Angeles. We should make every effort to restore the river to the extent possible without increasing flood risk. Alternative 20 does just that. The Los Feliz Improvement Association urges you to recommend Alternative 20 to return our river, its riparian habitat and its flora and fauna to full potential.

Sincerely yours,

Chris Laib, President

cc: Los Angeles River Project Office (1149 S. Broadway, 56th floor, Los Angeles, CA 90015)
Friends of the Los Angeles River
Mayor Eric Garcetti

Main Street Capital BIDCO

November 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, CA 90053-2325

Via email: comments.lariverstudy@usace.army.mil

Dear Josephine R. Axt:

Please take the necessary action to approve Alternative 20. We have been active in community and economic development in greater Los Angeles since 1995. It has been our mission to increase the flow and access to capital into low income and distressed communities. There are many underserved, low income, and communities of color along the Los Angeles River that will benefit from the increased investment under Alternative 20.

We are property owners and have the greatest desire to bring additional investors to the landscape of the LA River in collaboration with the City of Los Angeles' efforts to revitalize the Los Angeles River. We have a network of 30 financial institutions that are our partners in the delivery of sustainable economic development.

Please approve Alternative 20. Be bold and don't short change the Los Angeles River.

Make a deal, Make a difference

Sincerely,

MBanner

Michael Banner
President and CEO

1010 Wilshire Blvd, Ste. 807 • Los Angeles, California 90017
General: (213) 448-8043 • Facsimile: (213) 785-5233

LA-Mas

MÁS

DATE
November 15, 2013

TO
Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

OFFICE
3780 Wilshire Blvd, Ste 250
Los Angeles, CA 90010

PHONE
+1 213 384 3844

EMAIL
info@mas.la

WEBSITE
www.mas.la

Dear Dr. Axt,

I am the Co-Founder of LA-Mas, a non-profit organization focused on the relationship between health, community, and the built environment. We engage in research and master-planning to promote culturally sensitive design and innovative infrastructure focusing on economic, environmental, and social sustainability. We are dedicated to creating a better balance of our environment and urban community.

As a partner of the Northeast Los Angeles Riverfront Collaborative, funded by your fellow federal partner, I have seen firsthand the potential for communities surrounded the River to be positively impacted.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains

LA-Mas

MÁS

DATE
November 15, 2013

TO
Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

OFFICE
3780 Wilshire Blvd, Ste 250
Los Angeles, CA 90010

PHONE
+1 213 384 3844

EMAIL
info@mas.la

WEBSITE
www.mas.la

- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The Regional Economic Development analysis shows Alternative 20:
- Provides 7015 more jobs and $386 million more in wages during construction
- Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
- Creates 1094 more new permanent jobs valued at $62 million more
- The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Elizabeth Timme
Co-Executive Director

METABOLIC STUDIO

Lauren Bon, Director
Metabolic Studio
1745 North Spring Street, Unit 4
Los Angeles, CA 90012

Josephine R. Axt, Ph.D., Chief, Planning Division,
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Ms. Erin Jones, CESPL-PD-RN

November 13, 2013

To Whom It May Concern:

As a community stakeholder as well as an artist committed to the revitalization of the Los Angeles River and surrounding neighborhoods, I would like to submit the following comments on the Los Angeles River Ecosystem Restoration Feasibility Study that has been prepared by U.S. Army Corps of Engineers, in conjunction with the City of Los Angeles.

As you are well aware, the alternative that is ultimately selected by the Army Corps has the ability to affect the future of Los Angeles for generations to come. I would like to urge you, as well as the President and our Congressional leaders, to think boldly, as you did when the River was originally channelized in the earlier part of the last century. It was a tremendous feat of engineering to encase a free flowing river in concrete and reflected the thinking at the time regarding flood control, however this is a new century, with an extraordinary opportunity to right an environmental wrong, create habitat, address water quality and supply, adapt to climate change, as well as promote green jobs and equity in the country's second largest city. Large populations, many of whom have historically been underserved, will visibly benefit from your efforts and have already voiced their support for the most comprehensive alternative in your study, Alternative 20.

The study evaluates several alternatives for the purpose of restoring 11 miles of the Los Angeles River from approximately Griffith Park to downtown Los Angeles. I believe in a long-term vision to revitalize the entire length of the River's 51 miles, 32 of which are within the City of Los Angeles. The 11-mile stretch was chosen for the Ecosystem Restoration Study in order to concentrate habitat restoration in the soft bottom portion of the channel where it is most viable. However the dream of a continuous greenway from the mountains to the ocean remains, and it is important to choose the most robust alternative within the Ecosystem Restoration Study in order for Los Angeles to build upon the partnership with the Army Corps in ways

METABOLIC STUDIO

that address the entire length of the River. Los Angeles and its stakeholders are committed to this goal and are doing their part to make it a reality.

The Administration has already acknowledged the need for partnerships and for Federal agencies to work together across missions and silos to achieve the type of results needed for true sustainability and region wide benefits. As a result, the Los Angeles River was highlighted in the America's Great Outdoors (AGO) Initiative listening session led by the Department of Interior, and has been designated as a pilot program as part of the Urban Waters Federal Partnership. In addition, Los Angeles was awarded a Sustainable Communities Planning grant by Housing and Urban Development (HUD) in order to increase economic development and job creation opportunities along the same portion of the river corridor that the ARBOR study evaluates. There has already been a substantial effort made both locally and by the Federal government to revitalize the River and it is important not to fall short of this commitment in the final crucial stages of decision-making. Any investment made now will create multiple benefits in the long term.

Furthermore, these public investments will be enhanced by interest from the private and philanthropic sectors. I have been committed to the revitalization of the Los Angeles River in my role as Director of the Metabolic Studio, a conduit through which I practice my philanthropic activities as a Director of the Annenberg Foundation. The Metabolic Studio aims to transform resources into energy, actions and objects that nurture life. It is located within the ARBOR study area, adjacent to the River and to the Los Angeles State Historic Park (LASHP), near downtown Los Angeles. The Metabolic Studio is committed to realizing the latent potential and sustainability of environments and communities.

Currently I am developing *Bending the River Back into the City,* a major long term project that includes the construction of *La Noria*, a functioning water wheel that will bend the Los Angeles River, pierce the concrete channel, and could provide an unprecedented opportunity to create a wetland and habitat restoration in a highly urbanized area in Los Angeles. Alternative 20 is the only alternative that includes Los Angeles State Historic Park where I have been working for almost the past ten years. The selection of this alternative would not only leverage the significant expenditure of public funds previously made to acquire the park, but could also demonstrate an early win for the Army Corps in implementation of restoration efforts through a collaboration with the work I have already begun. Alternative 20 is the only option that would enhance the considerable resources that I and many other stakeholders have committed toward connecting Los Angeles State Historic Park to the River.

There is tremendous public support for the restoration measures proposed in Alternative 20, including the creation and reestablishment of historic riparian strand and freshwater marsh habitat to support increased populations of wildlife and enhance habitat connectivity within

METABOLIC STUDIO

the study area, as well as to provide opportunities for connectivity to ecological zones, such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains. As the Army Corps states, 'Restoration includes the reintroduction of ecological and physical processes, such as a more natural hydrologic and hydraulic regime that reconnects the river to historic floodplains and tributaries, reduced flow velocities, increased infiltration, improved natural sediment processes, and improved water quality.' Alternative 20 will provide the greatest opportunity to realize these benefits and will pay for itself in the long run.

As part of my work to develop the waterwheel I have traced the history of the Los Angeles Aqueduct, which just celebrated its 100th year anniversary transporting water to the region. The Los Angeles River was the City's original water supply, however the City of Los Angeles now imports more than 85% of its water, and recent studies by the Arid Lands Institute and the Council for Watershed Health have identified between 92,000 and 180,000 acre feet of stormwater runoff per year that could possibly be captured before being wasted into the ocean via the Los Angeles River. Furthermore, more than $3,000,000 in planning dollars is currently being spent by the City of Los Angeles, Los Angeles County, the United States Bureau of Reclamation, and multiple regional water districts to better refine these numbers. Of the alternatives presented, Alternative 20 offers the greatest opportunity to remove impervious surfaces from the LA River and its tributaries, allowing for the direct recharge of some of Southern California's most productive potable groundwater aquifers, namely the San Fernando and Central Basins. Any and all opportunities to increase local water supply should be taken to reduce Southern California's reliance on the Bay-Delta, the Owens Valley, and the Colorado River, thereby increasing the chances for successful habitat restoration programs in far reaching watersheds.

In addition, Los Angeles County is entering yet another multi-million dollar planning effort to improve water quality in the region's water bodies, with the Los Angeles River taking a large percentage of those dollars. Again, of the alternatives presented, only Alternative 20 provides meaningful changes to improve water quality in the River. These water quality benefits, which come in the form of land use changes, upstream tributary treatment, and in-stream flow management, can combine to create significant improvements in the water quality of the Los Angeles River. For example, looking at the project at Mission Yard under Alternative 20, tributary treatment can reduce pollutant loading (for the pollutants evaluated) by 50% to 100% according to The Piggyback Yard Feasibility Study, when accounting for land use conversion. In combination with the proposed work components in the other reaches envisioned under Alternative 20, the water quality benefits of the project as a whole will be greater than the water quality benefits of each individual component. This is due to the consecutive stages of pollutant removal as you move downstream, which build upon one another. These water quality improvements will contribute to enhanced ecological health within each site, to all components within Alternative 20, and to the Los Angeles River as a whole.

METABOLIC STUDIO

Clearly the selection of Alternative 20 will meet multiple critical challenges facing the Los Angeles region now and into the future. There is an opportunity to demonstrate a commitment to environmental, social, and economic justice in a very real way that meets the goals of many local as well as federal agencies and can be a model of success for urban areas across the country. I encourage you to demonstrate this leadership and I would be happy to make myself available for any further discussion.

I would like to thank you for your time and attention to this important decision you will be making on behalf of Los Angeles. Jill Sourial of my staff or I can be reached at (323) 226-1158 if you have any additional questions. I look forward to the recommendation by the Army Corps and will continue to advocate for full funding and responsible implementation of the plan once it is approved.

Sincerely,

Lauren Bon
Director, Metabolic Studio

cc: Senator Barbara Boxer
Senator Diane Feinstein
Congressmember Xavier Becerra
California State Assemblymember Jimmy Gomez
California State Senator Kevin DeLeon
Los Angeles Mayor Eric Garcetti
Los Angeles City Councilmember Gilbert Cedillo

1745 North Spring St. Unit 4 | Los Angeles, CA 90012 | 323.226.1158

Mia Lehrer + Associates

MIA LEHRER + ASSOCIATES
URBAN DESIGN LANDSCAPE ARCHITECTURE

November 15, 2013

Josephine Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053-2325

Re: **Support for Alternative 20 in the USACE LA River Ecosystem Restoration Feasibility Study**

Dear Dr. Axt:

Mia Lehrer + Associates is an Urban Design and Landscape Architecture firm that has worked in Los Angeles since 1997. Our work is committed to making Los Angeles a better place and we pledge our support for Alternative 20 of the US Army Corps of Engineers (USACE) Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 offers the greatest potential for catalyzing long-lasting benefits for our residents and our local, regional, and national economies.

We believe Alternative 20 is the most ambitious and robust proposed alternative for the LA River. USACE has built a remarkable flood protection system with the LA River, but the environmental damage and community blight resulting from the river's channelization are obvious and affect our daily lives. As a firm whose focus over the last 20 years has been to build places that matter, environments that inspire with technologies that sustain, our work and efforts have always been based on the absolute need for fundamental change.

As Landscape Architects we have dedicated our work to making Los Angeles a better place for us to live, work and raise our families. We are grateful for the impact we have on our environment through our projects, and are passionate about the work we do in connection with the LA River. As founding members of the original team for the LA River Revitalization Master Plan we have learned to love the unique and powerful infrastructure that is the LA River, and worked to develop plans and visions for what it could become. Today, eight years after the completion of the Master Plan, many of our employees live in communities adjacent to the LA River and are enjoying its transformation.

Alternative 20 focuses on environmental restoration and the need for improved stormwater management; however, we see physical and social impacts with far-reaching benefits. Alternative 20 provides Los Angeles with an opportunity to create new urban forms; it supports rational densification, it brings recreational opportunities, it supports economic development, and offers necessary alternative modes of transportation to Angelinos with a network of access and connections. The revitalization of this waterway will also improve the quality of our environment, a key factor in the creation of better places for community life for the 21st century and into the future.

The study that resulted in these alternative approaches has taken 7 years to complete. We know that the final recommendation will take many more years to implement. However, now is the time to decide the extent of our commitment so that we may initiate the grassroots work it takes to achieve the most meaningful, expansive restoration in partnership with the Federal government. It is unlikely that we will have another chance to make such a bold, sweeping statement about how we can bring nature back to our post-industrial landscape.

3780 Wilshire Boulevard *suite* 250 Los Angeles CA 90010 *tel* 213 384 3844 *fax* 213 384 3833 *website* www.mlagreen.com

Alternative 20 is a major investment in our people — our residents, our workers, our students, our businesses, our families, and the community institutions that serve us. Because of this, Mia Lehrer + Associates supports Alternative 20 as the most appropriate plan. We understand that transformation of the LA River will result in an improved regional quality of life and that its successes will be felt here immediately, and will be our legacy for future generations. We want to be a partner in that transformation.

Sincerely,

Mia Lehrer + Associates

MVSNA

Montrose/Verdugo City/Sparr Heights Neighborhood Association
P.O. Box 732
Verdugo City, CA 91046-0732

Via Email: comments.lariverstudy@usace.army.mil

November 16, 2013

Josephine R. Axt, Ph.D., Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Josephine R. Axt, Ph.D.:

We formed our neighborhood association in 1997 with the mission of uniting our neighbors to protect our quality of life. The catalyst for the formation of the MVSNA was the Oakmont V development to be built on the hillsides of the Verdugo Mountains. Our association worked with other community groups to preserve that section of the hillside as public open space and remains committed to the preservation of open space.

Our association strongly supports Alternative 20. We echo many of the sentiments expressed by others supporting Alternative 20, and we would like to emphasize two issues:

- The restoration of the LA River with the features of Alternative 20 is a unique opportunity to expand open space in the Los Angeles area in a meaningful way, and would enhance the efforts to preserve and expand open space in the LA basin by connecting habitats and wildlife ranges.

- While cost is always a consideration, the costs will only increase. As the river is restored, that restoration will make the area more desirable and increase the land value. Action now will generate rewards long into the future.

Please include our comments in support of Alternative 20 on the Draft IFR for the LA River Ecosystem Restoration Study.

Sincerely,

Grant Michals

Grant Michals
President

MOUNTAINS RECREATION & CONSERVATION AUTH MRCA
Los Angeles River Center & Gardens
570 West Avenue Twenty-Six, Suite 100
Los Angeles, California 90065
Phone (323) 221-9944 Fax (323) 221-9934

November 6, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report

Dear Dr. Axt:

The Mountains Recreation and Conservation Authority (MRCA) commends the City of Los Angeles Bureau of Engineering and the U.S. Army Corps of Engineers' (Corps) efforts on the Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report (ARBOR) and offers this comment letter regarding the potential for transformation of the Los Angeles River (River). The Santa Monica Mountains Comprehensive Plan, adopted in 1979 to preserve and protect what is now the Santa Monica Mountains National Recreation Area and other areas, is a direct parallel to the Los Angeles River ecosystem restoration. While considered a daunting endeavor at the time, the past three decades have witnessed the investment of $750 million in land acquisition and park improvements, creating an interlinked system of parkland protecting the mountains' many jewels. River restoration is at a similar situation today: The path forward is long and arduous, but in 30 years our children will look back and view a restored Los Angeles River as an inevitable outcome and an essential part of the fabric of the City of Los Angeles (City).

We appreciate the time and efforts the Corps and City have expended to work with the community and prepare the ARBOR study. We have reviewed the report in detail and we are providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in the ARBOR study as the Tentatively Selected Plan, we found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Institutional & Technical Recognition

"Per USACE Engineering Regulation (ER) 1105-2-100, significance of resources and effects will be derived from institutional, public, or technical recognition," page xx. The Mountains Recreation and Conservation Authority (MRCA) is listed on pages xxii and 1-13 as being involved in revitalization activities on the Los Angeles River since the 1990s by constructing a series of pocket parks along its banks. Per page 4-8, the MRCA also participated in the charette process. Per page 3-61, MRCA is recognized as managing the Los Angeles River Pilot Recreation Zone.

It should also be noted that the MRCA has invested many millions in building parks along the Los Angeles River and its tributaries to fulfill our mission, which is dedicated to the preservation and management of local open space and parkland, watershed lands, trails, and wildlife habitat. The MRCA manages and provides ranger services for almost 69,000 acres of public lands and parks that it owns and that are owned by the Santa Monica Mountains Conservancy (Conservancy) or other agencies and provides comprehensive education and interpretation programs for the public. The MRCA works in cooperation with the Conservancy and other local government partners to acquire parkland, participate in vital planning processes, and complete major park improvement projects. We should also be recognized as an organization at the forefront of creating natural recreation amenities and programs in the second (2^{nd}) largest metropolis in the nation. In particular, the MRCA manages and operates nine (9) parks along the River in the ARBOR study area.

By all accounts, the current state of the River is **unacceptable and degraded**. On pages 2-17 through 2-19, ARBOR enumerates the ecological problems with the River especially as impacted by urbanization and flood risk management. The need for restoration is demonstrated by our institutional and technical recognition of the importance of the River and its tributaries to the region's ecosystem function and resiliency.

Public Recognition

The MRCA has provided nature education programming in the ARBOR study area for **more than 20 years**, serving thousands of children and their families. These programs include public campfire programs at pocket parks along the River, 12-week Junior Ranger Programs with community-based partners, field trips for local schools and organizations, and interpretive programs for all ages. One pre-school program is even called "Mommy, the River and Me." This summer the MRCA managed the opening of a section of the River within the study area to kayaking and water craft through a partnership with the Corps and City. The Los Angeles River Pilot Recreation Zone, as the program was called, gave Angelinos an opportunity to see and experience the River in a different way, increasing the understanding of the River as a vital natural resource

and expanding the constituency for recreation and education along the River. The popularity of these programs, serving an audience that is both local and regional, illustrates a widespread interest and engagement on the part of the public. Clearly, the general public recognizes the importance of the Los Angeles River as an environmental resource, as evidenced by the large numbers of people engaged in the above activities.

The Value of Recreation

Per page 6-3, the third ARBOR study objective is to Increase Passive Recreation. As a local agency, we know there is a great demand for both active and passive recreation in the adjacent neighborhoods. In America's second largest city there is a serious lack of open space and recreational opportunities. We urge the Corps to revise the proposed recreation plan for Alternative 20.

The aforementioned interest and engagement with the River should be supported with restoration designs that allow additional appropriate public access and interpretation of the restoration, watershed and habitat. The recreation plan should take advantage of such locally popular passive recreation opportunities as kayaking, bicycling, hiking, bird-watching and community gathering by maximizing the relationship between nature and people. The recreation plan will be the way the Corps garners public support for the restoration efforts, but only if the plan is as robust as possible. Furthermore, the opportunity to use the restored wetlands and habitat areas as an educational resource for local schools and the community at large should not be wasted. Design of trails, for example, should accommodate group gathering on the edges near educational opportunities and allow for placement of interpretive signs. Corps policy allows the recreation plan to cost up 10% of the construction plan per the Corps' Engineer Regulation 1105-2-100: Planning Guidance Notebook, Appendix E – Civil Works Mission and Evaluation Procedures, page E-182. To accommodate a more robust recreation plan for Alternative 20, we urge the Corps to spend the maximum of 10% as opposed to the 1% that was projected to be spent on the plan for Alternative 13. Recreation is a critical component to keeping the River's restoration safe and functional.

The annual operations and maintenance cost for the recreation component is estimated to be $42,206 (Appendix C, Attachment 6, page 6-1). Based on over 20 years experience managing natural parks and trails in urban Los Angeles, we are concerned that this estimate will only fund the bare essential tasks to upkeep materials and facilities. Restoration of the River in the ARBOR study area is bound to become a tourist and regional attraction in its own right, but also because it is in close proximity to existing attractions like the Los Angeles Zoo, Griffith Park, Dodgers Stadium, Downtown Los Angeles and The Walt Disney Studios in Burbank, California. It should be anticipated that the River will incur heavy use of the recreation elements. Additionally, there will be the common challenges of maintaining natural amenities in urban areas. In our experience, these challenges include graffiti on hardscape and tree trunks, theft of

locked metal equipment, theft of vegetation, prolonged illegal camping and the like. The MRCA costs to maintain a one mile long stretch of linear stream restoration along the Tujunga Wash is $80,000 annually. We recommend the cost estimate of annual maintenance and operations for the recreation component of the project should be increased to anticipate site over-use and increased vandalism in the urban environment.

While vandalism cannot be prevented, we have found that "good uses" are effective deterrants to "bad uses." Costs for multi-week nature education programs can cost approximately $10,000. The kayaking program we administered this summer did need resources from our ranger, interpretation and planning divisions. In addition to maintenance funding, funding should be set aside to develop and operate robust interpretation programs.

Cost-effectiveness

Cost is a factor in today's constrained economic environment, but any real ecosystem restoration plan will take several decades to implement. We cannot take a shortsighted view of today's economics for this vital long-term plan. The Verdugo Wash and other components of Alternative 20 capture the long-term watershed value by linking the River to multiple large corridors and refuges in the mountains and along the river banks. In so doing, we will provide benefits in restoring a balance for the species in the ecosystem and the public within an urban setting.

Real estate costs are a major factor in any development in an urban area, including ecosystem restoration developments. Land acquisitions in the City will be expensive. However, the scarcity of habitat and ecosystems in an urban area are far more valuable than in other parts of the nation because of that scarcity. The City of Los Angeles is the second largest city in terms of population in the U.S. The value of the ecosystem should be valued even higher in light of the dearth of such habitat in the area.

Alternative 20 is a "Best Buy" plan. It was determined to be efficient but not the most efficient of the four final plans as measured by the cost effectiveness/ incremental cost analysis (CE/ICA). Throughout the discussion of CE/ICA in the Integrated Feasibility Report, statements are made that this is a tool to assist in plan formulation and evaluation "to help inform a decision" (Section 4.11, pages 4-34 and 4-35). However, Alternative 20 is the most complete, cost-effective, and acceptable plan in terms of true ecosystem restoration and sustainability. We believe that if the decision criteria are structured to conform to the Corps' own analysis, and other values discussed above are given adequate consideration, either in additional habitat units or by some other means, it will become clear that the incremental benefits of Alternative 20 relative to the costs will make Alternative 20 the Preferred Plan.

The increased effectiveness of the Alternative 20 is commensurate with the increased costs:

- Alternative 20 restores 6.4 miles of habitat or 58% of the ARBOR length which is two times the length of habitat restored in Alternative 13 (3.2 miles or 29% of ARBOR).
- According to the estimated quantities for demolition of concrete presented in the Appendix C: Cost, Alternative 20 removes 117,918 cubic yards of concrete while Alternative 13 only removes 36,891 cubic yards. Thus, Alternative 20 removes 3.2 times more concrete than Alternative 13.
- Alternative 20 provides the greatest connectivity of the final four plans. Alternative 20 adds 205% connectedness in the Study Area over Alternative 13. The restoration of a more natural connection to Verdugo Wash substantially enhances the benefits of the ecosystem restoration by providing connectivity for wildlife and plants into the historic floodplain of the Verdugo Wash and into the Los Feliz Golf Course, the Verdugo Mountains, and the San Gabriel Mountains.
- The greater connectivity and biodiversity provided by Alternative 20 will provide the restoration improvements greater ability to naturally be self-sufficient, meaning the annual maintenance costs will likely be less than that of Alternative 13. The thin linear planting areas in Alternative 13 are more susceptible to become overrun by invasive species and urban vandalism.

The ARBOR study claims the cost of not doing the project is $0, however, this is not an accurate cost valuation. On page 4-32, Figure 4-1 *Baseline to Future HU Comparison* demonstrates there will be a loss of about 1,000 habitat units over 50 years if no restoration is done. This futher degradation of the River will further isolate the community from regional visitations which help to boost local economies and property values. Page 4-61 shows values annual net recreation benefits at $2,905,732 versus $5,295,376 in annual recreation benefits provided by Alternative 13. The value would be greater for Alternative 20. Without the restoration, there is also a loss of such public health benefits as increased options for active lifestyles, better air quality and better water quality. According to an article in Forbes magazine "The Business of Obesity, What it Costs Us" (2013), obesity in America costs $152 Billion in direct costs including health care services, medical tests and drugs to tear comorbidities. Reducing the obesity rate by 5% could lead to savings in health care costs that could pay down the federal deficit by 13%. The restoration of plants and soil biology within the River restoration zone will naturally clean and filter stormwater runoff, saving municipalities hundreds of thousands of dollars in industrial water treatment.

The Time is Now

Cost and construction feasibility will always be factors that hem in a plan, which why as a planning document, the ARBOR study should be visionary and recommend

MRCA

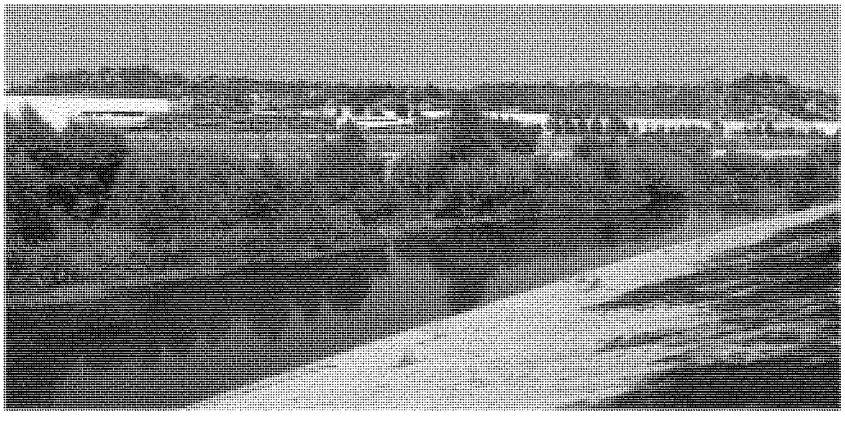
Alternative 20. If not now, then when? The country has little patience for public investment to re-study an area. We urge the Corps to select Alternative 20 as the final Federal plan, as it provides the greatest net sum of economic and restoration benefits. The local sponsor, the City of Los Angeles, has committed to its cost-sharing responsibilities. This is the right plan for restoring the ecosystem values that were lost by the channelization of the Los Angeles River; and the right plan for the people of Greater Los Angeles.

Sincerely,

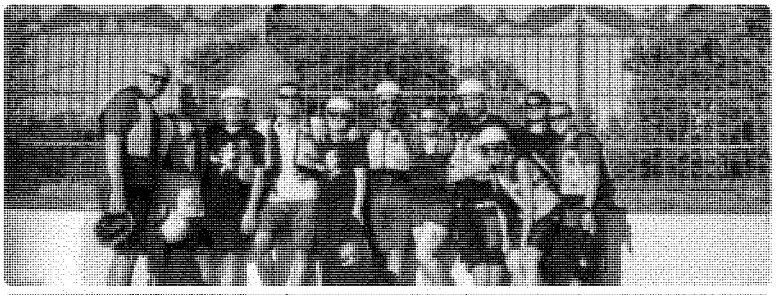
George Lange
Chairperson

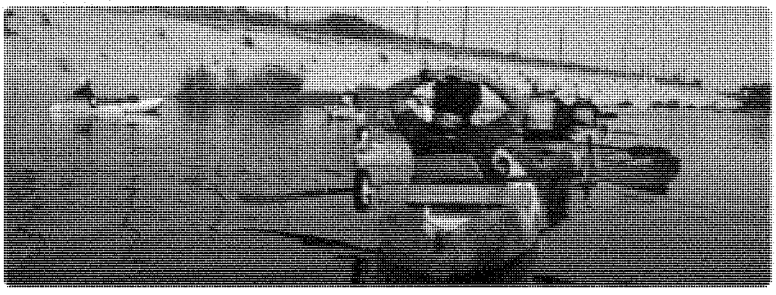
cc: Dr. Carol Armstrong, City of Los Angeles, River Project Office
Lewis MacAdams, Friends of the Los Angeles River

Atch: Photos of the Los Angeles River in the ARBOR study area

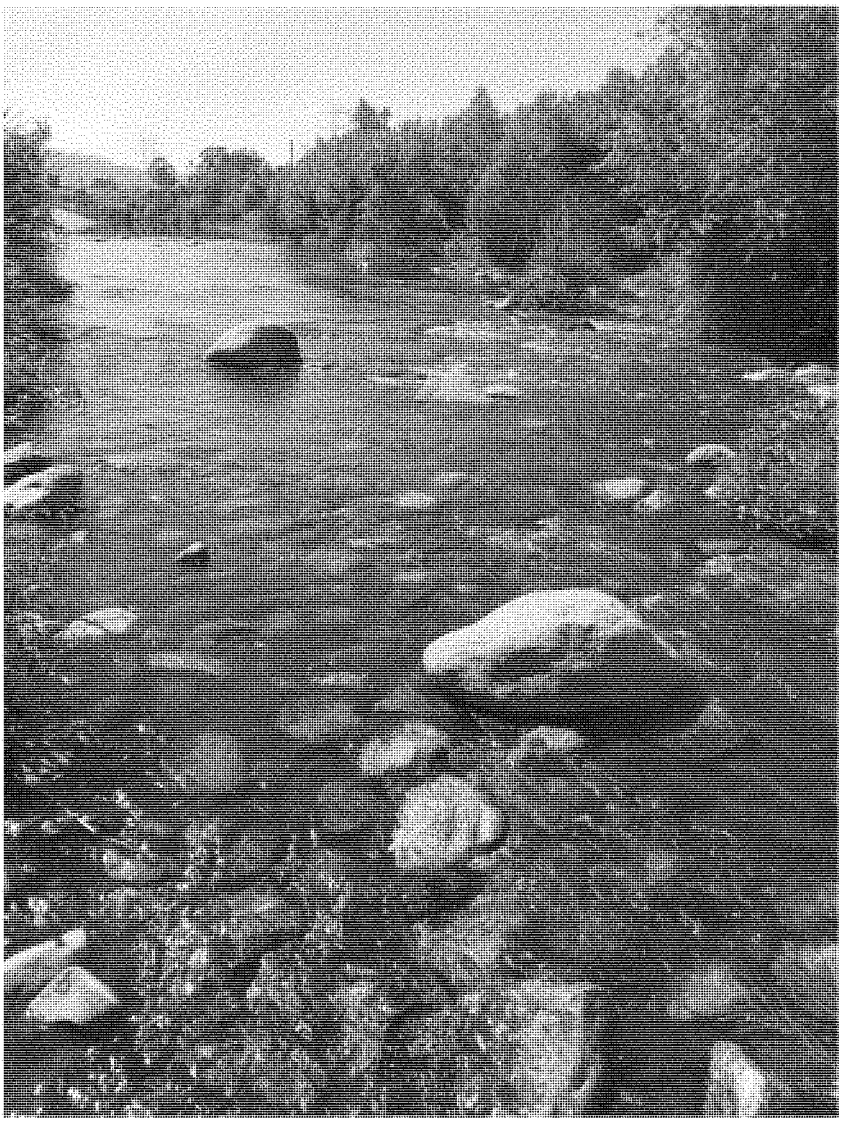


MRCA





MRCA



Mt. Washington Assn.

MT. WASHINGTON
ASSOCIATION
P.O. Box 50716
Los Angeles, CA 90050-0716

November 12, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones
CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

This letter is to state that the Board of Directors of the Mount Washington Association has determined to endorse Alternative 20 and sign on to the petition that follows.

Official Resolution in Support of the Selection of Alternative 20

WHEREAS, the Los Angeles River is the lifeblood of our community and a vital resource to be restored and protected; and

WHEREAS, in 2006, the Los Angeles City Council approved an agreement with the US Army Corps of Engineers (Corps) for the Los Angeles River Ecosystem Restoration Feasibility Study (Study); and

WHEREAS, in 2013, the Corps has developed a final array of four alternatives for the Study, and only Alternative 20 includes both significant restoration at the Los Angeles River's confluence with the Verdugo Wash near the City's border with the City of Glendale, and the only substantial western bank connection-providing a profound hydrological link between the Los Angeles State Historic Park and the river; and

WHEREAS, these two areas provide critical wildlife habitat connectivity to the Verdugo and Elysian Hills, respectively, and are included in the five key opportunity areas of the City Council-adopted Los Angeles River Revitalization Master Plan, which the US Congress directed the Corps to consider; and

WHEREAS, ***Alternative 20*** provides the most robust ecosystem restoration outcomes while also providing four times more jobs than the Corps-preferred alternative, and will thereby most appropriately redress historic environmental injustices that resulted from

Mt. Washington Assn.

the river's channelization—providing new public access to natural open spaces, improving public health, stimulating regional and local economies, and enhancing the quality of life in Los Angeles

NOW, THEREFORE BE IT RESOLVED, that the undersigned supports the selection and full implementation of Alternative 20 by the United States Army Corps of Engineers to restore our Los Angeles River.

By signing, I agree to submit my name and the name of the Mount Washington Association as an official public comment regarding implementation of the Los Angeles River Ecosystem Restoration Feasibility Study.

Sincerely,

Pilar Buelna
President

Cc: Mayor Eric Garcetti
Councilmember Gilbert Cedillo
Councilmember Jose Huizar

NWF

NATIONAL WILDLIFE FEDERATION®
California Office
209-966-2623
prattb@nwf.org
www.nwf.org

November 14, 2013

Via Email: comments.lariverstudy@usace.army.mil

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, CA 90053--2325

Re: Support for Alternative 20 – Draft Integrated Feasibility Report Los Angeles River Ecosystem Restoration Study

Dear Ms. Axt:

On behalf of our more than four million members and supporters, the National Wildlife Federation writes in strong support of Alternative 20 in the Draft Integrated Feasibility Report for the Los Angeles River Ecosystem Restoration Study. We urge the Corps to select Alternative 20 in its final plan.

The National Wildlife Federation (NWF) is the nation's largest conservation education and advocacy organization. NWF has more than four million members and supporters, including more than 250,000 members and supporters in California, and conservation affiliate organizations in forty-eight states and territories. NWF has a long history of working to protect and restore the nation's water resources and the fish and wildlife that depend on those vital resources.

NWF is working in Los Angeles and other cities in California to create wildlife corridors across urban areas. Fostering connections with wildlife on a daily basis both improves the health of people living in urban communities and provides important conservation benefits. We have partnered with the Center for the Environment and Sustainability at UCLA to help map potential areas in Los Angeles for enhancing green space and creating green corridors across the city using backyards, schoolyards and business properties. The Los Angeles River corridor is a critical area for these efforts.

The Los Angeles River is a victim – and a national symbol – of misguided attempts to control the nation's rivers by encasing them in concrete. However, with this study, the U.S. Army Corps of Engineers (Corps) can help undo decades of mismanagement by recommending a comprehensive plan that will restore broad stretches of the once vibrant Los Angeles River for people and wildlife. We join Mayor Garcetti, the Los Angeles City Council and a broad array of conservation and community organizations in urging the Corps to adopt Alternative 20 in its final integrated feasibility report to redress the damage that has been done to the Los Angeles River, the river's wildlife, and the people of Los Angeles.

Alternative 20 provides critical restoration components missing from the other alternatives, including from the Corps' tentatively selected Alternative 13. These additional restoration components are essential for restoring habitat along the river and connecting habitat areas in an ecologically significant way. They are essential for wildlife and for the health and well-being of the residents of Los Angeles, and. For example:

- Alternative 20 provides double the length of channel restoration as Alternative 13, and is the only alternative that restores vital wildlife corridors. The 45 additional acres of habitat created by Alternative 20 could be instrumental in the reintroduction and recovery of many endangered, threatened and rare species that historically occupied marsh, riverine and riparian habitats in the Los Angeles River. For example, the endangered least Bell's vireo historically occupied habitat in Reach 2, and probably many other sections of the LA River.

- Alternative 20 is the only alternative that will connect wildlife from the Verdugo Wash to the mountains and sets the stage for a critical wildlife corridor between the Santa Monica Mountains the Verdugo Mountains and the San Gabriel Mountains. In addition to serving as a critical wildlife corridor, the benefits from restoring the Verdugo Wash wetlands is enormous, and would be especially important for ensuring viable amphibian populations which are under severe stress.

  By allowing back and forth movement, habitat corridors help increase genetic diversity of wildlife populations and remedy population imbalances that inevitably occur in more restricted habitat areas. Wildlife corridors also provide routes that avoid the risk of road-crossing fatalities and that allow for a safe means of escape from natural and man-made disasters, including fires and floods. The Draft Integrated Feasibility Report does not adequately consider the enormous benefit of creating this connectivity, and this benefit should be more fully developed in the final study. Restoring the connectivity between the Verdugo Wash, the mountains, and the river is a critical component of an effective ecosystem restoration plan for the Los Angeles River and must be included in the final project.

- Alternative 20 is the only alternative that will fully realize the river's potential to bring green space to underserved neighborhoods by providing a hydrological link to the Los Angeles State Historic Park (the Cornfields Park) which serves downtown and the Chinatown area. The Cornfields is a large park that is near the river, but does not connect to it. Alternative 20 will connect this park and the river with wetlands and habitat. It will restore seasonal overbank flooding and allow wildlife connectivity from the park to the river. It will also increase recreational opportunities between the park and the river, an important goal for the City of Los Angeles which is working to achieve recreational equity for its citizens.

- Alternative 20 also includes expansive restoration in Reach 8 (Piggyback Yard), which is crucial to the public's vision for a restored Los Angeles River. Adding a soft-bottom channel in this reach will restore riparian forests capable of supporting endangered wildlife, and will greatly increase the hydrologic connection to the floodplain and overbank areas.

- Alternative 20 would provide an additional 10 acres of vital in-channel freshwater marsh Habitat in Reach 2(Midpoint Bette Davis Park to Upstream End of Ferraro Fields). Sensitive wildlife

NWF

species that could eventually benefit from this additional habitat include the threatened Santa Ana sucker, the endangered unarmored threespine stickleback, and the endangered arroyo toad. Added marsh habitat in Reach 2 could also aid the recovery of several listed plants, including the endangered marsh sandwort, the endangered Gambel's watercress, and the endangered Ventura marsh milk-vetch.

The National Wildlife Federation urges the Corps to adopt Alternative 20 to ensure ecologically significant restoration of the Los Angeles River, increase habitat connectivity, and create meaningful public access to the river for residents of Los Angeles.

Sincerely,

Beth Pratt

Beth Pratt
California Director, National Wildlife Federation

NELAart

The Northeast Los Angeles Arts Organization (NELAart) strongly supports Alternative 20 as put forth in the U.S. Army Corps of Engineers Los Angeles River Ecosystem Restoration Feasibility Study.

We realize that our mission to promote local arts and galleries, at first glance may not appear to bear much similarity to your mission to promote environmental restoration and connectivity.

However, we are both about promoting healthy, livable communities and about creating a vibrant present that builds on a rich history.

Further, as the Los Angeles River and the Arroyo Seco are being restored, artists and artisans are finding the small-scale industrial buildings that line their banks to be increasingly attractive and useful.

Our missions are, therefore, very much tied together, and we believe that Alternative 20 offers by far the most promise for a healthy and vibrant future. Alternative 20 will provide 425% more economic redevelopment employment and 400% more economic redevelopment income than Alternative 13. Rarely are there opportunities of this scope to do so much for our environment, our wildlife, our residents, our scenic beauty and our economy.

We look forward to the future--with a restored Los Angeles River and Arroyo Seco at the community's core.

Thank you for your work.

NELAart
5052 York Boulevard
Los Angeles, CA 90042
Cathi Milligan, Executive Director
Margaret Arnold, News Editor
Margaret.NELAart@gmail.com
NELAart.org

The Oaks HOA

The OAKS Homeowners Association
PO Box 29155
Los Angeles, CA 90029-0155

November 17, 2013

Josephine R. Axt, Ph.D.; Chief, Planning
U.S. Army Corps of Engineers, Los Angeles
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Re: Los Angeles River Ecosystem Restoration Feasibility Study

Dear Ms. Axt,

The Oaks Homeowners Association is an organization that represents 800 households of citizens adjacent to Griffith Park. We embrace the park's habitat and wildlife, and we care about the health of the park's ecosystem and its connection to the Los Angeles River and beyond. Over the years, we have supported scientific surveys conducted in Griffith Park, including the current Griffith Park Wildlife Connectivity Survey which not only has documented the deer, coyotes, and bobcats crossing treacherous barriers surrounding the park, but also a mountain lion known as P-22.

Scientists tell us of the critical importance of genetic mixing between populations of various species. Our government needs to act responsibly to encourage this to happen, especially when certain actions by various agencies were largely responsible for creating these impediments to wildlife in past decades as the urban population grew. For this reason, as well as others, we strongly support Alternative 20 over Alternative 13.

The Verdugo Wash opportunity area, in particular, could provide seasonal wetlands that create long-lost habitat such as that which existed prior to the channelization of the river and the building of Interstate-5. This area creates connectivity to the Verdugo Wash which can someday become an important habitat connection to the Verdugo Mountains and the San Gabriel Mountains.

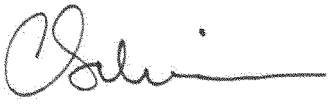
The Oaks HOA
2

Similarly, the Cornfields can be transitioned to rich marsh habitat which connects with the river and Elysian Park, currently an isolated habitat jewel.

The end result with Alternative 20 would be higher biodiversity, better connectivity and higher sustainability of our precious Mediterranean climate ecosytems.

Alternative 20 fits well with the vision and commitment the City of Los Angeles has made with regard to recreational opportunity and social equity. The extra funding is well worth the added value brought to nature and the citizens of Los Angeles. And the added value is something which planning metrics used for the study really can't measure!

Sincerely,



Caroline Schweich
President

Oakwood School

November 14, 2013

Dear Army Corps of Engineers:

Fourth grade students at Oakwood School in North Hollywood have been studying the health of various local ecosystems. We recently heard from a speaker from the FOLAR organization (Friends of the Los Angeles River) about an upcoming decision by the Army Corps of Engineers concerning projects to benefit the LA River.

We, the fourth grade class of 2013-2014, believe that supporting Alternative 20, instead of Alternative 13, would be better for the Los Angeles ecosystem, environment, and community at large.

We are supporting Alternative 20 because it would make the LA River a healthier ecosystem for plants and animals. The concrete eliminates habitat and removing more of it would allow more biodiversity. Alternative 20 is better for the environment than 13 because it covers more of the river, increasing the habitat 119 percent, which increases plant and animal populations, survival, and quality of life. It would also be better for the groundwater. A lot of water that ends up in the river is polluted and then dumped into the ocean. A natural river bottom would act as a filter, cleaning the water naturally. This is water that people could use. We could decrease the need to import water from other places and waste less. Only 3 percent of our drinking water comes from the LA river!

Fixing more of the river would also make people happier because they would have a natural place closer to their homes to enjoy. It would look like a healthier, friendlier environment. When people see how pretty it is, they will like it better and want to take care of it. There would be more recreation opportunities and students could take field trips to study river ecosystems. It would help raise environmental awareness.

If you are going to fix the river, we think you should go all the way and fix it as much as possible. Now is the best time to fund this project and we believe the benefits would outweigh the costs.

Sincerely,

The Fourth Graders at Oakwood School

11230 Moorpark Street

North Hollywood, CA 91602

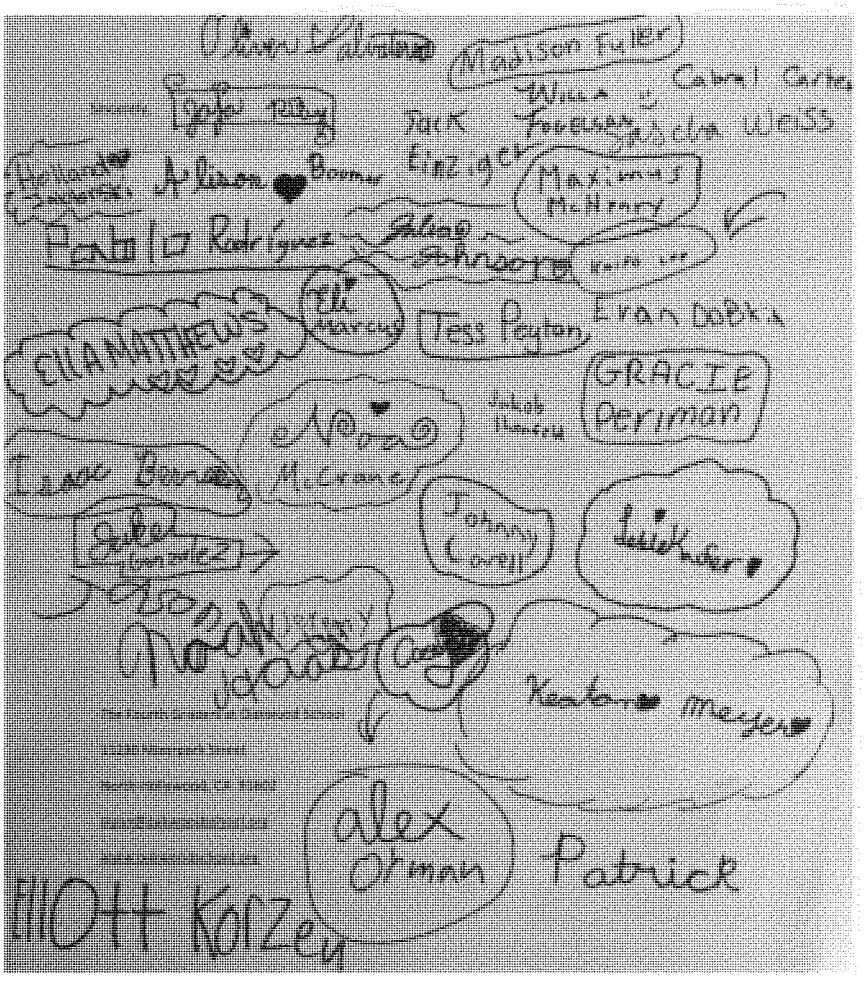
slyon@oakwoodschool.org

www.oakwoodschool.org

Oakwood School

We, the fourth grade class of 2013-2014, believe that supporting Alternative 20, instead of Alternative 13, would be better for the Los Angeles ecosystem, environment, and community at large.

Sincerely,



Pasadena Audubon Society
PASADENA AUDUBON SOCIETY
Founded April 1904
1750 N. Altadena Drive
Pasadena, CA 91107
WWW.PASADENAAUDUBON.ORG

November 17, 2013

Josephine R. Axt, Ph.D
Chief, Planning Division
US Army Corps of Engineers
Los Angeles District
P.O.Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr Axt,

On behalf of the over 1500 members of the Pasadena Audubon Society, I thank you for the opportunity to comment on the Los Angeles River Ecosystem Restoration Feasibility Study. The Los Angeles River is very important to us as birders and as people who care about bird habitats.

Because of the regional significance of this project, we urge the Army Corps of Engineers to select Alternate 20. While we understand the attractiveness of Alternate 13, and its apparent "value for dollar" appeal, we argue that that Alternate 20 will be the superior choice in the long run. Because it includes the Verdugo Wash which connects to the San Gabriel Mountains and the Verdugo Hills, connects the Los Angeles State Historical Park in Chinatown to the River with a wetlands interface, and restores more streams, including daylighting some which have been "lost" for years, Alternate 20 provides significantly more habitat connectivity. It provides more acreage of habitat restoration in places like Elysian Valley, the confluence, and Piggyback Yard. It would provide much more opportunity for recreation, such as bird watching, along with the restoration. Alternate 13, on the other hand, offers a much more timid approach to restoration.

We recognize that Alternate 20 is more expensive. But this is a long-term regional project, one that would bring wetlands back to the Los Angeles River on a large scale. In terms of cost, perhaps the Pasadena Audubon Society could partner with the ACOE for Audubon grant funding. This is a once-in-a-lifetime opportunity and we need to take it. Wetlands are seriously depleted in Los Angeles County, with 97% of historic wetlands lost to development. We need to restore as much as we can to provide homes for the flora and fauna whose habitats we so thoughtlessly destroyed in the name of progress.

Again, thank you for your time and the opportunity to comment.

Best regards,
Laura Garrett (signed)
Conservation Chair
purplecow@jps.net

SMBRC

bay restoration commission
STEWARDS OF SANTA MONICA BAY
santa monica bay restoration commission ✐ 320 west 4th street, ste 200; los angeles, california 90013
213/576-6615 phone ✐ 213/576-6646 fax ✐ santamonicabay.org

November 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt,

The Santa Monica Bay Restoration Commission (SMBRC) appreciates the opportunity to comment on the Draft Integrated Feasibility Report, Los Angeles River Ecosystem Restoration Feasibility Study. We commend the Corps and the numerous stakeholders for their efforts to restore the Los Angeles River.

The SMBRC is a leader in Green Neighborhoods, a concept that connects communities with green spaces and parks. The Commission is dedicated to increasing green space and parks in urban Los Angeles. In addition to beautifying our neighborhoods and improving the quality of life for Angelinos, these parks and green spaces are also designed to catch and clean polluted runoff before it enters our streams, rivers and the Santa Monica Bay. By keeping our waterways clean and restoring natural habitats, Green Neighborhoods also protect local wildlife and public health.

We are writing today in support of Alternative 20 over the tentatively preferred Alternative 13. While we agree that Alternative 13 has substantial benefits, including riparian habitat restoration and floodplain and freshwater marsh restoration and creation, it falls well short of the more comprehensive restoration possible under Alternative 20. Specifically, we would miss the opportunity to realize the following benefits provided by Alternative 20:

- Only Alternative 20 restores the confluence of the river with the Verdugo Wash, providing important habitat connections to the Verdugo Mountains State Park and the Verdugo Mountains Open Space Preserve in the San Gabriel Mountains. Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo and San Gabriel Mountains,

- Only Alternative 20 daylights streams and connects a restored freshwater marsh at the Los Angeles River State Historic Park, directly to the L.A. River. Alternative 20 results in more than three additional miles of restored riparian habitat,

- Alternative 20 removes more than 3 times the concrete (117,918 cubic yards vs.

SMBRC

bay restoration commission
STEWARDS OF SANTA MONICA BAY
santa monica bay restoration commission ✓ 320 west 4th street, ste 200; los angeles, california 90013
213/576-6615 phone ✓ 213/576-6646 fax ✓ santamonicabay.org

36,891) than Alternative 13, resulting in more than 131 more acres of restored habitat and additional infiltration capacity,

- Although Habitat Unit values from the CHAP model may not be high compared to other projects, its importance given the surrounding urban environment far outweighs the numeric output, especially given the number of people who benefit from the restoration,

- The Regional Economic Development analysis shows that Alternative 20 creates thousands more temporary and permanent jobs and adds hundreds of millions more economic benefits than Alternative 13.

Additionally, the Other Social Effects analysis shows Alternative 20, with its larger scope, will produce greater community connectivity, reach more census tracts with high poverty and high minority populations, and provide more green areas to encourage physical activity.

The SMBRC believes that, compared to Alternative 13, Alternative 20 provides the most robust ecosystem restoration, provides more jobs, and redresses some historic environmental injustices that resulted from the river's channelization. Alternative 20 also provides new public access to natural open spaces, improves public health, and enhances the quality of life in Los Angeles.

Thank you for your consideration.

Sincerely,

Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission

Jack Topel
Environmental Scientist
Santa Monica Bay Restoration Commission

SMMC

STATE OF CALIFORNIA-THE NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *Governor*

SANTA MONICA MOUNTAINS CONSERVANCY
LOS ANGELES RIVER CENTER & GARDENS
570 WEST AVENUE TWENTY-SIX, SUITE 100
LOS ANGELES, CALIFORNIA 90065
PHONE (323) 221-8900
FAX (323) 221-9001
WWW.SMMC.CA.GOV

November 6, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report

Dear Dr. Axt:

The Santa Monica Mountains Conservancy (Conservancy) commends the City of Los Angeles Bureau of Engineering and the U.S. Army Corps of Engineers' efforts on the Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report (ARBOR) and offers this comment letter regarding the potential for transformation of the Los Angeles River. The Santa Monica Mountains Comprehensive Plan, adopted in 1979 to preserve and protect what is now the Santa Monica Mountains National Recreation Area and other areas, is a direct parallel to the Los Angeles River ecosystem restoration. While considered a daunting endeavor at the time, the past three decades have witnessed the investment of $750 million in land acquisition and park improvements, creating an interlinked system of parkland protecting the mountains' many jewels. River restoration is at a similar moment today: the path forward is long and arduous, but in 30 years our children will look back and view a restored Los Angeles River as an inevitable outcome and an essential part of the fabric of the City of Los Angeles (City).

We appreciate the time and efforts the Corps and City have expended to work with the community and prepare the ARBOR study. We have reviewed the report in detail and we are providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in the ARBOR study as the Tentatively Selected Plan, we found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

SMMC

Institutional & Technical Recognition

"Per USACE Engineering Regulation (ER) 1105-2-100, significance of resources and effects will be derived from institutional, public, or technical recognition," page xx. The Santa Monica Mountains Conservancy (Conservancy) is listed on pages xxi and 1-13 as being involved in revitalization activities on the Los Angeles River since the 1990s by constructing a series of pocket parks along its banks.

It should also be noted that the Conservancy has invested approximately $70 Million in building parks along the Los Angeles River and its tributaries to fulfill our mission to strategically buy back, preserve, protect, restore, and enhance treasured pieces of Southern California to form an interlinking system of urban, rural and river parks, open space, trails and wildlife habitats that are easily accessible to the general public. Since 1980, the Conservancy has preserved over 69,000 acres of parkland in both wilderness and urban settings, and has improved more than 114 public recreational facilities throughout Southern California. We should also be recognized as an institute at the forefront of science-based open space preservation and habitat restoration in the 2nd largest metropolis in the nation. The ecosystem restoration proposed in ARBOR is consistent with two of our framework landscape planning documents: 1

- *Santa Monica Mountains Comprehensive Plan (1979)*
- *Common Ground from the Mountains to the Sea, San Gabriel and Los Angeles River Watershed and Open Space Plan (2001)*

The Common Ground plan is cited in ARBOR on pages 1-16. We urge you to consider adding the Santa Monica Mountains Comprehensive Plan as it demonstrates the importance of riparian habitat restoration and connections to the biological diversity of the Santa Monica Mountains.

Additionally, we have funded the following studies and reports that should be reviewed as part of ARBOR:

- *Harvard Graduate School of Design Studio, Los Angeles River (2002)*
- *Harvard Graduate School of Design Studio, Supernatural Urbanism (2003)*
- *UC Berkley College of Environmental Design Studio, The Los Angeles River Urban Wildlife Refuge a vision for parks, habitat, and urban runoff (2005)*
- *Friends of the Los Angeles River and the Los Angeles River Revitalization Corporation's, Piggyback Yard Feasibility Study (2013)*

SMMC

By all accounts, the current state of the Los Angeles River is **unacceptable and degraded**. On pages 2-17 through 2-19, ARBOR enumerates the ecological problems with the River especially as impacted by urbanization and flood risk management. The need for restoration is demonstrated by our institutional and technical recognition of the importance of the Los Angeles River and its tributaries to the region's ecosystem function and resiliency. 1

Public Recognition

The Conservancy has funded nature education programming in the ARBOR study area for **more than 20 years**, serving thousands of children and their families. These programs include public campfire programs at pocket parks along the River, 12-week Junior Ranger Programs with community-based partners, field trips for local schools and organizations, and interpretive programs for all ages. One pre-school program is even called "Mommy, the River and Me." The popularity of these programs, serving an audience that is both local and regional, illustrates a widespread interest and engagement on the part of the public. 2

Importance of Connectivity

Per page 6-3, the ARBOR study objectives are: 1) Restore Valley Riparian Strand and Freshwater Marsh Habitat; 2) Increase Habitat Connectivity; and 3) Increase Passive Recreation. Despite these clear goals, the value of the ecosystem restoration appears to have been determined solely using the Combined Habitat Assessment Protocols (CHAP) model. The CHAP model is designed to address wildlife habitat on a site-specific basis but does not capture values for restoring wildlife connectivity and hydrologic connectivity. These connectivity values are critical to achieving resilient and sustainable ecosystem restoration. The CHAP model is insufficient because it does not properly consider the richness of this biodiversity hotspot, the rarity of the region's Mediterranean climate, or the intense habitat destruction and overdevelopment in the second-largest city in the United States. These are values that were essentially eliminated when the Los Angeles River was channelized and that must be considered in reaching a decision on a meaningful ecological restoration alternative. Pre-channelization values can be and need to be recreated. 3 4

As a primary example, a prineipal value not considered by the model is the enormous benefit of connecting major tributary and mountainous areas to the river. The quality of connectivity provided by River restoration is of exceptional significance because it provides opportunity for the greatest diversity of plants and animals from water-loving species to upland species. Having spoken with several members of the Corps/City/resource agencies team who designated specific values for the model, we believe these connections were not valued or weighted in the model. Our determination is verified in Section 6.3 Objectives Comparison of Alternative Plans, page 6-8 and in Appendix G: Habitat Evaluation (CHAP), page 61, Section 9.0, the last paragraph, which recognizes the *"Additional benefits not captured in CHAP were used to evaluate and compare the final array of alternatives. These benefits include hydrologic connectivity to support biotic and abiotic functions, and nodal connectivity to support wildlife movement and dispersal. An assessment of these benefits is applied outside of the CHAP analysis as part of the environmental impact analysis."* While the document compares the alternatives, we did not find evidence to support selection of Alternative 13 over Alternative 20 except the cost differential. In fact, we find much evidence in the document that supports selection of Alternative 20 for these other benefits that are not captured in the CHAP model. The discussion of Wildlife Connectivity in Section 7.1.2 of Appendix G: Habitat Evaluation (CHAP), page 59, clearly supports selection of Alternative 20 because it best meets the need and criteria presented in the document. 5 6

The key paragraphs supporting the selection of the more robust connectivity in Alternative 20 state:

> *"Generally, nodes have a greater overall interaction when they are larger and closer together (Linehan et al 1995). Well connected systems prevent inbreeding depression and disease, and have a lower extinction rate as populations can more easily colonize if they are highly connected (Noss 1983; Schippers et al 1996). Without connections between habitat areas, isolation and loss of genetic diversity is imminent (Hobbs & Saunders 1990)."*
>
> *"In order to benefit the biological integrity of a landscape, corridors should be restored to allow for dispersal between habitat areas. More corridors equal more routes to suitable habitat, creating more opportunities for dispersal. A complex network of nodes and corridors is therefore critical to restoration in an urban environment, as suitable habitat often remains unused if isolated (Hanski & Thomas 1994)."*

SMMC

A well-balanced ecosystem needs these mountainous connections to be sustainable genetically and in terms of food, cover, refuge, and territories for the flora and fauna that once thrived in and along the Los Angeles River. Connectivity greatly influences the distribution of species on the landscape, the distribution of a single species, and the distribution of genetics or gene flow. Discontinuous fragments or nodes of habitat change the organisms and their relationships, especially in the food chain. The connectivity to other large expanses of habitat ensures ecological resiliency and long term sustainability. It is precisely these types of historic connections and corridors provided in Alternative 20 that could enable the reintroduction of Steelhead Trout and other native species into and adjacent to the River by restoring the historic aquatic habitat that once existed in this area.

Improving the habitat and the connections to the River, particularly transitions to large open space areas is important. Habitats on both sides of the River, tributaries, and other expanses of land create corridors that mammals, birds, reptiles, and other species heavily utilize. Medium and large mammals cross the Los Angeles River and are monitored by the Natural History Museum (NHM). The habitats, substrate, and hydrology on those corridors play important roles in the connections these animals use. 6

Verdugo Wash and Piggyback Yard are of particular importance in creating a sustainable ecosystem. The Verdugo Wash tributary to the Los Angeles River northeast of Griffith Park connects both of these waterways to the San Rafael Hills and the Verdugo Mountains. The River corridor to the mountains provides life-supporting connections for the animals in the ecosystem. During times of biological stress caused by urbanization, fires, floods, and climate change, the survivability of plant and animal life and sustainability of the ecosystem depends on the large expansive connections of the rivers and mountains. The benefit of connectivity of the Verdugo Wash to the mountains is a critical component of any ecosystem plan and must be included in the Federal project.

Alternative 20 also increases connectivity through the Los Angeles River State Historic Park (Cornfields) to the Elysian Hills. The hydrologic connection from the Cornfields site would be restored with terracing to the Los Angeles River. Wetlands would be restored at this site.

The Alternative 20 restoration plan for Piggyback Yard is important because it connects the Los Angeles River with over 100 acres of open space by removing concrete from the

channel and replacing it with terracing and new riparian habitat in a highly urbanized area of the City. Alternative 13 retains the concrete channel wall, which limits the usefulness of Piggyback Yard to only creatures that can fly or terrestrial species that can scale the channel wall. Alternative 20 creates an important hydrologic connection between upland restoration and the River at Piggyback Yard, Verdugo Wash and the Cornfields. Water quality and temperature is a primary objective when restoring for riverine species, especially fish, which need shaded, cool pools of water for reproduction. The value of land and water connectivity to the ecosystem is again the biodiversity created and the ability of species to find refuge in biologically stressed situations. To this end, Alternative 20 includes daylighted stormdrains, which provide opportunity for an increase of plants, of which a co-benefit is improved water quality and cool water temperature to improve habitat quality.

Alternative 20 provides the greatest connectivity of the final four plans. Alternative 20 adds 205% connectedness in the Study Area over Alternative 13. The restoration of a more natural connection to Verdugo Wash substantially enhances the benefits of the ecosystem restoration by providing connectivity for wildlife and plants into the historic floodplain of the Verdugo Wash and into the Los Feliz Golf Course, the Verdugo Mountains, and the San Gabriel Mountains. 6

As stated on page 6-27 of ARBOR:

> *"Restoration of the Verdugo Wash confluence would also provide 34 acre habitat node in the Study Area, with connectivity to the Los Feliz Golf Course via existing habitat in the Glendale Narrows (Figure 6-11) and connectivity through the downstream reaches. The added restoration at the Cornfields site in Reach 7 provides a 9 acre riparian habitat node that decreases the distance between habitat nodes in the resource poor downtown area (Figure 6-11). In Alternative 20, local habitat connectivity would increase 120% within the study area over Alternative 16, through restoration of the natural hydrology and habitat at the Verdugo Wash site and its connection to Taylor Yard via existing in-channel habitat in the Glendale Narrows, as well as through restoration of hydrology and habitat at the Cornfields site, which adds a habitat node and decreases distance between nodes in the resource poor downtown area."*

> *"Alternative 20, in addition to the regional connectivity in Alternative 13, adds the Verdugo Wash tributary, which provides a future connection between the LA River and the Verdugo Mountains, a connection that also historically supported a habitat corridor for movement of wildlife. Urbanization has eliminated this habitat corridor,*

and without restoration of the confluence at Verdugo Wash reconnection of the river to the Verdugo Mountains could not be realized. Restoration at the Verdugo Wash confluence would restore opportunity for passage to the Verdugo Mountains, a 26 square mile area serving as a stepping stone to the western San Gabriel Mountains (Figure 6-12). Additional habitat in the community of San Rafael Hills could also be incorporated into the movement corridor as a regional habitat node. Regional habitat connectivity is further improved by restoring connections between the river and the 575-acre habitat node at Elysian Park via restoration of the Cornfields site."

These connections to large areas of land create connectivity of habitats and species. By providing connections between habitat areas, corridors enable wildlife migration and breeding of plants and animals. As a general rule, the wider the corridor, the better because of the ability to include multiple habitat zones in the restoration activities. 6
Wider corridors also suffer fewer impacts from adjoining land uses and have fewer edge threats from invasive weeds and predators. Additionally, the multiple large habitat areas provided in Alternative 20 will enable populations to survive and repopulate after disasters impacting the main stem of the Los Angeles River. Thus, the habitats and species will be more resilient and self-sustaining over the life of the project.

The CHAP model should be considered as an important tool in the planning process, but should not be the only or primary factor used in selecting the alternative plan. The model itself is probably as good as any other; it just did not recognize the appropriate weighted value of other ecosystem restoration benefits. For example, the inclusion of the Verdugo Wash and Piggyback Yard, coupled with the other elements of the Alternative 20 plan, provides double the length of channel restoration as Alternative 13, and would demonstrate an exponential benefit in the ultimate sustainability of the entire ecosystem.

Importance of Biodiversity

California is part of the Mediterranean ecosystem, which only covers 2% of the Earth's land surface, yet accounts for 20% of all known plant species. The California Floristic Province has been declared a "hotspot" by the non-profit Conservation International. 7
To qualify as a hotspot, a region must meet two strict criteria: it must contain at least 1,500 species of vascular plants (> 0.5 percent of the world's total) as endemics, and it

has to have lost at least 70 percent of its original habitat. Today only 24% of California's original vegetation remains in more or less pristine condition.

ARBOR does not cite important local studies authored by highly respected biologists and others. The Feasibility Study concludes that few Federally-listed species are found in the Los Angeles River area. No State species of concern are listed. We recommend looking at the species whose range is biogeographically in the surrounding areas, mountains, and tributaries. Habitat loss and fragmentation lead to a breakdown in ecological processes such as wildlife migration, seed dispersal, pollination of plants, and other natural functions that are essential for ecosystem health. The result is decline in biodiversity and local extinction of sensitive species. Habitats should be created and managed to enable the reintroduction of the native species that once inhabited the Los Angeles River basin. The studies show there are many species that are progressively "blinking out" or being extirpated from the River system because channelization and urbanization have diminished their habitat dramatically over the last 50 years. The Corps has the opportunity now to lead the way to substantial and meaningful restoration for many of these species by implementing Alternative 20. 7

Alternative 20 significantly increases the amount of habitat restored. Alternative 13 restores 588 acres of habitat compared to 719 acres restored in Alternative 20. More importantly, the quality of the restoration is significantly superior in Alternative 20 than in Alternative 13. The Piggyback Yard is an excellent example of the improved quality of habitat created through Alternative 20 versus Alternative 13. Both alternatives claim the 113 acres for restoration of the Piggyback Yard. Alternative 13 does not include channel modifications but uses the existing storm drains in the channel wall to convey flows from the historical wash. In Alternative 20 (Page 4-58) *"the historical wash would be restored through the property with a riparian fringe as well as other side channels, and river flows would be diverted out of the River into Piggyback Yard creating a large wetland area. A railroad trestle would be included with this alternative to allow the described restoration to occur and allowing for the connection of the river channel and the adjacent restored areas."* The River would primarily connect birds to the site because mammals, reptiles, and other wildlife that cannot fly will not be able to scale the wall to connect to the restored Piggyback Yard. The minimal connections through the storm drains in Alternative 13 do not perform the same value or quality of restoration as Alternative 20. Alternative 20 removes the concrete wall and the restores the hydrological connection in a more natural way than the culverts through concrete wall. Alternative 20 8

reintegrates the hydrology and biology from the Piggyback Yard with the Los Angeles River.

The Cornfields site is another good illustration of the quality of restoration. In Alternative 13, Reach 7, the channel wall remains in place with vegetation being planted on the top of the bank in planter boxes. This will improve the aesthetics, but will not improve the habitat and wildlife value much. However in Alternative 20, the wall is removed and replaced with terracing; freshwater marsh and/or wetlands are restored; and the site is connected under a railroad trestle to the main channel of the River. This reconfiguration costs more but results in a far greater quality of habitat than Alternative 13. Higher valued habitats are achieved because of the restored hydrologic connection and the redesign of the habitat connections through terracing and streams. Thus, both the quantity and quality of restoration is greatly enhanced in Alternative 20. Additionally, as noted in Section 4.14.1, page 4-51, Alternative 20 represents *"the most intensive and largest footprint of restoration"* of the four final plans. 8

Considerable Co-benefits

Other values also should be considered in the decision in determining an adequate alternative. These include air quality benefits in a heavily stressed air quality region, hydrologic values, river water quality and storm water capture, which are essential to sound habitat restoration. Another value to be considered is the human environment and diverse minority communities, in particular, in a city with seriously inadequate open space and recreational opportunities. 9

The Value of Recreation

Per page 6-3, the third ARBOR study objective is to Increase Passive Recreation. As a state agency working locally in Los Angeles, we know there is a great demand for active and passive recreation in the adjacent neighborhoods. In America's second largest city there is a serious lack of open space and recreational opportunities. We urge the Corps to revise the proposed recreation plan for Alternative 20. The recreation plan should take advantage of such locally popular passive recreation opportunities as kayaking, bicycling, hiking, bird-watching and community gathering by maximizing the relationship between nature and people. The recreation plan will be the way the Corps 10

garners public support for the restoration efforts if the plan is as robust as possible. Furthermore, there is opportunity to use the restored wetlands and habitat areas as an educational resource for local schools and the community at large. Design of trails, for example, should accommodate group gathering on the edges near educational opportunities, and allow for placement of interpretive signs. 10

Cost-effectiveness

Cost is a factor in today's constrained economic environment, but any real ecosystem restoration plan will take several decades to implement. We cannot take a shortsighted view of today's economics for this vital long-term plan. The Verdugo Wash and other components of Alternative 20 capture the long-term watershed value by linking the Los Angeles River to multiple large corridors and refuges in the mountains and along the river banks. In so doing, we will provide benefits in restoring a balance for the species in the ecosystem and the public within an urban setting.

Real estate costs are a major factor in any development in an urban area, including ecosystem restoration developments. Land acquisitions in the City of Los Angeles will be expensive. However, the scarcity of habitat and ecosystems in an urban area are far more valuable than in other parts of the nation because of that scarcity. The City of Los Angeles is the second largest city in population in the U.S. The value of the ecosystem should be valued even higher in light of the dearth of such habitat in the area. 11

Alternative 20 is a "Best Buy" plan. It was determined to be efficient but not the most efficient of the four final plans as measured by the cost effeetiveness/ incremental cost analysis (CE/ICA). Throughout the discussion of CE/ICA in the Integrated Feasibility Report, statements are made that this is a tool to assist in plan formulation and evaluation "to help inform a decision" (Section 4.11, pages 4-34 and 4-35). However, Alternative 20 is the most complete, cost effective, and acceptable plan in terms of true ecosystem restoration and sustainability. We believe that if the decision criteria are structured to conform to the Corps' own analysis, and other values discussed above are given adequate consideration, either in additional habitat units or by some other means, it will become clear that the incremental benefits of Alternative 20 relative to the costs will make Alternative 20 the Preferred Plan.

The increased effectiveness of the Alternative 20 is commensurate with the increased costs:

- Alternative 20 restores 6.4 miles of habitat or 58% of the ARBOR length which is two times the length of habitat restored in Alternative 13 (3.2 miles or 29% of ARBOR).
- According to the estimated quantities for demolition of concrete presented in the Appendix C: Cost, Alternative 20 removes 117,918 cubic yards of concrete while Alternative 13 only removes 36,891 cubic yards. Thus, Alternative 20 removes 3.2 times more concrete than Alternative 13. 11
- Alternative 20 provides the greatest connectivity of the final four plans. Alternative 20 adds 205% connectedness in the Study Area over Alternative 13. The restoration of a more natural connection to Verdugo Wash substantially enhances the benefits of the ecosystem restoration by providing connectivity for wildlife and plants into the historic floodplain of the Verdugo Wash and into the Los Feliz Golf Course, the Verdugo Mountains, and the San Gabriel Mountains.

Plan Selection

Ecosystem restoration projects provide valuable quality and quantity of aquatic and riparian systems. The selection of the final plan should be determined by using multiple factors. The CHAP model and CE/ICA are only some of the tools that should be used in the selection process.

The Corps set numerical decision criteria for adequacy which are artificially low and led to selection of the "low hanging fruit" for restoration rather than a plan that truly restores the historic values for species, habitat and people. The study narrowed its focus on an 11 mile stretch of the 32 mile river running through the City that has the best chance for restoration. Alternative 13 reduces the length of restoration to only 3 miles. This minimal criterion is inconsistent with the stated objectives of the study and seems to be based only on the costs without comprehensively addressing the significantly greater benefits for species and habitat in Alternative 20. 12

While costs are a consideration, Alternative 20 is the most costly of the four best buy plans (Table 4-10 Final Array Costs and Outputs, page 4-47) because it restores more habitat and creates major connectivity to large blocks of land than just the relatively "low hanging fruit" restored in Alternative 13. Alternative 20 requires more land

acquisition, much more concrete removal, raising a railroad trestle, and restoring several additional hydrological and biological connections to the Los Angeles River. These actions are indeed costly, but create tremendous benefit by restoring an ecosystem that can survive the next 50 years because of its size and robust connectivity. These elements were not valued in the CHAP model, CE/ICA, or the selection of the TSP. Alternative 20 achieves true restoration for the impacts caused by channelization of the river. Alternative 20 is practical and can be implemented as the Federal project. The Integrated Feasibility Report itself supports selection of Alternative 20 except in the conclusions based on the cost of Average Annual Habitat Units and total cost. Implementing Alternative 20 will substantially restore the River in this 6.4 mile segment. Alternative 20 is the opportunity to select the Best Buy plan that provide the best scenario for long term success and sustainability of the habitat, species, environment, and people in the urbanized Los Angeles River study area and beyond. 12

Performance targets for ecosystem restoration were established for the two major objectives: Objective 1: Restore Valley Foothill Riparian and Freshwater Marsh Habitat and Objective 2: Increase Habitat Connectivity. In Section 4.12 SELECTION OF THE FINAL ARRAY Table 4-8 and Table 4-9 analyzed all the alternatives to determine which ones meet the 19 specific targets developed for the two objectives. Alternative 20 meets every one of the 19 targets developed for the two objectives with the highest score and often with an incremental increase. Alternative 13 does not.

Evaluation Criteria

NEPA utilizes the perspective of *significance* of resources to address impacts. Alternative 20 exhibits the most short term impacts primarily because of additional construction of the larger plan. None of these impacts rise to a level of significance. However, Alternative 20 generates the most beneficial impacts for the biological, human, and physical environment. The long term beneficial impacts caused by Alternative 20 are significant based on institutional, public recognition, and technical recognition criteria. Implementing Alternative 20 will have profound positive impacts on the biological resources, hydrological and hydraulic resources, air quality, water quality and recharge, education, recreation, health, economics, human ecology, disadvantaged communities, environmental justice, and the general sense of well being in the urbanized area. These positive benefits in ARBOR are greatest in Alternative 20. The Corps was the first to lead the nation in addressing Environmental Operating 13

Principles in water resources planning process and decision making. Alternative 20 is the embodiment of those principles. Given all these reasons, the Corps should support Alternative 20 as the Federally Selected Plan.

Utilizing the Corps' Planning Guidance (ER 1105-2-100) objectives stated in Section 6.3 (Page 6-8), Alternative 20 is clearly the superior choice of plans. Alternative 20 comes the closest to mimicking the natural conditions and processes that would have occurred had the Los Angeles River not been channelized. It exhibits the best ability *"to continue to function and produce the desired outputs with minimum of continuing human intervention"* because of the size, regional and local connectivity, and restored hydrological and biological connections that create the ecosystem and enable a high degree of self-sustainability of landscape and species. Additionally, the document states *"Restoration projects should be conceived in a systems context ... in order to improve the potential for long-term survival as self-regulating, functioning systems...Considerations should be given to the interconnectedness and dynamics of natural systems..."* Again, these criteria and objectives should lead to the selection of Alternative 20. 13

The Principles and Guidelines, as shown in Section 6.5.5 (Page 6-42), identified four decision criteria to be used in selecting measures and plans. The criteria are effectiveness, completeness, efficiency, and acceptability.

Alternative 20 *"is judged to be the* ***most effective*** *of the four final alternatives. It maximizes contribution toward achievement of the planning objectives, including key nodal connections for wildlife and habitat. It also maximizes the potential for near and long term RED and OSE benefits."*

Alternative 20 is the **most complete** by virtue of including the maximum connectivity to large land areas, the most acres for restoration, the most substantial and natural hydrologic connections, and the greatest length of restoration. These same factors render it the most resilient for long term benefits, survivability, and sustainability.

Alternative 20 is **efficient** and all features are cost effective. It is the most expensive and is less efficient that Alternative 13 because of the high incremental cost per habitat unit. This is due to Alternative 20 being the "game changer" for ecosystem restoration by technically providing substantially greater natural connections to the tributaries, mountains, and large expanses of land that will permanently be restored to open space and habitat restoration similar to that which historically occurred in this area. The cost

to acquire land and construct the Los Angeles River as we know it today was high, and the cost to restore segments of it by removing the concrete and replacing it with terraces and natural connections will likewise be high.

Alternative 20 is the most **acceptable** alternative. All four alternatives are acceptable, but 20 most fully meets the requirement of the authorization in the Water Resources Development Act of 2007 to develop a plan *"that is consistent with the goals of the Los Angeles River Revitalization Master Plan published by the city of Los Angeles..."* Alternative 20 is also the plan that is most acceptable to the public because it is the farthest reaching restoration plan and provides the most benefits to the physical, cultural, and human ecology. 13

Comparing the ranking of the four criteria for the four final plans shows Alternative 20 to be ranked first in three of the four evaluation criteria with 1 being the best.

Criteria	Alt 13	Alt 20
Effectiveness	3	**1**
Completeness	3	**1**
Efficiency	2	**3**
Acceptability	3	**1**

Alternative 13 does not satisfy all the general goals and specific objectives of the study. The decision to pursue Alternative 13 instead of 20 does not account for the benefits of a number of environmental values important to river ecosystem restoration.

The effectiveness of an urban ecosystem restoration project should not rely solely on the cost effectiveness of the creation of habitat units, but must also consider its relationships to the people and communities it serves. Congress in the 1970 Flood Control Act identified four equal national accounts for use in water resources development planning - national economic development (NED); regional economic development (RED); environmental quality (EQ); and social well-being (OSE, other social effects). As the report states, 14

"The four categories, known as the System of Accounts as suggested by the U.S. Water Resources Council, address long-term impacts and are defined in such a manner that each

proposed plan can be easily compared to the No Action plan and other alternatives. Collectively, the four accounts are required to include all significant effects of a plan on the human environment" (Page 6-31).

The selection process of Alternative 13 over Alternative 20 does not appear to have given proper significance to all the categories of the System of Accounts – specifically, the RED and OSE accounts – especially with regards to "effects of a plan on the human environment." The measurement of the effectiveness of an urban ecosystem restoration plan is not just habitat units. The measurement must include its interaction with the people and communities it will serve now and into the future.

Appendix B: Economics of the report indicates that nearly 129,000 residents live within a half mile of the footprint of the study area at a density three times the average in Los Angeles County (Page 14). Because Alternative 20 is twice as long as Alternative 13, Alternative 20 would serve more residents. Specific to Alternative 20 is its ecosystem restoration development in connection with the Los Angeles State Historic Park, an area referred to as Chinatown-Cornfields. This general area, south of the SR110 freeway, has nearly 26,000 residents that are not particularly served by Alternative 13. According to Table 3-4 of the Appendix the overall poverty rate of this area is 22 percent. Further, Table 3-1 indicates this population is a minority population with it being 92 percent non-white. As is common in an urban area of low income/minority population, the availability of parks is scarce. This area covered by City Council District 1 ranks 9th out of the city's 15 districts with less than 5 acres of parkland per 1,000 residents (Page 106). Alternative 13 does little to address the concerns of this area. 14 16

The selection of Alternative 13 looks to have not fully recognized the difference with Alternative 20 on a RED basis. Table 6-8 of the report indicates that the construction period of Alternative 20 would produce 9,001 jobs with wages of over $500 million in comparison to Alternative 13 with its 1,986 jobs and $114 million in wages, and these numbers are only for the construction.

Ecosystem restoration provides the "seed capital" for revitalization. The RED analysis of Appendix B shows Alternative 20 would spur redevelopment creating over 5,000 jobs with wages in excess of $336 million over the long-term as compared to Alternative 13 with nearly 1,300 jobs and $85 million in wages (Appendix B, Table 8-49).

Along with this redevelopment come permanent jobs. After all, businesses and houses that are constructed are not intended to be vacant. Appendix B, Table 8-53 displays the difference between Alternative 13 and Alternative 20 on an average annual basis over the life of the project. Alternative 20 is estimated to have 1,464 permanent jobs (nearly 1,100 more than Alternative 13) with wages of $83 million (a wage differential of $62 million over Alternative 13) on average for each year of the analysis. Of additional significance to these numbers is where the majority of the difference comes. Tables 8-43 thru 8-46 of Appendix B reveal the Chinatown-Cornfields area as the primary source for Alternative 20's greater impacts. Potential long-term economic improvements in this challenged area should be considered when comparing Alternative 20 to Alternative 13.

Redevelopment Long-Term Average Annual Impacts		
	Alternative 20	Alternative 13
Jobs	1,464	370
Labor Income	$83,046,000	$20,990,000

14

Appendix B reports,

"In a recent Environmental Science and Technology article the authors report that there is evidence that urban residents living in greener environments may be significantly healthier than those living in environments with less green space, and the presence of water may create even greater health improvements. Most notably for low-income and minority residents, inequitable urban development and the privatization of natural amenities has contributed to environmental injustices in the distribution of green space and water features. Collectively, this can cause disparities in health-related behaviors and obesity." (B-95)

As documented in Appendix B, the CCPHA found the total annual estimated cost to California for overweight, obesity and physical inactivity was $41.2 billion with $20.2 billion of this amount attributable to physical inactivity. (B-97)

The appendix also indicates in Figure 9.5 that obesity for minority children as compared to whites can be 70% higher for Hispanics and nearly 50% for African Americans.

The Centers for Disease Control and Prevention supports the goal of creating or enhancing access to places for physical activity, the enhancing physical education and activity in schools, and supports urban design and land use policies to encourage

physical activity. The additional and upgraded ecosystem restoration features of Alternative 20 should be considered in light of these goals, especially as there is proximity to nearly double the number of schools in this Alternative, and its physical coverage area also doubles as compared to Alternative 13.

Additional trails, access points, parking areas, and bridges are included in the alternatives. These would provide linkage and connectivity to the restoration areas as well as to existing parks, thereby improving community cohesion. Benefits would be seen under the alternatives and would provide a common place for residents of various socio-economic backgrounds to recreate and interact. This would help create a sense of community and belonging. In turn, these beneficial social effects would potentially influence the enhancement of surrounding areas to conduct similar activities. Alternative 20 with its larger scope will produce a greater connectivity with the people and communities of the study area. 14

Key benefits achieved by Alternative 20 as described above include:

- Three times more concrete removed.
- The length of restoration is two times greater in Alternative 20 than in Alternative 13 and adds more than twice the value by including additional tributary and large expanses of open space into the plan.
- More connectivity remedies the extreme biological stress caused by urbanization, fires, floods, and climate change. 15
- Other societal effects: environmental justice, water quality, public health, will be significantly improved with Alternative 20 over Alternative 13. This is an opportunity for the Federal government to positively affect these resources for a change.

Alternative 20 is most compatible with the numerous initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the Los Angeles River to habitats, species and people.

SMMC

The Time is Now

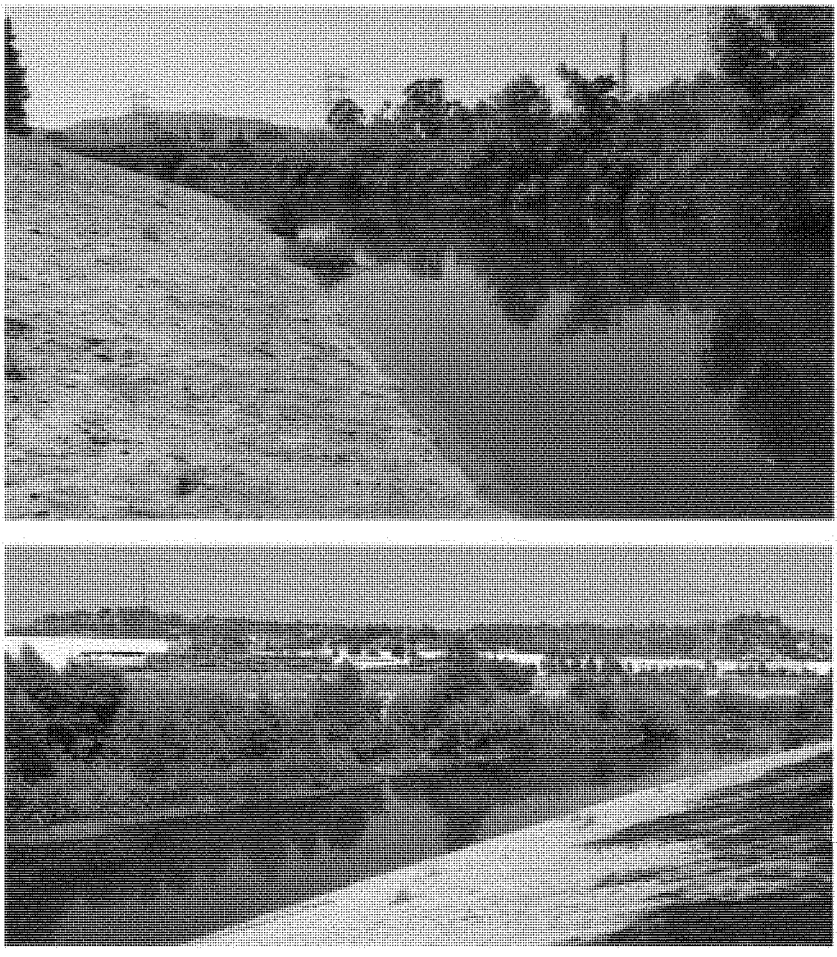
Cost and construction feasibility will always be factors that hem in a plan, which why as a planning document, the ARBOR study should be visionary and recommend Alternative 20. If not now, then when? The country has little patience for public investment to re-study an area. We urge the Corps to select Alternative 20 as the final Federal plan, as it provides the greatest net sum of economic and restoration benefits. The local sponsor, the City of Los Angeles, has committed to its cost-sharing responsibilities. This is the right plan for restoring the ecosystem values that were lost by the channelization of the Los Angeles River; and the right plan for the people of Greater Los Angeles. 15

Sincerely,

IRMA MUÑOZ
Chairperson

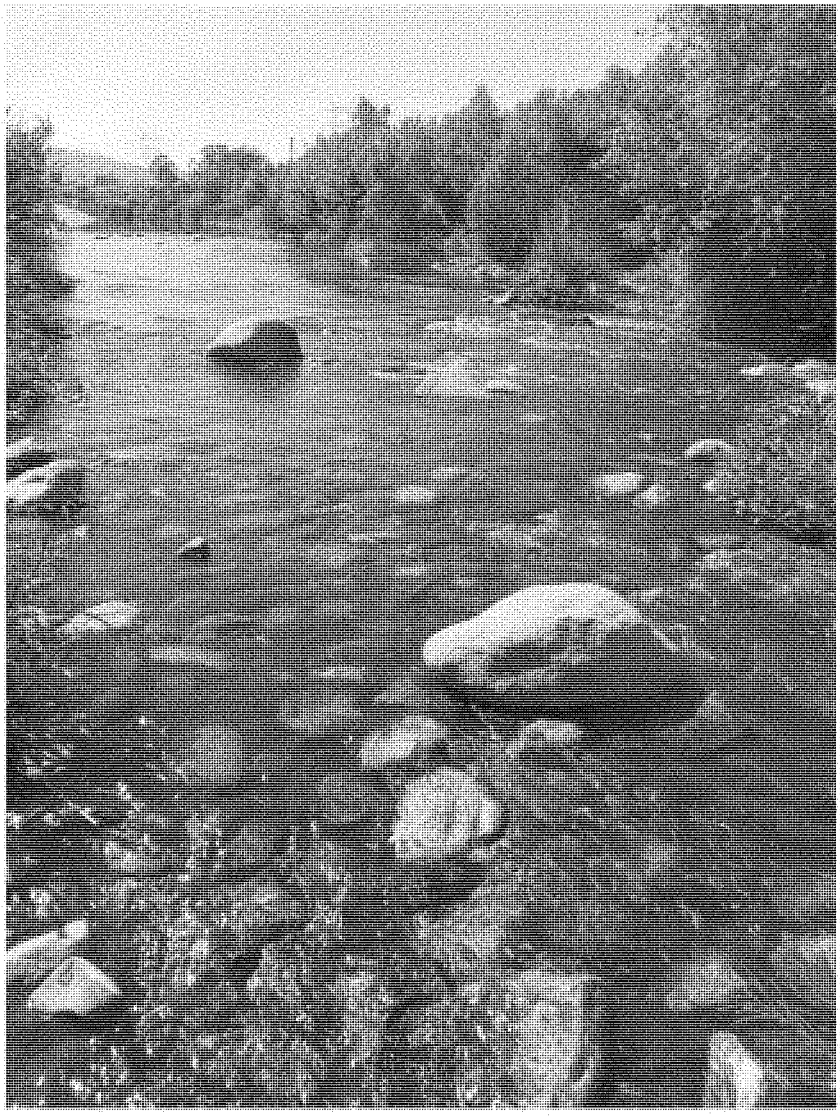
cc: Dr. Carol Armstrong, City of Los Angeles, River Project Office
Lewis MacAdams, Friends of the Los Angeles River

Atch: Photos of the Los Angeles River in the ARBOR study area
(following pages)



SMMC

Dr. Axt
November 6, 2013



Save LA River Open Space

Save LA River Open Space

Allied with the Studio City Residents Association

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers- Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Dr. Axt:

We strongly support, as do elected officials at many levels of government, that the best long term solution would be to adopt Alternate 20 for the restoration of the LA River and the LA River Watershed.

Alternate 20 removes more concrete which will lead towards creating habitat, restoring wetlands that will encourage the return of wild life and just as important, provide access for the public to the river, a sorely needed requirement for the citizens of Los Angeles and the San Fernando Valley.

The highly degraded Los Angeles Watershed must be restored not only for the above obvious reasons but also for the unforeseen benefits to future generations to come: Alternate 20 is best suited to these objectives.

The scope of restoration within Alternate 20 will not come around again: if the opportunity to go with Alternate 20 is not recommended and adopted by the Corps, it will be too late to say "I wish we had done otherwise than go with Alternative 13."

Please listen to all those who support Alternate 20.

Sincerely,

Alan Dymond

Alan Dymond
President
Save LA River Open Space
saveopenspace@slaros.org
www.savelariveropenspace.org
818-509-0230

Sherman Oaks Neighborhood Council

From: buckfilm@gmail.com on behalf of Craig Faustus Buck
To: SPL Comments LA River Study
Subject: [EXTERNAL] In support of Alternative 20
Date: Sunday, November 17, 2013 4:11:34 PM

Dear Army Corps of Engineers,

I am the Chair of the River Committee of the Sherman Oaks Neighborhood Council, one of the communities through which the L.A. River runs in the San Fernando Valley. Our community is extremely concerned about your stated choice of Alternative 13 for restoration of the river. We have heard from a broad cross-section of our community and the responses, from both residents and business owners of Sherman Oaks, have been overwhelmingly in favor of Alternative 20.

The greening of the river is not simply an engineering project, it is part of a master plan to rejuvenate communities along the river from the North San Fernando Valley to Long Beach. Alternative 13 ignores many of these areas and is short-sighted in terms of the economic potential of the river to revitalize Los Angeles as a whole. Please don't deprive us of the full potential of our River.

Thank you,

Craig Buck
Chair, River Committee of the Sherman Oaks Neighborhood Council
Council District 4 Appointee, Cahuenga-Ventura Boulevard Corridor Specific Plan Review Board

Sierra Club

ANGELES CHAPTER • SIERRA CLUB
3435 WILSHIRE BOULEVARD • SUITE 320 • LOS ANGELES • CALIFORNIA 90010-1904 • (213) 387-4287 • FAX (213) 387-5383

16 November 2013

Dr. Josephine R Axt
Chief, Planning Division
US Army Corps of Engineers
Los Angeles District
PO Box 532711
Los Angeles, CA 90053-2325

ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Dr. Axt:

After careful analysis of the Los Angeles River Study, Sierra Club supports the Army Corps of Engineers to pursue Alternative 20 in the Los Angeles River Ecosystem Restoration Integrated Feasibility Report that was published by the Army Corps in September 2013.

Over the years, the Los Angeles River system has been degraded and has been largely lost as a utilizable recreation area. Alternative 20 would offer the greatest amount of restoration to the Los Angeles River system and allow for recreation options that have been lost. It would also bring much needed habitat restoration that would also help in the maintenance of the remaining area ecosystems. The Los Angeles River system is a vital ecosystem that needs restoration.

As our area population increases, it is important to have recreational open space areas available to millions of local area residents. Having lands just a few minutes away where you can hike, bike, or ride a horse is something that we should have for our current and future generations.

Sincerely,

Fred Dong
Chairman of the Crescenta Valley Sierra Club for the Sierra Club

Sierra Club

DATE: Nov. 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, CA 90053-2325

Email: comments.lariverstudy@usace.army.mil

SUBJECT: Los Angeles River Ecosystem Restoration Feasibility Study
DRAFT Integrated Feasibility Report
Study/Environmental Impact Statement (DEIS)/Environmental Impact Report (DEIR)

Dear Dr. Axt,

The Water Committee of the Sierra Club Angeles Chapter has reviewed the Los Angeles River Ecosystem Restoration Feasibility Study and associated reports. Members of our committee have prepared the comments below for your review - a PDF file of this letter and all comments is attached for your convenience to print or share with other reviewers.

Thank you for the time and efforts the US Army Corps of Engineers and the City of Los Angeles have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report.

Thank you for the opportunity to participate in this vital work of LA DWP.

Regards,

Charming Evelyn
Chair, Water Committee

George Watland
Acting Co-Director

Sierra Club Angeles Chapter
3435 Wilshire Blvd. Suite 660
Los Angeles, CA 90010-1904

Attachment: Sierra Club Water Committee Comments - LA River Ecosystem Restoration Feasibility Study.pdf

Sierra Club

ADDENDUM

Comments by the Water Committee of the Sierra Club Angeles Chapter

General Comments by William Goldstein

Alternate 20 restores 719 Acres at a cost of $1.06B. Alternate 13 restores 588 Acres at a cost of $444M. A20 softens 80' of river bottom @ Bette Davis Park vs. nothing for A13. Arroyo Seco is an ephemeral stream for most of the year. A20 softens a .5 mile stretch turning it into a riparian marsh and wetland. A13 does not. Overall, it surprised me that staff didn't spend more time on the water-capture opportunity offered by the LA River. 750,000 acre ft. in any given year would serve a lot of families (@ 2 acre ft./family) and would go a long way toward reducing your water bill and mine. 1

Slowing the release schedule @ Hansen Dam would capture up to an additional 16,000afy. Also, using the planned parklands @ Taylor Yards and the Cornfields as spreading grounds during the rainy season would be a budget-pleaser.

Economics by David Campbell

The Environmental Quality (EQ) evaluation of beneficial and adverse effects of proposed alternatives on the ecological, cultural, and aesthetic effects of the affected natural and cultural resources is the major meat of the Report. This means that the EQ benefits of each alternative will be *subjectively* evaluated while the dollar costs are best objective estimates. Economic reasoning has a limited role.

Contributions of the effects of alternatives that can be measured in monetary terms (National Economic Development $) are a small part of the Integrated Feasibility Report. Recreation Benefits and Costs must be in the NED account. Not worth messing with. And, the report mentions jobs that could be created. The NED account only allows "benefits" from hiring unemployed and underemployed workers. This is done by using the difference between the wages paid (a cost) and the opportunity cost of the workers -- zero for the identified unemployed. The Report sort of overstates these benefits by using only numbers of workers. Also, I don't see discounted present values of the costs and benefits. 2

It sounds like environmental groups have *subjectively* chosen the higher cost alternative 20 vs. the lower cost alternative 13. I believe that one of the problems benefits of the better but higher cost projects can be that they take longer to implement and to receive the benefits. Thus, the discounted present value of the far in the future EQ benefits is small. One strategy is to look for ways to reduce the costs of #20. Incremental

Sierra Club

analysis can help. The report does show different aspects of each alternative. When *negotiating,* can you create a schedule that would proceed with the ones with larger subjective beneficial effects and low costs first i.e high net benefits. Or, come up with ideas for reducing costs or giving up on a couple of the most costly parts. Maybe someone could match up the various parts of 13 and 20 and jiggle them a bit.

The Angeles Chapter of the Sierra Club is pleased with the emphasis on the study's purposes, the detailed information that it contains, and the careful evaluation of reasonable alternatives to restore much of 11 miles of the Los Angeles River. The Chapter sends out a monthly e-Southern Sierran to over 90,000 members and supporters in the area who have supported the general thrust of river restoration as well as specific proposals for many years. As you heard at the even-handed public meeting most of the attendees would love to see all of the measures outlined in Alternative #20 be recommended to the Assistant Secretary and authorized by Congress. One of our members noted that, "It was clear from those speaking at the press conference that this was a *'seminal moment in LA County history"* as speaker after speaker spoke about the remarkable consensus around local, state, and federal support for Alternative 20." We, *and you,* understand, however, that the difficult process will take a long time. Steve Ellis of Taxpayers for Common Sense warned, "You can potentially risk not getting anything if you reach too high."

Competition for funds from presently authorized and new projects from the limited budget of the Corps is intense. See how few new projects are in the crowded 2013 Water Resources and Reform Development Act that passed the House on October 30. The Reform part of the bill requires the removal of many projects that have been on the list for more than five years. This still leaves loads of **competition** for Alternative #20's estimated Federal contribution of $500 million. And, any Rio L A authorization will not appear until at least a year from now according to your time-table. Authorization is only a first step; then monies must be appropriated. 2

Local sponsors will face similar problems in obtaining their *cost-share,* especially for near-term land acquisition. Former Los Angeles Mayor Villaraigosa promised that the City would pay its fair share, but ex-Mayor Richard Riordan forecasts local budget deficits.

Friends of the L A River (FOLAR) began 27 years ago. Since then, access has been allowed in several places, sections have been improved, public support has grown, and progress has speeded up. Nevertheless, it would take another 27 years to complete Alt. 20, or even Alt #13, relying on Federal and local dollars.

The last chapter of Patt Morrison's book Rio L A is entitled, "To see the river as it was." Many steps have already been taken in this direction, some as little as clean-up festivities or bike trails. Each step has encouraged more

people to touch the river. Somehow the process must continue so that others can enjoy and then fight for further restoration.

WHAT NEXT

These comments have illustrated that attempts to obtain authorization and funding for an entire package of these expensive Alternatives in one full swoop are likely to fail. Fortunately the Study does provide for a continual process and mentions that the selected alternative will be "implemented in phases".

The Sierra Club suggests that your synopsis of the final study contain timetables for chunks of these phases so that it is clear that requests for *annual* Federal contributions will be not be large. The restoration of the river piece by piece requires a ranking of the proposed segments. The study staff has already used Bang for the Buck to select the projects for each of the eight reaches of the river. It should now use the environmental quality value versus project costs to develop an EQ/Costs ranking and timetable for the each project in the selected Alternative.

The Corps should meet with FOLAR and a few other groups before November 18 to agree on the urgency of specific projects and a timetable. We don't think that you will be very far apart.

The Corps must attempt to quickly obtain federal and local authorization and funding for a couple of the top-ranked projects. It has spent seven years and $10 million on the Study. Your time and money should not be wasted. The Study conclusion should insist that the Corps begin restoration soon and finish the first steps quickly. The Final Study Report should make it understood that all the other pieces of the overall plan are waiting in a queue for similar actions. 2

ARBOR Riparian Transitions (ART)- Alternative 10

Restores x acres of Valley Foothills Riparian and x acres of freshwater marsh habitat Restores riparian corridors in overbank areas in 6 reaches (1, 2, 4, 5, 6, and 8) Daylights fourteen streams (three streams in reach 3, seven streams in reach 4, one stream in reach 5, and three streams in reach 7) Widens the soft river bottom in reach 6 at Bowtie and Taylor Yard by twenty-four feet Small terraced area in reach 6 Restoration of historic wash through Piggy Back Yard.

ARBOR Corridor Extension (ACE) - Alternative 13

Restores x acres of Valley Foothills Riparian and x acres of :freshwater marsh habitat Restores riparian corridors in overbank areas in 6 reaches (1, 2, 4, 5, 6, and 8) Daylights eleven streams (three streams in reach 3, seven streams in reach 4, and one stream in reach 5) Implements a side channel along the right bank behind Ferraro Fields in reach 3 and along the edge of Griffith Park

golf course in reach 4 Widens the soft river bottom in reach 6 at Bowtie and Taylor Yard by five hundred forty-four feet Small terraced area in reach 6 Vegetation on channel walls in reaches 6 and 7 Restoration of Arroyo Seco confluence Restoration of historic wash through Piggy Back Yard.

ARBOR Narrows to Downtown (AND) -Alternative 16

Restores x acres of Valley Foothills Riparian and x acres of freshwater marsh habitat Restores riparian corridors in overbank areas in 7 reaches (1, 2, 4, 5, 6, 7, and 8) Daylights eleven streams (three streams in reach 3, seven streams in reach 4, and one stream in reach 5) Implements a side channel along the right bank behind Ferraro Fields in reach 3, along the edge of Griffith Park golf course in reach 4, and through Piggy Back Yard in reach 8 Widens the soft river bottom in reach 5 by converting from trapezoidal channel to vertical and adds width at the downstream end of the reach, and widens in reach 6 at Bowtie and Taylor Yard by five hundred forty-four feet

in reach 8 creates 500 feet of soft river bottom with 1000 additional feet on a bench at the 2 year flood interval and sloping up another 800 feet to overbank level in reach 8. Small terraced area in reach 6, and additional terracing in reaches 5 and 8 Vegetation on channel walls in reach 6 and in notching at top of channel in reach 5 Restoration of Arroyo Seco confluence in reach 7. Restoration of historic wash through Piggy Back Yard.

Riparian Integration via Varied Ecological Reintroduction (RIVER) - Alternative 20 2

Restores x acres of Valley Foothills Riparian and x acres of freshwater marsh habitat Restores riparian corridors in overbank areas in 8 reaches Daylights twelve streams (three streams in reach 3, seven streams in reach 4, one stream in reach 5, and one in reach 7) Implements a side channel along the right bank behind Ferraro Fields in reach 3, along the edge of Griffith Park golf course in reach 4, and through Piggy Back Yard in reach 8 Widens the soft river bottom in reaches 2 and 5 by converting from trapezoidal channel to vertical and adds width at the downstream end of reach 5 in reach 6 at Bowtie and Taylor Yard by five hundred forty-four feet, and in reach 8 creates 500 feet of soft river bottom with 1000 additional feet on a bench at the 2 year flood interval and sloping up another 800 feet to overbank level in reach 8.

•Small terraced area in reach 6, and additional terracing in reaches 5 and 8 •Vegetation on channel walls in reach 6 and in notching at top of channel in reaches 2 and 5 •Restoration of Arroyo Seco in reach 7 and Verdugo Wash confluence in reach 3 •Restores freshwater marsh wetlands in Los Angeles River State Historic Park with a terraced connection to the main stem • Restoration of historic wash through Piggy Back Yard.

Comments by Judith Anderson

Habitat Restoration

Habitat Appendix

Stated, finally, the Goals for the Study. Or is it the goal for the entire ARBOR study? Not clear. 3

1. Restore Valley Foothill Riparian Strand and Freshwater Marsh Habitat

2. Increase habitat connectivity.

Objective: Restoration of the area to a condition characteristic of the historic, natural riparian river channel, as limited by ... urbanization and ... for flood risk management.

Important species: p. 12,13.

They ignored larger mammals. Mule Deer, mountain lion, bob cat, coyote. Mountain lions have been spotted in Griffith Park. Habitat stressors included horses, homeless, but ignored both feral and unleashed dogs and cats, as well as noise pollution from adjacent freeways and trains, and runoff pollutants. Trash is not simply careless disposal, but the ability of the recessed river channel to catch windblown object which became trash when they entered the channel from shopping carts to door mats. Homeless encampments are not large congregations, but typically solitary. perhaps 100 sq ft in a polygon of x acres? 4

All of the maps of habitat components, starting with Page 17 figure 6.1.1-1, are "Sample Maps"... Evaluations of the components was problematic since none of the reaches is mapped for all of the components, making it very difficult to find errors, or to compare polygons with habitat descriptions when not all polygons are shown on the maps. 5

The following comments are all that could be gathered based on an incomplete set of maps in the report: The opening implied that Los Feliz and Harding golf courses were important areas to examine. They do not appear in any polygon. Polygons on the left (eastern) bank are very limited in scope and (for example) ignore connectivity between Taylor Yard and the adjacent Los Angeles River State and City Park with its sample native habitat plantings. There is no polygon for North Atwater Park, and the Annex. Which has a bioswale channel for the urban runoff before it joins the river. On reach 6, no polygon for LA River State park, and none for Marsh Park. There are numerous areas around the Metrolink yard and especially areas to the north which deserve polygons even if they show no existing plant materials. 6

Of course there is existing habitat on Taylor Yard. The soil was all scraped away on this superfund site to remove contaminants pollutants from Taylor Yard, Inattention led to the deliberate destruction of osprey nests along the river in abandoned buildings on the west side of the parcel. I thought those 7

nests were supposed to be protected. Nowhere is the continuous flow of water from the Water Treatment Facility in-flow from Glendale even mentioned. Nor the use of some of the treated water on golf courses in Los Angeles. Where is the evaluation of the value of this water in restoring "natural" flows? Higher flows, year-round, are not natural. What are potential impacts if alternate uses for the water are found, as the price of imported water continues to rise, and what are the expected impacts at different flow rates? 8

The hydrology section fails to describe the interaction with the local water tables except to note that the reason for the soft bottom is that the water table is too high to cover it. There is ample evidence of other high water tables not far to the east in Highland Park. They are still being exploited by bottled water companies. Is there opportunity for infiltration? The report doesn't say. 9

Figure 6.2.1-5 Proximity to other natural areas...

The tenuous connection between Griffith Park and the Arroyo Seco needs to be protected. The study missed the opportunity to gain another strand of connectivity using Verdugo Wash to the Verdugo Mountains. Although it includes other Federal designations of land, the SMMNRA, ANF, it fails to include congressionally designated wilderness in the NW corner of Angeles National Forest. The San Raphael Hills have been nearly totally isolated from the main Verdugo Mountains. Connectivity issues are being addressed. Connectivity enhancements in the Sepulveda Pass by Cal Trans includes accommodations for species movement across the pass. Beginning studies across I-5 CA 14 S of Santa Clarita. 10

Page 7

Losses from the construction of a channelized controlled flow river with altered bottom. Should include possible loss of anadromous fish from the Los Angeles River, based on the existence of them in other streams in Southern California; Should include disruption of migration corridors of all land based species – plants, animals. The creation of "islands" increases the possibility of extirpation of species, especially those which are sensitive to disturbances and prefer more secluded habitat (eg. Mountain lion). It means the system now favors those species that are edge adapted. Loss of the top predator reverberates down the remnant ecosystem. 11

Within the "opportunities" section, there is a reference to "functioning ecological zones." This is neither defined nor mapped, nor described as of any date. The intent of including this term is NOT clear. Is there a goal of restoring the "non-functioning" ones, or ignoring the "functioning" ones? 12

An independent study of the essential migration corridors crossing Los Angeles County has been completed. This study, its conclusions and recommendations, have been ignored. 13

Section 3.10

Paragraph 2 describes the land adjacent to and west of Glendale Narrows as having single family and mixed residential housing. On the maps, it looks like it is Griffith Park. Griffith Park is referred to as a "recreational" area. The implication is that it provides little or no habitat suitable for wildlife, birds, reptile, etc. This is not borne out by the independent studies, commissioned by Friends of Griffith Park and others, that have been performed documenting the diversity of species in the Park. 14

Economics/Social Justice

Page 17 Where is tourism included in the business profile for Los Angeles? Is it included in "entertainment"? Table 3.5, is nearly useless since it is not divided out into the separate segments of the river under study.

Page 19 begins a review of legally required "Environmental Justice" factors. While the statistical analysis of the census tracts, there is very little recognition of the depth of the problem or accommodations within the proposed alternatives, which can ameliorate the injustices that are present today. For example: In calculating the acres per 1000 residents, the entire Santa Monica Mountains National Recreation Area seems to have been included although it is nearly inaccessible to school age children in Los Angeles. Private or agency funded busses are nearly hopelessly overwhelmed by the the task of getting these children into the NRA; financially strapped school districts are not funding school trips. Public transportation to the SMMNRA is very limited – in routes, in schedules, in hours of operation.

There is a reference to a Trust For Public Land study of Los Angeles residents access to parks. Other sections of the study go well beyond the reference to Los Angeles being "park poor." An examination of the actual maps show that there is indeed a case of Environmental INJUSTICE and discrimination against some ethnic (racial and cultural) groups and income levels. 15

During the period of this study the City of Los Angeles changed its funding procedures for Parks and Recreation Areas within the city. Fewer dollars were provided by the City; staff were cut and hours and services curtailed. Also, new expenses were added for services previously provided by the Department of Water and Power, such as electricity for night use. The City has been increasingly exploiting the open space for commercial enterprises and services such as advertising, and fee based entertainment in areas where all activities are free, such as picnic areas. Recognizing this trend toward increasingly expensive "opportunities" means that the city has been burdening "park poor" and "low income" residents with an undeclared tax on their use of city parkland.

In terms of adding extra open space and recreational opportunities which are free, every single acre becomes even more valuable. If the situation in Los Angeles sounds bad... at 6 acres/1000 residents, add to it the truly pathetic situation in nearby Glendale where there is only 1 acre / 1000. With nowhere to go in Glendale, they add their demands to those of the nearby communities: Burbank and Los Angeles. 15

The opportunity to open up new acres along the western edge of the city and along Verdugo Wash should be among the highest priorities.

5.1.1

There is a factual error concerning kayaking and fishing in the study area. There is now kayaking in the stretch of the river below the CA 2 crossing. In this stretch there are also more families having picnics, even though there are no tables, bird watching, photography, and nature study.

The map of Marsh Park seems inflated. Perhaps the map includes other land that has been purchased for park purposes but is not open to the public.

At several points the study refers to there being "NO FISHING", or fishing is prohibited, nor not permitted, and not cited. There also are NO SIGNS telling the public that fishing is not allowed. I think that's why there have been no citations.

On page 23 there is a reason given why the public doesn't use the river for swimming: "low water". That's ridiculous. I can give you about a dozen reasons why I would not advise children to learn to swim in the river. Residents know that much of the flow in the river comes from water treatment plants in Glendale and Sepulveda Basin. They don't trust the water as being safe. Perhaps they could, but that is a discussion for another time. Kayakers are advised; others don't even get that information. 16

They don't trust the bottom. They can see the trash accumulations and may have participated in River clean-up days. Glass, pieces of metal ready to go through the sole of a shoe, makes it unappealing when the bottom isn't visible. There is also a fear, in dodgy weather, when a rainstorm somewhere upstream that you neither hear nor see can unexpectedly put you in trouble. Rescues of unfortunates caught in the river make the evening news during winter storms. The long riprap slopes are not inviting for a quick escape route if you have several children. There are very few restrooms along the bike paths that make it inviting to bring families with small children, and not many trash bins either. There are no areas "designated" as suitable for swimming and wading. The reason is not "low water" but fear.

On Page 23 there is a note of the bicycle route on the western bank, but there are bicyclists on the eastern side of the river also, in the stretch of the river from Los Feliz north to at least the North Atwater Annex park. In some sections they share the bank with the equestrians, or use the flat paved area

below the side, and service roads along the bank. There are also bicyclists who reach the river bottom at the Metrolink property.

It is a true disservice to the public when it is expected to analyze output from "certified" planning software which it a) is unfamiliar with; b) has no access to the data put into it; c) is not informed about the assumptions which are built into the software. Like election results from Florida, the public needs more information on this 'certified' software. 17

Section 6.1.

Plagued with undefined terms, this section is difficult to evaluate. Examples: "desired ecosystem resources", "reasonable", or "reasonable with respect to Federal Objectives." Where are these Federal Objectives enumerated? 18

Comments by Dr. Tom Williams

We have reviewed various accessible documents regarding the proposed "Project" and have participated in one public meeting. We request that Environmental Impact Statement/Report - Feasibility Report be revised and reissued at a later date (i.e., January 2014) with a request for additional public comments. 19

No Scoping Report or Comments are provided to assess the adequacy of the DEIS responses,but presumably it will be in the FEIS. No reference is made to the California's required Mitigation Monitoring and Reporting Program, again presumably it will be in the FEIS. 20

Adequate analyses of stormflows, stormwater retention, and infiltration/recharge have not been provided for the affected drainage of the Project and their relationships to the overall eastern SFB area and north-central and eastern LACounty drainage areas. Similarly, adequate analyses of groundwater flows, recharges, and discharges and movements and relationships with contaminated groundwater sources and plumes within the project areas or the effected drainages have not been provided nor even referenced. 21

Considerations were not provided on the regional transportation impacts by removal/limitations of freight transport from the Alameda Corridor and prospects by SCAGs for Alameda Corridor extensions to Palmdale and San Luis Obispo through the Piggyback and Taylor rail yards. 22

Many assessment sections end with a phrase that everything will be sorted out or mitigated during the "design phase" where the public would not participate. Such comments may be appropriate to an Environmental Assessment but not to an Environmental Impact Statement and Report. Therefore, the Project description, the setting based on an adequate description, and assessment along with confirmed mitigation have not been 23

presented for public review and therefore comments can not be fully prepared based on the current materials. The Project's description, setting, and assessment are inadequate and incomplete (see also attached detailed review comments.

Throughout the Report and EIS, costs for rights-of-way and remediation of hazardous/contaminated soils and groundwaters are mentioned and assigned to the City of Los Angeles as the responsible sponsor agency. However, the City as the local Project Sponsor has not adequately or completely developed a setting, assigned project activities, facilities, and impacts, considered mitigation of these hazards and their costs/economic impacts and the dislocation of financial resources to these facilities and activities from those that may have much higher returns on recreational and environmental benefits and far less risk of unfunded costs for as yet unknown but certain presence of contaminated soils and groundwater. 24

Binding contracts or memorandum of agreement or understanding between the City and affected Railroads have not been provided or referenced, and thereby remedial, financial, and other conditions for rail yard usage remain at significant risks of unknown significant impacts to water resources and quality, hazardous wastes remediation, recreational resources and other sectors.

Similarly the allocations of scarce City financial resources for this one project would require deferral or abandonment of funding for operations and maintenance of existing open space and recreational resources and for any new facilities and space elsewhere, where needs remain high. Such financial dislocations, reassignment, or abandonments have real impacts on environmental justice issues within the City's complex and wide ranging culturally and financially diverse communities. 25

No considerations have been focused on any documented relationship of the current owners of the Taylor and Piggyback yards and facilities nor on the repeated use of trestle for relocated train corridors on both left/right backs and yards in the Project Alternatives areas. A signed MOU or similar binding commitments must be provided to support various unfounded claims. 26

No consideration has been provided for cumulative effects of this project (and its alternative) in conjunction with the LACo stormwater management system, LACo recycled water programs and local flows, LACityDWP recharge of recycled waters, diversion of recycled brine wastewaters out of the basins, groundwater remediation, and other LACo and LACi projects. 27

No consideration has been provided regarding recreational and other improvements north of the SR-2 compared to those south of SR-2 and potential effects under Environmental Justice. No considerations of gentrification and low income dislocation and related growth inducements 28

have been analyzed for the Arroyo Seco, Cornfields, and Mission Road corridor of USC/LACo Medical Center (the Piggyback service area).

As indicated by these general comments and elaborated in detailed comments attached, the DEIS, feasibility report, and Project/Alternatives descriptions are inadequate, incomplete, and based on unfounded conjectures which do not provide the public with the basis for recommending and supporting a "Locally Preferred Alternative".

The available documents are incomplete, inadequate, non-objective, and include many errors, erroneous assumptions, and unsupported conclusions in a vain attempt to justify some as yet ill-defined project. 29

The documents must be substantially revised and upgraded before complying with minimal requirements for Federal, county, and municipal considerations and decisions.

Please review, revised, and recirculate this DEIS, Feasibility Report, and Project/Alternatives Descriptions.

Thank You for this opportunity to review and comment upon this important Project. We support the overrall concept of the restoration of waterways but require full and objective disclosure of impacts and adequacy and completeness of supporting documents.

DETAILED COMMENTS

COMMENT FORMAT - Text A-p./parag. or Appendices A-p./parag. and relevant text contents provided for convenience of reader 30
City refers to focus-point of following ***comments***

Executive Summary - p.xvii - xxxv

All portions of ES must be assumed to be based on the full text or the sections below and their supporting appendices. If the Appendices or EIS-texts are incomplete and inadequate, the dependent higher tiered text and Executive Summary must also be considered as incomplete and inadequate.

xxxv/3 ES.9 Conclusion and TSP Identification

The increased benefits for habitat value, habitat connectivity (nodal and regional), restoration of hydrologic processes, and aquatic ecosystem restoration provided by alternatives 16 and 20, including the increase in RED benefits attained by these two larger alternatives make them **reasonably acceptable and supportable alternatives**. However, these added benefits also come at a **higher relative increase in costs**. Comparing cost to relative benefits gained, for a much smaller increase in costs over Alternative 10, **Alternative 13** includes ***: [elements separately/emphasized below for clarity]*** 31

all the features of 10 and
adds side channel restoration and floodplain connection in Reach 3, additional natural river bed in Reach 6,
a natural channel confluence in Reach 7 with riparian vegetation lining channel walls, and
a **significant increase of 309 percent** in nodal connectivity
as well an increase in regional habitat connectivity.

This alternative provides the **greatest increase in net benefits**...**for the least increase in cost** while **reasonably** meeting the objectives...meets all of the Principles and Guidelines criteria as an effective, efficient, complete, and acceptable plan.

Comparative adjectives are scattered throughout the EIS without any specific definitions and without reference to any quantitative measures for such usage. 31

Significance and accuracy of "309" has not been established and requires reference to the pertinent text section.

References between benefits and costs may be appropriate for the feasibility study aspects but opens the entire EIS to fiscal, financial, and economic reviews and comments regarding environmental justice as all LACity residents will pay for the Project but not receive equal benefits and may have more beneficial open space, recreational, and environmental projects and operations and maintenance of existing resources deferred, delayed, or abandoned.

1-12/2 This feasibility study provides an **interim** response...study efforts will determine the feasibility of ecosystem restoration...**There is no sponsor available to investigate flood risk management at this time**.

Current flood control risks are estimated at less than a 25 year flood, elsewhere in the report and EIS. Therefore another project can be assumed sometime in the future to deal with the absence of flood risk management efforts at this time. No estimates nor concept designs for flood risks at 100 year flood are provided, and no consideration of project segmentation is made. 32

The integrated EIS and feasibility study are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of water-consumptive vegetation and inducement for liquefaction throughout the Project area.

1-16/1 - 1-17/1 **1.4.2 Individual, Local, and Agency Reports**

No groundwater studies are referenced although conducted by federal, state, and local jurisdictions.

The integrated EIS and feasibility study are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of water-consumptive vegetation and inducement for liquefaction throughout the Project area. 33

1-17/2 **1.4.3 Concurrent Studies**

• None of the boundaries of these studies overlap with this study's project area

No SFB groundwater related studies

The integrated EIS and feasibility study are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of water-consumptive vegetation and inducement for liquefaction throughout the Project area. 34

1-17/3 - 1-19/5 **1.4.4 Details of Selected Background Reports**

No groundwater studies are indicated at all, although three major SFBasin and groundwater projects (Stormwater Recharge, Recycled Recharge, and Contaminated Groundwater), and the County's/Watermaster's studies and hydrological model would incorporate such groundwater sectors and have been underway for years. 35

The integrated EIS and feasibility study are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of water-consumptive vegetation and inducement for liquefaction throughout the Project area.

2-2/1 During the dry season, **base flows**...often less than 100 cfs and are entirely composed of discharge from municipal and industrial wastewater treatment plants and urban/irrigation runoff.

In this section and elsewhere similar comments are made without supporting records, models, or references with regard to the amount of groundwater discharge to or recharge from the River channel. 36

The integrated EIS and feasibility study are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater relationships with the channel flows.

2-4/3 -2-7/1 **Hydrologic connections** may be made naturally...reshape the adjacent floodplain area...**natural connections** support contiguous aquatic and riparian habitat...via restored corridors. **Natural hydrologic connections** also support aquatic processes...**Connections** may also be made through...using river water to feed overbank sites...supporting **other** ecological processes and exchanges. **Hydrologic and hydraulic connectivity**...restore **underlying processes** that support a functioning ecosystem, to reestablish habitat patches and corridors, and to reduce the habitat fragmentation created by urbanization... 37

The most natural and strongest hydrologic connection within the River valley, channels and floodplains, is the Surface/Ground Water connection which the EIS and IFS fails to provide, discussion, assess, or mitigate.

The integrated EIS and IFS are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area.

Sierra Club

2-7/2 **2.2 DESCRIPTION OF STUDY REACHES** ...eight geomorphically different reaches...defined based on the physical characteristics of channel morphology, bank characteristics, soil exposure, existing habitat, and surrounding land uses. Specific geomorphic criteria include: (1) channel bed type (either soft bed with **groundwater/surface water exchange**, or concrete)...

One of the few mentions of groundwater in both Sections 1 and 2 but without regard to the relationships of the groundwater above the SR-134, between the SR-134 and the SSR-110, and below the SR-110 of the Project area. 37

The integrated EIS and IFS are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area.

2-7/3 ...small temporary dam within the river bed near the upstream end of this reach that was once used to help divert water to the Headworks **spreading grounds** operated by...LADWP).

A second vague reference to the important of groundwater resources and their relationships to the surface and subsurface conditions of the River valley from the San Fernando Basin to Downtown LA. 38

The integrated EIS and IFS are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area.

2-17/4 8. ...inability of surface flows to infiltrate and recharge **groundwater aquifers**, which is necessary to restore **native flow regimes** and support native habitat communities;

The EIS does not provide supporting documents, modeling results, or other studies to conssider the statement made.

Riparian habitats and habitats and vegetation adjacent to the concreted "impervious" channels may suggest that although relatively impervious leakage does occur or that various section can recharge the underlying groundwater tables and aquifers sufficiently to maintain some trees and related riparian habitats. 39

The integrated EIS and IFS are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area.

2-18/2 The primary stressors on the habitats include:...and 4) disruption of natural river to floodplain connections and river/floodplain to **groundwater connections**.

The most persistent connection and support for riparian, wetland, and aquatic habitats is the groundwater and major studies throughout the Southwest US have demonstrated this connection 40

which is not considered throughout the EIS and IFS. Furthermore the connection and interplay between the surface and ground water regimes are often not considered along the entire Project reaches, from above-to-below the SR-134 and the SR-110 which connect vastly different surface and subsurface hydrologic regimes.

The integrated EIS and IFS are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area.

40

2-18/Figure 2-12 Conceptual Model Depicting the Study Area

Groundwater

In the Figure, groundwater is considered in isolation in the Project vicinity from the regime in San Fernando Valley and that below the U-101 which are all fully connected and dependant.

The integrated EIS and IFS are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area.

41

2-19/Table 2-1 Conceptual Model Components

Groundwater Elevation of and connections between **groundwater table and river and floodplain habitats**

Impervious surfaces Development has led to primarily impervious surfaces in the uplands adjacent to the river preventing **groundwater interactions** and promoting rapid runoff of precipitation...

Although mentioned herein this table, groundwater is largely and erroneously ignored in EIS text, descriptions, assessments, and mitigation and in supporting appendices and references. Some similarly isolated studies of groundwater for stormwater and recycled water recharges and for contaminated plume migration have not considered the baseflow discharges to the Project reaches and their efffects on the proposed Projecct of this EIS/IFS.

The integrated EIS and IFS are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area.

42

3-1/2 **3.1 GEOLOGY, SEISMOLOGY, SOILS AND MINERALS** Appendix D also describes geotechnical constraints associated with each alternative as well as provides **recommendations for future stages of study and design.**

3-5/5 Liquefaction is caused when the ground shakes **wet granular soil** and changes it to an unstable **liquid state**. Areas prone to liquefaction have **thick alluvial soils that are poorly consolidated**...in the study area...all lowland areas along the Los Angeles River and tributaries...high liquefaction

43

potential along the foothills...in Reaches 1-3, in Reaches 4-6,...in Reaches 7 and 8

Wet granular soils usually reflect high groundwater levels which are common along rivers and streams, and as indicated the entire length of the proposed Project. Similarly flood assessment often find that the river-support high groundwater table can pressurize groundwater flows into the assumed "levee protected floodplain" and generate "blowouts" and "soil boils" which is another form of liquefaction which most California geologists are not experienced with.

43

The integrated EIS and IFS are seriously flawed, inadequate, and incomplete with regard to an overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area.

3-25/1 3.4.3 Surface Water Quality Water quality...affected by point source and **non-point** source pollution entering tributaries and the main channel of the River...**Nearly 70 percent of the volume** in the River is from Water Reclamation Plant tertiary-treated effluent discharged outside of storm events (**Ackerman 2003**). Although **groundwater interactions exist (particularly in the Glendale Narrows and Arroyo Seco tributary**), the majority of storm drain discharges are believed to arise from urban discharges.

44

Let us assume that the groundwater thereby represents up to 30% of the dry weather flows and perhaps more during storm conditions and at the north and south ends of the Narrows (SR-134 - 110). Such recharges to and discharges from the channel or groundwater would be significant but are not decribed, assessed, or mitigated elsewhere.

As above, The integrated EIS and IFS...

3-74/1 Piggyback Yard is a modern railroad freight transfer yard. The USACE's HTRW survey found no records of any active or open CERCLA HTRW concerns or actions associated with this property. However, the **City of Los Angeles has indicated that there are remaining HTRW concerns regarding the Piggyback property**. In a **1953 USGS topographic map**, a portion of Piggyback Yard is identified as a railroad maintenance yard, the same identifier used for Taylor Yard. Because **Piggyback Yard and Taylor Yard were in use as railroad maintenance yards at the same time, similar activities likely occurred on both properties**. Also, historical maintenance activities were the source of much of the contamination at Taylor Yard. Therefore, although there is no record confirmation of HTRW issues at Piggyback Yard, **some** HTRW is likely to exist at the site.

45

As a federal-jurisdiction facility, hazardous waste investigation may not be undertaken unless the facilities are transferred to other jurisdictions.

Earlier maps and aerial photos are available and vital to risk assessments for the project (1894, 1908, and 1909 Illustrated

Map http://www.bigmapblog.com/tag/los-angeles/; Pierce's Los Angeles Birdseye View, 1894; no railroad yard is shown; Security Savings Bank Map of Los Angeles, 1908). Other documents clearly indicate Taylor Yard was operational in 1925-35, 20 years before the USGS reference.

Open spaces with no indication of yard, but main line tracks shown, which was traditional depiction of complex rail yards.

Birdseye View Pub. Co.'s Birdseye Map of Los Angeles (1909); full Piggyback Yard development shown but nothing is shown for Taylor Yard.

45

The proponents/preparers of the EIS have not undertaken an objective and full disclosure of the historic railroad and industrial development and activities along the river and their potential for contaminations of the sites and underlying groundwater.

The integrated EIS and IFS are totally and importantly deficient regarding the historic uses and developments of the two railroad yards, Taylor and Piggyback. Comparisons are erroneous and the EIS has not researched the historical development of the Piggyback Yard even when available within one hour "Google" search of the internet.

p.3-75/2 - 6 **Reaches 7-8** LADWP above-ground transmission lines run along the **right** ***[west]*** **bank of the River until just south of Main Street**, where the lines cross the River and run along both banks for the remainder of this portion of the study area. No...substations are in or near this portion of the study area (City of Los Angeles 1996).

Left (east) and right (west) bank hi-voltage power lines begins just south of the Arroyo Seco Channel confluence and continue south pass US-101 bridge.

Bank : margins of a channel are called right or left as viewed facing in direction of the flow. http://www.nws.noaa.gov/om/hod/SHManual/SHMan014_glossary.htm

46

Figures 3-21 and 3-22 show power lines on left/east bank - left when facing downstream/south and crossing to right/west bank at Main.

One small substation is located at the northern edge of the Piggyback Yard on the eastb side of the Lamar Str. entrance.

No provisions are made for replacement of hi-voltage power line foundations. As all utilities may require replacement/relocation for the Taylor and Piggyback Yards, a thorough inventory of above and below ground utilities must be provided based on reviews of relevant agencies documentation rather than a cursory vehicle survey of the sites.

EIS and feasibility report must be revised and reissued as a supplemental or revised project description, feasibility assessments, project costs, and EIS.

Sierra Club

3-24/1 ***[Flood protection]*** upgrades within the study area were not found to be **economically justified** in the 1992 review. Therefore, the flood risk management design conveyance capacity remains **far less** than the 1% ACE. **Existing vegetation** within the channel further decreases the conveyance capacity below that of design. 47

Such statements are arbitrary and subjective as they do not provide any significant informative content EIS. Confusion is created by not saying what the flood protection levels are under the existing design and existing conditions.

Sierra Club

p.15-5/ **15. INDEX** methane zone, 5-132
Index in error, TOC-5.18 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES 5-126
Last page of section - p.5-127
TOC-6 COMPARISON OF ALTERNATIVE PLANS 6-1 48
Many others occurrences of "methane zone(s)"exist as indicated herein. above.
Lack of quality control and proofing is a serious issue for completeness and adequacy; other errors have been noted but limited in comments within the timeframe for public comments.

p.4-7/2 4.4 ALTERNATIVE DEVELOPMENT AND EVALUATION PROCESS The alternatives formulated during this study...not plans for actual construction, nor...of sufficient design detail to be constructed. Detailed design analysis and preparation of plans...begin following the completion of the Integrated Feasibility Report...***and*** the EIS)...formulated to a level of detail **sufficient to determine economic feasibility** and **potential cost-sharing**, **technical feasibility**, **environmental feasibility**, and resource issues associated with implementation...
As presented the conceptual plans do not provide the levels of details for and have avoided risk assignments for serious issues of groundwater hydrology and rising baseflows and water levels, of hazardous materials likely to be encountered with incorporation of railroad rights of way and yards (the Taylor Yard, the east and west bank channels to Cornfields, Arroyo Seco, and Piggyback Yard, and the Piggyback Yard), and of discharge of the southward migrating SFB contaminated groundwater plume into the Narrows. As the City would be required to deal with and pay for the hazardous materials remediation, current plans cannot reasonably assess the potential and magnitudes of cost sharing between Federal, County, and City financial resources. 49
The technical feasibility and related costs of controlling the SFB plume migration is under study but has not been documented nor assessed by current City and DWP programs. Similarly the relocation of existing railroad tracks to trestled structures for both mainline tracks and yards has not been documented between the City and relevant railroads.
Environmental feasibility requires establishment of a baseline for contaminated soils and groundwaters beneath the Taylor and Piggyback Yards and the left/east and right/west backs beneath the railroad mainline track rights-of-way.
Therefore, the EIS and IFS cannot be considered as complete and adequate at the current levels of documentation and assessments. The IFS must clearly assign the risks and costs of risks realized before approving continued progress along required process.

4-14/5 This measure would provide some incidental water quality and recharge benefits. **Preliminary design** includes excavation of a basin that would have an **impermeable layer of either geotextile or fine materials installed**. The basin would then be planted with wetland vegetation. Average depth of the basin is assumed to be 3-feet and there would be some deeper areas up to 10 feet deep. It was assumed that this measure would provide 25 percent riparian habitat and 75 percent wetland habitat, resulting in one to two structural layers.

Costs were established based on Conceptual Designs not Preliminary Design, although typical EIRs under CEQA typically require at least preliminary designs for complete and adequate assessment. Under NEPA, the CoE typically conducts an Environmental Assessment for conceptual designs and EIS for preliminary or better designs. In this EIS, conceptual design elements have been developed, only, and costs and environmental assessments are based on conceptual designs. Such use renders the EIS and feasibility study as incomplete and inadequate with very high risks of significant financial, fiscal, and economic impacts on the City of Los Angeles. 50

4-56/2 4.14.3 Alternative 13...restores a total of 588 acres...there would be **six** reaches with restored **riparian corridors** in **overbank areas** (1, 2, 4, 5, **6, and 8**). Restoration features in each reach are described below...

4-57/2 Reach 7 Arroyo Seco/Los Angeles River State Historic Park In **Reach 7**, the Arroyo Seco tributary would be **restored with riparian habitat**...At the confluence on the upstream edge of the River, a backwater **riparian wetland** would be established. Within the River channel itself, the **banks** would be **restructured to support vegetation on the banks**. This reach subplan was the most incrementally cost effective with the most benefits for Alternatives 13 and 16. 51

Statement on first page is not borne out by the development planned for Reach 7 unless riparian "corridors" is defined differently from "riparian habitats" on the linear banks rather than "overbank areas". The preparers have not clearly and consistently defined and used riparian units.

4-22/1 4.7 COSTS Cost estimates were developed based on the **conceptual designs** developed for the measures, as described above. Appendix C, Cost, describes **assumptions**, unit costs, and price levels developed for the measures and alternatives.

4-22/1 Cost estimates for the **Preliminary Array** ranged from a high of $3.9 billion dollars for **Preliminary Alternative 1**: Comprehensive, which included $1.5 billion in estimated tunneling costs (the tunneling estimate did not include LERRD for tunneling) to $211 million for Alternative Preliminary: 52

4-22/1 Taylor Yard. These estimates were done for each **preliminary alternative** and each reach. They included construction, mobilization (7.5 percent), tunneling costs if any (without associated LERRD), a 25 percent

contingency for construction, **preliminary engineering**, and design with engineering during construction estimated at 11 percent, and supervision and administration costs of 6.5 percent. The estimate for interest during construction was 6.5 percent.

Use of conceptual designs for the City-financed elements is not appropriate for CEQA, especially when repeatedly conditioned with comments that further design and planning are required and some changes may result in significantly higher levels of construction and costs.

In the same paragraph, the Conceptual Designs are then transformed to Preliminary Arrays and Preliminary Alternatives for cost estimates. The preparers appear to be confused and have not portrayed Preliminary Cost estimates based on Preliminary Designs; all of which cannot be bidded nor documented. 52

Some differences are suggested when citing contingencies for design with engineering during construction and preliminary engineering rather than design.

The levels of design for such a complicated but integrated program are totally inadequate and incomplete, especially for the hydrological and hazardous materials sector, and are not supported by independent studies specific to the Project.

The real estate estimate was **based on the GIS mapping**...and included **business relocations cost** for Verdugo Wash and **Piggyback Yard** and a 20 percent contingency. Operations and maintenance costs were estimated and annualized for each alternative and reach. A matrix displaying the costs of each of the **preliminary alternatives**... 53

No documents or files were provided for the GIS mapping

No supporting documents, e.g., MOU or MOA between the City and relevant railroads, was provided for relocations of Piggyback (12 sets of track of 2500ft each, = 35,000linft) and thedouble-sets of track through the Reaches 7 and 8.

4-22/3 **4.8 FORMULATION OF SUB-REACH PLANS** Once the **preliminary array** of alternatives was formulated,...**preliminary array** into sub-reach plans...**preliminary alternatives** incorporated combinations of **measures** that varied substantially...based upon existing geomorphology and **opportunities and constraints**...each alternative represented a combination of alternative **features**,...to ensure that the best possible combination of **features** was identified, based upon **cost effectiveness** and **incremental cost analysis criteria**. 54

Sub-reach plans would consist of the **measures** included in **each geomorphic reach** of each alternative in the preliminary array...allowed recombination of the sub-reach plans and comparison of **those newly formed hybrid plans to the** 4-23/1 **preliminary plans in the economic analysis** to ensure that the **most efficient plans** were carried forward into the final array.

As a feasibility document and supporting EIS, consistent use of standard engineering and design terms is mandatory and must be based on some CoE glossary for preliminary, conceptual, array, alternatives, measures, opportunities, features, geomorphic/hydrologic/project reaches, hybrid plans, efficient plans, etc. 54

5-4/Table 5-1 Alternative 16 ***Construction Impacts*** Construction activities...over **624 days** and the number of daily worker commute trips would be approximately three times as many as Alt. 13. In addition, **existing railroad alignments (left bank) would be raised onto trestles through Piggyback Yard**...require temporary closure of the affected portion of the railroad line and rerouting of traffic using this line...delays for the rerouted rail traffic and for rail traffic on the lines to which traffic is rerouted. This short-term impact would be significant, since it would be difficult to find sufficient capacity on other rail lines to reroute freight, passenger, and **high-speed rail trains** while the trestles are being constructed.

The preparers apparently do not realize that the riverbank mainline tracks branch from the riverbank eastward on north side of Piggyback to serve the San Gabriel Valley UPRR mainline tracks (aka, Alameda Corridor East) and on the south side of Piggyback for Metrolink to the San Gabriel Valley, after passing along trestle through the recreation area and under Mission Road.

No re-routing for the San Gabriel Valley lines can be done without new track works to serve the same corridors. These will not be short-term nor limited in any manner for rerouting. 55

The existing and/or relocated mainline tracks would not be used for any high-speed rail trains; unfortunately this indicates the level of adequacy of the preparers rather than the impacts of the project.

5-4/ Table 5-1 Alternative 20 ***Construction Impacts...***Additional impacts would result from raising an additional railroad trestle **(right bank) through Piggyback Yard**...greater short-term significant adverse impact to rail transportation...by requiring an **additional temporary closure and rerouting of traffic**...short-term significant adverse effects but no long-term effects.

5-72/3 ....**temporary closure of the affected...railroad line and rerouting of traffic** using this line, which would result in delays for the rerouted rail traffic and for rail traffic on the lines to which traffic is rerouted. This short-term impact to rail traffic would be significant, since it would be difficult to find sufficient capacity on other rail lines to reroute freight, passenger, and high-speed rail trains while the trestles are being constructed.

Railroad trestles would be placed on both left and right banks, and the left bank passes by the Piggybank Yard but the only trestle on the west/right bank would be related to the Cornfield channel

north of the Piggyback Yard. Trestles are not required opposite to the Piggyback Yard and 3300ft further north/upstream.

Presumed rerouting of mainline rail operations cannot be validated at this time as the railroad's have not provided permission, agreements, or understandings as to the Project's impacts upon their operations and proposed facilities. The IFS only provides that whatever the costs and liabilities are, they are assumed by the City of Los Angeles. Such assignments have far greater short and long term impacts than the EIS implies. These considerations, impact assessments and comparisons are totally inadequate and incomplete. 55

5-10/6 Alternative 16 (AND) *Construction Impacts* ...restoration measures that would cover a larger portion of the study area in comparison to Alternative 10...include the **relocation of existing railroad tracks to trestles, construction of planter boxes built into channel walls, and channel bed deepening**...Construction impacts would be similar to those occurring under Alternative 10 and 13, but would include **larger footprints of disturbance at Verdugo Wash, Taylor Yard, the Arroyo Seco confluence, and Piggyback Yard**... 56

5-11/1

- Demolition and excavation of channel walls to construct **vegetated planter boxes**,
- Demolition and excavation to **deepen channel bed**, and
- Demolition and excavation of **old railroad features and construction of trestles** for relocating the railroad above the restoration area.

No descriptions of the bank-side and trestle tracks, especially for the Cornfields channel, has been provided to demonstrate the relocation feasibility compared to those adjacent to the yards.

5-40/2 5.4.2 Significance Criteria ...thresholds of significance...based on CEQA guidelines....:

- Creation or contribution to runoff that exceeded the capacity of existing or planned stormwater drainage systems or introduced substantial additional sources of polluted runoff,
- Located housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map,
- Increase in the water surface elevation of peak flows in the River, 57
- Substantial changes to the amount of surface water in the River, including both diminished or increased flow,
- Created pollution, contamination, or nuisance, as defined in Section 13050 of the California Water Code,
- Caused regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or water quality control plan for the receiving water body,
- Reduction in yields of adjacent wells or well fields (public or private),

• Adversely altered the rate or direction of flow of groundwater, or

Relocation of current containers-transfer facilities and rail lines from the Piggyback Yard will require major land use changes from current probably agricultural or open space lands to much more impervious logistics uses. 57

Current channels do not provide 100-year flood protection, and thereby although large financial resources are allocated no improvements would occur. 58

As indicated elsewhere, no reasonable estimates have been provided regarding the migration of the SFB plumes into the Narrows and presence of contaminated soils and groundwater related to the Piggyback Yard and beneath the mainline tracks to be relocated to trestle all of which could result in pollution release of contaminated materials and waters or in extraordinary financial resources. 59

Current contaminated groundwater production may be increased by other groundwater projects which have not been adequately modeled or assessed and which have not been assessed as to how this Project would affect or be affected by their impacts on groundwater resources. As the IFS/EIS have not presented adequate and complete analysis as to protecting groundwater production and to current and future groundwater flow rates and directions/circulation, the IFS/EIS cannot verify protection of groundwater resources and conditions and thereby must assume that unforeseen production reductions and significant changes in flow rates and circulation would occur. 60

5-43/6 Water quality pollutant removal mechanisms...include physical and biological...removal of pollutants through adsorption, absorption, filtration, and ultraviolet **disinfection**. Adsorption allows for a pollutant to bind to another substance through adhesion and thereby be removed from the environment...Absorption allows for uptake of a pollutant, when it is incorporated into **vegetation (nutrients)**...Ultraviolet disinfection occurs when ultraviolet rays are used to kill microorganisms (indicator bacteria).

Preparers apparently are not experienced in suspended and attached media bacterial decomposition and clay chemistry, where the bacteria attached to emergent vegetation is vital to surface water treatment and clay adsorption is vital to pollutant stabilization. Disinfection may greatly disrupt natural bioremediations and chemical changes could easily released fix metals and other pollutants. 61

This assessment is inadequate and incomplete with regard to environmental chemistry and lacks any technical information specific to any reach within the Project.

5-43/7 Alternative 10 **Biological removal includes phytoremediation and bioremediation**. Phytoremediation...using plants to remove, transfer, stabilize, and destroy environmental contaminants...Bioremediation...using 62

5-44/1 **biologic organisms** to remove, transfer, stabilize, and destroy environmental contaminants...

All bioremediation includes phytoremediation along with zoo- and bact-remediation. Similarly I am unaware of non-biologic organisms. All plants and fungi are biologic organisms. Therefore the statements related thereto are erroneous. 62

5-44/7 **Alternative 16 (AND)** ***Construction Impacts*** In comparison to Alternative 10 and 13, Alternative 16 proposes **additional significant restoration measures** over a larger area of implementation within the project area, with a larger footprint of disturbance at Piggyback Yard. The additional measures include:

- Demolition and excavation of channel walls to create terraced banks in Reaches 5 and 8,
- Demolition and excavation to deepen channel bed in Reach 5, and
- Demolition and excavation of old railroad features and construction of trestles for relocation of the railroad above the restoration area in Reach 8.

Hydrologic features, water quality, and groundwater resources would **not be significantly affected** by restoration measures under Alternative 16...over a larger area, increasing the potential for construction impacts; Alternative 10, BMPs would help prevent potential construction impacts.

AND

5-45/1 **Alternative 20 (RIVER)** ***Construction Impacts...***restoration measures over the largest area...Restoration measures...would also include the widening of Verdugo Wash in Reaches 3 and 4 and channel reshaping/widening restoration measures in Reach 2...impacts..., both adverse and beneficial, would be similar...but would be more extensive due to the increased area...

5-45/2 ***Operational Impacts*** ...Alternative 20 would not significantly affect **hydrologic features, water quality, and groundwater resources,** and would be the same as those under Alternative 16, but would occur over a larger area, again providing an incremental increase in **overall benefits**. 63

5-73/1 ...under this alternative, existing railroad alignments would be kept at grade but put onto trestles in Reach 8 on the left***/east*** bank south of Main Street to Cesar Chavez Avenue through Piggyback Yard, with excavation below the existing grade...raised onto trestles on the right bank between North Spring Street and North Broadway....to provide right-of-way for additional channel capacity and space to implement other restoration measures. This would require **temporary closure of the affected portion of the railroad line and rerouting of traffic using this line**,...result in delays for the rerouted rail traffic and for rail traffic on the lines to which traffic is rerouted. This short-term impact would be significant, since it would be difficult to find sufficient capacity on other rail lines to reroute freight, passenger, and high-speed rail trains while the trestles are being constructed.

Throughout the IFS/EIS, no soil sampling/analyses have been provided for the walls and banks of the channel where railroad have been located for 100 years. Many, most railroad rights of

way (RR-ROW) are known to have been contaminated by leakage and spills and it only takes one quart in one cubic yard to make it a hazardous waste. General presumption is that the RR-ROW is contaminated until proven clean. 63

Conversion of channel walls may be done without problems if no RR-ROW is associated with it, but the IFS/EIS has not demonstrated any evidence to prove the character of the soil or even the groundwater beneath it. This represents an unfunded, unknown risk to the public and the environment of the City of Los Angeles.

No evidentary/factual basis is provided for claims of "no significant effects" in the text and related appendices. Further comparisons of alternatives cannot be undertaken without definition of such risks to water quality, mobilization/exposures to hazardous materials, air emissions, financial/fiscal conditions, and environmental justice. 64

Closure, rerouting, and delays for the mainline railroad tracks generally indicates that the preparers are unfamiliar with laws and regulations and court/case histories when dealing with the mainline railroads. Absence of any reference to or supporting documentation of agreements with the railroads clearly indicates the inadequacy and incompleteness of the IFS/EIS. The railroad will not allow such delays or disruption and will require many measures herein not discussed, not assessed, and not funded. 65

5-54/6 Alternative 16 Local wildlife movement within the study area would be additionally improved by **restoration of a natural hydrologic connection** at Piggyback Yard...to reconnect the river to the historic floodplain. Due to the large size of the restored Piggyback Yard habitat (approximately 90 acres) ***[3.9Msqft 1000x 3900ft, but other areas refer to 100+acres]***, the connection to the River...allow the **site to serve as a source population** for other restored habitat areas along the river and minimize the risk of local extinction in smaller areas. The restored channel bed...provides a habitat corridor that connects to other habitat areas in the study area, which promotes wildlife movement and prevents inbreeding depression.). 66

5-72/3 ...existing railroad alignments...kept at grade but placed onto trestles in Reach 8 on the left bank south of Main Street to Caesar Chavez Avenue through Piggyback Yard, with excavation below the existing grade...trestled...for additional channel capacity and space to implement **other restoration measures**.

Wildlife movement maybe "improved" but in no manner can the restored hydrologic connection be considered as "natural" under a maze of railroad trestles and overlying train traffic and assumed container transfers.

If the entire Piggyback site is restored, trestle would still encircle three sides of the site with the 60,000+ vehicle I-5 and Mission Road along the fourth side. The 3-4 line trestles would be massive structures with considerable noise issues for the "wildlife". 67

This paragraph and related comparisons and "natural" and "habitats" involving the Piggyback Yard, Taylor, Cornfields, and Arroyo Seco "habitats" and bank side mainline railroad tracks (2-6 sets of tracks) are totally without supporting documentation and expert analyses. 68

5-112/1 **5.14 CUMULATIVE IMPACTS**
5-113/3 Boyle Heights Community Plan In the City of Los Angeles, the **Boyle Heights Community Plan**, which includes portions of **Reaches 7 and 8**,...promoting new businesses, **preserving existing industrial uses**, preserving and creating affordable housing, and **promoting new and expanded park and recreational opportunities**...
BHCPlan does not include Reach 7 and large parts of Reach 8, northern border is the north boundary of Piggyback Yard. 69
No reference is made for the NELA Community Plan nor USC/LACounty Medical Center Master Plans.
The IFS/EIS are totally deficient, inadequate, and incomplete with reference to all cumulative impacts, especially with regard to groundwater resources, contaminations, and conditions and to presence/absence and conditions of methane, hydrogen sulfides, and other hazards, liquefaction within the Project area and the individual reaches.

5-117/1 **Cornfield-Arroyo Seco Specific Plan** The Cornfield-Arroyo Seco Specific Plan will guide the future development of the Arroyo Seco area within and adjacent to Reach 7...The specific plan area would encompass the **River channel for several miles**...
Reach 7 only is 1.1miles of the River and the total River frontage of the CASP is 1.4 miles. The proposed Project and any channel connecting the River and Cornfields would be in conflict with the Urban Village zoning along the west side of the west/right bank railroad tracks to become trestles. 70
The IFS/EIS are in error(s) and totally deficient, inadequate, and incomplete with reference to all cumulative impacts related to landuses in this specific Reach and location.

5-117/5 **5.14.2 Cumulative Impact Analysis** ...discusses the impacts of the alternatives when considered cumulatively with impacts of other **past, present, and reasonably foreseeable future actions**...
The IFS/EIS does not discuss the LA City's stormwater recharge ("Prop O"), floodplain, contaminated groundwater, or recycled recharge projects, nor the bridge replacement programs, and therefore both are totally deficient, inadequate, and incomplete with reference to all cumulative impacts within the Project area. 71

5-121/3 Cumulative Impacts- Transportation The restoration measures...**could result in cumulative impacts** to current and planned 72

rail operations. Various commuter and passenger rail projects, such as the Metrolink's Metro Gold Line extension and the **State-sponsored high-speed rail**, include routes that overlap several project reaches. In addition, both Union Pacific and **BNSF** maintain both **active rail lines and storage tracks** along both sides of the River.

Railroads will not be adversely impacted with required mitigations that will be required of the Project or the Project would be abandoned perhaps after a few year of litigation. Federal jurisdiction of the railroads will require that the City agree to all measures presented by the railroads and pay appropriately for such measures and railroad overheads. 72

Current high-speed rail alignments would not involve the Project area or rights-of-way as the its trackwork may go underground from the east of Reach 5 to near Main/Alameda, fr west of Reach 8.

BNSF is not involved in tracks within the Project area.

This is the first and only mention of "storage tracks" in the entire IFS and are largely restricted to Reaches 6, 7, and 8; although these tracks will require additional trestles, this sole mention appears an error.

5-122/3 **Public Health and Safety, Including Hazardous, Toxic or Radiological Waste** The study area for public health and safety includes the River channel, and the immediate vicinity...Implementation of River restoration measures could result in **less-than-significant potential cumulative impacts**..., **HTRW**, **methane zones**, and...associated with the project. 73

The IFS/EIS do not provide adequate and complete information regarding the presence of contaminated soils, movement of contaminated groundwater plumes, and ground methane within and adjacent to the Project area. Without such information, no analyses nor assessment can be considered adequate, complete, or reliable, and no claim of "less than significant" or "potential cumulative impacts" can made supported.

6-36/6 **Alternative 16 (AND)** Impacts...include those identified under Alternatives 10 and 13...more extensive compared to Alternative 10 due to more extensive implementation of proposed restoration measures...Short-term, significant impacts to transportation and circulation would occur as a result of having to **temporarily close railroad lines** that **pass through Piggyback Yard** to allow them to be placed onto trestles...passenger and freight trains to be rerouted during the construction phase, leading to delays in rail service and disruption of delivery schedules. 74

As mentioned before, railroads will be fully compensated by the Project Sponsor for all impacts plus overheads, and other financial packages before any activities occur.

Mainline railroads pass along the north, west, and south boundaries of the Piggyback Yard but do not enter the Yard, strictly speaking, 75

only storage tracks lie within the Yard and if trestle would cover most of the area. Since the railroad Yard activities require wheeled access for transfer the proposed Project will be required relocate and compensate for any and all disruptions for the entire Yard, perhaps to Colton or Palmdale.

Therefore any alternative requiring access to the Yard will require relocation of the entire yard but retaining trestled railroad tracks along the north, west, and south perimeter of the Yard. 75

6-31/1 **6.4.3 HTRW** ...known contaminated sites within the study area that cannot be avoided by the project...San Fernando Valley Superfund Site, and Taylor Yard G1 and G2...high impact sites. In addition, contamination is **possible** at the Piggyback Yard site based on **historical uses, posing a potentially high impact to the project** since the **extent of this potential contamination is unknown**. Localized groundwater contamination may also be encountered during construction...non-Federal sponsor ***[=LA City]*** would remediate or ensure the remediation of soil contamination to the standard required for the restoration project prior to construction of restoration features at the affected sites. Because it is **infeasible to remediate groundwater contamination prior to construction**, the sponsor would be responsible at **100 percent non-project cost for addressing contaminated groundwater**... 76

The entire Piggyback Yard must be considered contaminated as it was operating at least in 1909 and well before the Taylor Yard, 1915-1925 and included many of the same activities. In addition, numerous gas plants along the railroads received coal as feedstock for their typical coal gasification activities which also produced large amounts of hydrocarbon contaminants and products used by the railroads.

The IFS/EIS is totally inadequate and incomplete and erroneous in their discussions of the history of the Piggyback and Taylor Yards and therefore the risks of contaminated soils and underlying groundwater.

6-31/1 The sponsor understands its responsibility and has **directly committed** to undertaking or ensuring the **necessary HTRW remediation**...including providing sites to be cleaned to be compatible with the restoration land use necessary and **addressing** groundwater contamination during dewatering activities.

The IFS/EIS provides no references or documentation in support of these statements. As the IFS/EIS do not provide any integration with existing contaminated groundwater studies in the SFB or with railroad programs and greatly understate the risks of contaminated soils and groundwater in Reach 5-8, the commenters cannot and the Public should not accept vague statements. 77

Sierra Club

APPENDIX A Design

Appendix A p.50/2 A concrete reinforced **naturalized** channel...constructed on the **left/east and right/west banks**...and extend 50 feet towards the center of the channel.

p. A-50/2 **Naturalized** channel locations...excavated at a depth of 12 feet and width of 50 feet towards the channel centerline...behind the locations of the proposed retaining walls and...allow temporary access for construction of the retaining walls.

No concrete planter boxes, concreted rubble-filled trenches, and trestled concrete channels can be considered to be "naturalized", transformation to natural state or conditions, especially as the channel would retain more than 100ft, half the width of existing channels. 78

This and similar wordings appear to be reflecting a bias approach for exaggerating the restoration and minimizing the remaining artificial nature of the flood channel.

Similarly, such statements and avoidance elsewhere that the channel does not provide the standard 1%/100-year recurrence protection afforded by such channel elsewhere casts suspicions that the entire document is inadequate and incomplete and does not provide the Public with a full disclosure document.

In addition, the IFS/EIS does not indicate, here and elsewhere, that the sidewall reconstructions will be close to the existing groundwater table surface and that as elsewhere in Reaches 7 and 8 and perhaps Reach 6 such proximity exposes workers and air quality to hydrogen sulfide gases emanating from the oil-field contaminated grroundwater known to be in the area and discharging to the channel through flapped weepholes in the channel bottom. 79

A-p.51/ **Figure 4.16 Cross-Section 7, Interstate 6 *[sic, I-5]* to Main Street** 80

A-p.52/2* Preliminary Channel Design...**"Arroyo Seco Cross-Section,"...design...remove 4 feet and 24 feet off the top of the **existing left/south** and **right/north *[channel passing from east to west] retaining walls...; the **left/south bank** would be widened...**the right/north bank** widened...

A-p.54/2 **Preliminary Channel Design...**"Cornfields Cross-Section,"...design...create...wide channel...***[west to east/LA River]*** The **left/north and right/south banks** of the channel...***[Looking downstream which is opposite of that used for the LA River]*** 81

A-p.58/ **Figure 4.19 Cross-Section 8a, Main to First Street, bottom C-Section *Single-Track/Left-Side Trestle shown but mentioned p.56/2***

"...existing **railroad *[singular?]*** would be impacted; the **railroad** would need to be elevated on **a trestle** above the proposed wetland area ***[or channels]***. Construction of the trestle would avoid realignment of the current railway...

Sierra Club

A-p.59-60 and p.61/**Figure 4.20 Cross-Section 8b, Main to First Street**

A single set of references should be used - e.g., north, south, east, and west should be used throughout the IFS/EIS without the more complicating terminology of left/right banks which are not in common use by the Public, the target reviewers of the IFS/EIS. 81

Trestles when mentioned and depicted are shown as single track and assumed to be only on left-side rather than two sets on both sides. No description is provided of a full "Typical Trestle" with dual track sets and maintenance walkways has been provided anywhere in the IFS. 82

No provision is made for the various junctions, spur tracks, sidings, and the Piggyback Yard with many yard tracks. No provision is made for container loading/unloading in Yards.

No mention and depiction is made of dual-plus track sets on both side of channel and extent of trestle along the channel and adjacent to fences. 83

The IFS/EIS are inadequate and incomplete with regard to all trestle works, their designs, and thereby their costing and degree of mitigation.

A-p.67/5 - Alt 13. Existing railroad **tracks** within the Piggyback Yard parcel would be elevated on **trestles** to allow flow through and **connection of the riparian zone and marsh habitat** to the main channel.

A-69/5 Alternative 16 ...channel would be constructed through the Piggyback Yard,...Existing railroad tracks within the Piggyback Yard parcel would be elevated on trestles to allow...connectivity to the riparian zone, channel, and marsh habitats ***[beneath the trestles]***.

More than 12 sets of tracks x 2500ft occupy the Piggyback Yard renders this option impractical if not impossible. 84

Tracks-On-Trestle does not replace the function of container transfers to/from stacks/trucks <> rail cars.

Project and sponsor cannot practically place all operations on trestles therefore the yard would cease to existing and all functional facilities would require relocation to other areas.

None of this has been documented in agreements of the City or County with the railroads.

None of the impacts of indirect relocated functions, operations, and facilities has been assessed.

A-70/1 Elevate railroad (Reaches 7,8)

Reach 7 1000+ feet >4,000ft		
SR-110	***3 right***	***2 left***
SR-110-Broadway-Cardinal	***2-5 right***	***2 left***
Reach 8 2000ft	***>8000ft***	
Cardinal - Chavez	***2-5 right***	***2-6 left***
Chavez - First	***2-4 right***	***2 left***

All Union Pacific, Metrolink, AmTrak, and MTA/LOSSAN 20+ Yard Rail Sidings 85

Total trestling of the channel openings require a doubling or more of the lineal measurements and thereby the costs, which also excluded railroad standards, transfer of rail/new rail, overheads, and acceptance, without claims.
The measurement and unit costs bases are in error but would probably not be done by Sponsor contractors anyway. Railroads would have full control of all related activities and would charge accordingly. 86

A-71/4 **Reach 7** – Storm drain outlets...to create **freshwater marsh habitat** on the overbank area of the channel, and include **one *[large]*storm drain on the left bank**, and **two *[large]*storm drains on the right bank**...rebuilt in this reach to provide habitat features and flow regimes supportive of **in-stream biota**. **Existing railroad tracks on the right bank** would be **elevated on trestles** to allow flow through and main channel hydrologic connection to the riparian zone, channel, and marsh habitats. 87
Construction of freshwater marsh must have perennial water sources other than high groundwater tables. IFS/EIS does not document the flows and persistence of flows for these drains.
Statements increase the trestling of the bank on the east side of the channel without trestles being reflected in measurements and costs. 88
Trestling is not required on the east side without basis for selecting east or west for trestles.
Other smaller drains exist on both sides; no criteria are provided to select the drains to be "naturalized". 89
Unclear meaning as to "in-stream biota", sedges or snails or fish?

A-71/8 Reach 8 The main channel...reconfigured to take advantage of the Piggyback Yard parcel...1,000-foot-wide bench...would include marsh vegetation. A channel...through the Piggyback Yard...supportive of marsh habitat. Existing railroad tracks **within** the Piggyback Yard parcel would be elevated on trestles to allow flow through and main channel hydrologic connectivity to the **riparian zone**, channel, and marsh habitats. 90
Statement suggests a few tracks rather than 20+ Yard Rail Sidings of 1000-2500ft in the Yard and the need for full relocation of the entire Yard rather than 40,000ft of trestles. Trestled siding track could not function without yard equipment and supports for cranes, gantries, lifts, trucks, etc. and 3.5M sq ft of trestles. 91
Continuing and persistent underestimating of the effects in the Piggyback Yard renders all aspects for Alternatives 13-20 in the IFS/EIS totally inadequate and incomplete and in erros for design and costing.

Appendix C Costs

C - 3-13/Reach 7 Line 1 Lengths 1000ft x $5000
C - 3-15/Reach 8 Line 1 Lengths 4806ft x $5000
C - 3-18/ Unit Costs/All Reaches Line 35 Railroad Trestle LF $5000...Engineers estimate for placing an elevated railroad trestle
Piggyback Yard 20+ Yard Rail Sidings of 1000-2500ft
90-100+ acres = 3.5M sqft 1000+x3500ft - 3000+ft E-W x 2200+ft N-S, or 2600ft NW-SE x3400ft NE-SW
Statement suggests a few tracks rather than 20+ Yard Rail Sidings of 1000-2500ft in the Yard and the need for full relocation of the entire Yard rather than 40,000ft of trestles. Trestled siding track could not function without yard equipment and supports for cranes, gantries, lifts, trucks, etc. and 3.5M sq ft of trestles.
Continuing and persistent underestimating of the effects in the Piggyback Yard renders all aspects for Alternatives 13-20 in the IFS/EIS totally inadequate and incomplete and in erros for design and costing.

92

C - 4-1 O&M Line 35 0% No O&M Costs Anticipated
C-7/3 Line PS-12 No design currently for the storm drains or the **new railroad trestles**. Scope for these...not anticipated to grow, but if it did **costs would increase significantly**.
C-7/5 CE-12 High risk or complex construction elements, site access, in-water, unique construction methods, Special equipment or subcontractors needed,
Construction of the railroad trestles is a more difficult construction task. The railroad companies would need to be heavily involved and special contractor would be likely. Cost estimate assumed a sub- for this work, and has conservative unit cost. Therefore impact would be marginal, but risk is still high of something not going as planned.

93

As the trestles will form part of the relocation package for all railroads, Zero O&M for trestle cannot be justified, especially since the existing rights-of-way have virtually zero costs and high accessibility while trestle in water require maintenance without similar accessibility.
The assumed ZERO-O&M reflects a totally inadequate and incomplete approach to the entire railroad relocation activities and total absence of experience with national Main Line railroads.
Without a clear MOU/MOA with the relevant railroads, risks for increased costs and very significant increases are assured and 100% realizable.
Furthermore the construction of the trestle is different from track relocation or installation of new track (anticipated).
Most likely, railroads would assume all control of any works for their rails, with full and complete payment by the appropriate Project participants.

94

Project participants shall be required to fully compensate the railroads for any operations delays or disruptions of mainline and yard railroads.

APPENDIX K HTRW SURVEY REPORT

This entire section is totally incomplete and inadequate with regard to the known presence and migration of the SFB contamination plumes into the northern Reaches 1-3 and those beneath the Taylor Yard and Reaches 4-6. For Reaches 7-8, the preparers appear totally unaware of extensive contaminated groundwater and hazardous soil contamination from railroad, lumber, and coal gasification facilities dating back to 1870s throughout Reaches 7-8, north of US-101. Hydrogen sulfides in the groundwater from Broadway to US-101 and from Alameda to the River reached levels of >100mg/L during RTD/MTA construction of the Red Line facilities.

Similarly, the preparers are unaware of the numerous shallow oil fields beneath Reaches 7-8 and extensions of productive formations beneath Reaches 5-6, and of the DPW encounters with H2S and methane during sewer excavations.

95

K-13/2 The Piggyback Yard site is a REC because of additional information obtained from the 1953 historical USGS topographic map of Los Angeles, which shows this property and Taylor Yard under use for **similar purposes in the mid-20th century**.

K-16/4 Piggyback Yard is...non-mapped HTRW REC property that impacts the restoration project, because the extent and presence or existence of HTRW is unknown...has **historic similarity with Taylor Yard**,...

In a one-hour internet search, the Piggyback Yard was clearly depicted in 1909, although nothing was depicted in the Taylor Yard area. A more profession search of archives and historic aerial photos may provide far more adequate and complete

The supporting documents and EIS text are totally wrong in the historic context of Taylor Yard compared to the larger, earlier, and probably dirtier contamination of soils and underlying groundwater.

This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

96

K-13/4 The **AAI search and results for this report** indicate **no HTRW concerns for the Piggyback property**. That is, **no records were found** of any active or open environmental regulatory CERCLA **related HTRW concerns** or files or actions associated with this property...information **found for this property** listed only a few minor reported regulatory actions...spills of hazardous materials from within railcars unloaded at this property. The spills were remedied to the satisfaction of the local California environmental regulatory authorities and no further regulatory action was required...much of the existing surface at this property is asphalt

97

paved...there are no maintenance facilities or related buildings on this property, nor are there any activities that involve the use, treatment or storage of large amounts of hazardous materials.

97

Such a mechanical search indicates the lack of judgment and experience on the part of the preparer not the records. Historic records do exist and are well known for coal gasification plants as shown by chimneys in the 1909 depiction and 1920-30's aerial photos that showed the sites in Reach 8 and probably Reach 7 and maybe Reach 6.

LACity and LACounty maps and records also show the owners and uses and sometime building measurement from which reasonable interpretations maybe made regarding the potential/risk of contamination from coal gasification plants (many coal-tar hydrocarbons and PAHs), oil/lubricant/brake fluids depots (PCB, hydrcarbons, etc.), timber tie yards (creosotes, PCPs, etc), and steam generation (asbestos and mercury). The search conduct is obviously flawed and limited so as to purposefully underestimate the probabilities and risks of high and locally assigned unfundable costs for remediation.

This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

K-13/5 However, some concerns still remain regarding HTRW for the Piggyback property that has been noted by the project Sponsor (City of Los Angeles). Much of the additional information regarding such concerns for this property was obtained during discussions that occurred during the follow up AFB meetings. The most important information was obtained during a recent search of the USGS historic topographic map collection. This search revealed the presence of a railroad maintenance yard shown on the historical 1953 topographic map...This cluster of buildings is also labeled on the map as "Union Pacific Maintenance Yard"...The map reveals evidence that both maintenance yards were **active on or about 1953**. Further review of historic topographic maps **after 1953**...This indicates that the maintenance yard did not exist sometime after 1953.

98

K-14/1 ...recent findings from the historic USGS 1953 map...HTRW is still present at Taylor Yard, **it is possible that HTRW may still exist at Piggyback Yard**...historical maintenance activities at Taylor Yard contributed to the majority of its present HTRW contamination. Because Piggyback Yard and Taylor Yard **were in use at the same time**, similar activities **most likely occurred** at both of these properties...**historical similarities**...Piggyback Yard is likely to contain **some amount** of HTRW contamination and is therefore carried forward as a REC.

Refer to pictures of 1894, 1906, 1908, and 1909 Illustrated Map http://www.bigmapblog.com/tag/los-angeles/

Pierce's Los Angeles Birdseye View (1894); no railroad yard is shown

Map of Los Angeles railway systems (1906)

Security Savings Bank Map of Los Angeles (1908); no indication of yard, but main line tracks shown
Birdseye View Pub. Co.'s Birdseye Map of Los Angeles (1909); full Piggyback Yard development shows yard and half-roundhouse and many others yard tracks but nothing is shown for Taylor Yard.
Piggyback Yard is more likely to have more contamination than at Taylor as it preceded Taylor by more than ten years and has adjacent coal gasification plants which received coal from rail siding and provided hydrocarbon products for the rail operations and construction (creosote for all timber products) activities. 98
This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

K-14/4 Piggyback Yard is one additional non-listed and non-mapped HTRW REC property that impacts the restoration project, because the extent and presence or existence of HTRW is unknown...has **historic similarity with Taylor Yard**, which is presently contaminated with HTRW...
As the Piggyback Yard preceded Taylor Yard and had similar but additional industrial process nearby and larger cooling ponds, we must assume that the now-covered soil is thoroughly contaminated and contamination has reached the high groundwater table in the area.
This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

K-16/1 The Sponsor ***[LA City]*** is responsible for 100% costs for the response of any HTRW contamination for these **two properties** such that it meets the future land use requirements for this LAR project. **The Sponsor has committed to undertaking necessary remediation and providing "clean sites" prior to construction of the LAR restoration project**. These costs would not be cost shared as part of the restoration project.
LACity shall be responsible for the two properties and all track relocations and underlying contaminated soil removal and treatment for both west/right and east/left mainline rail tracks to trestles.
The cost estimates are totally erroneous and based on no facts in evidence. The entire approach especially to the Piggyback Yard is to downplay contamination and assume cleaniness rather than estimating: 400K sq yd x 5 yd deep = 2M cu yds of contaminated soil x $600/cuyd = $1.2B which the City would have to pay before any Project work would commence. 98 99
This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

Sierra Club

K-16/1 **It is likely** that this response will consist primarily of excavation-removal/hauling efforts directed towards remediation of soil and soil vapors. This is the most direct and effectively remediation method... There are other remediation methods...are not **suitable for the short time frame** needed to construct the habitat.

No MOU/MOA has been provided therefore no probabilities can be assessed, as the relevant railroad would be expected to take charge of any work within their areas and rights of way.

The entire approach especially to the Piggyback Yard is to downplay contamination and assume cleaniness rather than estimating: 400K sq yd x 5 yd deep = 2M cu yds of contaminated soil x $600/cuyd = $1.2B which the City would have to pay before any Project work would commence.

This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

100

K-18/1 **6.0 GROUNDWATER CONDITIONS 6.1 Summary of Groundwater Conditions and Related Discussion** The groundwater **exists in the form of an unconfined aquifer throughout most of the project study area**...contains both **shallow and deep** groundwater portions that differ in general quality...shallow portion...to approximately 100 feet below ground surface, while the deeper part extends from 100 feet below ground surface to approximately 200 feet....co-mingled and widely contaminated with known HTRW...VOCs and Chromium metals...officially known as the SFVSS, a Federal CERCLA Superfund site.

The statement that the groundwater resources are both unconfined but separable into two components appear to contradict each other. Furthermore, no mention is made for 1994 and later updates of the SFBGroundwater Model which extends to at least SR-2 bridges within the Project area.

This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for groundwater contamination and remediation for Reaches 1-5 if not further.

101

K-18/2 Groundwater contamination, unlike soil contamination, **cannot be effectively addressed prior to construction** in order to provide **complete remediation** at groundwater contaminated areas/properties...would be the responsibility of the Sponsor at 100% non project cost.

Groundwater is commonly contained and remediated and depending on the construction schedule additional wells and pump/treat systems could be employed.

This entire section reflects the practicality of incorporating the costs of complete remediation to say <10ppm TPH.

The sections dealing with groundwater, surface waterr, soil contamination, and groundwater contamination are totally incomplete and inadequate with apparent bias for promoting the

102

Sierra Club

Project without consideration of risks and costs for the Project and especially for Alternative 13-20.

K-18/4 Open bottom areas and **weep and drain holes** exist within the LAR channel/levee...built into the channel/levee for...relieving and draining this structure of surrounding...ground water...provided a continuous and open pathway for discharge of groundwater, including any uncaptured HTRW **contaminated groundwater** from the SFVSS that might or might have already migrated into the LAR.

Those downstream of SR-110 have provided discharge for high contamination levels of H2S arising from beneath the west side floodplain of Reach 8 and perhaps other locations in Reaches 6-8. Simple inspection of the channel floor discharge ports will show white deposit of CaSO4, sulphate where the H2S reaches aerated water. 103

Such "sour water" would adversely impact any open excavations near the groundwater table and any dewatering discharges as was the case with the Red Line Phase One excavations in Reach 8

The sections dealing with groundwater, surface waterr, soil contamination, and groundwater contamination are totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for the Project and especially for Alternative 13-20.

K-18/5 ...**very likely** that some portions of the edge of the SFVSS HTRW contaminated groundwater plume **are or have already discharged into the river on a continual basis**... 19/1 of certain project features such as wetland and open bottom areas should not interfere or promote migration of this plume since some of it is or has already migrated into the LAR. The construction of unique habitat features should not interfere with or alter the existing pathways of migration of contaminated groundwater beneath the Study area.

The discharge to the river can be viewed separately from the continued southward migration from the SFB into the Narrows and eventual discharge to Reaches 6-8. As recognized elsewhere the two-part groundwater table contamination has not been monitored and migrating contaminant plumes have not been fully documented along with groundwater regimes. 104

This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

K-19/1 ...certain project features such as **wetland and open bottom areas should not interfere or promote migration** of this plume since some of **it is or has already migrated into the LAR**...construction of unique habitat features **should** not interfere with or alter the existing pathways of migration of contaminated groundwater beneath the Study area. 105

K-19/2 Wetlands are **known to naturally degrade HTRW contaminants**,...presence of this particular feature and the combinations of active responses should further reduce migration of HTRW contamination plumes into the LAR after the project is built.
K-19/3 **Planned irrigation**...could result in leaching **contaminants** to the underlying shallow groundwater system...potential adverse impacts to the existing groundwater system associated with the infiltration...minimized by limiting irrigation and surface runoff...minimize infiltration and leaching of soil contaminants...threat to the underlying shallow groundwater system...eliminated by the **complete removal** of contaminated soils beneath areas that will experience irrigation, surface runoff and erosion.
K-20/2 The REC for the **one** Piggyback Yard property exists based on the **historical similarities** between this property and the Taylor Yard property, which is currently a high impact HTRW site with existing known amounts of heavy HTRW contamination. The presence and extent of the HTRW contamination at Piggyback Yard is unknown at this time because it has **never had cause to or has never before been formally investigated**...full impact of HTRW at this site on this project will continue to remain unknown until such time a formal investigation is undertaken.
No analysis or modeling has been conducted for the IFS/EIS, therefore none of this can be justified or documented. Without a good groundwater model, effects of surface water recharging of groundwater and groundwater discharging to surface water cannot be assessed or analyzed.

105

K-19/5 7.1 Extent of HTRW impacts
This appendix identifies 23 properties that are impacted by HTRW and contamination within 500 feet of the project footprint. Three of these properties are of high HTRW impact to the project. Nineteen are low impact. **One is of unknown impact** ***[Piggyback]*** but has historic use characteristics similar to high impact sites.
K-20/2 The REC for the **one** Piggyback Yard property exists based on the **historical similarities** between this property and the Taylor Yard property, which is currently a high impact HTRW site with existing known amounts of heavy HTRW contamination. The presence and extent of the HTRW contamination at Piggyback Yard is unknown at this time because it has **never had cause to or has never before been formally investigated**...full impact of HTRW at this site on this project will continue to remain unknown until such time a formal investigation is undertaken.
K-20/2 Any **HTRW impacts for Piggyback Yard are assumed to be the same as that existing for Taylor Yard at this time.**
Further...investigations and studies...will need be undertaken before the impacts are ascertained fully.
K-20/3 The extent of the undefined portions of the known residual groundwater and/or soils contamination at **all 23 properties** is not known at this time...There is a possibility that future activities related to construction and maintenance of the habitat project will encounter portions of both **known or undefined** but known residual groundwater and/or soils

106

Sierra Club

contamination...water discharge from these activities will need to be approved and permitted prior to release according to the Los Angeles RWQCB water quality standards...This is a Recognized Environmental Condition...and is in turn a HTRW impact to the Corps of Engineers Los Angeles River Ecosystem Restoration project study area. 106

This entire section like other references do not reflect responses to comments previously given for the historic relationship of the Piggyback and Taylor Yards is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

K-21/5 There is insufficient information from the search/inquiry to determine the **true extent or level** of contamination, or severity of the HTRW impact...recommended actions...more rigorous review of...environmental reports or data case files...visiting and obtaining the files from the LARWQCB and DTSC for the listed REC sites....also likely involve more intense discussions with regulatory agency personnel or scientists about the severity of the HTRW contamination...site visit...to gain a clearer understanding of the nearby topography and features of each site. 107

This entire section is totally incomplete and inadequate with apparent bias for promoting the Project without consideration of risks and costs for Alternative 13-20.

This hasn't been done - totally inadequate setting and impacts assessment and assignment of costs and liabilities.

Silver Lake Reservoirs Conservancy

From: Craig Collins
To: SPL Comments LA River Study
Subject: [EXTERNAL] Silver Lake Reservoirs Conservancy position on ARBOR study.
Date: Friday, November 15, 2013 9:03:04 PM

SILVER LAKE RESERVOIRS CONSERVANCY STATEMENT ON USACE LOS ANGELES RIVER ARBOR STUDY.

Silver Lake Reservoirs Conservancy applauds the completion of the ARBOR study and its conclusions that substantial restoration efforts of the Los Angeles River are needed and worthy of public investment.

Alternative 20 is the clear correct choice, because it's the only one that can achieve the benefits the entire ARBOR study contemplates. Silver Lake Reservoirs are close by the River and offer potential to aid key River restoration objectives, including:

- Stormwater management,
- Riparian viability, and
- Reduced need for costly imported water in the Los Angeles region.

As the Reservoirs are to be removed from the LA domestic water system, their future will be closely related to the future of the LA River. It is important that the Alternative selected for restoration be sufficient to achieve these objectives.

Moreover, as shown by many other cities that have seen US Army Corps of Engineers and other waterway restoration programs, returning rivers to their cities as life-giving bodies serves as a lever to spur restoration of the urban core. Result: revitalized neighborhoods, economic resurgence and a better quality of life.

The lesson learned by these cities is clear: **these restorations pay for themselves in the transformation of their cities.**

Only Alternative 20 provides the comprehensive revitalization sufficient to create the leverage needed to build true transformation of the LA River. Alternative 13, while offering important benefits, will not have the results that can sustain the essential purpose of the effort. Half-measures return less than half benefit.

Alternative 20's initial investment will be returned with interest, as long-neglected communities along the River enjoy its benefits and create new places to work, live and play.

The Los Angeles River is the vital spine of Los Angeles, as it has been for over two hundred years. Restoring its life will not only bring a viable ecosystem back to its waters, but will spur the revitalization of neighborhoods far beyond its banks. This is what we have learned from other cities in the US, China, Korea, Spain, Germany, and many others. It is time for Los Angeles to discover what it can create with its River.

Craig Collins
President
craig.collins@silverlakereservoirs.org

www.SilverLakeReservoirs.org
Silver Lake Reservoirs Conservancy
P.O. Box 39735, Los Angeles CA 90039

Studio City Neighborhood Council

SCNC BOARD

Lisa Cahan Davis
Jane Drucker
Jon Epstein
Remy Kessler
Brian Mahoney
Richard Niederberg
Scott Ouellette
Brandon Pender
Lisa Sarkin
Shilpa Sayana
Lana Shackelford
Gail Steinberg
Rita C. Villa
John T. Walker
Denise Welvang

STUDIO CITY NEIGHBORHOOD COUNCIL

4024 Radford Ave.
Edit. Bldg. 2, Suite 6
Studio City, CA 91604
(818) 655-5400

PRESIDENT
John T. Walker
VICE PRESIDENT
Lisa Sarkin
TREASURER
Remy Kessler
SECRETARY
Rita C. Villa
CORRESPONDING SECRETARY
Jane Drucker
www.studiocitync.org

October 18, 2013

Josephine R. Axt, PhD, Chief, Planning Division
US Army Corps of Engineers, Los Angeles District
PO Box 532711
Los Angeles, CA 90053-2325

Attention: Ms. Erin Jones CESPL_PD_RN

Dear Ms. Axt and Ms. Jones,

At its regular board meeting on October 16, 2013, the Board of the Studio City Neighborhood Council passed the following motion:

MOTION 10.16.2013.SP5: The Board of the Studio City Neighborhood Council supports the selection of Alternative 20 as it is described in the Los Angeles River Ecosystem Restoration Integrated Feasibility Study rather than Alterative 13 which was tentatively selected by the U.S. Army Corps of Engineers.

If you have any questions, please do not hesitate to contact us.

Sincerely Yours,

Lisa Sarkin

Lisa Sarkin, Vice President
Studio City Neighborhood Council

Cc: Los Angeles City Councilmembers, Matt Hale, Karo Torossian

LS/ls

Studio City Residents Assn.

STUDIO CITY RESIDENTS ASSOCIATION
Your Advocate for Studio City

P.O. Box 1374 • Studio City, CA 91614 • Ph (818)509-0230 Fax (818)509-0260 • www.studiocityresidents.org

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers- Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Dr. Axt:

We strongly support, as do elected officials at many levels of government, that the best long term solution would be to adopt Alternate 20 for the restoration of the LA River and the LA River Watershed.

Alternate 20 removes more concrete which will lead towards creating habitat, restoring wetlands that will encourage the return of wild life and just as important, provide access for the public to the river, a sorely needed requirement for the citizens of Los Angeles and the San Fernando Valley.

The highly degraded Los Angeles Watershed must be restored not only for the above obvious reasons but also for the unforeseen benefits to future generations to come: Alternate 20 is best suited to these objectives.

The scope of restoration within Alternate 20 will not come around again: if the opportunity to go with Alternate 20 is not recommended and adopted by the Corps, it will be too late to say "I wish we had done otherwise than go with Alternative 13."

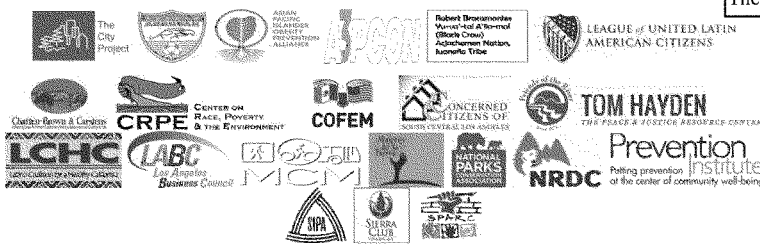
Please listen to all those who support Alternate 20.

Sincerely,

Alan Dymond

Alan Dymond
President
Save LA River Open Space
saveopenspace@slaros.org
www.savelariveropenspace.org
818-509-0230

The City Project



The City Project * Anahuak Youth Sports Association * Asian and Pacific Islander Obesity Prevention Alliance
Asian Pacific Policy & Planning Council * Robert Bracamontes * Marc Brenman
California League of United Latin American Citizens * Chatten-Brown & Carstens LLP * Center on Race, Poverty & the Environment
COFEM (Consejo de Federaciones Mexicanas en Norteamérica) * Concerned Citizens of South Central Los Angeles
Belinda Faustinos * Friends of the River * Senator Tom Hayden (Ret.) * Latino Coalition for a Healthy California
Los Angeles Business Council * Los Angeles Neighborhood Land Trust * Los Jardines Institute (The Gardens Institute)
Multicultural Communities for Mobility * Mujeres de la Tierra * National Parks Conservation Association
Natural Resources Defense Council * Prevention Institute * Search to Involve Pilipino Americans * Sierra Club
SPARC (Social and Public Art Resource Center) * Amigos de los Rios * Mia Lehrer + Assoc.

November 18, 2013 Updated

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Ms. Erin Jones, CESPL-PD-RN
Via e-mail comments.lariverstudy@usace.army.mil

Re: Support Alternative 20 for Green Justice along the Los Angeles River, including Health and Environmental Justice, Parks, and Recreation -- Public Comments on Draft Los Angeles River Ecosystem Restoration Feasibility Study

Dear Dr. Axt:

I. Overview

The Army Corps of Engineers channelized the Los Angeles River in concrete in the 1930s to prevent floods. The people of Los Angeles now have the opportunity to work with the Corps, the National Park Service, Department of Interior, U.S. Environmental Protection Agency (EPA), and state and local government to restore the lost beauty of the River with equal justice for all. The Mayor of Los Angeles, the Los Angeles City Council, the Los Angeles Business Council, diverse nonprofit organizations, and community stakeholders all **support Alternative 20, which is the best alternative to help ensure healthy, livable communities for all along the Los Angeles River**.

1

The Corps must consider the impact of River restoration on all communities, including communities of color and low-income communities, to ensure the benefits and burdens are distributed fairly. The Corps must analyze fully green access, health justice, active living, culture, art, and history, affordable housing, complete green streets, local green jobs, and impacts on people, as well as environmental impacts.

The dual purposes of the draft Los Angeles River Ecosystem Restoration Feasibility Study ("Study") are

The City Project

"to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles" and "to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river."

Alternative 20, called RIVER (for Riparian Integration via Varied Ecological Reintroduction), is the most comprehensive restoration alternative analyzed by the Study. Alternative 20 provides for an investment of $1.04 billion in the future and children of Los Angeles. Alternative 20 includes all the features of the other Alternatives. This includes restored habitat and wetlands at Piggyback Yard, widening at Taylor Yard, restoration in the natural bed river sections of the Glendale Narrows, terracing of the River near Riverside Drive, transitions or connections between existing riverside corridors and sections of the River that are lined concrete, and terracing, widening, removal of concrete, and restoration of wetlands in the River channel itself. Alternative 20 is the only alternative that includes widening the River near the Bette Davis Park area of Griffith Park, restores the confluence of the River with Verdugo Wash, and restores wetlands at the Los Angeles Historic State Park with a terraced connection to the main stem of the river. Alternative 20 restores two times the River length that the Corps' preferred Alternative 13 does. **We support Alternative 20.**

We applaud the Corps for analyzing environmental justice and socioeconomics (sections 3.13 and 5.13), recreation and access (sections 3.9 and 5.9), cultural resources (sections 3.6 and 5.6), and transportation (sections 3.7.6 and 5.7). The Corps recognizes with respect to environmental justice that "[o]f key concern in Los Angeles is the growing disparity of access to and use of open space resources, including parks, ball fields, and natural areas by those living in low-income communities of color." Study, section 3.13.3. Parks and recreation are an important component of health, prevention, and wellness. The Corps includes a detailed plan for recreation (section 4.16) and public involvement (section 8).[1] **Alternative 20 is the best alternative to advance each of these goals.** 1

The Corps has an opportunity to create a best practice analysis and alternative for greening urban waterways and for community participation world wide. The Smithsonian Anacostia Community Museum's current exhibit "Urban Waterways and Civic Engagement" emphasizes that greening urban rivers and inner cities is not just about conservation values — as important as those are — it's about the people who live along the rivers, and the future of our children and our world. The exhibit covers the L.A. River and five others around the world.[2] The *New York Times* highlights revitalization of the L.A. River as a best practice example for "more sustainable, livable and socially just cities." Nicolai Ouroussoff, *Reinventing America's Cities: The Time Is Now*, N.Y. TIMES, (March 29, 2009).

The Los Angeles River stretches 52 miles and crosses over a dozen cities, flowing through diverse communities from the headwaters in Calabasas in the Santa Monica Mountains through the San Fernando Valley and downtown Los Angeles to the ocean in Long Beach. The River, which should be naturally green, is not. Children of color living in poverty with no access to a car have the worst access to parks and green space, suffer disproportionately from chronic health conditions including obesity and diabetes, and are the most at risk for crime, drugs, and violence, in the region.

We applaud the federal government for making the revitalization of the Los Angeles River a national priority. The determination that the Los Angeles River constitutes "traditionally navigable waters" by EPA Administrator Lisa Jackson cleared the way for this federal leadership. President Barack Obama's

[1] Relevant Study excerpts are included as Appendix A.
[2] Smithsonian Anacostia Community Museum, *Reclaiming the Edge: Urban Waterways and Civic Engagement* (Oct. 15, 2012 – Nov. 3, 2013), http://anacostia.si.edu/exhibits/current_exhibitions.htm.

America's Great Outdoors initiative designates the greening of the Los Angeles and San Gabriel Rivers as one of the nation's top 101 outdoor priorities. The Urban Waters initiative includes the Los Angeles River as one of the nation's top ten priorities. The National Park Service has published multiple studies on green access, human health, disparities based on race, color, national origin, or income, and the responsibility of park agencies to alleviate those disparities.

River restoration should serve diverse needs and the full range of values at stake through democratic participation in the planning process and a fully funded, balanced Alternative 20 that includes:

- multibenefit park and green space projects that promote healthy active living; clean water, land, and air; urban habitat; and climate justice
- biking, running, hiking, camping, and passive recreation
- active recreation, including soccer, baseball, and other sports fields
- public health values incorporated into River and urban planning
- complete green streets with bike trails and safe routes to school
- joint use of parks, schools and pools along the River
- economic vitality and local green jobs
- affordable housing to avoid displacement and gentrification
- protecting Native American and spiritual values
- public art celebrating the diverse heritage and culture of Los Angeles, and
- Transit to Trails to take urban residents on fun, educational, and healthy River, mountain, and beach trips.

2

Alternative 20 is the best alternative for all the people of Los Angeles and beyond to have equal access to green space and places for healthy recreation, including park poor, income poor communities and people of color.

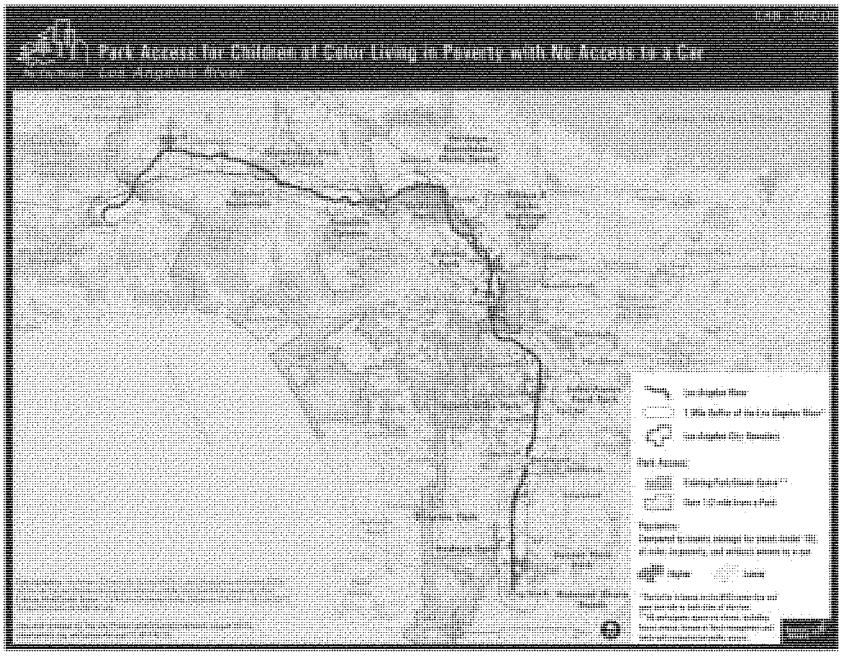
We look forward to working with the Army Corps of Engineers to seek equal justice, democracy, and livability for all along the River through Alternative 20. Part II discusses the people along the River. Part III presents equal justice laws and principles, including the requirements to conduct a compliance or equity analysis and a health impact assessment for River revitalization. Part IV discusses the values at stake – park and health values; economic values and local green jobs; transportation justice; Native American and spiritual values; culture, history, and public art; and best practices for clean water justice. Part IV concludes with the implications for the Study and Alternative 20.

1

II. Alternative 20 Best Serves the Needs of People along the River

Projects should be prioritized for the people in the areas with the greatest need. These areas are shown in red along the River in the map below. Alternative 20 best serves these needs.

The City Project



1
3

Children of color living in poverty with no access to a car have the worst access to parks and green space, suffer disproportionately from chronic health conditions including obesity and diabetes, and are the most at risk for crime, drugs, and violence, in the region. These facts are illustrated in the map above, and in the chart below which analyzes a one-mile corridor along either side of the Los Angeles River.

A. The One-Mile River Corridor Compared to the City of Los Angeles, County, and State

The River, which should be naturally green, is not. There are 7.2 total acres of green space per thousand residents along the one-mile River corridor, compared to 11.6 in the City of Los Angeles, 89.8 countywide and 1,343.5 statewide.

Communities along the River corridor are disproportionately Latino – 52% along the River, compared to 48% for the City of Los Angeles, 47% for the county and 37% statewide. 18% of the people along the River live in poverty, compared to 20% citywide, 16% countywide and 14% statewide. The median household income is $45,179 along the River corridor, compared to $47,813 citywide, $55,476 countywide, and $60,883 statewide.

These facts are documented in the following chart.

LAR - 2010 (T)

LOS ANGELES RIVER CORRIDOR	1 MILE		1 Mile & City of LA		1 Mile & Not City of LA		LOS ANGELES CITY		LOS ANGELES COUNTY		CALIFORNIA	
	COUNT	PERCENT	COUNT	PERCENT	COUNT	PERCENT	COUNT	PERCENT	COUNT	PERCENT	COUNT	PERCENT
Total Population	883,226	-	441,125	-	442,101	-	3,761,569	-	9,758,256	-	36,637,290	-
Children (under 19)	225,951	26%	92,203	21%	133,748	30%	897,572	24%	2,460,513	25%	9,325,329	25%
Seniors (65 and over)	84,978	10%	50,912	12%	34,066	8%	384,446	10%	1,026,041	11%	4,060,396	11%
Race / Ethnicity												
Non- Hispanic White	234,713	29%	182,310	41%	52,403	16%	1,088,971	29%	2,772,785	28%	15,307,042	41%
Hispanic	455,937	52%	172,847	39%	283,090	64%	1,811,259	48%	4,599,238	47%	13,456,157	37%
White (Hispanic and Non-Hispanic)	477,244	54%	262,611	60%	214,633	49%	1,901,057	51%	4,961,930	51%	22,392,713	61%
African American	63,880	7%	20,393	5%	43,285	10%	366,243	10%	852,780	9%	2,246,311	6%
Native American	4,008	0%	2,232	1%	1,776	0%	18,961	1%	47,794	0%	283,628	1%
Asian Pacific Islander	93,984	11%	55,806	13%	38,178	9%	435,170	12%	1,366,882	14%	4,887,681	13%
Other Race	215,245	24%	86,145	20%	129,100	29%	930,054	25%	2,219,377	23%	5,448,609	15%
2 or more races	28,845	3%	13,735	3%	15,110	3%	110,084	3%	309,513	3%	1,378,348	4%
Income / Poverty												
Median Household Income	$ 43,179	-	$59,169	-	$35,766	-	547,833	-	$55,476	-	$60,883	-
In Poverty	153,190	18%	70,037	16%	83,137	19%	720,743	20%	1,508,618	16%	4,919,945	14%
Children (under 18) in poverty	Not Available		Not Available		Not Available		250,369	28%	543,689	22%	1,748,267	19%
Seniors (over 65) in poverty	Not Available		Not Available		Not Available		51,456	13%	112,637	11%	345,214	9%
People in poverty that are Children (under 18)	Not Available		Not Available		Not Available		250,369	7%	543,689	6%	1,748,267	5%
People in poverty that are Seniors (over 65)	Not Available		Not Available		Not Available		51,456	1%	112,637	1%	345,214	1%
Rent / Own												
Own	120,223	41%	68,211	41%	52,012	43%	508,944	39%	1,552,091	48%	7,112,050	57%
Rent	172,001	59%	96,849	59%	75,152	59%	800,470	61%	1,665,788	52%	5,280,802	43%
Transportation												
No Car Access	28,337	10%	15,030	9%	13,307	10%	166,373	13%	305,743	10%	935,969	8%
Health												
% of Children out of HFZ for Body Composition*	Not Available		Not Available		Not Available		-	53%	-	48%	-	44%
Passed 5 of 6 Physical Fitness Exams**	Not Available		Not Available		Not Available		28,039	20%	77,373	22%	308,408	23%
Passed 6 of 6 Physical Fitness Exams**	Not Available		Not Available		Not Available		42,262	29%	99,519	28%	421,894	31%
Students Enrolled in Free and Reduced Lunch Program***	Not Available		Not Available		Not Available		496,201	76%	1,017,249	65%	3,465,446	57%
Parks and Open Space												
Acres of Green Space	6,331	-	5,097	-	1,234	-	43,517	-	876,327	-	49,220,693	-
Acres of Bureau of Land Management land	11	-	0	-	11	-	0	-	12,503	-	15,369,816	-
Acres of Forest Service land	0	-	0	-	0	-	2,673	-	655,179	-	20,794,883	-
Total Acres of Green Space Per 1,000 Residents	7.2	-	11.6	-	2.8	-	11.6	-	89.8	-	1,343.5	-
Net Acres of Green Space Per 1,000 Residents	7.2	-	11.5	-	2.8	-	10.9	-	21.4	-	361.8	-

The Los Angeles River Corridor is defined as a 1-mile buffer of the LA River. Demographics are based on areas straddling with river centroid as the buffer. The buffer intersects the following: N/A, Chatsworth, Encino, Long Beach, Los Angeles, Maywood, Pacoima, Vernon, Unincorporated Los Angeles County.

*Race/ethnicity figures will not add up to 100% if Hispanic is included. Census ACS 2008-10 allowed respondents to mark multiple races in addition to being Hispanic/Latino.

*HFZ = Health Fitness Zone. Body Composition can be used as an indication of possible overweight/obesity, extracted from fitness data for grades 5, 7, and 9 from Data Quest, California Department of Education 2010-11 for LAUSD.

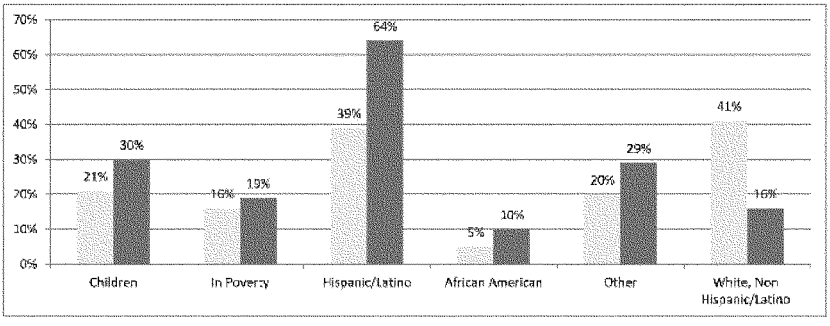
**Fitness data calculated for grades 5, 7, and 9 from Data Quest, California Department of Education 2010-11. ***Free/Reduced Lunch. http://data1.cde.ca.gov/dataquest/gis_calworks.asp for LAUSD.

**** All parks and open space data has been calculated from GreenMiG Network's California Protected Areas Database (CPAD) version 1.8, July 2013. www.calands.org. Total acres include BLM and FS land. Net Acres exclude BLM and FS land.

1
3

B. The One-Mile River Corridor within the City of Los Angeles, Compared to Outside the City

The one-mile River corridor within the City of Los Angeles has 11.6 acres of parks per thousand residents, compared to only 2.8 acres within the corridor outside the City. The one mile River corridor within the City is disproportionately non-Hispanic white and wealthy. These facts are documented in the following bar chart and text.



Non-Hispanic whites are 41% within the City River corridor, compared to 16% outside. Latinos are 39% compared to 64%. African Americans are 5% compared to 10%. "Other race" are 20% compared to 29%.

21% of the population are children, compared to 30% outside. 16% of the people live in poverty, compared to 19% outside. Median household income is $59,169 within the City River corridor, compared to $45,766 in the River corridor outside the City.

C. The Study Emphasizes Environmental Justice and River Access

The Study recognizes that much of Los Angeles is park poor and income poor, and there are disparities in green access:

> Much of Los Angeles is considered to be park deficient which refers to any geographic area that provides less than 3 acres of green space per 1,000 residents, as defined by California law [Robert Garcia and Seth Strongin, *Healthy Parks, Schools and Communities: Mapping Green Access and Equity for Southern California* at 14-15 (The City Project Policy Report 2011), available at www.mapjusitce.org/socal]. . . . In general, access to parks and acres of parkland per 1,000 residents is lowest in areas that have the highest number of families below the poverty line of $47,331. . . . The City Project, a local nonprofit research organization was founded to find ways to improve park availability for all neighborhoods, regardless of ethnicity or income level (Garcia et al. 2009).

Study, section 3.9.1.

The Study, quoting a report by the City of Los Angeles, emphasizes the need for environmental justice along the River:

1
3

> Many local organizations have stressed the importance of making sure that the River's revitalization addresses environmental justice issues (See, e.g., the City Project's work at: www.cityprojectca.org.). Of key concern in Los Angeles is the growing disparity of access to and use of open space resources, including parks, ball fields, and natural areas by those living in low income communities of color.

Study, section 3.13.3, quoting Los Angeles River Project Office, *Los Angeles River Access and Use: Balancing Equitable Actions with Responsible Stewardship* (the River Report) (2009) at page 26.

The River Report in that same passage concludes:

> Whole generations are growing up in Los Angeles without any meaningful relationship to the natural environment. . . . The River offers an opportunity to redress environmental justice problems by not only providing numerous new green spaces, but also by ensuring free access to them.

River Report at 26.

The River Report emphasizes that the "City's River revitalization efforts must balance human interests in accessing and using the River with improvements that will ensure an environment supportive of healthy, sustainable biodiversity . . . . The River offers one of the nation's and the world's most significant opportunities to introduce meaningful environmental value back into the post-industrial urban landscape."

Alternative 20 best serves the environmental and health justice concerns emphasized in the River Report:

- Compliance with equal justice laws and principles, as discussed below
- Human health including obesity and diabetes
- The use of health impact assessments in River revitalization
- Economic justice and green local jobs and wealth creation
- Transit to Trails to take urban residents on fun, educational, and healthy River, mountain and beach trips
- Shared use of parks, schools, and pools
- Public art along the River, including the Great Wall of Los Angeles and other monuments that reflect the diversity of the River and its people.[3]

1
3

See River Report at pages 5, 20-21, 25-27, 36, 40, 43. The 2007 Los Angeles River Revitalization Master Plan is in accord with the River Report. *See* City of Los Angeles, *Los Angeles River Revitalization Master Plan* (April 2007) at pages 5-26 to -29 (health and active recreation), 3-24, 5-36 to -37 (public art, culture, and history along the River, including the Great Wall of Los Angeles).

[3] *See* Robert Garcia, *Green Justice Monuments: Diversity, Democracy and Freedom*, KCET Departures (Aug. 24, 2012), *at* www.kcet.org/socal/departures/landofsunshine/green-justice/green-justice-monuments.html.

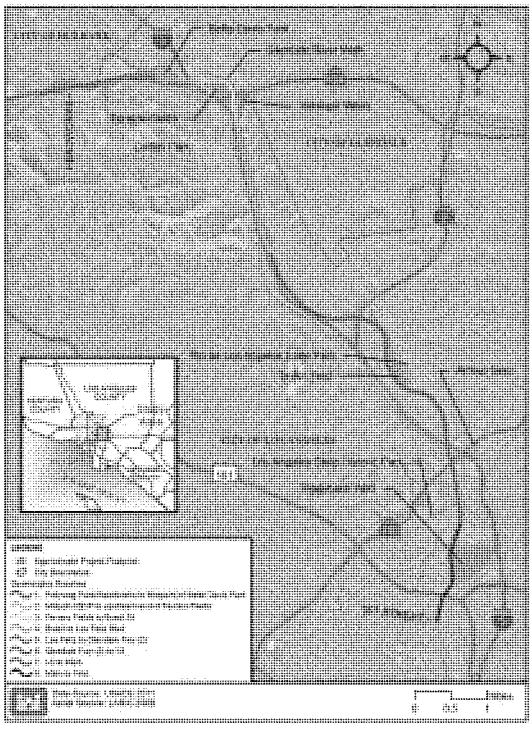


Figure ES-3 Study Area, the ARBOR Reach

The 11 Mile Study Area along the L.A. River.

III. Alternative 20 Best Promotes Compliance with Equal Justice Laws and Principles

The final Study and Alternative 20 must ensure compliance with equal justice laws and principles. Section 3.13.3 includes a discussion of the President's Executive Order 12898 on Environmental and Health Justice, and presents without further analysis demographic data. That section does not discuss other applicable civil rights laws. That section does not include a proper compliance, equity, and

4

environmental justice analysis of the data. The final Study should conduct a proper analysis in sections 3.11, 3.13, 5.11, and 5.13, as described below.

4

This Section III summarizes the legal framework under applicable laws. Tables 1-6 in Appendix C summarize the legal framework. The social science and other evidence to be analyzed under these laws is presented in the following Section IV.

A. The President's Executive Order 12898 on Environmental and Health Justice

Section 3.13.3 of the Study says that it "provides a discussion of environmental justice in accordance with Executive Order (EO) 12898." The discussion must be strengthened in the final Study.

The President's Executive Order 12898 on Environmental and Health Justice requires a federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Executive Order 12898 § 1-101 (Feb. 11, 1994); *see also id.*, §§ 1-102, 6-604.[4]

The Presidential Memorandum accompanying the executive order identifies Title VI of the Civil Rights Act of 1964 as one of several federal laws that should be applied to prevent minority communities and low-income communities from being subject to discriminatory effects. According to the U.S. Department of Justice, "the core tenet of environmental justice—that development and urban renewal benefitting a community as a whole not be unjustifiably purchased through the disproportionate allocation of its adverse environmental and health burdens on the community's minority—flows directly from the underlying principle of Title VI itself." U.S. Department of Justice, *Title VI Legal Manual* at page 59 (2001). *Accord*, Federal Transit Authority, *Title VI Requirements and Guidelines for Federal Transit Administration Recipients*, FTA C 4702.1B at Chap. I-6 (Oct. 1, 2012). FTA's guidance comparing 12898 and Title VI is included as Table 1 in Appendix C below.

While the cited section includes "[t]he ethnic data from the 2005-2009 American Community Survey (U.S. Census Bureau 2010a) for the census tracts comprising the assessment area, as well as Los Angeles County," reciting that data is not enough.

The final Study must discuss other applicable laws, demographics, and social science evidence through a proper compliance, equity, and environmental justice analysis, as described below.

B. Title VI of the Civil Rights Act of 1964 and its Regulations

The Study does not analyze the applicable Title VI of the Civil Rights Act of 1964 and its regulations. These laws should be analyzed and applied to the evidence in sections 3.13 and 5.13 of the final Study.

Title VI and its regulations prohibit both intentional discrimination, and unjustified unnecessary discriminatory impacts regardless of direct evidence of intent. The discriminatory impact standard can ferret out subtle and structural practices that have demonstrably discriminatory effects. A thoughtless policy can be as unfair as, and functionally equivalent to, intentional discrimination. As a matter of common sense, discriminatory programs or activities should be avoided in favor of those that serve

[4] Section 3.13.3 also cites Executive Order 13045 (directing each federal agency to identify, assess, and address environmental health and safety risks that may disproportionately affect children).

everyone's interests fairly, effectively, and without discrimination.

"Simple justice requires that public funds, to which all taxpayers of all races contribute, not be spent in any fashion which encourages, entrenches, subsidizes, or results in racial discrimination." President John F. Kennedy's message to Congress on June 19, 1963, quoted by Senator Hubert H. Humphrey. 110 Cong. Rec. 6543, *quoted with approval in Lau v. Nichols*, 414 U.S. 563, 569 (1974).

Title VI and its regulations ensure equal access to public resources by prohibiting recipients of federal financial assistance (including presumably all state, regional, and local park agencies here) from discriminating on the basis of race, color, or national origin in their programs or activities. Section 601 of Title VI provides: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." 42 U.S.C. § 2000d. Title VI applies to all the programs and activities of a recipient agency if any part of the agency receives federal funds. *See* 68 Fed. Reg. 51334 (Aug. 26, 2003) (definition of "program or activity" subject to Title VI). Federal agencies have enacted regulations to implement Title VI.[5]

Recipients of federal financial assistance literally sign contracts to comply with these laws as a condition of receiving federal funds. *Guardians Ass'n v. Civil Serv. Comm'n*, 463 U.S. 582, 629-30 (1983) (Marshall, J., dissenting on other grounds). The State of California, County of Los Angeles, cities along the River, and park agencies along the River receive federal financial assistance and are bound by Title VI and its regulations under these laws, and under contractual grant agreements.

The final Study should analyze revitalization of the River and Alternative 20 under the disparate impact standard, which is commonly framed as follows:

1. Will River revitalization have a disproportionate numerical impact based on race, color, or national origin?
2. Are such disparities justified by business necessity?
3. Are there less discriminatory alternatives to accomplish similar ends?

See, e.g., Larry P. v. Riles, 793 F.2d 969, 982, 982 n. 9 (9th Cir. 1984); *Title VI Manual* at 49-53.

The Corps should guard against intentional discrimination in River revitalization, too. The United States Supreme Court has described the kinds of circumstantial evidence that are relevant to protect against intentional discrimination, including: (1) the impact of the action and whether it bears more heavily on one racial or ethnic group than another; (2) a history of discrimination; (3) compliance with or departures from substantive norms in reaching the decision; (4) compliance with or departures from procedural norms; (5) whether decision makers knew of the impact of their actions; and (6) whether there is a pattern of racial discrimination. *See Village of Arlington Heights v. Metro. Housing Dev. Corp.*, 429 U.S. 252, 265-70 (1977); *Title VI Manual* at 43-46.

The final Study can guard against intentional discrimination and discriminatory impacts by including a compliance analysis, as described in the following sections.

C. The Final Study Must Include a Compliance and Equity Analysis for River Revitalization

[5] *See, e.g.*, 43 C.F.R. § 17.1 et seq. (Department of Interior); 40 C.F.R. § 7.1 et seq. (EPA); 49 C.F.R. § 21.1 et seq. (Department of Transportation).

In positive terms, the Federal Transit Authority (FTA) has described what an applicant for federal financial assistance must demonstrate under Title VI and its regulations, and the President's Executive Order 12898 on Environmental and Health Justice. The required compliance, equity, and environmental and health justice analysis along the River includes the following steps, which should be fully analyzed in the final Study.

1. A clear description of what the agency plans to do on River revitalization.
2. An analysis of the burdens and benefits of River revitalization for all people.
3. An analysis of alternatives, including Alternative 20 as the best alternative.
4. The full and fair inclusion of minority and low-income populations in the decision-making process.
5. An implementation plan to address any compliance or equity concerns identified in the analysis.

5

See Letters from Peter M. Rogoff, Administrator, FTA, U.S. Department of Transportation, to Steve Heminger, Executive Director, Metropolitan Transportation Commission and Dorothy Dugger, General Manager, San Francisco Bay Area Rapid Transit District (Jan. 15, 2010 and Feb. 12, 2010), *available at* www.cityprojectca.org/blog/archives/4468. FTA has provided detailed guidance that is a best practice for federal agencies and recipients on how to conduct compliance, equity, and environmental and health justice analyses. The Corps should follow these guidance documents in the final Study. *Environmental Justice Policy Guidance for Federal Transit Administration Recipients, Circular*, FTA C 4703.1 and pages 12, 42 (Aug. 15, 2012); FTA, *Title VI Requirements and Guidelines for Federal Transit Administration Recipients, Circular*, FTA C 4702.1B (Oct. 1, 2012). *Accord, Coliseum Square Assoc., Inc. v. Jackson*, 465 F.3d 215, 232 (5th Cir. 2006) (12898 instructs agencies to consider the environmental justice impacts of their actions; agency's consideration of environmental justice issues reviewed under Administration Procedures Act).

The determination that the Los Angeles River constitutes "traditionally navigable waters" by EPA also makes clear that the Public Trust doctrine applies to River revitalization. The Public Trust doctrine reinforces the requirement that government agencies must distribute the benefits and burdens of revitalization equally along the River.[6] *See* Robert García and Erica Flores Baltodano, *Free the Beach! Public Access, Equal Justice, and the California Coast*, 2 Stanford Journal of Civil Rights and Civil Liberties 143, 178-79 (2005), and authorities cited.

D. Affordable Care Act Section 1557 on Health Disparities, Wellness, and Prevention

The Affordable Care Act provides important protections against health discrimination based on race, color, national origin, limited English language proficiency (LEP), immigration status, and other characteristics in Section 1557. Section 1557, 42 U.S.C. § 18116, applies to any health program or activity, any part of which receives federal financial assistance. Section 1557 also applies to any program or activity administered by a federal executive agency. Section 1557 applies to such programs or activities along the River. Section 1557 references prior laws that protect against health discrimination, including Title VI of the Civil Rights Act.

---

[6] The United States Supreme Court decision in *Illinois Central Railroad v. Illinois*, 146 U.S. 387, 452 (1892), is the principle authority on the public trust doctrine in the United States. According to the Court, navigable waters are held in trust for the people of the state. The California Supreme Court held in *National Audubon Society v. Superior Court*, 33 Cal. 3d 419 (1983), that the values protected under the public trust doctrine include recreation and aesthetics.

The World Health Organization defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."[7] In addition, the social determinants of health -- the conditions in which people live, learn, play, work, and age -- contribute to health justice and disparities.[8] The WHO definition of health is consistent with the broad view of health in the Affordable Care Act, which includes over 60 provisions geared towards advancing health justice through a broad range of actions, sectors, and actors. Thus, the Act includes physical activity, healthy land use, and infrastructure projects as part of its mandate. Prevention and wellness can be as or more important than health care.

The Act includes projects to promote physical activity and healthy land use as part of its mandate. *See, e.g.*, ACA sections 4001, 4201, 4306; Texas Health Institute, *The Affordable Care Act & Racial and Ethnic Health Equity Series: Report No. 4 Public Health and Prevention Programs for Advancing Health Equity* at iii-xii, 33-34, 41-46, 48 (Nov. 2013); American Public Health Association, *Issue Brief: Prevention Provisions in the Affordable Care Act* at 6-9, 11, 18 (Oct. 2010).

Why are equal justice protections necessary to protect health and life itself along the River?

The documented costs of health inequalities are great. Between 2003 and 2006, for example:

- The combined costs of health inequalities and premature death in the U.S. were $1.24 trillion.
- Eliminating health disparities for people of color would have reduced direct medical care expenditures by $229.4 billion.
- 30.6% of direct medical care expenditures for African Americans, Asians, and Hispanics were excess costs due to health inequalities.
- Eliminating health inequalities for people of color would have reduced indirect costs associated with illness and premature death by more than one trillion dollars.

Thomas A. LaVeist, et al., Joint Center for Political and Economic Studies, The Economic Burden of Health Inequalities, at 1 (Sept. 2009), *available at* www.jointcenter.org/hpi/sites/all/files/Burden_Of_Health_FINAL_0.pdf.

The National Prevention Council promotes prevention activities across sectors. This includes:

> • Support and expand cross-sector activities to enhance access to high quality education, jobs, economic opportunity, and opportunities for healthy living (e.g., access to parks, grocery stores, and safe neighborhoods).
>
> • Identify and map high-need areas that experience health disparities and align existing resources to meet these needs . . . .

---

[7] Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948. Available at http://www.who.int/about/definition/en/print.html.

[8] World Health Organization, Social Determinants of Health, available at http://www.who.int/social_determinants/sdh_definition/en/index.html. *Accord*, Rio Political Declaration on Social Determinants of Health (Oct. 21, 2011) (World Health Organization); World Health Organization, *Meeting Report: World Conference on Social Determinants of Health, Rio de Janeiro, Brazil, 19-20 October 2011* (2012) and World Health Organization, *Summary Report: World Conference on Social Determinants of Health, Rio de Janeiro, Brazil, 19-20 October 2011* (2012).

U.S. Department of Health and Human Services, Office of the Surgeon General, National Prevention Council, *National Prevention Strategy* (2011), p. 26, *available at* www.surgeongeneral.gov/initiatives/prevention/strategy/report.pdf.

The implications of Section 1557 for the final Study and Alternative 20 are discussed in the following section on assessing health impacts.

E. The Final Study Must Assess Health, Physical Activity, and River Access

The draft Study discusses public health and safety in terms of water safety; wildfire; methane zones; vector borne-diseases; and hazardous, toxic, and radioactive wastes in detail. *See* public health sections 3.11 and 5.11. The draft Study also mentions in passing health impacts from active recreation. *E.g.*, section 4.16.2. We agree with these health discussions as far as they go. In light of extensive social science evidence presented by the National Park Service and others discussed below, the final Study must carefully analyze human health, equal justice, and River access. A compliance analysis and health impact assessment in the final Study provides the proper framework for analyzing the evidence discussed in Section IV(A) below. Alternative 20 best serves these values.

The Los Angeles River Revitalization Master Plan includes a detailed chapter on health, physical activity, and River access. *Los Angeles River Revitalization Master Plan* (April 2007) at pages 5-26 to -29 (health and active recreation). The final Study must address these concerns too.

A health impact assessment is necessary here. "Recognizing and addressing the effects of a proposal on health equity (or health disparities) between various groups has been seen as a core task of HIA . . . ." National Research Council (NRC), *Improving Health in the United States: The Role of Health Impact Assessment (HIA) (2011),* at page 62. The influential NRC book recommends six steps for an HIA. The NRC HIA framework is applicable to the River Study: (1) screening, (2) scoping, (3) assessment, (4) recommendations, (5) reporting, and (6) monitoring and evaluation. *See* HIA framework chart, *id.*, at pages 7, 6-9; logic framework of causal pathways at 54; systematic scoping table at 55; health effects matrix at 63; rating health effects at 64.

A health impact assessment is necessary here for several reasons. The communities in the project area have high levels of health disparities for both outcomes and exposures. Project activities clearly and significantly affect health disparities within these communities. There significant differences between alternatives in terms of health impacts. It is necessary to understand what are the potential health impacts of the proposed project, particularly those related to health disparities. Information from a well done HIA would make a difference in the decisions that are made.

The equal justice laws and principles discussed above require or facilitate a health impact assessment of River revitalization as part of the final Study. The elements of an HIA analysis are consistent with a compliance or equity analysis under Title VI of the Civil Rights Act of 1964, Title VI regulations, and the President's Executive Order 12898 on Environmental and Health Justice. This is illustrated in Tables 2 through 6 in Appendix C. The HIA is also consistent with the requirements of an analysis under environmental laws, including the National Environmental Policy Act. *See, e.g., NRC HIA at* 110-12, 119-27, 151-59. The Corps agrees in the Study, at section 5.13.2.

The value of an HIA for the River goes beyond weighing the Study alternatives to address how River restoration relates to state sustainability initiatives (such as SB 375 on climate change), strategic growth

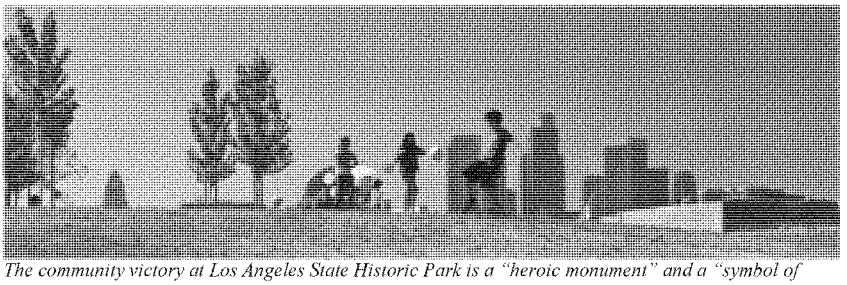
initiatives (such as Health in All Policies), and the Affordable Care Act's National Prevention Strategy.

Alternatives for River restoration must be examined from a societal perspective that upholds the letter and spirit of the National Prevention Strategy. The final Study should incorporate the health and equity lens of the National Prevention Strategy. An HIA could accomplish this and help establish a standard for other agencies' efforts to support the National Prevention Strategy.

F. Best Practice Example: HUD, Equal Justice, and the Los Angeles State Historic Park

Then-Secretary of Housing and Urban Development Andrew Cuomo withheld federal funding for a warehouse project by the City of Los Angeles unless there was a full environmental impact statement, including an environmental justice analysis that considered the park alternative and the impact on people of color and low income communities. Secretary Cuomo applied Title VI and the President's Executive Order 12898 on Environmental and Health Justice in response to an administrative complaint filed by community advocates. HUD's action resulted in the creation of what is now the Los Angeles State Historic Park at the Cornfield. The 32-acre site could have been warehouses. Instead, it's a park.

Secretary Cuomo's action set a best practice example for the kind of analysis for River revitalization in the final Study. HUD's action illustrates an agency applying its administrative expertise, laws, and regulations to a public works project along the River that includes a park alternative. The HUD letter and successful administrative complaint are available on the web. *See* www.cityprojectca.org/ourwork/urbanparks.html#cornfield. The analysis in the final Study needs to comply with this best practice example.



The community victory at Los Angeles State Historic Park is a "heroic monument" and a "symbol of hope." L.A. Times Magazine, July 15, 2001.

In addition, the Corps must ensure that recipients of federal financial assistance and engage in programs or activities involving River restoration do in fact comply with the federal authorities cited above. These recipients include, for example, the County of Los Angeles, local municipalities including the City of Los Angeles, the California Department of Parks and Recreation, the Santa Monica Mountains Conservancy, Mountains and Recreation Conservation Authority, and the San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy. The Corps must conduct these analyses so that these recipients know and implement their obligations, and the public knows and receives the benefits to which they are entitled. *See, e.g., Title VI Requirements and Guidelines for Federal Transit Administration Recipients, Circular*, FTA C 4702.1B (Oct. 1, 2012).

IV. Alternative 20 Best Serves the Full Range of Values at Stake in River Revitalization

Alternative 20 best serves the full range of values at stake in River revitalization, including: human health and access to green space and recreation in the region, the history of discriminatory access along the River; economic values; transportation justice; Native American and spiritual, cultural and historical values; and clean water justice. 1

We again applaud the Study for including an analysis of cultural resources, transportation, recreation, environmental justice, and public involvement. The following recommendations are intended to ensure the final Study includes a proper compliance, equity, and health impact analysis.

A. Best Practice Examples to Analyze Health, Equal Justice, and River Access

1. Best Practice Analysis: NPS on Health, Equal Justice, and Green Access

NPS explicitly recognizes that "[p]eople of color and low income populations still face disparities regarding health and access to parks" in its report *Healthy Parks, Healthy People U.S. (HP/HP Report)*. These disparities adversely impact human health. According to NPS, for example, "In regard to obesity, 36 percent of black and 35 percent of Hispanic high school students nationwide are overweight or obese, while 24 percent of non-Hispanic white high school students suffer from these conditions."[9] Human health benefits include promoting a state of complete physical, mental and social wellbeing, and not merely alleviating chronic diseases including obesity and diabetes, as emphasized by NPS's *HP/HP Report*, citing the World Health Organization.[10] NPS emphasizes the role that park agencies play to alleviate these disparities and promote public health. 1 3

NPS's recent *Healthy Parks, Healthy People Science Plan* compiles extensive social science, evidence-based research that identifies "[r]elationships between socio-economic status and participation and access to green space and outdoor recreation." *Healthy Parks, Healthy People Science Plan* (July 2013), p. 38, citing Lee & Maheswaran (2010) and Richardson & Parker (2011). For example:

- "Green space can aid in reducing health disparities among populations (Richardson & Parker, 2011, Wells (2003)." p. 34.
- "Disparities in health conditions are influenced by socio-economic status (Sallis, Story, & Lou, 2009)." p. 38.
- "Green spaces and parks, which promote good health, can play an important role in alleviating socioeconomic health disparities (Mitchell & Popham, 2008)." *Id.*

Extensive research by The City Project and others support these conclusions, as illustrated by the map and demographic analyses of the River corridor above. *See generally* Robert García and Seth Strongin, *Healthy Parks, Schools and Communities: Green Access and Equity for Southern California* Policy Report (The City Project 2011), *available at* www.mapjustice.org. *See also* Newell, J, Sister, C., Wolch J., Swift, J, P. Ghaemi, J. Wilson, and T. Longcore, *The Green Visions Plan for 21st Century*

---

[9] *HP/HP Report* at 4. *See* Trust for America's Health and Robert Wood Johnson Foundation, (2011), *F as in Fat: How Obesity Threatens America's Future*, available at http://healthyamericans.org/report/88.

[10] *HP/HP Report* at 8, *citing* Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948. *See* WHO FAQ at www.who.int/suggestions/faq/en/index.html.

Southern California (2007), p. 19-20.

Green access, health, and equal justice concerns are also well documented by the City of Los Angeles in the *Los Angeles River Revitalization Master Plan* and *River Report*, as cited above.

The final Study should analyze such health data for River restoration including Alternative 20.

2. Best Practice Analysis: Congresswoman Judy Chu and NPS on Health, Environmental Justice, and the San Gabriels NRA

Congresswoman Judy Chu emphasizes public health and environmental justice as two main reasons why the region needs a national recreation area in the San Gabriel Watershed and Mountains. These reasons also apply to the restoration of the River. "Los Angeles is the most park-poor region in the United States. New York City has more park space than L.A. Lack of recreational opportunities – large or small – has severe impacts on urban populations struggling with obesity, diabetes, heart disease, and chronic illness. Opportunities to enjoy outdoor activity are vital for public health and the well being of people of all ages and walks of life." *See* Congresswoman Judy Chu, San Gabriel NRA Proposal FAQs, goo.gl/Ybdk3H.

As NPS highlights in its San Gabriels study, "Los Angeles County is one of the most disadvantaged counties in terms of access to parks and open space for children of color and people of color." *San Gabriel Watershed and Mountains Special Resource Study & Environmental Assessment* (Newsletter #5, Nov. 2011) (*San Gabriel Study*), p. 219. NPS notes that "county averages can mask dramatic disparities in access to green space within the county." *Id.*, citing The City Project's research and analyses. Non-Hispanic "[w]hites currently have disproportionately greater access to parks and open space, compared to Latinos and African-Americans. These groups are 12-15 times more likely to have less park acreage per capita when compared to [non Hispanic w]hites." *Id.* NPS further states that "the communities with the least amount of access to parks and open space tend to have higher rates of childhood diseases related to obesity such as diabetes." *Id.* Relevant excerpts from this NPS study are included as Appendix B.

The greening of the L.A. River should be coordinated with federal efforts to green the San Gabriel River, to create a national recreation area in the San Gabriels, and to expand the national recreation area in the Santa Monica Mountains. The final Study should address these concerns.

2. Applying County and City Analyses of Green Access, Human Health, and Equal Justice

The County and City of Los Angeles have recently published a Health Atlas documenting disparities in the City covering park access, health, poverty and income, and race, color or national origin. The purpose of the Health Atlas is to prioritize projects in the planning process. For that reason, the Atlas is highly relevant to the compliance and equity analysis for the Study and Alternative 20. The Health Atlas shows, for example, that green space is generally located where disproportionately non-Hispanic white and wealthy people live. Green space is generally not located where disproportionately people of color and low-income people live. *Compare* Map 15 (non-White and Hispanic population), *with* Map 63 (park access). The Atlas evaluates social determinants of health that need to be analyzed in the River Study. *See, e.g.*, Raimi & Associates, County of Los Angeles Public Health Department, City of Los Angeles, and Los Angeles Department of City Planning, *Health Atlas for the City of Los Angeles* (2013) at pages 13-26 (demographic and social characteristics), 179-80 (community health and equity index), 55-84 (health conditions), 27-40 (economic conditions), 155-70 (housing), 144-54 (crime), 110-27 (transportation), 41-54 (education), and 128-43 (food security). The Health Atlas, as good as it is on

economic variables and health equity, nevertheless does not include the thorough analysis of equity based on race, color, or national origin that the Final study must include under the authorities cited above. The Health Atlas is available at planning.lacity.org/cwd/framwk/healthwellness/text/HealthAtlas.pdf.

The Los Angeles County Department of Public Health published a report that discusses how health and wellbeing among different racial, ethnic, and economic groups varies throughout the cities and communities of the County. Green space, and resources for physical activity are disproportionately limited in low-income communities and communities of color. Often these groups are separated from other communities. The clustering of these communities limits access to outlets that may improve the lives of residents who are living in them. *See* County of Los Angeles Public Health Department, *Social Determinants of Health: How Social and Economic Factors Affect Health* (2013) at pages 2 (one path), 4-6 (what determines health), 9-13 (findings), 15 (discussion), 16 (recommendations), and 19 (a better path). The report is available at publichealth.lacounty.gov/epi/docs/SocialD_Final_Web.pdf.

The County Health Department also analyzed obesity and green access compared to economic hardship for 128 cities and communities in the County in 2007 and found obesity rates varying widely from a low of 4% in Manhattan Beach to a high of 41% in Irwindale. The percentage of overweight and obese children tended to be higher in communities that provide fewer acres of parks, recreation areas, or wilderness areas. The report found a correlation between obesity and economic hardship. Cities or communities with a high economic hardship burden – measured as higher poverty, unemployment, median income, lower educational attainment, more dependents, crowded housing – also had higher percentages of overweight and obese children.[11] The City Project has further analyzed the same data to show the impact of these disparities on communities of color. *See* Robert Garcia and Ramya Sivasubramanian, *Race and Place Do Matter: Economic Hardship, Obesity, and Equal Justice*, KCET Departures (April 18, 2013), *at* www.kcet.org/socal/departures/landofsunshine/green-justice/race-and-place-do-matter-economic-hardship-obesity-and-equal-justice.html.

Other studies show that people living closer to parks are more likely to exercise regularly, leading to weight loss, increased energy, and better overall health.[12] **These are important lessons in support of Alternative 20 and a thorough health impact assessment in the final Study**. People in low-income areas in Los Angeles who live within one mile of a park visited that park four time more frequently and exercised 38% more than people who lived more than one mile away.[13] Children and adults who live in communities with parks, athletic fields, nature centers and other recreational facilities are more physically active.[14] Research shows that park proximity is associated with higher levels of park use and physical activity among a variety of populations, particularly youth. Further, having more parks and more park acreage within a community is associated with higher physical activity levels.[15] This is particularly true for low-income communities. One study found that people in low-income areas in Los Angeles who live within one mile of a park visited that park four times more frequently and exercised 38% more than

---

[11] Los Angeles County Public Health, *Preventing childhood obesity: the need to create healthy places, A Cities and Communities Health Report* (October 2007), *available at* http://publichealth.lacounty.gov/wwwfiles/ph/hae/epi/chr2-childhood_obesity.pdf.
[12] U.S. Centers for Disease Control and Prevention (2001), *Increasing Physical Activity: A Report on Recommendations of the Task Force on Community Preventive Services* ("Increasing Physical Activity"), *available at* www.cdc.gov/mmwr/preview/mmwrhtml/rr5018a1.htm.
[13] Deborah A. Cohen, Thomas L. McKenzie, Amber Sehgal, Stephanie Williamson, Daniela Golinelli, & Nicole Lurie, *Contribution of Public Parks to Physical Activity*, 97 American Journal of Public Health 509-14 (2007).
[14] Robert Wood Johnson Foundation, *Leadership for Healthy Communities, Action Strategies for Healthy Communities: Open Spaces, Parks & Recreation*, (2009), www.leadershipforhealthycommunities.org/content/view/298/129.
[15] Andrew J. Mowen, *Parks, Playgrounds and Active Living, Active Living Research Synthesis* (Feb. 2010), www.activelivingresearch.org/files/Synthesis_Mowen_Feb2010.pdf.

people who lived more than one mile away.[16]

The community helped stop a commercial development in favor of creating Rio de Los Angeles State Park.

B. Alternative 20 Best Promotes Economic Values and Local Green Jobs along the River

The Study should ensure that the restoration promotes extensive local green jobs, apprenticeship programs, career opportunities, and contracts for women, minority, veteran, and small business enterprises that reflect the diversity of the surrounding region. This includes new and enhanced education, interpretation and collaborative programs that engage diverse cultures and the unique natural environment of the River through partnerships between local communities, non-profit social justice, environmental justice, and public art organizations, and the government.[17]

Section 3.13.2 of the study presents data on employment and income in the study area. That section does not analyze this data by race, color, or national origin. The Study does not analyze the impacts in that manner to assess equity in section 5.13. While temporary employment benefits during construction of each alternative are identified, the Study does not analyze who would benefit and who would be left behind. The final Study must include this analysis.

River restoration should get people back to work, strengthen the economy, and build people's feelings of confidence and self-worth in what continues to be the worst economic crisis since the Great Depression. Latinos and African Americans have been the worst hit by joblessness and drops in median wealth in the current economic crisis. "Socio-economic conditions can significantly affect a population's well-being and access to healthy living," as the City's Health Atlas notes. *See* Health Atlas at 27-40.

---

[16] Deborah A. Cohen, Thomas L. McKenzie, Amber Sehgal, Stephanie Williamson, Daniela Golinelli, & Nicole Lurie, *Contribution of Public Parks to Physical Activity*, 97 American Journal of Public Health 509-514 (2007).

[17] *See* Peter R. Orszag, Director, Office of Management and Budget, *Memorandum re: Updated Implementing Guidance for the American Recovery and Reinvestment Act of 2009*, April 3, 2009, at page 2 and *Guidance* at page 6, *available at* http://www.recovery.gov/About/Documents/m09-15_April3.pdf.

U.S. Secretary of the Interior Sally Jewell announced the launch of a national youth conservation initiative, which will provide jobs, training, educational, and volunteer opportunities to millions of youth, at a news conference at San Francisco's Crissy Field on November 7, 2013. The initiative is part of Secretary Jewell's ambitious goal to engage youth with our public lands. Secretary Jewell hopes to create something similar to the public work program Civilian Conservation Corps from the 1930s, calling it the 21st Century Conservation Service Corps. See www.cityprojectca.org/blog/archives/23276.

The Civilian Conservation Corps (CCC) offers valuable lessons for River revitalization to create local green jobs and economic vitality for all. The CCC was one of the most successful New Deal programs and appealed to people across political and class lines. The CCC employed 3 million young men, planted 2 billion trees, slowed soil erosion on 40 million acres of farmland, and developed 800 new state parks. Visits to National Parks increased 600% from 1933 to 1941. Unemployed youth got paid, their minds and bodies grew stronger, they contributed to society, and they stayed out of trouble as they learned the benefits of hard work, conservation, and recreation. Businesses sold goods and services to CCC camps. However, and this is just as important in terms of lessons learned, the CCC employed almost only white men, not women and not young boys and men of color. *See generally* Neil Maher, *Nature's New Deal* (2008). The final Study and Alternative 20 should promote local green jobs and economic vitality for all.

If you want parks, work for jobs – and justice. As John Meynard Keynes said, the boom, not the slump, is the time for financial austerity. *See generally* Robert Garcia, *Green Justice: If You Want Jobs and Justice, Keep Our National Parks Open*, KCET Departures (Sept. 21, 2012), *at* goo.gl/OLovi, reprinted at National Parks Conservation Association, Park Advocate, www.parkadvocate.org/if-you-want-jobs-and-justice-keep-our-national-parks-open/. The Corps should apply the lessons of the CCC along the River and through Alternative 20.

Raul Macias, Founder and Director of Anahuak Youth Sports Association, a community-based organization serving children and families along the River in northeast Los Angeles, points out the benefits of green youth jobs:

> There are many youths that can obtain green jobs, over the weekend, or part time. It would be a smart thing to do. Youth who are incarcerated and released from jail don't have any options for work. This could create good opportunities if the resources were to be made available. If we invest in youth now, it can save many thousands of dollars and it would be good practice to do so.

Mr. Macias joins in the submission of these comments.

C. Transportation Justice

The Study recognizes the need for transportation justice along the River.

> According to Southern California Association of Governments (SCAG), public parks are intended to serve all residents, but not all neighborhoods and people have equal access to these public resources. SCAG calls for a multiagency effort and public transportation to improve access for all to parks throughout Southern California (SCAG 2008).

Section 3.9.1.[18]
The final Study must present transportation alternatives for green access along the River. This includes

[18] Southern California Association of Governments (SCAG), *Regional Comprehensive Plan*, 36-40 (2008).

Transit to Trails to take inner city youth and their families and friends on fun, educational, and healthy river, beach, and mountain trips. NPS discusses the benefits and accomplishments of Transit to Trails in its *San Gabriels Study*, included in Appendix B (p. 179).

Transportation alternatives also include bike trails that meet the needs of people of color and low-income people. Alternatives should also serve households with limited or no access to a car, and limited transit alternatives. *See generally Health Atlas* at pages 110-14.

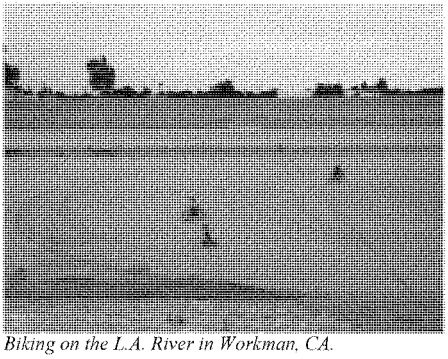
As Allison Mannos, founding president of the Multicultural Communities for Mobility, emphasizes, "Low income people and people of color need transportation alternatives to and along the Los Angeles River. These folks also use bikes disproportionately for commuting and pleasure, according to the City's Health Atlas." Ms. Mannos joins in the submission of these comments.

For all alternatives, section 5.7 of the Study concludes:

> Because the River corridor would be enhanced aesthetically and new multi-use walking and biking paths would be constructed, and public access would increase, more people would be expected to use the River corridor for local and recreational trips. Travel on the existing Los Angeles River Bike Path would also increase. The capacity of the Los Angeles River Bike Path and the new multi-use paths that would be constructed as part of the project should be sufficient to accommodate demand.

Further analysis must be done to ensure the benefits and burdens of these impacts are distributed equitably.

In addition to transportation alternatives for green access along the River, the Study should ensure that high-speed rail does not disproportionately impact communities of color and low-income communities along the River, or interfere with River restoration. Specifically, the rail line must not adversely impact Los Angeles State Historic Park, Rio de Los Angeles State Park, and surrounding communities, or interfere with River restoration and revitalization. *See Letter re: Concerns Regarding High-Speed Rail Through Downtown Los Angeles*, submitted to the California High-Speed Rail Authority (Sept. 20, 2012), *available at* www.cityprojectca.org/blog/archives/6430.



Biking on the L.A. River in Workman, CA.

D. Native American and Spiritual Values

The Corps has consulted with the California Native America Heritage Commission, received records of Native American resources along the River, contacted tribal representatives, and plans to "continue efforts to inform and consult with tribal representatives regarding any cultural concerns that they might have." Section 3.6.1. *See also* section 5.6. We support this emphasis.

The Native American Heritage Commission (NAHC) is the "trustee agency" for the protection and preservation of California's Native American cultural resources under state law. The NAHC supports "cultural preserves" to provide a higher level of protection for Native American cultural items and burial grounds. Without adequate maintenance and security, Native American cultural resources may be vandalized or destroyed, erasing an important historic link with indigenous California and the natural environment. *See* Robert Garcia, *Native American Values, Health, and Green Access in Southern California*, KCET Departures (May 23, 2013), *at* goo.gl/9sJ0xp.

Robert Bracamontes writes:

> "I am Acjachemen, Nican Tlaca, indigenous to this land. For us the land gives us food, a place to play peon, a place where we are put to rest in peace, a place for ceremony, a place where life and culture are one. Some have viewed the land as something to steal, to make great profit from by taking and selling it for selfish ownership. We need our land back, we need to protect it for future generations. I hope those of you speaking about helping realize this is not a novel or a movie. This is not about a movement. This is about a living breathing tribe thousands of years old. It is about all of my living relatives, my Ancestors, and the new lives entering the world today. We cannot think that History is not a continuous fluid event. I am Acjachemen. Bob Black Crow."

6

Mr. Bracamontes joins in the submission of these comments.

E. Culture, History, and Public Art along the River and in Alternative 20

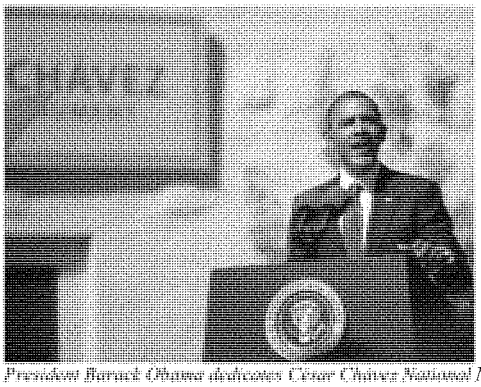
The Study discusses registered cultural resources and analyzes potential impacts to the resources in sections 3.6 and 5.6. We urge the Corps to look beyond the cultural resources that appear on the National Register of Historic Places or the California Register of Historical Resources. The final Study should promote cultural, history, and public art that celebrates the diversity of the region. The final Study should establish an inclusive procedure to work with the community to study places and works that should be designated as official landmarks and monuments.

Monuments should reflect the diversity of a place and its people. People of color, women, and Native Americans have been vital to the creation of Los Angeles. Yet with over 1,000 official cultural and historical landmarks in the City of Los Angeles, only about 100 relate to people of color, women, and Native Americans. This is astonishing, especially because the place was Indian country for about 10,000 years before contact, and Spanish or Mexican territory for hundreds of years before California joined the Union in 1850.

Marginalizing the contributions of people of color, women and Native Americans is not unique to Los Angeles. Only about 5% of national, state and local landmark designations reflect women's history, and an even tinier proportion deal with so-called minority history, according to Dolores Hayden in her book *The Power of Place* (1997).

According to then-Secretary of the Interior Ken Salazar, "Less than 3% of all the national landmarks that we have -- the highest designation you can receive as a historic landmark -- are designated for women, Latinos, African Americans or other members of minority groups." Ed O'Keefe, *Ken Salazar urges more Latino-themed national parks, sites,* Washington Post (Oct. 11, 2011), *available at* goo.gl/ypqBvH.

The final Study should follow the guidance that NPS provides for theme studies regarding, for example, civil rights, goo.gl/Gt8HFF; Latinos, goo.gl/MfC66L; and Asian-Americans, goo.gl/XZScoZ, to promote diverse resources along the River.



President Barack Obama dedicates Cesar Chavez National *Monument, October 2012.*

The Great Wall of Los Angeles by UCLA Prof. Judy Baca and SPARC (Social and Public Art Resource Center) is a best practice example of public art that celebrates the diversity of Los Angeles, the state, and the nation. The Great Wall, the longest mural in the world, is in the L.A. River. The Great Wall should be considered for inclusion on the national registry or as a landmark or monument. The Los Angeles River Revitalization Master Plan is a best practice example of considering these resources. *See Los Angeles River Revitalization Master Plan* (April 2007) at pages 3-24, 5-36 to -37 (public art, culture, and history along the River, including the Great Wall of Los Angeles).

SPARC's Judy Baca and Carlos Rogel at the Great Wall restoration along the L.A. River, 2011. Judy Baca is a professor at UCLA and Carlos Rogel is a Ph.D. student there.

Judy Baca speaks eloquently how River revitalization and Alternative 20 should address park access for all, and public art. On park access:

> If public parks are not accessible to the diversity of all people, then what spaces are? Where can people meet and share the sense that they are citizens of a common land?
>
> In neighborhoods of wealth, the phenomenon of gated neighborhoods is increasingly common. These neighborhoods grow up around the desire for security from crime and a sense of comfort at not having to deal with those different from oneself. Under such conditions, where does civic life occur? In the court rooms? In the schools? In the parks? Where do we find places of respite, open places to meet that speak to a shared sensibility about what it means to be a citizen of our city, of our state and country?
>
> If you ask groups of students in university classes across Los Angeles to define public space, they will most inevitably name a shopping mall: the Galleria, the Beverly Center, the Third Street Promenade. Yet these are corporate spaces where all activities are orchestrated and controlled, and certain people are excluded from participation by virtue of not having (enough) money to purchase goods.

Judy Baca speaks on the lessons of public art and the Great Wall for River revitalization and Alternative 20:

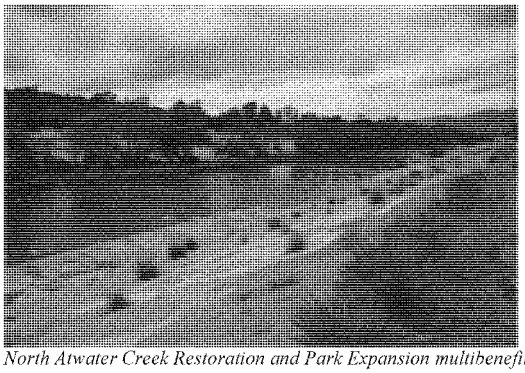
> Is art work like the Great Wall of Los Angeles and other public murals that are participatory and public antithetical to aesthetic practice? The question we ask ourselves early in the process of creating community-based art is this: is it possible for us as artists to fully integrate the voices of the people that live in the spaces in which our work is being done? The critical element is understanding the process. Perhaps there is no issue that has consistently plagued community cultural development work and contributed to its secondary status as fine-art work more than the issue of judging its aesthetics. It has

> long been held that the artist's personal interpretation of a particular moment in time, of an event or experience, is unique.
>
> Community-based art is not simply one's individual notion of the creation of a masterpiece, but public work that is greatly influenced by the people for whom the work is made. The creation of public art requires a unique sensitivity, the artist's opening to interpretations that are sometimes distant from his or her own. In a sense, a method of compassionate listening is required, followed by a gestation period wherein the artist must take in the often disparate collective vision, then make it the artist's own by establishing central images stemming from the group experience. In no way does this process diminish the capability to create great public art. Sometimes the process connects instantaneously with the artist, or the artist is able to capture a strong image or idea that later has great resonance within the community.

Prof. Baca and SPARC join in the submission of these comments.

F. Best Practice Examples: Clean Water Justice and Multibenefit Projects along the River and in Alternative 20

Environmental laws are a tool for achieving environmental justice along the River. Thus, for example, EPA, community allies including The City Project, and the City of Los Angeles reached a $2 billion agreement under the Clean Water Act to fix sewer system violations including noxious odors that disproportionately impacted communities of color. The agreement provides for multi-benefit park and clean water projects along the River. This is a best practice example for government, community groups, civil rights advocates, and environmentalists to work together with the Corps to achieve equal justice for all along the River. *See* Robert Garcia, *The Grass Roots Fight for Clean Water Justice*, KCET Departures (March 22, 2012), *at* www.kcet.org/socal/departures/landofsunshine/green-justice/clean-water-and-green-justice.html.



North Atwater Creek Restoration and Park Expansion multibenefit project was funded in part by the $2 billion Clean Water Act agreement.

Secretary of the Interior Ken Salazar visited one of these projects North Atwater Park along the River,

across the street from Griffith Park on the East Bank of the River. The East Bank project provides one opportunity to improve recreation and health to serve low income communities and communities of color. The site is already parkland that the city of Los Angeles is squandering for use as a service yard, toxic storage, and parking lot. The site can readily be restored as a real park in a park poor community. Within one mile of the site, there are 0.8 acres of open space per 1,000 residents. 40.8% of the people are Hispanic, 21.7% other, 18.0% Asian, and 16.9% non-Hispanic white. 20.3% live in poverty. The City Project and diverse allies have presented a conceptual plan that includes a balanced park with active and passive recreation. Scenic pathways and trails would allow for exercise and relaxing for individuals and families. Playing fields, interpretive learning spaces, and public art would enhance the park. All of these uses can be accommodated with sensitive and equitable planning that takes into account the needs of all users.[19] The final Study should analyze the restoration of Griffith Park on the East Bank of the L.A. River as part of Alternative 20.

Tom Hayden emphasizes the importance of water, justice, and the River:

> The effort to green the Los Angeles River is near and dear to my heart. I was the state legislator who first included funding for River restoration in a state parks bond, met with the Army Corps of Engineers in D.C. about the River, and helped create the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy with Hilda Solis. Before you can "green" a River you must have a river with water running through it. The L.A. River is barely a river at all. Every big city in the United States has a river except for Los Angeles, so it's not an environmental problem, it's a real estate and growth problem. "Greening" the edges of the channel is one step. Land-based conservation is not enough. The Study and Alternative 20 must ensure water flows through the River.
>
> The revitalization of the LA River can revitalize and unify the LA region. But the restoration of the river must be more than a trickle down. The staff proposal, Alternative 13, would fund only half the actual river expansion that is proposed in Alternative 20. And the project must involve more than token steps towards environmental justice, especially since the river passes through majority communities of color. If the lesser proposal is adopted, it will mean a barrier to further progress for many years ahead.

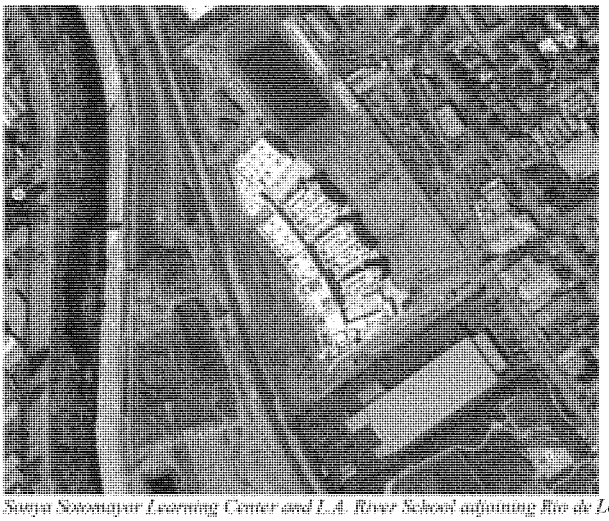
Tom Hayden has led a long and distinguished career of activism, politics, and writing dedicated to public service, and he remains a leading voice for saving the environment, reforming politics through greater citizen participation, and providing positive alternatives for inner city youth. He served in the California legislature from 1982 to 2000, first as an assemblyman and for the last eight years as a senator. He serves on the Board of the City Project. Mr. Hayden joins in these comments.

G. Schools, Pools, and Parks along the River

The L.A. River School at the Sonya Sotomayor Learning Center adjoins Rio de Los Angeles State Park. This is a best practice for the joint use of schools, pools, and parks along the River. The school is a best practice for educational programs on environmental and health justice, culture, art, and history, physical activity, and the full range of values at stake along the River. The Los Angeles Unified School District has raised $27 billion for school construction and modernization. The district has built 130 new schools

[19] Robert Garcia, *Restoring Griffith Park on the East Bank of the Los Angeles River*, KCET Departures (July 12, 2012), *at* www.kcet.org/socal/departures/landofsunshine/green-justice/restoring-griffith-park-on-the-east-bank-of-the-los-angeles-River.html.

and modernized hundreds more since 1998. Each $50 million created 935 annual jobs, $43 million in wages, and $130 million in local business revenue. Hundreds of acres of land were cleaned up, including land along the River. More importantly, the future became brighter for generations of children. This is a best practice example for how River revitalization and Alternative 20 should contribute to jobs and the local green economy.



Sunny Slauson Learning Center and L.A. River School adjoining Rio de Los Angeles State Park.

H. Implications for the Study and Alternative 20

River restoration should serve diverse needs and the full range of values at stake through a fully funded, balanced Alternative 20. Alternative 20 best serves the interests identified in these comments.

The City Project has extensively analyzed park and health disparities and the diverse values at stake under the equal justice laws and principles discussed above. The most thorough analysis is reflected in its 2011 policy report *Healthy Parks, Schools and Communities: Green Access and Equity in Southern California.* The report includes GIS mapping and demographic analyses, evidence based social science research, and participatory community based research. As documented in the report in ways that are relevant here:

- Children of color living in poverty with no access to a car have the worst access to places for physical activity in parks and green space. They suffer disproportionately from higher levels of obesity and diseases related to the lack of physical activity. *Id.* at 9-12, 26-111.
- Proximity to parks and recreation tends to support increased physical activity. *Id.* at 19-21.
- Park disparities are not an accident of unplanned growth, an efficient market in land, or rational choices maximizing personal utilities. Park disparities reflect a legacy and pattern of discriminatory land use, housing, education and economic policies dating back to the New Deal and beyond. *Id.* at 112-21.

- Park and health disparities in Southern California are consistent with broader patterns across the nation. *Id.* at 9-12.
- The report analyzes the myriad values at stake in equal access to park and health resources. *Id.* at 19-25.
- The report analyzes park and health disparities under civil rights laws and principles, including Title VI and the President's Order on Environmental and Health Justice. *Id.* at 122-23.
- The report presents recommendations for change that are generally applicable to River revitalization, the final Study, and Alternative 20. *Id.* at 125-26.

We respectfully refer the Corps to the cited sections of that Report, which is available on the web at www.mapjustice.org/socal.

V. Conclusion

The classic Olmsted plan *Parks, Playgrounds, and Beaches for the Los Angeles Region* called for the greening of the Los Angeles River as part of a comprehensive web of parks, schools, beaches, and forests in 1930. The successful community struggles to create Los Angeles State Historic Park and Rio de Los Angeles State Park 70 years later sparked the present work to green the River.

In far less time other cities have done far more on their urban waterways. New York City has created the Manhattan Riverfront Greenway circling the island of Manhattan.[20] Madrid has created a world-class urban park for the ages in Parque Madrid Río that rivals its 16th century Parque del Buen Retiro.[21] Greening the San Gabriel River is actually much, much further along than greening the L.A. River, providing a scenic 64-mile biking and hiking route from the mountains to the ocean. The Smithsonian Anacostia Community Museum exhibit on *Reclaiming the Edge: Urban Waterways and Civic Engagement* includes the L.A. River.[22] The Study and River restoration through Alternative 20 present a tremendous opportunity to implement in Los Angeles a best practice example for revitalizing urban waters and inner cities for all. **The whole world is watching.**

We urge the Corps to implement the following recommendations in the final Study and Alternative 20.

1. Ensure compliance with equal protection laws and principles that provide for equal access to the River and the benefits of River restoration. 4

2. Include a compliance, equity, and environmental and health justice analysis that addresses the impact of the greening of River on all communities, including communities of color and low-income communities, and ensures equal access to the River and the benefits of River restoration.

3. Conduct or facilitate a health impact assessment for River revitalization. 7

4. Promote economic vitality through green jobs programs for diverse local youth and other residents. 8

[20] Robert Garcia, *Manhattan Waterfront Greenway and Hope for L.A.*, KCET Departures (May 17, 2012), *at* http://www.kcet.org/socal/departures/landofsunshine/green-justice/manhattan-waterfront-greenway.html.
[21] Robert Garcia, *Parque Madrid Río, Don Quixote and Sancho Panza*, KCET Departures (April 20, 2012), *at* http://www.kcet.org/socal/departures/landofsunshine/green-justice/parque-madrid-rio-don-quixote-and-sancho-panza.html.
[22] Smithsonian Anacostia Community Museum, *Reclaiming the Edge: Urban Waterways and Civic Engagement* (Oct. 15, 2012 – Nov. 3, 2013), http://anacostia.si.edu/exhibits/current_exhibitions.htm.

5. Provide an implementation plan to promote equal access to the benefits of River revitalization and alleviate disparities identified in these comments. 9

6. Study, celebrate, and preserve cultural, heritage, public art, and Native American sites to reflect the diversity of the River and its people. 10

7. Consider the restoration of Griffith Park on the East Bank of the L.A. River. 11

8. Provide transportation alternatives for green access along the River, including bike trails, complete green streets, safe routes to school, and Transit to Trails that takes urban residents on fun, educational, and healthy River, mountain, and beach trips. 12

9. Ensure full and fair participation by all communities in the planning and decision making process. 13

10. Serve diverse needs and the full range of values at stake through a fully funded, balanced Alternative 20. 1

We look forward to working together with the Corps and the Los Angeles community on Alternative 20 and this vision for an equitable restoration of the Los Angeles River now and in the years to come. 2 3

Sincerely,

The City Project
Robert Garcia, Founding Director and Counsel
Ramya Sivasubramanian, Assistant Director and Counsel
Daphne Hsu, Staff Attorney
Lynnete Guzman, Program Manager

Amigos de los Ríos
Claire Robinson, Managing Director

Anahuak Youth Sports Association
Raul Macias, Founder and Director

Asian and Pacific Islander Obesity Prevention Alliance
Scott Chan, Program Director

Asian Pacific Policy & Planning Council
Mark Masaoka, Policy Coordinator

Robert Bracamontes
Yu-va'-tal 'A'lla-mal (Black Crow)
Acjachemen Nation, Juaneño Tribe
Marc Brenman
Social Justice Consultancy

California League of United Latin American Citizens
Tomas Gonzales, Immediate Past Deputy State Director
Kathy Jurado, District Director

Chatten-Brown & Carstens LLP
Jan Chatten-Brown
Douglas P. Carstens

Center on Race, Poverty & the Environment
Brent Newell, Legal Director

COFEM (Consejo de Federaciones Mexicanas en Norteamérica)
Omar Gomez

Concerned Citizens of South Central Los Angeles
Mark Williams, Youth Director

Belinda Faustinos
Retired Executive Officer, Rivers and Mountains Conservancy

Friends of the River
Steve Evans, Wild & Scenic Program Consultant

Senator Tom Hayden (Ret.)
The Peace and Justice Resource Center, Director
The City Project, Board Member

Latino Coalition for a Healthy California
Xavier Morales, Executive Director

Los Angeles Business Council
Mary Leslie, President

Los Angeles Neighborhood Land Trust
Alina Bokde, Executive Director

Los Jardines Institute (The Gardens Institute)
Richard Moore, Coordinator

Mia Lehrer + Associates
Mia Lehrer, Principal

Multicultural Communities for Mobility
Allison Mannos, Board President

Mujeres de la Tierra
Irma Muñoz, President/CEO

National Parks Conservation Association
Ron Sundergill, Senior Director, Pacific Region

Natural Resources Defense Council
Damon Nagami, Senior Attorney

Prevention Institute
Manal Aboelata, Managing Director
Sandra Viera, Program Coordinator

Search to Involve Pilipino Americans
Dennis G. Arguelles, Director of Programs

Sierra Club
Leslie Fields, Environmental Justice and Community Partnerships, Program Director
Byron Gudiel, Sr. Organizing Manager, California

SPARC (Social and Public Art Resource Center)
UCLA Prof. Judy Baca, Artistic Director

cc: Secretary Sally Jewell, U.S. Department of the Interior
Director Jon Jarvis, National Park Service
Administrator Gina McCarthy, U.S. Environmental Protection Agency
Deldi Reyes, Environmental Justice Program Manager, U.S. EPA, Region 9
Arsenio Mataka, Assistant Secretary for Environmental Justice and Tribal Affairs, California Environmental Protection Agency
General Anthony Jackson, Director, California Department of Parks and Recreation
Mark Ridley-Thomas, Chairman, Los Angeles County Board of Supervisors
Eric Garcetti, Mayor, City of Los Angeles

Appendix A

Relevant Excerpts from Army Corps L.A. River Study

3.9 RECREATION AND PUBLIC ACCESS

For this analysis, the recreation resource area is defined as being a half-mile buffer on either side of the River. The inventory of larger regional parks and other resources that exist outside the study area are beyond the geographic scope of this assessment other than to demonstrate the lack of regional parks and open space available within the greater Los Angeles area.

3.9.1 Regional Context and Demand

The City of Los Angeles has approximately 24,000 acres of parks, with approximately 15,899 acres of parkland under the jurisdiction of the Department of Recreation and Parks. Other agencies managing parklands include the Los Angeles Department of Water and Power, Mountains Recreation and Conservation Authority, the Santa Monica Mountains Conservancy, California State Parks, and the County of Los Angeles. In all, this equates to a city-wide average of 6.26 acres of park per 1,000 residents (Trust for Public Land 2011). The City of Glendale has 39 developed parks comprising 280 acres, or about 1.4 acres per 1000 residents (City of Glendale 2012c). The City of Burbank operates 27 park facilities covering 155 acres, as well as 500 acres of open space, equating to approximately 6.34 acres of parkland per 1,000 residents (City of Burbank 2010). Including all parks identified in the assessment presented below, the recreation resource area has an estimated 5,000 acres of park, or 38.77 acres per 1,000 residents. This value is high compared to the city-wide average due to the presence of some larger than average parks near the study area, such as Griffith Park (the largest park at 4,210 acres) and Elysian Park (575 acres).

Much of Los Angeles is considered to be park deficient which refers to any geographic area that provides less than 3 acres of green space per 1,000 residents, as defined by California law (GreenInfo Network 2010). In particular, the industrial areas surrounding Reaches 7-8 have the least parkland, with fewer than 3 acres per 1,000 people. Other areas, particularly on the southwest side of Reaches 1-3, have greater than 3 acres of parkland per 1,000 residents, which is due to the presence of Griffith Park. In general, access to parks and acres of parkland per 1,000 residents is lowest in areas that have the highest number of families below the poverty line of $47,331.

According to Southern California Association of Governments (SCAG), public parks are intended to serve all residents, but not all neighborhoods and people have equal access to these public resources. SCAG calls for a multiagency effort and public transportation to improve access for all to parks throughout Southern California (SCAG 2008). The City Project, a local nonprofit research organization was founded to find ways to improve park availability for all neighborhoods, regardless of ethnicity or income level (Garcia et al. 2009).

Residents of Los Angeles place a high priority on the quality of natural and environmental resources. In a study from 2000, 75 percent of those surveyed said that preserving wetlands, rivers, and environmentally sensitive areas would be either "somewhat effective" or "very effective" at improving their quality of life. There is also strong support for protecting cultural resources and for environmental education (Public Policy Institute of California 2000).

3.9.2 Recreation Opportunities in the Study Area

Approved uses of the River in the study area are generally limited to pedestrian, cyclist, and equestrian trails along the banks. Some areas of the River's watershed have recently been permitted for seasonal fishing or canoeing/kayaking on a year-to-year basis (Sepulveda Basin), were approved in Reach 6, between Fletcher Dr. and Egret Park, within the study area in summer 2013 (Memorial Day to Labor Day) as a Los Angeles River Pilot Recreational Zone authorized by the City of Los Angeles and

Table 3-21 Comparison of Southern California County Economic Indicators (2010)

Area	Median Household Income	2010 Unemployment Rate	2010 Poverty Rate	2009 Median Home Value
City of Burbank	$62,255	9.2	8.9	$619,700
City of Glendale	$54,163	12.7	13.1	$641,600
City of Los Angeles	$48,570	13.0	21.6	$565,200
Los Angeles County	$54,828	12.4	17.5	$521,900
All of California	$60,392	12.8	15.8	$479,200
Assessment Area Tracts	$51,941	8.7	12.3	$492,569 (1)

(1) Average of assessment area tracts
Sources: U.S. Census Bureau 2010a, U.S. Census Bureau 2011, LAEDC 2012.

Table 3-22 Assessment Area Employment by Industry (2010)

Industry	Percent
Educational services, and health care and social assistance	18.4
Professional, scientific, and management, and administrative and waste management services	13.3
Retail trade	10.8
Arts, entertainment, and recreation, and accommodation and food services	10.6
Information	9.3
Manufacturing	8.6
Construction	6.2
Other services, except public administration	5.3
Finance and insurance, and real estate and rental and leasing	4.9
Transportation and warehousing, and utilities	4.7
Public administration	3.7
Wholesale trade	3.7
Agriculture, forestry, fishing and hunting, and mining	0.5

Source: U.S. Census Bureau 2010b.

3.13.3 Environmental Justice

This section provides a discussion of environmental justice in accordance with Executive Order (EO) 12898 and the protection of children from environmental health risks in accordance with EO 13045. The ethnic data from the 2005-2009 American Community Survey (U.S. Census Bureau 2010a) for the census tracts comprising the assessment area, as well as Los Angeles County, are described below.

As outlined in a 2009 City of Los Angeles report, *Los Angeles River Access and Use: Balancing Equitable Actions with Responsible Stewardship*, "Many local organizations have stressed the importance of making sure that the River's revitalization addresses environmental justice issues (See, e.g., the City Project's work at: www.cityprojectca.org.). Of key concern in Los Angeles is the growing disparity of access to and use of open space resources, including parks, ball fields, and natural areas by those living in low-income communities of color."

Within the census tracts that encompass the study area, the Hispanic or Latino population was the dominant group, with about 50 percent of the population. The Caucasian population was second, with

about 30 percent of the population. Third was the Asian population, with 14 percent, followed by the Black population at 4 percent, and other races at 2 percent. Largely similar, the City of Los Angeles reported 49 percent Hispanic, 29 percent White, 11 percent Asian, 10 percent Black, and 1 percent other races. In the County, some differences become apparent, where the population is 60 percent White, 25 percent Hispanic, 10 percent Asian, 2 percent Black, and 1 percent other races.

In 2010, approximately 25 percent of the state's population was made up of children (those under 18 years old). Approximately 24 percent of the population in Los Angeles County was under 18 years of age (U.S. Census Bureau 2011). Within the 28 census tracts of the assessment area, approximately 22 percent of the population was under 18 years of age (U.S. Census Bureau 2010a).

As shown in Table 3-24, below, about two-thirds of the population's primary language spoken at home is a language other than English. About 45 percent of the population in the study area tracts speaks Spanish at home, 32 percent speak English, and the remaining 23 percent speak other languages. The substantial Spanish-speaking population is consistent with the demographic information summarized previously.

Table 3-23 Language Spoken at Home (Percentage in 2010)

Area	English Only	Other than English	Spanish	Other Indo-European languages	Asian and Pacific Islander languages	Other languages
Study Area Tracts	32.4	67.6	44.7	10.6	11.8	0.5
Los Angeles County	43.9	56.1	39.6	5.3	10.2	1.0
Burbank	55.9	44.1	20.1	16.0	6.3	1.7
Glendale	32.7	67.3	15.2	37.8	12.8	1.5
Los Angeles	40.3	59.7	43.6	6.7	8.1	1.4

Source: U.S. Census 2010 and 2010a. Percentages for study area tracts are based on a weighted average using population as the weights.

As shown in Table 3-25, below, poverty in the study area is generally consistent with regional data. Poverty in the study area is about 3 percent lower than the City of Los Angeles, but about 1 percent higher than in the whole County. The portions of Burbank and Glendale within the study area have higher poverty rates than those cities do overall.

Table 3-24 People in Poverty (Percentage in 2010)

Area	All People	Under 18	18 to 64	Over 64
Study Area Tracts	16.2	20.3	14.3	13.1
Los Angeles County	15.4	22.1	13.5	10.7
Burbank	8.3	9.7	8.3	5.8
Glendale	12.3	16.4	10.8	13.1
Los Angeles	19.1	27.9	16.7	13

Source: U.S. Census 2010 and 2010a. Percentages for study area tracts are based on a weighted average using population as the weights.

Disability information is not available by census tract. Table 3-26 presents the percentage of people with disabilities in Los Angeles County, the City of Los Angeles, Burbank, and Glendale. It is assumed that the same general characteristics apply to the specific study area tracts, where approximately 8 to 10 percent of the population has a disability.

project would be served by a landfill with sufficient permitted capacity and there would be no adverse impact. In addition, there are additional landfills in the area that could accommodate debris, if necessary.

Construction activities would occur over a longer time period compared to the other alternatives, so the temporary effects of construction would last longer.

Operational Impacts

Impacts to public services during operation would be similar as those described for the previous alternatives but would be slightly more extensive due to the larger project footprint. Impacts would be less than significant.

5.12.4 Best Management Practices and Impact Avoidance Measures

Measures that would be implemented and would provide BMPs for reducing impacts include:

- Development of a utility management plan
- Obtaining a Private Solid Waste Hauler Permit from the City's Bureau of Sanitation prior to collecting, hauling and transporting waste,
- Recycling/reuse of construction debris to the extent possible;
- Disposing of excess debris to City certified waste processing facility, and
- Staggering construction of daylighting outfalls in order to minimize reduction in capacity of the stormwater system.

5.13 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

5.13.1 Regulatory Framework

Federal

Federal Executive Order 12898 was signed by President Bill Clinton on February 11, 1994, to focus Federal attention on the environmental and human health conditions of minority and low-income populations with the goal of achieving environmental protection for all communities. The Order directed Federal agencies to develop environmental justice strategies to aid Federal agencies identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Environmental justice concerns may arise from impacts on the natural and physical environment, such as human health or ecological impacts on minority populations, low-income populations, and Indian tribes, or from related social or economic impacts.

State

In addition to its prioritization by the Federal government, California was one of the first states in the Nation to pass legislation to codify environmental justice in state statute, defining "environmental justice" as "The fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies." (Government Code Section 65040.12)

Local

The City of Los Angeles General Plan, Housing Element includes the City's policies in regards to housing issues (City of Los Angeles 2001), Policy 2.3.2 states that the City will "…allow for the provision of sufficient public infrastructure and services to support the projected needs of the population and businesses of the City within the patterns of use established in the community plans."

5.13.2 Significance Criteria

The proposed project alternatives could cause significant impacts related to population, socioeconomics, and environmental justice if they would be inconsistent with the City of Los Angeles' General Plan, Housing Element in the following ways (City of Los Angeles 2002):

- Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure),
- Cause growth (e.g., new housing or employment generators) or accelerate development in an undeveloped area that exceeds projected/planned levels for the year(s) of project occupancy/buildout, or
- Cause a substantial number of residents, businesses, or employees to be displaced (includes displacement of affordable housing), necessitating the construction of replacement housing elsewhere.

Additionally, alternatives would cause significant impacts under NEPA if they would:

- Have disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and, or low-income populations. The CEQ guidance identifies three factors to be considered to the extent practicable when determining whether environmental effects are disproportionately high and adverse (CEQ, 1997).
- Whether there is or would be an impact on the natural or physical environment that significantly (as the term is employed by NEPA) and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment.
- Whether the environmental effects are significant (as the term is employed by NEPA) and are or may be having an adverse impact on minority populations, low-income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and
- Whether the environmental effects occur or would occur in a minority population, low income population or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

5.13.3 Environmental Impacts

No Action Alternative

Construction Impacts

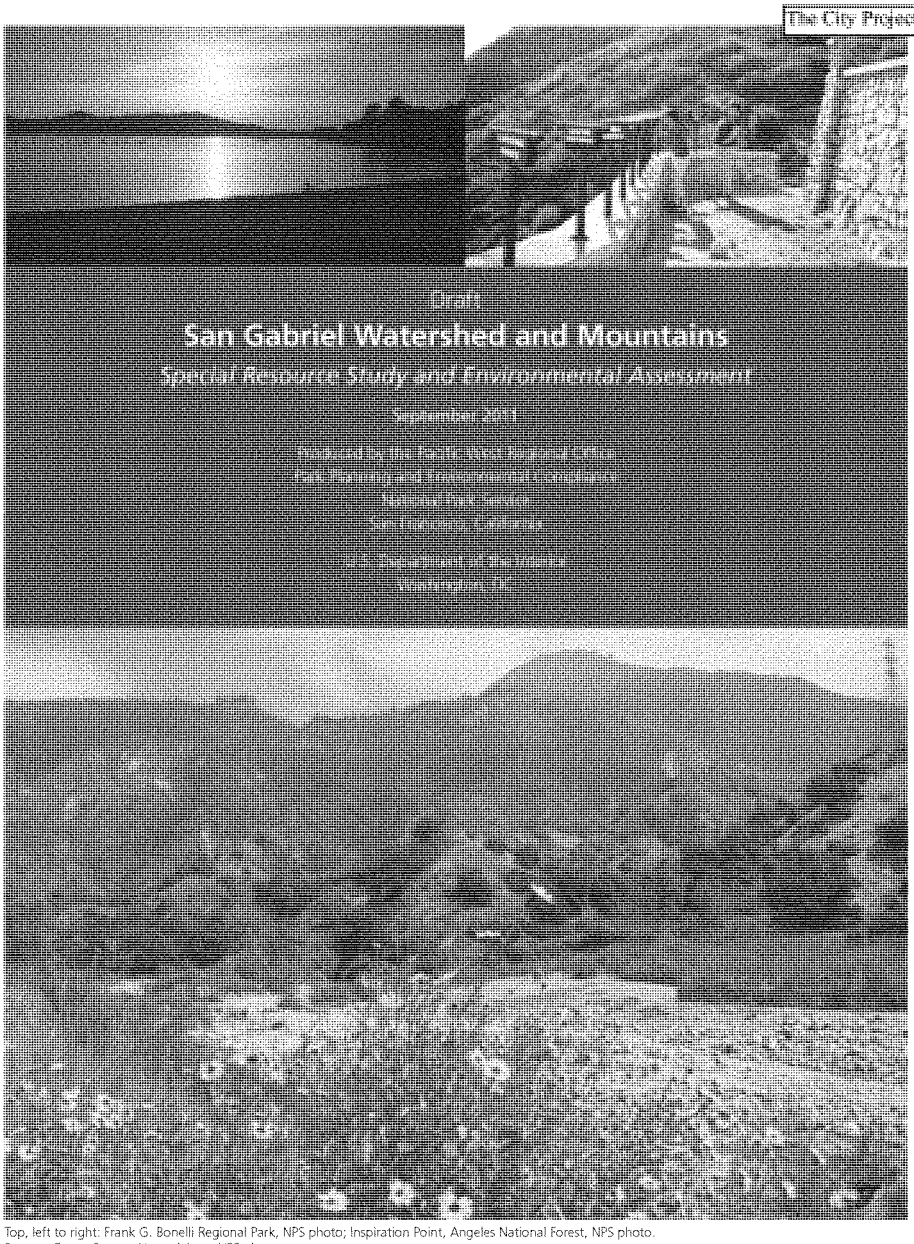
No impacts to socioeconomics would occur from construction under this alternative because construction would not occur.

Operational Impacts

The socioeconomic assessment area consists of a predominantly residential and densely populated area in Los Angeles County. Due to the existing dense level of development, it is unlikely that changes in the local or regional economy will result in drastic changes in land use, population, or demographics in the assessment area. Other factors such as gentrification, poverty rates, and local businesses can affect the local economy and land uses, but no clear trends have emerged at the time of this assessment. Any changes that do occur in the period of analysis would likely be coincident with larger regional trends and would not materially alter the conditions in which an ecosystem restoration study would be constructed.

Appendix B

Relevant Excerpts from *NPS San Gabriel Study*



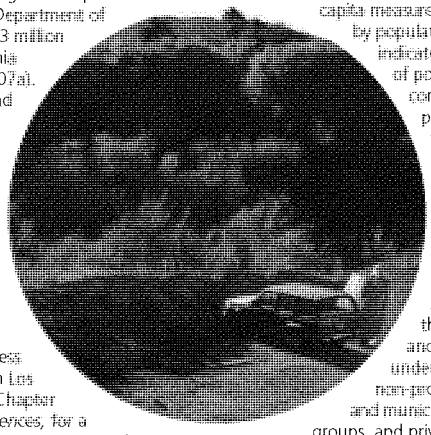
Top, left to right: Frank G. Bonelli Regional Park, NPS photo; Inspiration Point, Angeles National Forest, NPS photo.
Bottom: Eaton Canyon Natural Area, NPS photo.

Recreation Needs and Opportunities

INTRODUCTION

The Los Angeles metropolitan region has struggled to provide adequate recreation opportunities for its growing urban areas since its first population boom at the end of the 19th century. Throughout the 20th century, population growth and development in the region has far outpaced the creation of recreational facilities. This has occurred despite the completion of previous comprehensive recreation studies that called for investment in more recreational facilities.

Deficiencies in recreation and open space remain for much of the Los Angeles Region. Over 15 million people live in the larger metropolitan region and the California Department of Finance projects another 13 million residents by 2050 (California Department of Finance 2007a). With existing recreation and park areas in most cases already taxed beyond capacity, it is safe to assume that significant efforts will need to take place to ensure sufficient opportunities for diverse recreational experiences in the future. In addition, communities of color and children have disproportionately low access to parks and open space in Los Angeles County. See also Chapter 7, *Environmental Consequences*, for a more discussion on current recreation trends.



NEEDS

Recreation Demand in Urban Areas

In addressing present and future open space concerns for the study area, disparities must be addressed regarding the disproportional access to park and recreational space. As recent reports from The Trust for Public Land (TPL) and the City Project indicate, public access, predominantly of minority populations, to parks and recreation facilities is a serious concern. According to TPL, Los Angeles County ranks at the bottom in comparison to the nation's seven major cities (Boston, New York, San Francisco, Seattle, San Diego, and Dallas) in terms of providing access to parks for children. In fact, the report, based on 2000 census data, indicates that "more than 1.5 million children in Los Angeles County do not live within walking distance of a public park." In most cases, parks in the Los Angeles region are not located near those areas with high concentrations of young children (Trust for Public Land 2004).

The issue of accessibility is of particular concern when measuring existing open and park space in comparison to population densities. As demonstrated in the City Project's work in Los Angeles, many families in the low income neighborhoods of the region often do not have cars nor are near public transportation systems that allow for access to regional parks. This is particularly true in the case of the 651,874-acre Angeles National Forest which, in making a simple per capita measurement (open space divided by population size), appears to indicate a sizeable measurement of potential recreation space in comparison to a local urban population. However, the aforementioned barriers to access and the inaccessibility of much of the forest's terrain, skews this measurement significantly.

Public interest in open space and recreation in the region is significant and concerted efforts are underway by a myriad of non-profit organizations, local and municipalities, community groups, and private and public groups to procure and maintain open space in various areas throughout the Los Angeles region. Furthermore, the $2.6 billion Proposition 40 has further sparked this interest in public space allowing for funds to be allocated for environmental and park projects throughout the state of California (Trust for Public Land 2004).

Regional stakeholders such as the state land conservancies, land trusts, and other non-profits have worked diligently in their respective efforts to maintain and acquire park and open space in the region. The Rivers and Mountains Conservancy (RMC), one of eight conservancies in the California Resources Agency, is working to "preserve open space and habitat in order to provide for low-impact recreation and educational uses, wildlife habitat restoration and protection and watershed

Photo caption: The Santa Clara River. 2007. NPS photo.

The City Project

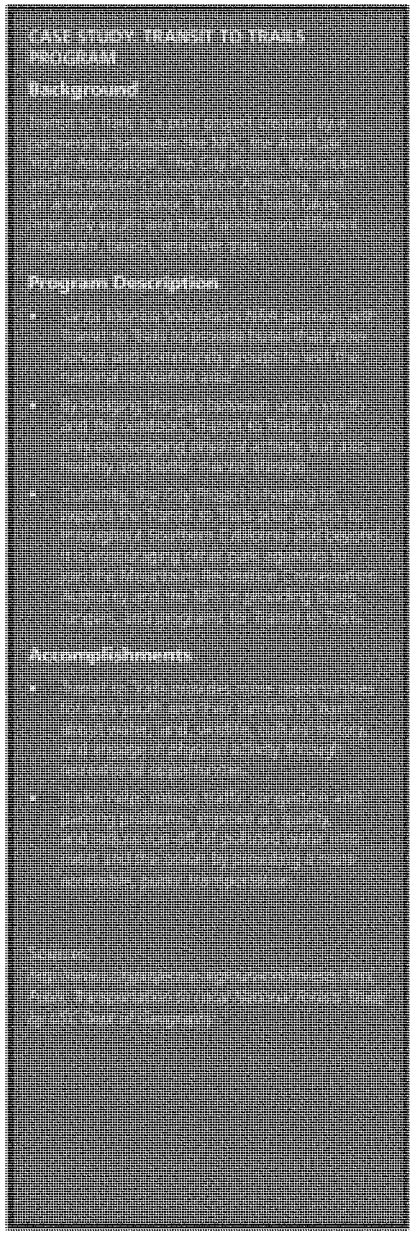
Job training and conservation stewardship programs for youth and nearby community members would be offered. In addition to the positions listed above, area youth would be encouraged to be involved with service organizations by applying for positions through existing programs such as the Student Conservation Association, Youth Conservation Corps, AmeriCorps and other organizations which expose youth to the conservation and stewardship of our public lands.

LAND ACQUISITION

Lands within the NRA would remain under their current jurisdictions, with each land management agency continuing to fund its own operations. As almost 90% of the land in the proposed NRA is already protected for recreation and conservation by partner agencies (158,000 of approximately 178,000 acres), land acquisition needs would be small. Much of the remaining 20,000 acres are comprised of urbanized lands in commercial and residential use that would not be appropriate or feasible for NPS land acquisition. The NRA partnership would be eligible to request NPS funding for land acquisition within the NRA for acquisition of small areas with resource significance such as a historic site or open space with native habitat. However, it should be noted that such funding is extremely limited. Funding for land acquisition would also be available from partner agencies and through local fundraising efforts.

OPERATIONAL AND VISITOR FACILITIES

Construction of new administrative facilities for NPS operations and management would not necessarily be required to support the proposed NRA. Given the existing amount of office space available in and near the proposed NRA, it is likely that the NPS could lease administrative and operational facilities from partner agencies or through existing office space available in the area. There may also be opportunities to adaptively reuse a historic building or property through leasing if the NPS acquired land that contained such facilities. The NPS could also use partner facilities or adaptively reuse buildings to provide visitor facilities. If established, the NRA partnership would identify specific operational and visitor facilities needs through a general management plan.



in the study. Some commenters suggested that federal recognition would bring positive attention to the area and would help the local economy and tourism. Others worried that designation could bring about increased traffic, noise, waste, and congestion associated with increased tourism. This was particularly a concern in the Antelope Valley area, where residents worried that increased recreation would require commercial development which could negatively impact rural communities.

The impact of special designations on visitation at existing parks or recreation areas was studied to provide context for the impact analysis. Recent research conducted on eight changes in national park unit designation between 1979 and 2000 shows that conversions have "substantial and persistent" effects on annual visitation. These changes appear to be more important to national visitors than to local or regional users. This particular research is limited to conversions of units already in the national park system, and its results are applicable in times of economic well-being. For the units studied, an immediate annual visitation increase of about 6 percent was experienced and then maintained over time (Weiler 2005).

Adequacy of Park and Recreation Areas in the Study Area

The process of prescribing a standard for the level of service for park and recreation facilities has long been problematic. The U.S. Department of Housing and Urban Development (HUD) recommends 2.5 acres of parkland for every 1,000 residents, although many consider this ratio to be low. The National Recreation and Parks Association (NRPA) gave acreage recommendations in *Recreation, Park and Open Space Standards and Guidelines* (1983) and *Park, Recreation, Open Space and Greenway Guidelines* (1996). The NRPA acknowledged that local condition and community desires should be considered in adopting local standards and stated a standard of 6-10 acres for every 1000 residents.

As described in Chapter 2, *Resource Description*, current studies on the adequacy of recreational areas in the Los Angeles Region show approximately 9.1 of recreation acres per 1,000 residents (Trust for Public Land 2004). However, county averages can mask dramatic disparities in access to green space within the county (The City Project 2007). In 2004, the Los Angeles County Department of Parks and Recreation completed the Strategic Asset Management Plan for 2020. Based on the projected population growth, the county estimated

Table 14: Visitation to Major Recreation Destinations within the Study Area

Facility	Total
Frank G. Bonelli Regional Park	463,743
Santa Fe Dam Recreation Area	753,993
Whittier Narrows Recreation Area	1,727,841
Whittier Narrows Natural Area	44,520
Devils Punchbowl County Park	99,421
Pio Pico State Historic Park	7,500 (FY 2007/2008)
Angeles National Forest	3.5M (2010)

Sources: (Los Angeles County, Rupert, pers. comm, 2010; USFS 2009; Friends of Pio Pico State Historic Park, Schoff, pers. comm. 2011)

Note: Annual visitation data was not available for the Puente Hills Landfill Native Habitat Preserve.

that it would not meet its standard of four acres of parkland per 1,000 residents by 2020 for four of its five supervisorial districts. Only the rural north county area, which includes the Antelope Valley portion of the study area, would meet this goal (Los Angeles County 2008).

Quantity and density, however, are not the only measures. If park, open space, and recreation amenities are not accessible to all residents, their benefits cannot be fully realized. Factors such as proximity to open space, safe and accessible transportation and walking routes, the presence of obstacles such as freeways, railroads and other physical barriers also affect access. Open space is also not often equitably distributed. Areas that fall well below meeting the standards for parks and recreation facilities are described as being "park-poor."

In many park and recreation assessments, a ¼ mile to ½ mile radius is used to measure access to local parks. These distances are used because they represent areas that can be accessed by a 5 to 10 minute walk. Three separate analysis of the adequacy and distribution of recreational areas in the Los Angeles Region have concluded that while some communities have ample parks and recreational areas, many are severely lacking. Those communities with adequate accessibility to parks and recreational areas tend to be more affluent with a majority of non-Hispanic whites.

Visiting regional areas such as the ANF and the Santa Monica Mountains National Recreation Area pose transportation challenges for many residents (Los Angeles County 2008). Recent studies have found that statewide, Los Angeles County is one of the most disadvantaged counties in terms of access to parks and open space for children and people of color (The City Project 2007; Trust for Public Land 2004). A study by the Trust for Public Lands found that with its high concentration of open space in areas far from its most densely populated communities, the Los Angeles area offers its children the worst access to parks among the cities evaluated nationally (see Table 16). A study on access to parks and park facilities conducted as part of the Green Visions Plan found that one third or less of parks in the San Gabriel Valley area appear to have transit (Sister, C., Wilson, J.P., and Wolch, J. 2008).

The communities with the least amount of access to parks and open space tend to have higher rates of childhood diseases related to obesity such as diabetes. According to the Centers for Disease Control, Americans living closer to parks are more likely to exercise regularly, leading to weight loss, increased energy, and better overall health (Centers for Disease Control and Prevention 2001). The California Center for Public Health Advocacy analyzed the 2004 California Physical Fitness Test of 5th, 7th, and 9th graders. The analysis shows that among students in Los Angeles County, 31.3% are overweight. Overweight children face a greater risk of developing many health problems during childhood, including Type 2 diabetes, high blood pressure, asthma, orthopedic problems and gallstones, as well as low self-esteem, poor body image, and depression. Overweight children are more likely to be obese as adults, putting them at a much higher risk for heart disease, cancer, stroke, and diabetes later in life (California Center for Public Health and Advocacy 2006).

People of color are less likely to have adequate access to parks in the Los Angeles area. Studies by the Green Visions Plan for a 21st Century Southern California and the City Project both found that Whites currently have disproportionately greater access to parks and open space, compared to Latinos and African-Americans. These ethnic groups are 12-15 times more likely to have less park acreage per capita when compared to Whites (Sister, C., Wilson, J.P., and Wolch, J. 2008; The City Project 2007).

Los Angeles County trends for access to parks, as described previously, correlate with trends within the study area. Access to parks and open space is readily available to communities in the Antelope Valley, Soledad Basin, and wealthier communities in the San Gabriel Mountains foothills. The map "Park Acres Per 1,000 Residents," on the following page, includes park and recreation acreages for study area cities and communities. The map conveys that foothill communities and communities in the northern portions of the study area have the largest amounts of parks and recreation space per 1,000 residents. Many of the more urban communities in the San Gabriel Valley have smaller park acreages per 1,000 residents and fall well below the Los Angeles County standard of 4 acres per 1,000 residents. Given the limited availability

Table 15: Standards for Parks and Open Space

Standard	Acres/1,000 Population
HUD	2.5
National Recreation and Parks Association Park Acreage/ Population Standard	6.25-10.5
Los Angeles County	4

effects of each alternative, however, could result in a small, net beneficial condition to some local communities as a result of improved urban quality, land protection, and economic benefits from recreation and conservation. However, the total cumulative effect is expected to be more dependent upon regional economic conditions and population increases (and distribution) over time than on the actions taken as a result of this study.

Conclusions

The action alternatives positively address current and future recreation needs. In terms of economic benefit associated with these objectives, the no action alternative would have the least benefit and alternatives A, C, and D would have beneficial effects to varying degrees. Alternative D, due to its geographic scope, particularly in urban areas, has the greatest potential for beneficial impacts to quality of life and other socioeconomic indicators.

Increased visitation would represent an adverse impact on infrastructure and social systems. Since visitation might be expected to increase in each of the action alternatives, infrastructure impacts would likely increase proportionally. The adverse impact in alternative A would likely be negligible, increasing to minor in both C and D. With congressional action approving the implementation of any of the action alternatives, or variants thereof, further planning would be undertaken. Additional environmental analysis would be prepared to look at site and area-specific activities and alternatives. Through that analysis, more specific conclusions can be drawn regarding direct, indirect and cumulative impacts. Joint planning efforts among stakeholders, and subsequent agreements, would be designed to optimize between the economic benefits and social costs so that the former is maximized and the latter is mitigated.

Impact Analysis - Socially or Economically Disadvantaged Populations Socioeconomic Impacts (Environmental Justice)

As the analysis in the *Recreation Use and Visitor Experience; Affected Environment* describes, economically disadvantaged populations in the study area lack access and the ability to partake of existing opportunities due to lack of close-to-home open space, lack of effective transportation, lack of culturally advantageous facilities or opportunities, and lack of knowledge about recreation and natural resources. Under current conditions, all contribute to an impact on these populations. As stated, each action alternative attempts to remedy these current conditions to provide a net beneficial result.

BACKGROUND ON ENVIRONMENTAL JUSTICE

Environmental justice must be considered in every major federal action by assessing environmental factors that negatively or disproportionally affect minority populations. Pursuant to Executive Order 12898, promulgated by President Clinton in 1994, federal agencies "shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States."

The NPS has numerous partnerships programs with youth corps and conservation organizations that serve as a means to introduce minority and low income children and young adults to environmental and conservation issues.

Youth corps and job corps partnerships provide a solid environmental learning experience for the youth involved, while at the same time leaving a legacy of work which significantly benefits the parks and community.

The NPS also seeks to identify opportunities to develop partnerships with Tribal governments, consistent with mission needs to provide necessary technical assistance to enhance tribal capacity to address environmental, health, and welfare concerns.

NO ACTION ALTERNATIVE

A portion of the local population can be categorized as socially or economically disadvantaged and potentially affected by each of the alternatives. Population growth trends over time will likely exacerbate the amount and intensity of

this condition. This equates directly to socially and economically disadvantaged populations who lack the means of access, and the ability to partake of existing opportunities due to physical barriers (e.g adult and childhood obesity or other ailments). The existing deficiencies in open space, lack of effective transportation connecting communities to recreation opportunities, lack of culturally advantageous facilities or opportunities, and lack of knowledge about recreation and natural resources, under current conditions, all contribute to moderate adverse impacts on these populations.

ALTERNATIVE A

Alternative A would have a generally beneficial impact on socially and economically disadvantaged populations by providing an improved recreational experience at the ANF. However, it would likely represent only a minor improvement for communities that are currently underserved for recreation. Of all the alternatives, this one places the least emphasis on developing new effective partnerships and cooperative management efforts that have the best chance of providing a remedy for these populations. Also, it would do little to increase access to recreation from underserved populations or provide close-to-home opportunities in urban communities.

ALTERNATIVE C

Alternative C would have a greater beneficial impact on these populations, with efforts applied specifically in urban areas close to the San Gabriel River where some communities are underserved and economically disadvantaged. The alternative potentially provides job training and opportunities within these communities that have the potential both to improve economic access for recreation, but also to build programs and provide awareness regarding opportunities. To the extent that recreation opportunities can be designed to fit cultural preferences (for example, large group picnic and camping areas) for local disadvantaged populations, the greater will be the beneficial results. The development of effective and diverse partnerships in this alternative would also serve to build programs and cooperative agreements with entities that represent disadvantaged groups so that the necessary results can be obtained.

ALTERNATIVE D

Again, due its expanded geographic and programmatic scope, alternative D holds the greatest potential benefit for socially and economically disadvantaged populations. Also, it presents the most opportunities for new close-to-home recreation opportunities for areas that are currently underserved. In short, this alternative provides the best framework for implementing NPS' environmental justice policy as outlined above.

CUMULATIVE IMPACTS

Population growth trends in the study area and the surrounding region are likely to put additional pressure on available open space. Considering that public lands in this area are currently among the most heavily visited within the system, recreation opportunities and qualities are likely to diminish if nothing is done. The study area alternatives seek to ameliorate the condition to a greater or lesser degree. Therefore, the cumulative effect of growth and development trends, plus the effects of each alternative, would likely result in a net beneficial condition in regard to recreational opportunities for disadvantaged populations within the study area. The overall level of cumulative impact, considering factors that exacerbate issues for the socially and economically disadvantaged, would decline as compared to the no action alternative.

Conclusions

In general, it is anticipated that each of the action alternatives is likely to improve conditions regarding health and well-being of disadvantaged populations. Clearly, it is the stated intent of this congressionally-mandated study to do so. To do nothing would leave these populations to current trends in development. The creation of new public land open spaces would be advantageous. At the same time, the proposed changes in land use on existing public lands is not likely to affect commercial or non-commercial resources and values that economically disadvantaged populations might be dependent upon under current conditions.

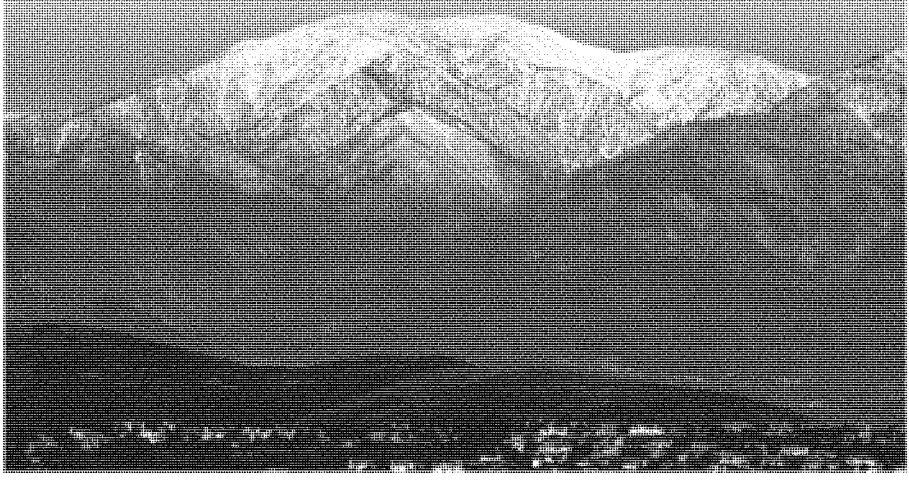
The partnership program and stakeholder agreements set forth particularly in alternatives C and D would meet the intent of the U.S. Department of the Interior and NPS Environmental Justice strategy as outlined above. Nevertheless, it is important to seek effective involvement of potentially affected social and economically disadvantaged populations when a congressionally mandated plan goes forward.

The City Project

San Gabriel Watershed and Mountains Special Resource Study & Environmental Assessment

Errata

October 2012



The City Project

San Gabriel Watershed and Mountains Special Resource Study & Environmental Assessment

Errata
October 2012

The following errata provide factual corrections, additions, and revisions to the *Draft San Gabriel Watershed and Mountains Special Resource Study and Environmental Assessment (draft study report/EA)*, dated September 2011. Changes to the draft study report/EA, and references to the page number where the change has occurred are provided. The reader must have access to a copy of the draft study report/EA in order to fully understand the changes.

Additional copies of this document and the September 2011 report can be downloaded from the internet at www.nps.gov/pwro/sangabriel. Printed copies are also available on request from the address below.

National Park Service
Attn: San Gabriel Watershed and Mountains Special Resource Study
333 Bush Street, Suite 500
San Francisco, CA 94104

Chapter 7 Environmental Consequences

Page 205, Table 12, Row 1, Second Column, revised to include additional language:
No specific actions will be taken in a floodplain due to completion of this study. The outcome of the study will be a recommendation to Congress. If Congress takes action, then new environmental analysis would be undertaken prior to specific implementation actions that may affect floodplains.

Page 205, Table 12, revised to include new row:

Mandatory Topic	Discussion and Rationale	Disposition
Greenhouse Gas Emissions (GHG)	Completion of the study does not itself affect greenhouse gas emissions, nor does it propose specific management actions which would affect greenhouse gas emissions. If Congress takes action, then new environmental analysis would be undertaken prior to specific implementation actions that may affect (GHG).	This topic is dismissed from further analysis

Page 225, 2nd column, following last paragraph, revised to include additional demographic information about minority and low income populations:

Minority and Low Income Populations

In February of 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The Executive Order identifies agency responsibilities:

> To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Marianas Islands.

The Council on Environmental Quality provided *Environmental Justice: Guidance under the National Environmental Policy Act* in December 1997 to assist federal agencies in addressing environmental justice in their NEPA procedures. This guidance defines low-income population, minority, and minority population as follows:

> Low-income population: Low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.
>
> Minority: Individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. In identifying minority communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native American), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of geographic analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as to not artificially dilute or inflate the affected minority population. A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds (CEQ 1997).

Based on data from the U.S. Census Bureau for 2010 for 49 communities in the study area, 41 communities had a minority population greater of than 50%; eight communities had a minority population of less than 50%. Data was not available for Bradbury, Irwindale, and Industry communities. Minorities represented from 23% to 96% of the population in those 49 communities. Individuals identified as members of minority groups totaled nearly 2.1 million people in the 49 communities, 74% of total study area population (U.S. Census Bureau 2012).

The total population of the 49 communities for which data was available was approximately 2.8 million (Note: some of the 2.8 million may fall outside of the study area as many of the communities are only partially included), with 74% representing minority groups, and 11% being below the poverty level. About 11% of the people in the study area had incomes below poverty level. In 22 out of 49 communities in the study area more than 10% of the population is below poverty, with the percent of the population within each community below poverty level ranging from 4.1 to 20.7%.

Page 242, first column, third paragraph, last sentence, revised as follows:
This would be done in partnership with water agencies, the Los Angeles County Department of Public Works and the U.S. Army Corps of Engineers.

Chapter 8 Consultation and Coordination

Page 218, second column, second paragraph, second sentence revised as follows:
However, county averages can mask dramatic disparities in access to green space within the county (The City Project 2007 and 2011).

Page 219, first column, fourth paragraph, second sentence revised as follows:
Recent studies have found that statewide, Los Angeles County is one of the most disadvantaged counties in terms of access to parks and open space for children and people of color (The City Project 2007 and 2011, Trust for Public Land 2004).

Page 220, second column, second paragraph, last sentence revised as follows:
These ethnic groups are 12-15 times more likely to have less park acreage per capita when compared to Whites (Sister, C., Wilson, J.P., and Wolch, J. 2008, The City Project 2007 and 2011).

References

Pages 301 to 302, revised to add the following new references:
California Department of Fish and Game

2011a *California Natural Diversity Database, Special Vascular Plants, Bryophytes, and Lichens List.* Available online at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf

2011b *California Natural Diversity Database, Special Animals List.* Available online at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf

Page 303, revised to add new reference:

[CEQ] Council on Environmental Quality, Executive Office of the President
1997 *Environmental Justice Guidance Under the National Environmental Policy Act.* Washington, D.C.

Page 303, revised to remove reference:

~~The City Project~~
~~2007 *Healthy Parks, Schools and Communities: Mapping Green Access and Equity.* Available on the internet at: http://www.cityprojectca.org/ourwork/mappinggreenaccess/index.html.~~

Page 303, revised to add new reference:

The City Project
2011 *Healthy Parks, Schools and Communities: Mapping Green Access and Equity for Southern California.* Available online at: http://www.cityproject.org/greenjustice

Page 306, revised to add new reference:

King, Chester and and Thomas C. Blackburn
1981 "Tataviam." In Heizer, Robert, volume editor, *Handbook of North American Indians, Vol.8: California.* Smithsonian Institution Press, Washington D.C.

Page 307, revised to add new reference:

Magney, David, David Magney Environmental Consulting
2012 Personal communication with Barbara Butler, National Park Service, Pacific West Region, January 2012.

Page 308, revised to add new reference:

NPS
2010 *Overview of the History of American Indians in the Santa Monica Mountains (DRAFT).* Prepared by Chester King for the Santa Monica Mountains National Recreation Area.

Page 310, revised to add new reference:

Robertson, Glenn
2004 *Whittier Hills Ecological Preserve Master Plan and Proposal for Puente-Chino Hills Open Space District.* Whittier, California.

Page 312, U.S. Census Bureau, revised to add new reference:

2012 *State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building*

Permits, Consolidated Federal Funds Report. Available online at:[http://quickfacts.census.gov/qfd/states/06000.html*]*. Last Revised: Tuesday, 18-Sep-2012.

Page 313, revised to add new reference:

[USFS] United States Forest Service, Department of Agriculture

2011 *Angeles National Forest Threatened, Endangered, Proposed, Candidate, and Forest Service Sensitive Plants and Animals Which May Occur Within the Angeles National Forest, Los Angeles and San Bernardino Counties, California*. Animals Revised March 2004; Plants October 1, 2006; Status of Species Updated September 21, 2007; Scientific Names Updated February 10, 2011.

Appendix C

The following tables summarize the analyses under:

Table 1. Comparison of Title VI and Environmental Justice Authorities

Table 2. Executive Order 12898 on Environmental and Health Justice

Table 3. Compliance or equity analysis FTA

Table 4. Disparate impact standard Title VI regulations

Table 5. Intentional discrimination standard Title VI statute

Table 6. National Research Council health impact assessment

Table 1: Comparison of Title VI and Environmental Justice Authorities

Key Aspects of the Authorities[23]	Title VI	Environmental Justice
What is the basis for the authority?	Title VI is a Federal statute and provides that no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.	The basis for addressing environmental justice is an Executive Order: EO 12898 directs each Federal agency to "make achieving environmental justice part of its mission." The EO is intended to improve the internal management of the executive branch . . . .
What is the purpose of the authority?	Title VI prohibits recipients of Federal financial assistance (e.g., states, local governments, transit providers) from discriminating on the basis of race, color, or national origin in their programs or activities, and it obligates Federal funding agencies to enforce compliance.	EO 12898 calls on each Federal agency to achieve "environmental justice...by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...."
To whom does the authority apply?	Title VI is a Federal law that applies to recipients and subrecipients of Federal financial assistance (e.g., States, local governments, transit providers), and not to DOT itself.	EO 12898 applies to Federal agency actions, including DOT's and FTA's actions. Title VI is one of the tools used by Federal agencies to implement this directive.
What does the authority require, and of whom?	Under Title VI, DOT has the responsibility to provide oversight of recipients and to enforce their compliance with Title VI, to ensure that recipients do not use DOT funds to subsidize discrimination based on race, color, or national origin.	EO 12898 is a directive from the President of the United States to Federal agencies intended to improve the internal management of the Federal government. DOT issued its own Order implementing EO 12898, and updated the Order in May 2012 (Order 5610.2(a)).
What does the authority say with regard to negative effects or impacts?	In accordance with 49 CFR part 21 and Title VI case law, if an otherwise facially neutral program, policy, or activity will have a discriminatory impact on minority populations, that program, policy, or activity may only be carried out if (1) the recipient can demonstrate a substantial legitimate justification for the program, policy, or activity; (2) there are no comparably effective alternative practices that would result in less-disparate impacts; and (3) the justification for the program, policy or activity is not a pretext for discrimination.	In accordance with EO 12898 and the DOT Order on EJ, if a DOT program, policy, or activity will have a disproportionately high and adverse effect on minority or low-income populations, that program, policy, or activity may only be carried out if further mitigation measures or alternatives that would reduce the disproportionately high and adverse effects are not practicable. In determining whether a mitigation measure or an alternative is "practicable," the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects will be taken into account.
Does the authority create any rights or remedies?	Title VI allows persons alleging discrimination based on race, color, or national origin by recipients of Federal funds to file administrative complaints with the Federal departments and agencies that provide financial assistance. Persons alleging intentional discrimination (i.e., disparate treatment) may bring a court action seeking to enforce Title VI but cannot do so with regard to allegations of discrimination based on agency disparate impact regulations. Disparate impact claims may be filed with the Federal agency.	EO 12898 establishes the Executive Branch policy on environmental justice . . . .

[23] Table 1 is from Federal Transit Administration, U.S. Department of Transportation, *Circular FTA C 4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients* 4-5 (Aug. 15, 2012).

Table 2: Environmental and Health Justice Analysis Executive Order 12898

Executive Order 12898 on Environmental and Justice.[24] ***See*** **draft Study at 3.13.3.**	**NRC Health Impact Assessment (HIA): 1. screening, 2. scoping, 3. assessment, 4. recommendations, 5. reporting, 6. monitoring and evaluation**[25]
1. Identify disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority populations and low-income populations	1. Screening 2. Scoping 3. Assessment 5. Reporting
2. Avoid, minimize, and mitigate such effects through mitigation measures or alternatives	3. Assessment 4. Recommendations 5. Reporting 6. Monitoring and evaluation
3. Prevent denial of, reduction in, or significant delay in receipt of benefits by minority and low-income populations	3. Assessment 4. Recommendations 5. Reporting 6. Monitoring and evaluation
4. Social, economic (including costs), and environmental effects taken into account	3. Assessment 6. Monitoring and evaluation
5. Ensure full and fair participation by potentially affected communities	1. Screening 2. Scoping 3. Assessment 6. Monitoring and evaluation

[24] *See, e.g.,* FTA, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients, Circular*, FTA C 4703.1 at 12, 42 (Aug. 15, 2012). *Accord, Coliseum Square Assoc., Inc. v. Jackson,* 465 F.3d 215, 232 (5th Cir. 2006) (12898 instructs agencies to consider the environmental justice impacts of their actions; agency's consideration of environmental justice issues reviewed under Administration Procedures Act).

[25] National Research Council (NRC), *Improving Health in the United States: The Role of Health Impact Assessment (HIA) (2011),* HIA framework chart at page 7, 6-9; logic framework of causal pathways at 54; systematic scoping table at 55; health effects matrix at 63; rating health effects at 64.

Table 3: Compliance, equity, and environmental and health justice framework

Compliance or equity review FTA[26]	NRC Health Impact Assessment[27]
1. A clear description of what the agency plans to do	1. Screening 2. Scoping 5. Reporting
2. Analyze the burdens and benefits for all populations, including minority and low income populations	3. Assessment
3. Analyze alternatives	2. Scoping 4. Recommendations
4. Full and fair inclusion of minority and low-income populations in the decision-making process	1. Screening 2. Scoping 3. Assessment 6. Monitoring and evaluation
5. Implementation plan to address any equity concerns identified in the process	5. Reporting 6. Monitoring and evaluation

[26] *See, e.g., Environmental Justice Policy Guidance for Federal Transit Administration Recipients, Circular*, FTA C 4703.1 and pages 12, 42 (Aug. 15, 2012); FTA, *Title VI Requirements and Guidelines for Federal Transit Administration Recipients, Circular*, FTA C 4702.1B (Oct. 1, 2012); Letters from Peter M. Rogoff, Administrator, FTA, U.S. Department of Transportation, to Metropolitan Transportation Commission and San Francisco Bay Area Rapid Transit District (Jan. 15, 2010 and Feb. 12, 2010), *available at* www.cityprojectca.org/blog/archives/4468. *See also* 42 C.F.R. §§ 42.406, 42.407 (DOJ Title VI coordination regulations require data collection to permit effective enforcement of Title VI and compliance review).

[27] National Research Council (NRC), *Improving Health in the United States: The Role of Health Impact Assessment (HIA) (2011)*, HIA framework chart at page 7, 6-9; logic framework of causal pathways at 54; systematic scoping table at 55; health effects matrix at 63; rating health effects at 64.

Table 4: Disparate Impact Analysis Title VI Regulations

Disparate Impact Analysis[28]	NRC Health Impact Assessment[29]
1. Whether a program or activity has an adverse and disproportionate numerical impact based on race, color, or national origin. This can be shown through statistical studies or anecdotally.	1. Screening 2. Scoping 3. Assessment 5. Reporting
2. Are the disparities justified by business necessity	3. Assessment 4. Recommendations 5. Reporting 6. Monitoring and evaluation
3. Are there less discriminatory alternatives to accomplish these interests	3. Assessment 4. Recommendations 5. Reporting 6. Monitoring and evaluation

[28] The HUD regulations described above use this disparate impact analysis. 24 C.F.R. § 100.500. *See also* federal disparate impact regulations, 43 C.F.R. § 17.1 *et seq.* (Department of Interior Title VI regulations); 40 C.F.R. § 7.1 *et seq.* (EPA Title VI regulations).

[29] National Research Council (NRC), *Improving Health in the United States: The Role of Health Impact Assessment (HIA) (2011)*, HIA framework chart at page 7, 6-9; logic framework of causal pathways at 54; systematic scoping table at 55; health effects matrix at 63; rating health effects at 64.

Table 5: Intentional Discrimination Analysis Title VI Statute

Intentional Discrimination Analysis[30]	NRC Health Impact Assessment[31]
1. Whether there are adverse, numerical disparities based on race, color, or national origin	1. Screening 2. Scoping 3. Assessment 5. Reporting
2. Whether there is a history of discrimination	1. Screening 2. Scoping 3. Assessment 5. Reporting
3. Whether the program or activity meets substantive standards	3. Assessment 4. Recommendations 5. Reporting
4. Whether the program or activity meets procedural standards	3. Assessment 4. Recommendations 5. Reporting
5. The decision maker's knowledge of the impact of the program or activity	3. Assessment 4. Recommendations 5. Reporting 6. Monitoring and evaluation
6. Whether there is a pattern or practice of discrimination	1. Screening 2. Scoping 3. Assessment 5. Reporting 6. Monitoring and evaluation

[30] *See, e.g.,* Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. §§ 2000d - 2000d-4a; *Village of Arlington Heights v. Metro. Housing Dev. Corp.*, 429 U.S. 252, 265-70 (1977).
[31] National Research Council (NRC), *Improving Health in the United States: The Role of Health Impact Assessment (HIA) (2011),* HIA framework chart at page 7, 6-9; logic framework of causal pathways at 54; systematic scoping table at 55; health effects matrix at 63; rating health effects at 64.

Table 6: NRC Health Impact Assessment

NRC Health Impact Assessment[32]	
1. Screening	
2. Scoping	
3. Assessment	
4. Recommendations	
5. Reporting	
6. Monitoring and evaluation	

[32] National Research Council (NRC), *Improving Health in the United States: The Role of Health Impact Assessment (HIA) (2011)*, HIA framework chart at page 7, 6-9; logic framework of causal pathways at 54; systematic scoping table at 55; health effects matrix at 63; rating health effects at 64.

The Nature Conservancy

The Nature Conservancy
Protecting nature. Preserving life.™

601 South Figueroa St, Suite 1425
Los Angeles, CA 90017

Tel (213) 327-0104
Fax (213) 327-0161

nature.org/california

November 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District;
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, California 90053-2325

Via Email: comments.lariverstudy@usace.army.mil

Regarding: Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Dear Dr. Axt,

On behalf of the California Chapter of The Nature Conservancy, thank you for the opportunity to comment on the Los Angeles River Ecosystem Restoration Integrated Feasibility Report: Feasibility Study and Environmental Impact Statement/Environmental Impact Report.

The Nature Conservancy (Conservancy) is an international non-profit organization dedicated to conserving the lands and waters on which all life depends. Our on-the-ground work is carried out in all 50 states and in 34 foreign countries and is supported by approximately one million members. To date, we have helped conserve more than 117 million acres (including 1.2 million acres in California) and 5,000 river miles around the world. We have been engaged in the protection and management of natural resources across the U.S. for many years. In fact, we sponsor more projects with the US Army Corps of Engineers than any other non-profit organization.

The foundation of the Conservancy's work is our commitment to using the most up-to-date conservation science information and methodologies to guide decision-making. Our tools and methods have been widely adopted by other organizations and agencies that engage in ecosystem restoration. As a science-based organization with on-the-ground experience, the Conservancy carefully reviewed the "Area with Restoration Benefits and Opportunities for Revitalization" (ARBOR) Study. Our comments are focused on the habitat restoration, biological diversity, wildlife, and ecological benefits covered in the Study.

ARBOR arrives at a time when the global significance of the mediterranean biome is well-recognized. Mediterranean-climate regions have high levels of species richness and endemism and are found in only five places on Earth: the Mediterranean Basin, the western cape of South Africa, southwestern Australia, the central coast of Chile, and California and northern Baja California. While mediterranean-climate regions cover only 2.2 percent of Earth's land surface, they contain 20 percent of all known plant species. Unfortunately, mediterranean ecosystems are also among the most threatened on Earth. Because they are characterized by hot, dry summers and mild, wet winters, mediterranean-climate regions are attractive places for human settlement. Many have been heavily urbanized and now face grave problems such as habitat destruction, degradation, and fragmentation. More than 41 percent of the mediterranean biome has been converted to farmland and urban uses, and only 5 percent of its natural area has been protected.

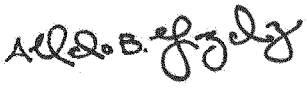
In Greater Los Angeles, the valleys have been developed for residential, commercial and industrial use and many natural riparian corridors have been channelized. However, we found in our 2013 Assessment of the region's biological diversity, important ecological values remain as do opportunities for ecological restoration that will benefit nature and people. This science-based assessment demonstrated that the areas of greatest restoration potential are the region's riparian corridors, the foothills, and water retention/flood control basins, including the soft-bottom portion of the Los Angeles River.

Restoration of the Los Angeles River will be of particularly high value, because its flows are vital to the region's hydrological and groundwater health and to the riparian plant communities along its course. These riparian plant communities are, in turn, essential to the existence of many of the region's distinctive species of birds, mammals, reptiles, amphibians, insects, spiders and other invertebrates. As the Study notes, the Los Angeles River was once populated with native fish and amphibians. Songbirds, seabirds, and water fowl found nesting sites and food sources there, and many animals large and small used the channel and riparian zone as a natural corridor for movement. Restoring the Los Angeles River will be a necessary component of the restoration of nature and of nature's benefits to people in the nation's second largest metropolitan area. Its restoration is also a matter of global significance due to the scarcity of mediterranean riparian habitat.

In closing, the Conservancy supports the extensive habitat restoration envisioned in ARBOR, including the proposal to restore the 11-mile soft-bottom portion of the Los Angeles River, Valley Foothill Riparian Strand, and Freshwater Marsh Habitat. The restoration of habitat and wildlife linkages will reconnect habitats along the river and throughout the region, which would leader to broader biodiversity gains. As stated in the attached Appendix, it is essential that plants and both invertebrate and vertebrate wildlife species, such as insects, fish, amphibians, reptiles, birds, and mammals, be included in the ecosystem restoration plan. While each of the alternatives (10, 13, 16, and 20) detailed in the Study offers restoration benefits, our evaluation indicates that Alternative 20 will provide the greater biological diversity and ecosystem function restoration benefits. 1

We commend the U.S. Army Corps of Engineers and the City of Los Angeles on this comprehensive study of the Los Angeles River's ecosystem restoration potential. Thank you again for the opportunity to provide comments on the Los Angeles River Ecosystem Restoration Integrated Feasibility Report. Please direct questions to Shona Ganguly, External Affairs Manager, at sganguly@tnc.org or please call 213-327-0104 extension 14207.

Sincerely,



Alfredo Gonzalez
Regional Director, South Coast & Deserts
The Nature Conservancy

Addendum to The Nature Conservancy's Comments on the Army Corps of Engineers' Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Appendix A: Scope, Geography, and Restoration

Geography The Report appropriately focuses on the approximately 11-mile long reach of the River, which extends from the US Army Corps of Engineers Headgate to First Street. The entire River is 51 miles long and the original study area encompassed a 32 mile stretch from the confluence of Bell and Calabasas Creeks at Owensmouth Boulevard in the northwestern San Fernando Valley to Washington Street near the border between the City of Los Angeles and Vernon. The ARBOR selected reach has the River's longest sections of soft bottom and connections to important tributaries and two relatively large riverside properties that could be restored to function as floodplain and wildlife habitat (Taylor Yard and Piggyback Yard). Other areas within the watershed that deserve greater attention include the Sepulveda Basin and the linkage between the northern Verdugo Hills and Big Tujunga Creek (from approximately Green Verdugo Reservoir to the Angeles National Golf Club). While these stretches require consideration in a distinct project, they are integrally important to the restoration of an ecologically functional Los Angeles River. 2

Scope The Project's stated planning objectives are appropriately directed towards habitat protection and restoration plus increased connectivity with large, core habitat areas nearby, all of which will protect and restore biological diversity. The stated objectives are (see ES.5 on page xxiii):

1. Restore Valley Foothill Riparian Strand and Freshwater March Habitat: Restore Valley Foothill Riparian wildlife habitat types, aquatic freshwater marsh communities, and native fish habitat within the ARBOR reach throughout the period of analysis, including restoration of supporting ecological processes and biological diversity, and a more natural hydrologic and hydraulic regime that reconnects the river to historic floodplains and tributaries, reduces velocities, increases infiltration and improves natural sediment processes
2. Increase Habitat Connectivity: Increase habitat connectivity between the river and the historic floodplain and increase nodal connectivity for wildlife between restored habitat patches and nearby significant ecological zones such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills and San Gabriel Mountains within the ARBOR reach throughout the period of analysis.
3. Increase passive recreation: include recreation that is compatible with the restored environment in the ARBOR reach throughout the period of analysis.

Objectives 1 and 2 will directly contribute to protection and restoration of biological diversity. The portion of Objective 1 dedicated to restoration of a more natural hydrologic and hydraulic regime will also contribute to flood risk management. For nearly a century, the primary objective of Army Corps of Engineers projects was flood risk management through channelization and hard barriers. The Corps has expanded its means to reaching these hydrologic and hydraulic objectives in the four alternatives featured in the Report that will also restore processes and features that directly contribute to and in some cases are necessary for the restoration of viable populations of some native species. Those methods also provide "green infrastructure" benefits for people.

More specific information about the benefits sought, and especially about the benefits expected from different actions, are missing from this Report and would be helpful, perhaps crucially so, in guiding decisions about which alternative to pursue. There is little evidence in the Report that any of the alternatives discussed would be sufficient to restore viable populations of native fish to the Los Angeles River. We recommend that either 3

information on additional steps that would be necessary to accomplish this be added to the Report along with a brief analysis of the cost and practical possibilities of this occurring OR that this objective be dropped.

Moreover, there is very little specific information on restoring habitat for migratory and resident birds was included in the Report. The ARBOR section of the Los Angeles River already harbors impressive numbers of waterfowl (mostly migratory) and some birds that nest, shelter and forage in riparian vegetation, particularly during certain periods of the year. The actions selected and taken could be more beneficial and cost-effective (efficient) if guided by clearer analysis of which species were most likely to benefit, and how habitats and other resources most suited and important to them could be restored. For example, some species of wading birds, ducks, geese and other waterfowl are favored by certain water depths and by certain substrates (e.g. fine muds v. sands), and a focus on enhancement or restoration of these features could make a significant difference in whether the project actually attracts targeted species and how many individuals the restored section of the River then supports or hosts during migratory visits. Because birds attract interest and attention not only from serious birdwatchers but from many more people with interest in the world around them, efforts that bring significant numbers of birds, especially species less familiar than the pigeons, crows and English sparrows common in urban environments, could garner far greater public interest and support for this project and other conservation work. 4

Restoration & Biodiversity Protection Alternative 20 (RIVER) makes the most provisions for biodiversity protection and restoration compared to Alternatives 10, 13, and 16, particularly because of the additional connections it would provide to nearby core protected areas, and the direct links it would make with re-created wetland/floodplain habitat in the Piggyback Yards and the Los Angeles State Historic Park (Cornfields). Alternative 20 also provides the highest number of habitat units restored and the highest number and quality of ecosystem connections re-established—the factors most closely aligned with the protection and maintenance of biological diversity and ecosystem functions. Importantly, Alternative 20 includes restoration of the Verdugo Wash confluence and the Cornfields site, in addition to reaches 1-7 (connecting Pollywog Park, Bette Davis Park, Ferraro Fields, Upstream Glendale Narrows, Los Feliz, Bowtie Parcel, Downstream Glendale Narrows/Arroyo Seco, Main Street, and First Street).

The re-created wetland/floodplain area of the Piggyback Yards and the Cornfields site will provide new riparian habitat and significant flood risk reduction via green infrastructure. It will also provide significant flood risk reduction via green infrastructure (i.e. the use of natural systems such as restored flood plain capable of supporting healthy native vegetation, rather than artificial, hardscape solutions). Restoration of these two sites will also bring nature into areas of Greater Los Angeles now particularly lacking in open space and native habitats. 1

Alternative 20 includes actions designed to link habitats along the Los Angeles River to the Santa Monica Mountains and San Gabriel Mountains and to restore floodplain habitat (and floodplain function) to the Taylor Yard, as does Alternative 13. However, Alternative 20 alone includes actions to link Verdugo Wash and the Verdugo Hills (through restoration around the confluence of the Los Angeles River and Verdugo Wash). In Alternatives 13, 16 & 20 connection to the San Gabriel Mountains would be made through restoration around the confluence of the Los Angeles River and Arroyo Seco which flows from the San Gabriel Mountains north of Pasadena and Altadena. However, the Los Angeles River – Arroyo Seco confluence is in a very highly developed, busy location, surrounded by major roads and rail lines and may remain difficult to reach for many animals. In Alternative 20, a second connection to the San Gabriel Mountains through the Verdugo Hills will be started, but additional work to connect the northern Verdugo Hills with the San Gabriel Range through Big Tujunga Creek will probably be necessary for this corridor to function for most terrestrial animals (many bird

species, some flying insects and some plants with good long-distance fruit/seed dispersal mechanisms may be able to cross the gap that now exists there). Likewise, while Alternative 13 would restore habitat to the Piggyback Yards only Alternatives 16 and 20 would eliminate the physical barrier between the Los Angeles River and the Piggyback Yards and thereby allow the Piggyback Yards area to function as floodplain and reduce flood risk.

We recommend that more information is provided on the habitat and biological diversity values in any of the areas the project Alternatives would link with (Santa Monica Mountains, San Gabriel Mountains, Elysian Hills, Verdugo Hills, etc.) in the final version of the Study. For example, although the Santa Monica Mountains are highly fragmented by residential and other urban developments, they still contain habitat and biodiversity values. The Verdugo Hills contain roughly 14 square miles of habitat including park lands totaling 4,000 acres owned and protected by the City of Burbank, City of Glendale, City of Los Angeles, California Department of Parks and Recreation (Verdugo Mountains State Park) and the Santa Monica Mountains Conservancy. Geologically a part of the Transverse Ranges, the Verdugos (sometimes called Verdugo Hills, sometimes Vedugo Mountains) are relatively low and largely covered with chaparral vegetation on slopes and more mesic canyon and riparian woodlands in canyons and along waterways. The San Gabriel Ranges to the north reach much greater elevations (over 10,000 feet) and host a wider variety of vegetation types ranging from coastal sage scrub in the lowlands to montane coniferous forests and meadows along the crest of the range and descending to Joshua Tree woodland and creosote scrub on the drier, inland side. The San Gabriel Range is part of a sprawling network of protected habitat of continental and global significance, connected with the San Bernardino and Peninsular Ranges to the east and south, the Santa Susana Range to the west and the Tehachapi Range to the north/northeast which in turn link to the Sierra Nevada. It supports a National Forest – parts of which would become part of a new National Recreation Area under a proposal now being given serious consideration – as well as state and local park and preserve lands. The San Gabriels host a wide variety of animals, including black bears, puma and many other mammals, reptiles, amphibians, fish, and birds. It would be particularly useful to know more about whether there are any species endemic to the region, or whose numbers are suspected of having dramatically decreased as a result not only of the destruction of habitat in the region, but of the severing of links between the various ranges (Santa Monicas, Verdugos, San Gabriel Mountains) that still harbor large areas of habitat. 5

Appendix B: Water Resources/Hydrology

Water Resources Sections 3.5 and 5.4 of the Report recount the fact that the river is in a relatively polluted state in an urban area, mostly supplied by sewage treatment plant outflows in dry weather, engorged by precipitation in rain events because few open areas are left to absorb the water.

Hydrology and Hydraulics The opening sections of the Report (page 1) state the purpose of the study and reflect the U.S. Army Corps of Engineers' core mission of flood risk. 6

> *It is important to note up front that the primary premise from the hydrology and hydraulics perspective is that any ecosystem project evaluated in this study must not negatively impact the flood risk management function of the system. This means any effort to alter the existing Los Angeles River channel must provide mitigation to offset any loss of conveyance.*

The premise is in conflict with the presence of vegetation in the river channel, which slows flow, raises water levels, and presents increased risks of flooding where the channel's concrete channel and levees are not adequate. The Report notes that several segments within the 11-mile reach considered for improvement are

currently not adequate to contain 100-year floods.[1] The channel construction, according to the Report, was based on originally defective design criteria (page 38-39).

The Report then identifies four selected alternatives that were analyzed compared to the Existing Conditions to determine their impacts on the flood control function of the channel. Two factors to evaluate the effects of alternatives:

> *One of the critical constraints for this ecosystem restoration study was that the proposed alternatives would have no impact on the flood control functions of the Los Angeles River Channel. In addition to the impacts on flood control, it is imperative the proposed alternatives do not create any adverse conditions related to high velocities. Since the proposed alternatives are quite elaborate and extensive, the COE needed an efficient process for determining impacts and feasibility for each of the proposed alternatives. To evaluate the hydraulic Impacts, it was decided to base the impacts on two factors; the change in maximum water surface elevation and the maximum velocity. (page 31)*

6

The Report evaluates maximum velocities for maintenance of vegetation and sets standards for soft bottomed, unlined sections of the river. In all of the Reaches covered by the Study, and for all of the Alternatives, velocities are typically greater than 8 feet per second. Because the original design of the channel was undersized (and FEMA has not recognized that fact), and because vegetation elevates flooding risk by restricting the velocity of flow, we have some concern that restoration efforts that increase the amount of vegetation in the river channel may be resisted despite the Corps' finding that "any of the four alternatives can work hydraulically given the constraint on maintaining vegetation to acceptable limits" (page 42). We would like additional clarification on whether any additional armoring will be requested downstream to compensate for increases in vegetation, and whether the Corps will retain the prerogative to remove vegetation that it considers interfering with swift flows during flooding events. This clarification could also help catalyze restoration efforts by nongovernmental organizations inclined to assist with Los Angeles River restoration and counter the idea that the need to manage flood risk will inadvertently or eventually undo their efforts.

Appendix C: Additional Recommendations (Geology, Seismology, Soils, Minerals, and Wildlife)

Study Area The heavily vegetated portion of the river continues past the Glendale Freeway (SR-2) all the way to the Golden State Freeway (Interstate 5), whereas in Section 3.5 on page 3-33, lines 10-12, the Report erroneously states, *"The River is mostly confined to a concrete-lined channel surrounded by urbanized areas and much of it is virtually devoid of any natural vegetation. Exceptions include Reaches 4-6 in the study area, roughly from Brazil Street to the Glendale Freeway."* The 2.34 mile reach of the river between the SR-2 and I-5 is described in the study as Reach 6 on page 2-13, where it is stated, *"Sediment deposited in the channel has formed sand bars/islands, which have become stabilized as the root systems of the many trees and other vegetation have trapped sediment."* Also, page 3-35 lines 3-4 state: "*Riparian communities continue south throughout the reaches and stop just upstream of the I-5 overpass, where the channel bed becomes concrete once again.*" Finally, it should be noted that there is also vegetation in Reach 2, and while the study states on page 2-9 lines 1-2 that Reach 2 "is not as densely vegetated as areas farther downstream in Reaches 4 to 6", it nonetheless contains some vegetation—"Sediment deposited in the channel has formed sand bars/islands,

7

[1] On page 15 of Appendix E, the Report notes: It is important to note there are several locations within the ARBOR reach where the probability of flows breaking out from the channel within the ecosystem project area is greater than 1% in any given year (equivalent to the 100-yr flood), i.e., the channel has less than 100-yr level of protection in some locations.

which have stabilized as the root systems of the many trees and other vegetation in the channel have trapped sediment over time" (page 2-8, lines 10-11). Therefore mischaracterization of this section of the river as "virtually devoid of any natural vegetation" should be corrected. 7

Nomenclature/Categorization In Section 3.1 on page 3-7, Figure 3-3, the San Rafael Hills are mislabeled as the Repetto Hills. The Repetto Hills are separate and distinct and located to the south and southeast of the San Rafael Hills. 8

In response to the section on perennial grasslands, if the dominant species are not perennial, this habitat type would be better categorized as "Annual Grassland", "Invasive Annual Grassland", "Non-native Annual Grassland", or even "California Grassland". On page 3-33, lines 40-42, the Report describes, *"Perennial Grassland Dominant species include introduced annual grasses such as wild oats, bromes, and fescues. Non-native forbs including filaree and clovers may be present. Native species may also be present."* 9

A question about the differences between the "Low Density Urban" and "Pasture Agricultural" categories arises from page 3-34, lines 8-9: *"Low Density Urban This is composed of urban uses such as parks, recreational fields, golf courses, and other such urban open space areas."* Given that this category undoubtedly has significant portions of it covered by grass, clarification is needed about difference between this category and "Pasture Agricultural" category listed above on page 3-33 line 38 and if it is based on a management difference. 10

Vegetation & Invasive Species The justification that there are limited funds to maintain vegetation in the channel and therefore the invasive species should be removed seems to be at the crux of the whole restoration debate for the Los Angeles River. On page 3-34, lines 11-16, the Report explains, *"Vegetation within the River channel can inhibit the channel's capacity to convey floodwaters. The channel is designed to be maintained free of vegetation to avoid impacts to flood conveyance and channel structures. However, lack of funds for maintenance has resulted in substantial vegetation growing within the channel. Due to limited funds available to maintain vegetation in the channel, USACE has focused on removing non-native vegetation using both herbicide and mechanical means. Non-native plants often out-compete natives, degrading the ecological vitality and productivity of native habitats."* 11

It is difficult to recommend restoration best practices without knowing how management is currently influencing the habitat present. More information about when and exactly what the Corps has done recently with regard to "occasional mechanical removal" of riparian habitat for this reach and the rest of the river would be helpful. The Report alludes to non-native removal efforts and "mechanical removal," but does not elaborate as seen on page 3-34, lines 25-26: *"Several small patches of riparian habitat are located within the River channel and are subject to occasional mechanical removal by the USACE, with most recent efforts focused on non-native removal."* and lines 38-39: *"Vegetation growth at Verdugo Wash has become a concern for inhibiting water flow and all vegetation is periodically mechanically removed in Reach 3."*

There is also limited quantitative data in the Report on species, vegetation, and degradation in these reaches, particularly on page 3-34, line 30: *"Staging areas between Forest Lawn Drive and Zoo Drive are bordered by perennial invasive grasses"* and on page 3-34, line 44: *"overall, vegetation is limited and degraded in these reaches."* Information is also needed on the "weedy species" as well as quantitative measurement of cover that is mentioned on page 3-35, line 21-23: *"Any vegetation within the main River channel is composed of weedy species that have become rooted in the cracks of the channel walls or hummocks of vegetation that grow on the minimal accumulated sediment and wash out with high flows."* 12

Wildlife Species The sections on the species along the Los Angeles River need elaboration, clarification, and more research. The bat species need to be specifically named, rather than the allusion on page 3-39, line 6-7: *"and several species of bats (CDFW 1993)."* (The CDFW study is not easily available online, which makes verification difficult.) Also, only the common urban species of birds are listed (page 3-39, lines 9-22). There are many species of birds that have been sighted at the Los Angeles River and recorded at the CNDDB and ebird that are not listed here, nor is there an accounting here of the total number of birds that have been seen along the river, despite the fact that this should be in the hundreds. Also, the work of the foremost bird expert in Los Angeles (Kimball Garrett) should be cited in this section. More waterfowl and shorebirds should be listed as well. We recommend that the section include additional and more thorough information and references.

The section on "Special Status Species" (page 3-40, line 14) should include information about special status natural communities. In addition, special status species should include all 898 taxa of Special Animals and all fully-protected animals as defined by the California Department of Fish and Wildlife:
http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spanimals.pdf,
http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/fully_pro.html
If these were to be considered as "Special Status Species" by this study (as they should be), then the list of special status species detected within the study area on the river grows longer to include:

- Willow Flycatcher
- White-tailed Kite
- Yellow Warbler, and a number of other species

13
14

We disagree with the language in the statement that indicates that "only three bird species have the potential to occur in the project area" as stated on page 3-40, lines 29-33: *"There are a total of 28 special status wildlife species with the potential to occur in the greater Los Angeles Basin (Appendix G). However, of these, only three bird species have the potential to occur in the project area, including high potential for least Bell's vireo (Vireo bellii pusillus), and low potential for both the southwestern willow flycatcher (Empidonax traillii extimus) and coastal California gnatcatcher (Polioptila californica)."* It is highly likely that there are other species that have this potential, particularly if the river and its habitats were to be enhanced through restoration. It also suggests that these areas have been thoroughly surveyed, which may or may not be the case. A more accurate statement would be: "However, of these special status species, only one has been recorded within the project area in recent years—the Least Bell's Vireo." Furthermore, in reference to page 3-40, the common names of bird species should be capitalized. This is the preferred format, and it avoids confusion when using common names (reference http://www.worldbirdnames.org/rules-caps.html).

15

The Report makes assumptions about certain species not occurring within the study area, when there is documentation to the contrary. For example, Willow Flycatcher occurrences within the study area have been documented in ebird, even though the Report states on page 3-40, lines 41-43 that *"the most recent documented occurrence of the southwestern willow flycatcher was over 13 miles west of the project area in the Angeles National Forest."* Also, while the California gnatcatcher may not nest in the acre of Coastal Scrub habitat found within the study area, this acre is close to known gnatcatcher habitat in the Santa Monica Mountains. On page 3-40, lines 43-44, the Report states, *"The gnatcatcher, which generally occupies coastal scrub habitat, is unlikely to occur since there is less than 1 acre of this habitat type in the corridor."* However, there is a record in ebird for California gnatcatcher from this spring (2013) in the bird sanctuary in Griffith Park, and individuals may intermittently use the remnant fragments of scrub habitat along the river.

16

The Nature Conservancy

The following statement from page 3-42, lines 12-16 about the blockage of wildlife passage is overly broad and requires citation and justification: *"The combination of the River channel and the adjacent highways and development has effectively created a blockage to the wildlife movement that would have historically occurred between the Santa Monica Mountains to the west and Verdugo Mountains and San Gabriel Mountains to the east. Additional development further blocks wildlife passage between the Verdugo Mountains and the much larger Angeles National Forest."* Our concern here reflects our desire for better understanding of wildlife movement in Los Angeles. In absence of a study done to quantify movement of wildlife through these areas, we do not know which species are restricted in their movements and which species may be moving through the urban environments to get to larger patches of habitat. These movements are very species-specific, and generalizations like the statement above could inadvertently add to the mistaken belief that "there is no nature in Los Angeles," a notion this report endeavors to dispel. 17

The central concern that emerged from a review of Section 4.9 is the exclusion of invertebrate species and plants from the species that were evaluated. On page 4-30, lines 21-22, the Reports describes, *"Over 175 species were evaluated in CHAP for the LA River Ecosystem Restoration Study including fish, amphibians, reptiles, birds, and mammals."* Also, only 35 of the 175 species were not birds. The main issues with this focus is that many of the species that carry out ecological functions are not vertebrates – and these "key Ecological Functions" are part of the CHAP methodology. It is also curious that many of the bird species evaluated in the CHAP were not mentioned in the section on wildlife, despite the fact that they have been recorded (on e-bird) within the study area on the river. These include: 18

- Hooded Oriole
- Bullock's Oriole
- Lazuli Bunting
- Blue Grosbeak
- Western Tanager
- several species of woodpeckers and owls
- Cinnamon Teal
- Ring-necked Duck
- Northern Pintail
- Sharp-shinned Hawk
- Osprey
- Great Blue Heron
- Spotted Sandpiper
- Black Necked Stilt

From a review of Section 5.5, Alternative 20 is the most beneficial for wildlife, because there is a significant increase in areas targeted for restoration compared to the other alternatives. This increased target area renders it the most expansive and transformative restoration alternative with 288 acres of valley foothill riparian habitat restoration, 46 acres of freshwater marsh creation, and open water habitat creation (from the expansion of the soft river bottom to its maximum potential along Reaches 5, 6, and 8) (page 5-55, line 35-38). 1

The River Project

November 18, 2013

Josephine R. Axt
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053

ATTN: Ms. Erin Jones, CESPL-PD-RN

The RIVER PROJECT
3912 Laurel Canyon Blvd., # 208
Studio City, California 91604
tel: 818-980-9660
www.TheRiverProject.org

SUBJECT: COMMENTS ON THE LOS ANGELES RIVER ECOSYSTEM RESTORATION FESIBILITY REPORT AND EINVRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

The River Project submits some rather informal comments for your consideration:

The study does not consider climate change or its impacts at all. In 2013 - with what we've seen, with what we know, with the recent Presidential Executive Order – that's inexcusable. 1

The study does not consider flood risk management. Los Angeles is a national priority watershed – one of the top 10% most at risk of NOT achieving the Corps 100-year "vision" according to the Corps' own National Watershed Vision report. 2

The study does not consider upstream inputs as they are bound to change over time, despite the fact that they are now in the process of changing and - given City recent commitment to capture and infiltrate local rainfall to the maximum extent practicable - will certainly continue to change over time. This despite Corps guidance that "Restoration projects should be conceived in a systems context ... in order to improve the potential for long- term survival as self-regulating, functioning systems. This system view will be applied both in examination of the problems and the development of alternative means for their solution. Consideration should be given to the interconnectedness and dynamics of natural systems..." and despite the directive following the 1996 LACDA lawsuit that the Corps and County should take a watershed approach in the region. 3

The study does not consider local water resources. Nor does the study consider the inherent conflict between continuing to operate the LACDA Project as it was designed and responsibly stewarding Los Angeles' local water resources. Recognizing and reconciling these two issues are of paramount importance to achieving a climate adaptive Los Angeles. 4

Widening the channel is indeed critical to restoring ecosystem function as well as to protecting local water resources and achieving a higher measure of public safety. Appropriate study of this approach was hampered by the study's narrow scope. 5

The notion that the habitat created by the proposed project will suffer from reduced flows seems to demonstrate a lack of understanding of the needs of our native habitats. The Corps' cavalier attitude toward valuable ecosystems in the Los Angeles region has been repeatedly demonstrated, most recently in the Sepulveda Basin. There is no reason to believe that attitude 6

will change. Given the City's historic budgeting for parks and their track record at Bull Creek and their own Studio City Greenway, leaving maintenance of the project in their hands is not, at this point in the City's understanding of ecosystems and their value, provide any higher measure of comfort.

While significant effort went into the development of the study, the project was doomed from the beginning by the narrowly constrained scope.

As a result, what we have is an economic development plan with some native landscaping, wherein some concrete gets moved around but no meaningful ecosystem (much less hydrologic) function is derived. It appears that nearly half the jobs "created" and several times as much of the "labor income" comes from redevelopment as from restoration. 6

On the plus side, there are some lovely renderings that have been used to great effect to build a wider constituency for a restored river, for which we are thankful.

However, investing $1B in federal and local funds in a project that through it's limited scope is, in essence, an economic development plan that seeks to locate new development in areas that are and will remain at risk in a 100-year storm (not to mention a larger event) is mad.

A comparable investment that fully considered the river in a watershed context and explored its role in addressing Los Angeles' climate change challenges would be much more prudently spent.

The logical thing to do is to set this study aside, and begin a dialogue about whether or not the Army Corps is relevant on the Los Angeles River in this era of climate uncertainty. As long as they are charged with maintaining the system that they built in the 20th century – a system designed to throw our local water resources away as fast as possible, a system that will by its very nature always have a negative impact on local water quality and habitat – we cannot sincerely maintain that they do. Our challenge is to better balance the need for public safety with the need for local water resources and to do it through an integrated approach to achieve the greatest number of benefits for the citizens of Los Angeles. 7

WRRDA provides a means to decommission the Corps' responsibility on projects where they are no longer relevant. A move to do so in Los Angeles would take careful thought as to where the responsibilities would shift and thoughtful planning about a different role for the river in our city, but it seems the wisest decision we could possible make.

Melanie Winter, Director

The Trust for Public Land

THE TRUST for PUBLIC LAND

Los Angeles Office
L.A. River Center
570 West Avenue 26
Suite 300
Los Angeles, CA
90065
T 323.223.0441
F 323.223.2978
www.tpl.org

October 25, 2013

Lieutenant General Thomas P. Bostick
Commanding General and Chief of Engineers
United States Army Corps of Engineers
2600 Army Pentagon, Room 2E667
Washington, DC 20310-2600

Dear Lieutenant General Bostick:

On behalf of The Trust for Public Land, a national organization dedicated to conserving land for people, we are pleased to offer enthusiastic support for Alternative 20 (RIVER), in the USACE study of the Los Angeles River. We join Mayor Eric Garcetti, the Los Angeles City Council, and many of our partners and colleagues in Los Angeles in backing this expansive vision.

The Trust for Public Land was established in 1972 with goals of protecting land in and around cities, and pioneering new land conservation techniques. With offices now in 30 states, we have preserved more than 3 million acres of land for people to enjoy as parks, gardens, and other natural places, ensuring livable communities for generations to come.

To emphasize our support of Alternative 20 we have drafted the enclosed review, which outlines some of our work on urban river projects nationwide. Our experience testifies to the value of wide-ranging river restoration, and the multiple benefits of these projects on community and habitat health, water quality, and economic development.

We understand the important precedent promised by the ARBOR study, and applaud this grand effort to carefully consider and understand the possibilities for restoring the ecosystems of our beloved LA River. Thank you for this opportunity to share our thoughts.

Regards,

Roger Hoesterey
Vice President and Western Division Director

Jodi Delaney
Los Angeles Program Director

cc:
Hon. Eric Garcetti, Mayor of Los Angeles
Col. Kimberly Colloton, USACE SPL Commander
Dr. Josephine Axt, USACE SPL Chief of Planning
Gary Lee Moore, City Engineer

REVIEW AND COMMENT OF

LOS ANGELES RIVER—ARBOR STUDY

THE TRUST *for* PUBLIC LAND

CONSERVING LAND FOR PEOPLE

ABOUT US

The Trust for Public Land (TPL) is a national organization dedicated to conserving land for people to enjoy as parks, gardens, and other natural places, ensuring livable communities for generations to come.

We were established 1972 with goals of protecting land in and around cities and pioneering new land conservation techniques. Working from more than 30 offices around the country, The Trust for Public Land has completed more than 5,400 park and conservation projects nationwide, protecting more than 3.2 million acres valued at $7.4 billion in 47 states, Washington, DC, Puerto Rico and the US Virgin Islands. Forty years of success has made us a national leader and innovator in city park creation, state and local conservation funding and the use of GIS mapping and proprietary "greenprinting" techniques for conservation planning.

Our participatory design process engages local stakeholders to ensure that each newly developed site meets the needs of the community it serves. In fact, we provide a uniquely expert portal to local communities that brings experience with multi-million dollar fundraising efforts, complex negotiations and transactions, and land conveyances to local, state, and federal units of government directly to the people we serve.

The mission of our Parks for People Program is to ensure that all people—in particular, all children— are within a ten-minute walk of a park, playground, or natural area. To date, we have renovated, developed and preserved more than 300 parks and 100 community gardens in dozens of cities across the country.

THE LOS ANGELES RIVER: 76 ACRES and 23 PROJECTS SINCE 1995

The Trust for Public Land is proud to join local partners working to transform the Los Angeles River into a usable river greenway. Our shared vision: a network of parks, trails, natural areas, and community spaces linking 13 cities and 25 communities along the 51-mile length of the river.

More than 9 million people live along the LA River, with 121 schools within walking distance along the way. Since 1995, The Trust for Public Land has protected more than 70 acres of riverfront land, to help "green" the river and its adjacent neighborhoods.

Los Angeles State Historic Park

In 2001, The Trust for Public Land helped secure the Cornfields, now **Los Angeles State Historic Park**, a 32-acre property on the edge of LA's downtown and Chinatown. At that time it was an abandoned railyard slated for a one-million-square-foot industrial development.

Maywood Riverfront Park Acquisition

The Trust for Public Land also worked with city leaders to double the acreage available for parks in Maywood, CA, the most densely populated city west of the Mississippi and home to more than 30,000 residents in only 1.13 square miles. With funding from California Propositions 12 and 13, and support from individuals and foundations, The Trust for Public Land acquired **six adjoining industrial parcels** along the Los Angeles River, and conveyed them to the city for creation of a new park site.

While Maywood Riverfront Park was completed in 2006, ultimately, this park complex will include a state-of-the-art playground for young children, basketball courts, and a riverfront bicycle path. Maywood city leaders also have pledged to create a $1 million park stewardship fund to finance long-term park maintenance.

Marsh Street Pocket Park Acquisition

Marsh Street Park is an approximately 1-acre pocket park located in a dense, mixed residential and industrial neighborhood in the City of Los Angeles. The park is situated along one of the rare and lush soft bottom sections of the Los Angeles River. Park amenities include whimsical playground equipment shaped as a serpent, seating areas, native plants, interpretive signs and a stormwater feature that captures and infiltrates stormwater and urban run-off from city streets adjacent to the site. Marsh Street Park also includes an adjacent skate area and in the coming years, the park site will expand to include a nearby lot.

Aliso Creek Confluence Park

Our Los Angeles Office currently has one project-in-progress on the LA River: the Aliso Creek Confluence Park in Reseda, a multi-phase effort to create safe, usable open spaces for local residents to walk, jog, bike and explore nature close to home. Project plans include a new 2-acre park at the confluence of Aliso Creek and the LA River and a refurbished 1-mile trail connecting neighborhoods to the park and to each other. Trail improvements will include a new pedestrian bridge to cross Aliso Creek, native plantings, shaded benches, entry gates, interpretive signage and rest areas for cyclists and pedestrians.

Ongoing Partnerships

In all of our river projects we've enjoyed the partnership of multiple agencies and partners across the city, county and state, including: The City of Los Angeles, The County of Los Angeles, Los Angeles Conservation Corps, Los Angeles Neighborhood Land Trust, The Santa Monica Mountains Conservancy, California Coastal Conservancy, City of Maywood, Mountains Recreation and Conservation Authority, the Rivers and Mountains

Conservancy, the Jewish Home for the Aging, Mujeres de la Tierra, the Reseda Neighborhood Council, the West Valley YMCA. California Department of Toxic Substance Control, Chinatown Yard Alliance (consisting of, among others, Chinese Consolidated Benevolent Society of Los Angeles, Concerned Citizens of South Central LA, Environmental Defense, the Friends of the LA River (FOLAR), Latino Urban Form, and the Natural Resources Defense Council), Regional Water Quality Control Board, and the State of California Department of Parks and Recreation.

URBAN RIVERS NATIONWIDE

THREE DECADES OF EXPERIENCE: OVER 1,200 ACRES OF RIVERFRONT PROPERTY IN NEW YORK, NEW JERSEY, AND GEORGIA

Hudson River Walkway, New Jersey

Twenty million people—and a diverse community of plants and animals—live within minutes of the harbor estuaries that connect New Jersey with New York (extending in New Jersey from Bergen County into Monmouth County). These important resources have been neglected following a century of industrial pollution at the harbors' edge.

The Trust for Public Land's work around the estuary began in the 1980s with the creation of the **Hudson River Walkway.** Today, we focus on protecting underdeveloped land in densely populated communities where open space is scarce and past industrial use has limited the public's access to the estuary and its tributaries. This work builds upon decades of cleanup efforts that encourage a return to the harbor front's natural estuary restoration.

With a parcel-by-parcel GIS analysis of the region complete, our New Jersey and New York offices are acquiring strategically critical properties and supporting community efforts to reclaim access to the rivers, protect natural lands, and increase parkland.

East River State Park, New York

We have protected more than 600 acres that connect to the harbor, **including Old Place Creek, South Brother Island**, and helped the North Brooklyn neighborhoods of Williamsburg and Greenpoint establish a new recreational foothold on the waterfront with its acquisition of two city blocks that now make up **East River State Park.**

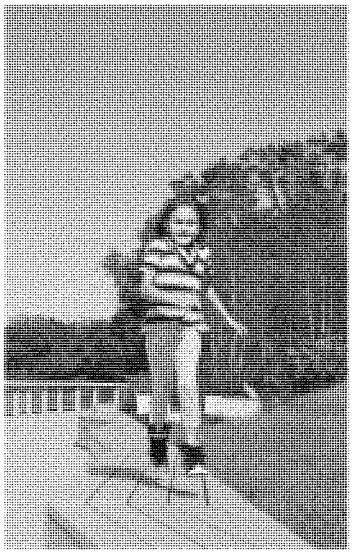
The Trust for Public Land supports community efforts to reclaim public access to waterways, protect natural lands, and increase parkland in the country's most densely populated urban area, an ambitious undertaking stretching from Staten Island, through the lower and upper portions of New York Bay, and along both sides of the Hudson River up to the northern tip of Manhattan.

Buffer the Bay, New York

Our **Buffer the Bay greenprint** (published jointly with NYC Audubon) led to the protection of more than 600 acres in Jamaica Bay, including **Four Sparrow Marsh, Fresh and Spring Creek Preserves, Dubos Point Wetlands, Terra-Peninsula Point Preserve** and **Beach 88th Street Wetlands**.

In addition to the Buffer the Bay report, The Trust for Public Land has published four Greenprints in this geography, including the **Harbor Heron's Greenprint** and **Harlem River (Bronx side) Greenprint,** which featured recommendations for increasing public access, creating a greenway, restoring the edge – and increasing infiltration rates that can better absorb storm water and reduce coastal flood rates.

Newark Riverfront Park, New Jersey



Together, the City of Newark and The Trust for Public Land developed **the 7-acre Newark Riverfront Park**, along the Passaic River in the Ironbound neighborhood, where there is currently less than a half-acre of parkland per 1,000 residents. Over a 4-year period, the team facilitated a **public design process** to develop a project that reflects the history, culture, and interests of the community. The new park, which was featured on the front page of the New York Times, includes trails for walking and biking as well as a floating dock for access to the river. Other features include a riverfront boardwalk, a performance space, educational signage, and new plantings. This brownfield is located on the former site of a contaminated metal smelting plant, a Superfund site adjacent to the Passaic River.

The park design includes an environmental cap comprising two feet of clean soil and the removal of the hazardous soil. The space has turned from a neighborhood detriment to one of the most desirable and attractive places in the area and it stands as Newark's only public access point to the river. A formal open space with amenities to be shared by many, the park can now absorb flood waters through its resilient design.

Proctor Creek, Georgia

The Trust for Public Land is working with multiple private, federal, and local partners to clean up and restore **Proctor Creek,** a heavily polluted tributary of the Chattahoochee River, and create an 11-mile greenway.

A mitigation bank is being established to help finance this effort. Proctor Creek was recently selected as a new **Urban Waters Partnership** site by the Environmental Protection Agency.

When completed, the project will provide increased access to parkland for Atlanta residents, connecting the Atlanta BeltLine (a network of public parks, multi-use trails and transit circling downtown Atlanta) with the Chattahoochee River.

ALTERNATIVE 20: OUR CHOICE FOR THE LA RIVER & ECOSYSTEM RESTORATION

The Trust for Public Land joins Mayor Garcetti, the LA City Council and numerous partners in support of Alternative 20 for many reasons, particularly the enhanced ecosystem restoration included. The ambitious goals of the Corps -- to restore riparian and aquatic habitat, establish habitat connectivity, restore natural hydrologic processes and provide recreation -- are most fully expressed in this vision.

Alternative 20 restores an additional 45 acres of habitat compared to the other alternatives. These additional acres could be instrumental in the reintroduction and recovery of many Los Angeles Basin endangered, threatened and rare species that historically occupied marsh, riverine and riparian habitats in the Los Angeles River.

For example, the endangered least Bell's vireo (*Vireo bellii pusillus*) historically occupied habitat in Reach 2, and probably many other sections of the LA River. More recently, researchers documented this rare bird in the lower Sepulveda Reservoir/Los Angeles River near Burbank Boulevard and the Taylor Yard area. Biologists report there is a high probability of least Bell's vireo occurring in the project area. Certainly the addition of 45 acres of newly restored habitat provided in Alternative 20 will help this endangered bird recover from the brink of extinction.

Furthermore, the added habitat could eventually pay for itself in the form of mitigation banks set up to preserve habitat for protected species. The trend toward the use of habitat mitigation banks to offset development projects in nearby areas makes native habitat increasingly valuable, especially in the midst of a major metropolitan area.

The Trust for Public Land underlines the high importance of the following areas included in Alternative 20:

Reach 2: Midpoint of Bette Davis Park to Upstream End of Ferraro Fields
Alternative 20 would provide an additional 10 acres of vital in-channel freshwater marsh habitat. Sensitive wildlife species that could eventually benefit from this additional habitat include the threatened Santa Ana sucker (*Catostomus santaanae*), the endangered unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) and the endangered arroyo toad (*Anaxyrus californicus*).

Added marsh habitat in Reach 2 could also aid the recovery of several listed plants, including the endangered marsh sandwort (*Arenaria paludicola*) the endangered Gambel's

watercress (*Nasturtium gambelii*), and the endangered Ventura marsh milke-vetch (*Astragalus pycnostachyus var. lanosissimus*).

Reach 3: Ferraro Fields /Verdugo Wash Area. The inclusion of this area maximizes tributary reconnection at an important connecting point for regional habitat migration. The confluence provides an important corridor from the Santa Monica Mountains to the Verdugo and San Gabriel Mountains, all areas regularly served by The Trust for Public Land and our partners.

Alternative 20 adds another 35 acres of vitally important habitat. New riverine habitat would be created by restoring the confluence and a section of Verdugo Wash to its natural state. The same endangered and threatened species listed in Reach 2 above would benefit from this additional habitat.

Reach 7: Arroyo Seco/LA River Historic Park (Cornfields). As the initial protection of this riverfront property was completed by The Trust for Public Land, the Cornfields area is especially close to our hearts. The marsh restoration proposed here in Alternative 20 widens the river channel and brings significant soft bottom restoration in a part of the river important to surrounding low-income communities. The ten acres of wetland marsh included in the park will bring about dramatic change for the river, and those who will enjoy the habitat environment and wildlife that will be able to call the area home.

Alternative 20 provides an additional nine acres of riparian habitat. Riparian habitat frequently contains the highest biological diversity in Southern California landscapes, but it is often the rarest habitat type. Added riparian habitat provided in Reach 7 could aid the recovery of several listed species, including the endangered least Bell's vireo (*Vireo bellii pusillus*), the endangered Western yellow-billed cuckoo (*Coccyzus americanus occidntalis*) and the endangered southwestern willow flycatcher (*Empidonax traillii extimus*).

Reach 8: Piggyback Yard. The expansive restoration in this crucial downtown area is a must-have in everyone's vision of the LA River. Adding a soft-bottom channel here will restore riparian forests capable of supporting endangered wildlife, and greatly increase the hydrologic connection to the floodplain and overbank areas.

Alternative 20 (and 16, compared to 13) would add another 17 acres of vital wetland marsh habitat to the project. Numerous endangered and threatened species would benefit from this additional habitat, including those listed above in Reach 7.

RESTORING NATURE— RESTORING THE SPIRIT

All of our work at The Trust for Public Land underscores the benefits of open space and parks on people, especially children.

For the 80 percent of Americans who live in or near a city, neighborhood parks provide the closest experience with nature. Yet, 80 percent of US census blocks do not have a park within a half-mile, according to report by the Center for Disease Control and Prevention.

As a result, an entire generation is growing up without a connection to nature, missing out on the daily chance for recreation, exercise, community, and renewal that parks provide. The Trust for Public Land believes that every American—in particular, every child—should live within a ten-minute walk of a park or playground. Parks reduce crime, revitalize local economies, and bring neighborhoods together. They also promote public health, lowering a community's collective risk of obesity, diabetes, and other illnesses linked to inactivity.

Restoring the LA River, and expanding green space and increasing recreation will bring multiple benefits to Los Angeles residents.

Physical Health Benefits

There is strong evidence that when people have access to parks and green space, they exercise more. In a study published by the CDC, creation of or enhanced access to places for physical activity led to a 25.6 percent increase in the percentage of people exercising on three or more days per week.

A group of studies reviewed in the *American Journal of Preventive Medicine* showed that "creation of or enhanced access to places for physical activity combined with informational outreach" produced a 48.4 percent increase in frequency of physical activity.

The same group of studies showed that access to a place to exercise results in a 5.1 percent median increase in aerobic capacity, along with a reduction in body fat, weight loss, improvements in flexibility, and an increase in perceived energy.

When people have nowhere to walk, they gain weight. Obesity is more likely in un-walkable neighborhoods, but goes down when measures of walkability go up: dense housing, well-connected streets, and mixed land uses reduce the probability that residents will be obese.

Beyond the recreational opportunities offered by parks, a growing body of research shows that contact with the natural world improves physical and psychological health. One important study reviewed the recoveries of surgical patients in a Pennsylvania hospital. The rooms of some patients overlooked a stand of trees, while others faced a brown brick wall. A review of ten years of medical records showed that patients with tree views had shorter hospitalizations, less need for painkillers, and fewer negative comments in the nurses' notes, compared with patients with brick-wall views.

Mental Health Benefits

The benefits extend to psychological health. "The concept that plants have a role in mental health is well established," according to a review of previous studies by Howard Frumkin in the *American Journal of Preventive Medicine*. "Horticultural therapy evolved as a form of mental health treatment, based on the therapeutic effects of gardening. It is also used today in community-based programs, geriatrics programs, prisons, developmental disabilities programs, and special education."

Further, "research on recreational activities has shown that savanna-like settings are associated with self-reported feelings of 'peacefulness,' 'tranquility,' or 'relaxation,'" Frumkin writes. "Viewing such settings leads to decreased fear and anger…[and] is associated with enhanced mental alertness, attention, and cognitive performance, as measured by tasks such as proofreading and by formal psychological testing."

An extensive study published in 2001 in the Netherlands set out to determine the link between green space and health. The study overlaid two extensive databases, one with health information on more than 10,000 residents of the Netherlands, and the other a land use database covering every 25-by-25-meter square in the nation, allowing researchers to know which people lived near city parks, agricultural land, and forests and nature areas.

The study produced several key findings. First, "in a greener environment people report fewer health complaints, more often rate themselves as being in good health, and have better mental health," the study found. Second, "when it comes to health, all types of green seem to be equally 'effective'"; the study found the same benefit from living near city parks, agricultural areas, and forest.

A ten percent increase in nearby green space was found to decrease a person's health complaints in an amount equivalent to a five year reduction in that person's age. Important theoretical foundations were laid in this area by Harvard biologist Edward O. Wilson, who in 1984 hypothesized the existence of biophilia, "the innately emotional affiliation of human beings to other living organisms."

Others have extended this idea to postulate "an affinity for nature that goes beyond living things, to include streams, ocean waves, and wind."43 This affinity may stem from evolutionary roots: "For the great majority of human existence, human biology has been embedded in the natural environment," Frumkin writes. "Those who could smell the water, find the plants, follow the animals, and recognize the safe havens, must have enjoyed survival advantages."

Several studies have shown that greenways increase regular physical activity. [Ross C. Brownson, *Promoting and Evaluating Walking Trails in Rural Missouri* (St. Louis: St. Louis University School of Public Health, 1999); Eppley Institute for Parks and Public Lands, School of Health, Physical Education and Recreation, Indiana University, *Summary Report Indiana Trails Study: A Study of Trails in 6 Indiana Cities* (Bloomington: Indiana University, 30 November 2001)]. The Safe Routes to Schools programs use trails to encourage safe physical activity for children.

Outdoor play also provides therapy for children with attention deficit disorder (ADD). Researchers discovered that children with ADD do better following activities in green areas. [Andrea Faber Taylor et al., "Coping with ADD: The Surprising Connection to Green Play Settings," *Environment and Behavior* 33, no. 1 (January 2001): 5-34].

Social Benefits

Among the most important benefits of urban parks and green space – though perhaps the hardest to quantify – is their role as community development tools. Green spaces make neighborhoods more livable; they offer recreational opportunities for at-risk youth, low-income children, and low-income families; and they provide places where people can experience a sense of community.

More parks can provide a better social environment for low-income children. A study by the University of Illinois and the University of Chicago stated, "In inner-city neighborhoods where common spaces are often barren no-man's lands, the presence of trees and grass supports common space use and informal social contact among neighbors." A University of Missouri-Saint Louis study also found that St. Louis neighborhoods with community gardens were more stable overall than other neighborhoods.

Our shared vision of a restored Los Angeles River promises natural places for vibrant recreation and interaction, to enliven the spirits of LA residents and visitors alike.

Reports cited from *The Benefits of Parks*, The Trust for Public Land, January 2003, and *The Health Benefits of Parks*, The Trust for Public Land, November 2006:

http://www.tpl.org/publications/books-reports/park-benefits/benefits-of-parks-white-paper.html
http://www.tpl.org/publications/books-reports/park-benefits/the-health-benefits-of-parks.html

CONCLUSION

All of us at The Trust for Public Land are delighted to be part of the exciting renaissance taking place on the Los Angeles River. We honor the work of the Army Corps of Engineers and all partners in preparing this important study, and the hope it has generated for so many of our constituents across Los Angeles.

Alternative 20 accomplishes beautifully the goals of the ARBOR study: to restore habitat, increase connectivity, and enhance recreation. We look forward to continuing our relationship with the City and County of Los Angeles, in addition to federal, state and local partners – to bring our shared dreams of the Los Angeles River to life.

Theodore Payne Foundation

THEODORE PAYNE FOUNDATION for Wild Flowers & Native Plants, Inc.
ESTABLISHED 1960

PROGRAMS
Fall Festival
Library and Archives
Native Plant Garden Tour
Poppy Day
Seed Collection
Theodore Payne Nursery
Wildflower Hotline
Workshops and Classes

10459 Tuxford Street
Sun Valley, CA 91352
(818) 768-1802
(818) 768-5215 fax
info@theodorepayne.org
www.theodorepayne.org

November 12, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones
CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

This letter is to state that the Board of Directors of the Theodore Payne Foundation for Wild Flowers and Native Plants has determined to endorse Alternative 20 and sign on to the petition that follows.

Official Resolution in Support of the Selection of Alternative 20

WHEREAS, the Los Angeles River is the lifeblood of our community and a vital resource to be restored and protected; and

WHEREAS, in 2006, the Los Angeles City Council approved an agreement with the US Army Corps of Engineers (Corps) for the Los Angeles River Ecosystem Restoration Feasibility Study (Study); and

WHEREAS, in 2013, the Corps has developed a final array of four alternatives for the Study, and only Alternative 20 includes both significant restoration at the Los Angeles River's confluence with the Verdugo Wash near the City's border with the City of Glendale, and the only substantial western bank connection-providing a profound hydrological link between the Los Angeles State Historic Park and the river; and

WHEREAS, these two areas provide critical wildlife habitat connectivity to the Verdugo and Elysian Hills, respectively, and are included in the five key opportunity areas of the City Council-adopted Los Angeles River Revitalization Master Plan, which the US Congress directed the Corps to consider; and

Theodore Payne Foundation

WHEREAS, ***Alternative 20*** provides the most robust ecosystem restoration outcomes while also providing four times more jobs than the Corps-preferred alternative, and will thereby most appropriately redress historic environmental injustices that resulted from the river's channelization—providing new public access to natural open spaces, improving public health, stimulating regional and local economies, and enhancing the quality of life in Los Angeles

NOW, THEREFORE BE IT RESOLVED, that the undersigned supports the selection and full implementation of Alternative 20 by the United States Army Corps of Engineers to restore our Los Angeles River.

By signing, I agree to submit my name and the name of the Theodore Payne Foundation for Wild Flowers and Native Plants as an official public comment regarding implementation of the Los Angeles River Ecosystem Restoration Feasibility Study.

Sincerely,

Lynette Kampe
Executive Director

TreePeople

TREEPEOPLE

November 15, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Los Angeles River Ecosystem Restoration Feasibility Study

Draft Integrated Feasibility Report

Dear Dr. Axt,

TreePeople is pleased to have the opportunity to comment on the Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report. TreePeople is one of the largest and longest-established environmental organizations in California, celebrating our 40th anniversary this year.

We are consistently asked at TreePeople about health of the LA River. Something about the LA River captures the imagination. Having a restored river ecosystem in the middle of our city would create a massive shift in the minds of Angelenos, making our connection to nature, the value of water, and our role as caretakers of our water supply, much more real.

At TreePeople we work daily to make the connection between the land outside our front doors to our rivers and our ocean. At TreePeople's Center for Community Forestry, our LaKretz Watershed Education Center teaches thousands of school children a year about the connection we have as city dwellers to the Los Angeles River and a clean, local water supply. Students get to see firsthand the damage and pollution resulting from too many paved surfaces, forcing water that once nourished our soil and aquifers to be shed and wasted, causing water pollution as well as the need to import water from elsewhere. Having a restored river will be an educational as well as recreational resource that will make a huge difference to our entire city and region.

Based on our 40 years dedicated to restoring Los Angeles' urban land to function as a living watershed, TreePeople supports Alternative 20. This Alternative provides the highest value to our city in environmental, economic, and social terms. For too long, L.A. has been managed as a concrete drain, sending water over streets and pavement to the L.A. River, where the polluted water goes out to sea. Not only is water flushed away, but also money, as we pay mounting costs to mitigate the pollution and replace local rainwater with imported water for our water supply. Alternative 20 does the most to restore nature, and the natural functions of a healthy watershed, via habitat restoration on key large parcels of land. It provides the most tree canopy – sorely needed to protect L.A. residents from extreme weather, including heat waves, droughts and flooding. It also revitalizes much-needed green spaces in areas particularly affected by environmental justice issues.

TreePeople believes this Alternative will do the most to improve not only our environmental health, but the physical health of our residents, which research increasingly shows to be closely tied to the amount of nature we can access in our urban landscape. It does the most to connect Angelenos to local water, something we are currently too divorced from. The City of Los Angeles imports nearly 90% of its water from distant and increasingly impacted

12601 MULHOLLAND DRIVE BEVERLY HILLS CA 90210 TEL 818 753-4600 FAX 818 753-4635 WWW.TREEPEOPLE.ORG

Printed with soy ink on chlorine-free, carbon free 100% post consumer recycled paper

sources. Having a functioning river ecosystem in our city will connect Angelenos more closely to local water as a resource, not as waste. It will help us to more clearly understand the cost-effective ways that we can create a clean, secure, local water supply by harvesting, storing, and conserving our rainwater, rather than throwing it away. This is a once in a lifetime opportunity.

TreePeople strongly believes in integrated government functions -- meaning integrated programs and projects that create greater efficiencies and save the city, and region, money. One thing we would like to see as the designs move forward is increased attention to the opportunities presented for multi-benefit projects (i.e., projects that not only restore habitat, but also contribute to increasing our local water supply, and decrease our water pollution). Multi-benefit projects can also leverage funding from additional stakeholders.

There have been many originally unanticipated costs to the environment and our economy from channelizing the River. We believe that we should look at restoring as many of the original benefits as possible given this amazing opportunity to revitalize the L.A. River.

Thank you for this opportunity to comment,

Andy Lipkis
Founder & President

12601 Mulholland Drive Beverly Hills CA 90210 tel 818 753-4600 fax 818 753-4635 www.treepeople.org

Printed with soy ink on chlorine free, wind free 100% post-consumer recycled paper

UC Berkeley

College *of*
Environmental
Design LANDSCAPE ARCHITECTURE
AND ENVIRONMENTAL PLANNING
University of California, Berkeley
202 Wurster Hall #2000
Berkeley, California 94720-2000
phone 510.643-9335
fax 510-643-6166

18 November 2013

Josephine Axt
US Army Corps of Engineers Los Angeles District
915 Wilshire Boulevard, Suite 1101
Los Angeles, CA 90017
Josephine.R.Axt@usace.army.mil

Comments on Draft Integrated Feasibility Study, Los Angeles River Restoration

Dear Josephine,

Thank you for the opportunity to submit these comments on the Draft IFR for the Los Angeles River Restoration project. Overall, the Draft Integrated Feasibility Study represents an excellent compilation of relevant information and background for the Los Angeles River Restoration Project. However, as documented here, there are some important concerns with the basis for the selection of the preferred alternative presented in the document. The proposed restoration project includes sites within an 11-mile reach of the river, focusing on a reach with a mostly alluvial bed characterized by high groundwater levels (the 'soft-bottomed' reach). As such, the restoration project is already 'cherry picking' among the best opportunities for restoration along the urban Los Angeles River. This implies that the specific components presented in the various alternatives already represent optimal projects for ecosystem restoration along this river in a highly urban environment. 1

Comparing Selection of Preferred Alternative with USACE Policy Guidance
Reviewing the policy guidance summarized in ER-1105-2-100 (USACE 2000), it appears that the Corps has considerable latitude regarding the choice of the preferred plan.

> "Neither cost effectiveness analysis nor incremental cost analysis include a "one plan" selection rule similar to the "NED (National Economic Development) plan" selection rule for NED evaluations. In the absence of such a decision-making rule, neither analysis dictates what choice to make. However, the information developed by both analyses can inform decision making by progressively proceeding through the available levels of output to ask whether the next level is "worth it"; that is, whether the environmental benefit of the additional output in the next level is worth its additional cost." (USACE 2000, pp.E-156-E157)

UC Berkeley

In deciding whether the environmental benefits of additional output is "worth it", the Corps is to take into account, in part, the significance of the resource, as reflected by scientific information and institutional recognition.

> "Significance based on institutional recognition means that the importance of an environmental resource is acknowledged in the laws, adopted plans, and other policy statements of public agencies, tribes, or private groups." (USACE 2000, p. E-159)

The significance of the potential benefits from the Los Angeles River restoration projects have been abundantly reflected in actions of local governments and non-governmental organizations, notably the commitment by the City of Los Angeles to an unprecedentedly high local cost share, and the city's support for the more substantive restoration under Alternative 20. 1

> "Public recognition means that some segment of the general public recognizes the importance of an environmental resource, as evidenced by people engaged in activities that reflect an interest or concern for that particular resource. Such activities may involve membership in an organization, financial contributions to resource-related efforts, providing volunteer labor, and correspondence regarding the importance of the resource." (p.E-160)

The extraordinary public support for restoration of the Los Angeles River, and specifically for the more extensive restoration that would be implemented under Alternative 20, is manifest in the active support of grass-roots organizations with large membership bases, such as Friends of the Los Angeles River (FoLAR) and the Council for Watershed Health, as well as national environmental groups.

In-Channel vs Off-Channel Habitat Value

As stated in Section 6.3 and in Appendix G, Section 7.0 (USACE 2013), the Combined Habitat Assessment Protocol (CHAP) does not give greater weight to in-stream habitat, and the method does not consider the benefits of the hydrologic and habitat nodal connectivity, despite the fact that such in-channel and connected habitats are known to be more valuable ecologically. Thus, the analysis may overvalue the benefit of off-channel habitats, such as those separated from the channel by a road or other barriers in Reach 1. Although Alternatives 16 and 20 have higher per habitat unit incremental cost, the habitat quality added in these alternatives is likely to be much higher by virtue of being in-stream and/or hydrologically connected to the main channel. However this real difference in habitat value is not captured by the Combined Habitat Assessment Protocol. 2

While Section 6.3.1 provides a comparison of restoration of natural hydrological function and habitat connectivity, it does not provide a convincing justification for Alternative 13 as the best option. A more nuanced evaluation with a better scientific basis, accounting for value of in-channel over off-channel habitat, and the value of connectivity, would likely indicate that Alternatives 16 and 20 are superior. It might be interesting to see how eliminating off-channel habitats would affect the results of the Cost Effectiveness/Incremental Cost Analysis (CE/ICA), as the over-rated off-channel habitats may bias the final rankings.

Although the study has three stated objectives, the CHAP benefit analysis method focuses mainly on the first objective, area of habitat. Clearly, current scientific research would indicate that connectivity can be equally or more important ecologically than number of acres of a habitat type. The implicit bias towards habitat acres (Objective 1) and de-emphasis on connectivity (Objective 2) means that while connectivity was considered in alternative formation, it was evidently not adequately represented in the CE/ICA analysis. A similar critique could be made for passive recreation (Objective 3), which in this dense urban setting assumes an importance far greater than would be the case for the more typical restoration project setting. 2

Other Limitations of the CE/ICA Analysis

In the CE/ICA analysis, since the incremental analysis looks for a high unit cost delta between alternatives, to determine the level of restoration that meets the cost benefit objective, the selected project would likely include a large amount of "lower hanging fruit" (such as replanting the existing open space to create riparian planting palette like Reaches 1 and 2). More substantive project components, such as lowering the existing river banks to reconnect floodplain, would likely be excluded from the project, due to their high cost for a relatively smaller footprint. However, these excluded components may be critical to establish a self-sustaining, resilience river ecosystem, but might be deemed un-economic based on the CE/ICA structure. 3

The CE/ICA analysis did not consider the future opportunity costs. For example, some project components a given alternative may appear to be less economically justified based on the CE/ICA analysis. However, if these components are not implemented now, they will be more costly or even impossible to implement in the future. For example, if Alt 13 instead of Alt 20 were selected, some of the land that would be used for restoration under Alternative 20 may be lost to urban development, precluding future restoration. The CE/ICA analysis did not consider these types of irreversible impacts, but such impacts should be considered in restoration planning.

Premature Dismissal of Tunneling Options and Implications for Alternative Selection

For a given project, the CE/ICA analysis can point to different conclusions based on the set of alternatives defined for the analysis. If CE/ICA evaluation included tunneling alternatives in the analysis, based on the rules of CE/ICA, the selected alternative would likely have been Alternative 20, not Alternative 13 (USACE 2013, Appendix B, Figure 6.1).

4

As described in Appendix B, Economics Analysis of USACE (2013), early in the alternative evaluation process, the project team dismissed tunneling alternatives due to prohibitive cost. However, tunneling alternatives meet the study objectives, so properly they should not have been dismissed prior to the analysis. These alternatives should proceed to CE/ICA and be evaluated in the analysis. It is during the CE/ICA analysis that overly expensive alternatives are identified and can be rejected, but to arbitrarily throw out alternatives that have not yet been analyzed undermines the entire basis of the analytical

process.

The guidance on conducting CE/ICA analyses (USACE 2000) recommends,

> "Graphing the Best Buy plans can help visually display the relationship between the increasing financial investment required for increasing environmental outputs." (USACE 2000, p.E-156)

The graph can be inspected to identify abrupt increases in cost as a basis for determining

> "whether the next level is "worth it"; that is, whether the environmental benefit of the additional output in the next level is worth its additional cost." (USACE 2000, p.E-156-157)
>
> "Often this questioning process will tend to continue to conclude that successive levels of output are "worth it" until an unusual increase in incremental costs, beyond the general range of preceding costs, is encountered." (USACE 2000, p.E-157)

4

The jump in cost between Alternatives 13 and 16 was a principal basis cited for selecting Alternative 13 as the preferred alternative in USACE (2013). However, as shown in Figure 6-1 of Appendix B (USACE 2013, App B, p.36), if the tunneling alternatives were considered, the largest incremental cost jump will not be from Alternative 13 to Alternative 16, but from Alternative 20 to the cheapest tunneling alternative. This has important implications for which alternative is selected. Simply stated, if the tunneling options had not been arbitrarily and prematurely eliminated prior to the CE/ICA analysis, the CE/ICA would probably have led to the conclusion that Alternative 20 to be the Tentatively Selected Plan (TSP).

Distinctive Attributes of Urban River Restoration

The context of urban river restoration is distinct from the context of restoration undertaken in more rural areas. The ecological potential will always be limited by encroachment of development near the river channel, but the relative ecological importance of a smaller number of sites near an urban river can be proportionally greater. Moreover, the social benefits from providing passive and active recreation along the river corridor, and the potential for ecological education, especially for children from disadvantaged backgrounds, cannot be overstated. On the Los Angeles River, the passive recreation (Objective 3) appears not to have received comparable weight to the acres of habitat restored (Objective 1) because of the way the CE/CIA model was run, biasing the results away from a very important objective in the urban context.

5

Unlike restoration projects in rural areas, one of the most critical needs for urban river restoration projects adequate space for natural river forms and processes, and to allow for floodplain reconnection. With high land values in urban areas, it is an expensive need. As noted in Section 3.3.4, Table 3-5 (USACE 2013), although 59% of total study area is already in Open Space/Recreation land use, the land acquisition cost is still over $300 million. With high land value and limited available river corridor, typical restoration options are (1) river enhancement focused on recreation and aesthetics, with limited ecological value, or (2) expensive land acquisition to provide space for river and floodplain processes. The policies limiting the percentage of the project budget that can be applied to land acquisition create significant limitations on urban creek restoration. Even in this project where the local sponsor is willing to shoulder the total cost of land acquisition and this component of the budget is far greater than typical,

6

it requires explicit approval to waive the reimbursement. The specifics of the Los Angeles River project demonstrate that this land acquisition policy needs to be reexamined, especially for urban projects.

We recommend that a distinct planning process be developed for urban settings to better capture important potential benefits, especially in view of the increasing importance of restoration in urban contexts. 6

Lack of Integration of Ecosystem and Restoration and Flood Risk Management

A striking feature of some parts of the soft-bottomed reach of Los Angeles River, such as the Taylor Yard reach, is the dense growth of riparian vegetation within the active channel in the form of vegetated mid-channel bars and islands. Largely as a result of the encroachment of vegetation into the active channel, the channel capacity has been reduced, in the worst-affected places to approximately that of a 9-year return interval flood. Regulatory protections for riparian habitat have thus far prevented removal of mid-channel vegetation. It would seem a logical 'win-win' if removal of mid-channel vegetation could occur simultaneously with establishment of riparian vegetation on the adjacent floodplain as planned under the Project. The riparian habitat on the floodplain could more than compensate for that lost in the channel. However, this is not proposed in the IFR (Integrated Feasibility Report), and we understand this not under consideration because the ecosystem restoration and flood risk reduction 'accounts' cannot be mixed. No doubt there were some valid reasons for a policy to avoid mixing of the accounts, but in the current case, when viewed from a common-sense perspective outside of the self-referential world of USACE policy, it is clearly an opportunity lost. In fact, it is unrealistic to discuss ecosystem restoration only, while ignoring the reduced channel capacity of some parts of the soft-bottomed reach. 7

The ARBOR (Area with Restoration Benefits and Opportunities for Revitalization) reach does not currently provide 100-year flood protection. If existing vegetation and sediment were removed from the active channel in most encroached areas, as per the original project O&M (operations & maintenance) requirements, the channel conveyance would increase to about the 25-year flood. If the proposed project only maintains existing flood conveyance capacity, flood risk is greater than would be the case under the original design condition, and thus it would result in higher premiums under the FIRM program. If the proposed project were to restore the original 25-year design capacity, the project will still trigger FEMA map revision, but the flood risk and thus the premiums would not increase. With or without the proposed project, a FEMA map revision is inevitable under the Biggert-Waters Flood Insurance Reform Act of 2012.

It is notable that the authorization for the study does not restrict the Corps to look only at ecosystem restoration:

> "Section 4018 of the Water Resources Development Act of 2007 provided authorization for a "feasibility study for environmental ecosystem restoration, *flood risk management, recreation, and other aspects of Los Angeles River revitalization that is consistent with the goals of the Los Angeles River Revitalization Master Plan published by the city of Los Angeles....*" The implementation guidance for this section identified that the scope and substance of the study under the Senate resolution is identical to the study mandated by section

> 4018 and directed that the ongoing study incorporate the section 4018 study. The feasibility study incorporates, where applicable, conceptual elements and addresses restoration goals from the City's Los Angeles River Revitalization Master Plan.
>
> "This feasibility study provides an interim response to the study authority, and the study efforts will determine the feasibility of ecosystem restoration of the Los Angeles River and surrounding environment. There is no sponsor available to investigate flood risk management at this time."
>
> (USACE 2013, pp.1-11 – 1-12; emphasis added)

The reason given for not considering flood risk management is, "There is no sponsor available to investigate flood risk management at this time." The lack of a local sponsor is probably because the Corps has O&M responsibility for this reach of the Los Angeles River, not the Los Angeles County Flood Control and Water Conservation District. Because it is the Corps' responsibility, the lack of a local sponsor is not surprising, but irrelevant. The tragedy is that there are undoubtedly multiple benefits that could accrue from integrating the two study purposes, such that ecosystem restoration is integrated with flood risk management. The integration of these two goals and its potential synergies are more of a 21st-Century concept of watershed planning, in contrast to single-purpose studies, such as the artificially isolated view of ecosystem restoration only, as presented in the IFR. The study authorities from Congress encompassed more than ecosystem restoration, but only ecosystem restoration was addressed in the IFR. Thus, the formulation of the project was over-constrained by narrowing the objectives. Rather than think along separate lines of ecosystem restoration and flood risk management, we recommend adopting a more holistic approach of *floodplain management*, following on the concepts developed for the Unified National Plan for floodplain management, including *wise use* of floodplains. 7

There many structures along the Los Angeles River exposed to flood risk currently, as illustrated in Plates 23a and 23b of USACE (2013), which shows the area threatened by the 100-year flood, including dense residential areas and commercial/industrial areas, where many people may believe that they are currently protected from flooding. Developing a project that would protect some of these structures could yield benefits that could help pay for ecosystem restoration.

Summary and Recommendations

In sum, the Los Angeles River Ecosystem Restoration project represents a bold step by the US Army Corps of Engineers to undertake ecosystem restoration in a dense urban environment. However, our review of the IFR identified some 'fatal flaws' that we believe merit consideration:

1) Reliance on the CHAP model results in a bias towards the number of 'acres restored' and fails to account for the importance of hydrologic connectivity and social values of restoration in this urban setting. 2

2) The incremental restoration approach may be a flawed paradigm, in that it does not effectively account for process and the importance of ecosystem attributes such as connectivity. A restoration component that is expensive but essential for the overall functioning of the system could be rejected because of its high cost per unit area. 3

3) Arbitrary exclusion of tunneling alternatives from the CE/ICA analysis created the impression that the greatest increase in costs was from Alternative 13 to Alternative 16, whereas the greatest increase 4

would be from Alternative 20 to the cheapest tunneling alternative, which would support selection of Alternative 20 rather than 13.

4) Although flood risk reduction was an authorized purpose of the study, it was not addressed in the IFR, which artificially limited itself to ecosystem restoration. Because of the degraded performance of the concrete channel system, there should be opportunities to improve flood capacity combined with ecosystem restoration. An integrated approach to reducing flood risk and restoring ecological and social values could yield substantial benefits in this urban area, such that flood reduction benefits could help pay for ecosystem restoration. 7

5) The IFR represents a 'single-purpose' approach, in contrast to more advanced and nuanced approaches to floodplain management that can benefit from synergies among multiple objectives.

6) The current Corps planning process appears ill suited to restoration in dense urban environments, especially the policies limiting land costs as percentage of overall project costs. Given the likely increasing importance of ecosystem restoration in urban areas, it may be worthwhile for the Corps to develop a planning approach better adapted to the opportunities and constraints of urban settings. 6

We hope these comments are useful to you, and we would be happy to discuss further any of them.

Sincerely yours,

G. Mathias Kondolf, PhD
Professor and Chair
kondolf.berkeley@gmail.com

Raymond Wong, P.E.
PhD candidate
raymondwong.e@gmail.com

Department of Landscape Architecture and Environmental Planning
University of California Berkeley

References Cited

USACE (US Army Corps of Engineers). 2000. Planning Guidance Notebook. Engineer Regulation 1105-2-100. US Army Corps of Engineers, Washington DC.

USACE (US Army Corps of Engineers). 2013. Los Angeles River Ecosystem Restoration Draft Integrated Feasibility Report. US Army Corps of Engineers Los Angeles District, Los Angeles, California. September 2013.

UC San Diego
UCSD

UNIVERSITY OF CALIFORNIA, SAN DIEGO

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

DEPARTMENT OF COMMUNICATION
OFFICE:
FAX: (619) 534-7315

9500 GILMAN DRIVE
LA JOLLA, CALIFORNIA 92093-0503

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711

ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

November 15, 2013

Dear Dr. Axe.

My name is Elana Zilberg. I am a professor at the University of California San Diego with over twenty years of conducting ethnographic research in the city of Los Angeles. In the last three years, I have turned my attention specifically to the revitalization of urban rivers in the Southwestern United States, focusing primarily on the Los Angeles River in California, and San Antonio River in Texas. For the purposes of my letter today, I focus on the Los Angeles River, although the San Antonio River and the ecological restoration of its southern stretch is wonderful example of what the Army Corps of Engineers can achieve in collaboration with local agencies.

First, let me applaud you and the Army Corps of Engineers for devoting time, effort and resources to producing your feasibility report for the ecological restoration of the 11 mile stretch of the River from the Glendale Narrows through downtown Los Angeles. After having read your report and attending various government and community meetings, I have concluded that Option 20 is the best plan on the table.

While it is the most expensive plan, Option 20 comes closest to the vision put forth in the 2007 Los Angeles River Master Plan and dovetails well with President Obama's American Great Outdoors Initiative and the Urban Waters Public Partnership. Option 13 simply does not go far enough in making up for the destruction of the habitat and species that once flourished in and along the River. Moreover, it does not go as far in restoring the relationship between the people of Los Angeles and the River. Including the Verdugo Wash and Piggyback Yard in the restoration project has a much greater chance of achieving both ecological restoration and human connection.

I won't reiterate the long list of what Option 20 offers than Option 13 does in the realm of ecological restoration, which is I understand your primary focus. As a cultural and urban anthropologist with a particular interest in the political ecology of cities, I have been inspired by the momentum and energy galvanized around the revitalization of the Los Angeles River. It is clear that the broad constituencies that have come together around the River, feel very strongly that Option 20 will have the greatest impact in restoring some semblance of the former

November 18, 2013

UC San Diego

ecosystem of the River, and in improving the quality of life for its residents - particularly for those living in the vicinity of the area but also for the city's residents at large.

Option 20 simply goes much further in meeting the criteria laid out in your study. I therefore urge the Corps to join the City in putting their support behind Option 20.

Yours sincerely,

Elana Zilberg
Associate Professor
Director of Graduate Studies

Union Pacific Railroad

UNION PACIFIC RAILROAD
801 Louisiana, Ste. 300
Houston, Texas 77002
www.up.com

Melissa B. Hagan Senior General Attorney–Environmental, Law Dept.

713.220.3207 (o)
713.907.6810 (c)
mbhagan@up.com

November 18, 2013

Via U.S. Mail: CMRR 7012 3050 0000 44384 517 and
Electronic Mail: comments.lariverstudy@usace.army.mil

Josephine R. Axt
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711

ATTN: Ms. Erin Jones,
CESPL-PD-RN
Los Angeles, CA 90053-2325

Re: Union Pacific Railroad Company's Comments to SPL-2013-003-NLH-Draft Integrated Feasibility Report for Los Angeles River Ecosystem Restoration Study

Dear Ms. Axt:

Union Pacific Railroad Company ("UP") appreciates this opportunity to comment on the September 2013 Draft Los Angeles River Ecosystem Restoration Integrated Feasibility Report ("Draft IFR"), prepared by the U.S. Army Corps of Engineers ("Corps") and City of Los Angeles ("City"). UP owns the Los Angeles Trailer and Container Intermodal Facility ("LATC") rail yard in downtown Los Angeles, incorrectly referred to as the "Piggyback Yard" in the Draft IFR. UP has a specific interest in the four action alternatives analyzed under the Draft IFR since all would result in the conversion of the LATC property from its current industrial use to riparian/wetland habitat. For the reasons discussed below, UP opposes action alternatives 10, 13, 16 and 20 because they would require the conversion of the LATC property from its current use to riparian/wetland. 1

The first step in any joint federal-state project is completing adequate environmental review under the California Environmental Quality Act ("CEQA")1 and the National Environmental Policy Act ("NEPA")2. After closely examining the Draft IFR, however, it is clear that the Corps's environmental review of the project is flawed. First, the Draft IFR does not adequately analyze all feasible project alternatives. Second, the four action alternatives identified in the 2

[1] Cal. Pub. Res. Code §§ *et seq.* CEQA applies to "discretionary projects proposed to be carried out or approved by public agencies, including, bnt not limited to, the enactment and amendment of zoning ordinances, the issuance of zoning variances, the issuance of conditional use permits, and the approval of tentative subdivision maps unless the project is exempt from this division" (*Id.* at § 21080).

[2] 42 U.S.C. §§ 4331 *et seq.* NEPA applies to "proposals for legislation and other major Federal actions" and in cases where an agency is exercising its discretion in deciding whether and how to exercise its authority over an otherwise non-Federal project. (*Id.* at § 4332(2)(c)).

Draft IFR include unrealistic and unachievable conclusory assumptions about the feasibility of relocating the LATC. Finally, the Draft IFR fails to properly consider the importance of the rail yard's integral role in the national transportation infrastructure, effects on the human environment, and environmental justice and socio-economic factors, as explained in greater detail below. For these reasons, UP opposes the four action alternatives identified in the Draft IFR to the extent that they involve changes at the LATC. 2

The LATC is a Critical Component of UP's Domestic Intermodal Traffic Network

The Los Angeles Corridor is one of the City's main rail transportation corridors. UP first established its rail maintenance facility at the LATC in the early 1900s. Today, UP's modern 120-acre intermodal, i.e., truck to rail and rail to truck, container facility receives, sorts and distributes approximately 240,000 cargo containers per year, ninety-five percent of which are domestic. (UP Operating Data, October 2013). Activities at the LATC include receiving inbound trains, switching cars, loading and unloading intermodal trains, storing intermodal containers and chassis, building and departing outbound trains, and repairing freight cars and intermodal containers and chassis. The LATC also provides forty-seven percent of California car transport and service to the neighboring United Parcel Service facility, serves as a relief valve for the Port of Los Angeles traffic, and has become a vital component of the nation's transportation infrastructure. 3

Currently, the LATC operates at near fluid capacity and UP plans to undertake major improvements to the railyard in the near future. This $100 million modernization project will ensure the most efficient operation and utilization of the LATC, with a particular emphasis on future growth. In addition, UP leads Class I Railroads in the purchase and deployment of Generator-Set switcher locomotives ("GenSets"), which significantly reduce air emissions and use less fuel than their counterparts. Eight of these GenSets, costing approximately $1.5 million dollars each, are used at the LATC. In addition, UP has spent more than $3 million dollars to update cargo handling equipment at the rail yard since 2012.

Railroad Operations are Under the Exclusive Jurisdiction of the Federal Surface Transportation Board

Only the Federal Surface Transportation Board (STB) has authority to regulate the use of railroad property. As set forth in the Interstate Commerce Commission Termination Act (ICCTA) the STB has exclusive and preemptive jurisdiction over:

> (1) transportation by rail carriers, and the remedies provided in this part with respect to rates, classifications, rules (including car service, interchange, and other operating rules), practices, routes, services, and facilities of such carriers; and 4
>
> (2) the construction, acquisition, operation, abandonment, or discontinuance of spur, industrial, team, switching, or side tracks, or facilities, even if the tracks are located, or intended to be located, entirely in one State, is exclusive. Except as otherwise provided in

> this part, the remedies provided under this part with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law. 49 U.S.C. § 10501(b).

4

Thus, Union Pacific's continued operation of the LATC cannot be disturbed except as directed by the STB. Accordingly, the Draft IFR's assumption that a project requiring relocation of the LATC is feasible may not be realistic, and is not adequately supported in the Draft IFR.

All Draft IFR Action Alternatives Require Conversion of UP's Property, Result in Significant Adverse Impacts, and Will Obstruct and Preclude UP's Ongoing and Future Operations at the LATC

The Draft IFR evaluates alternatives for restoring approximately eleven miles of the Los Angeles River from Griffith Park to downtown Los Angeles, and includes a Draft Feasibility Study and a joint Environmental Impact Report ("EIR")/ Environmental Impact Statement ("EIS"). Ultimately, the Draft IFR analyzes a total of four final action alternatives—Alternatives 10, 13, 16 and 20—and concludes that all would require conversion of the LATC property from industrial use to riparian/wetland habitat, result in significant adverse impacts to air quality, land use, traffic and circulation, socioeconomics, and environmental justice, and preclude UP's ongoing and future operations at the site.

5

As detailed in the Draft IFR (Tables 6-7 and ES-5), Alternatives 10 and 13 propose partially converting the existing LATC to riparian and wetland habitat, restoring the historic wash, temporarily removing rail lines, permanently removing spur lines in the rail yard's interior, and removing railyard storage capacity. The work would include the removal of standing structures, removal of pavement, grading, and shallow excavation. Alternatives 16 and 20 would further exacerbate the extent and duration of these adverse impacts by raising existing railroad alignments along the left bank onto trestles through the LATC to connect the river channel and adjacent wetland areas. Alternatives 16 and 20 would also require the closure of the affected portion of the railroad line and rerouting traffic using this line, resulting in delays for both the rerouted rail traffic and for rail traffic on the lines to which traffic is rerouted. The Draft IFR concludes that such impact would be significant, "since it would be difficult to find sufficient capacity on other rail lines to reroute freight, passenger, and high-speed rail trains while the trestles are being constructed." (Draft IFR, p. 5-4). Additionally, alternatives 16 and 20 would require the permanent removal of spur lines and rail capacity.

6

In addition to the specific traffic and circulation impacts noted above, the Draft IFR finds that all four action alternatives would also: (1) substantially and disproportionately affect low-income and minority populations by eliminating 157 well-paid blue-collar jobs from the LATC; (2) conflict with the Industrial land use designation of the rail yard, as well as specific goals and policies concerning industrial land uses in local plans; and (3) cause significant adverse impacts due to air pollution during construction, which would exceed state and federal thresholds for criteria pollutants.

7

Notwithstanding these adverse impacts, the Corps chose Alternative 13 as its "tentatively selected plan," and the Los Angeles City Council voted to unanimously to support Alternative 20 on August 23, 2013.[3] 7

The Draft IFR Fails to Provide the Necessary and Accurate Information Required for Informed Decision-Making Under CEQA and NEPA

The Draft IFR does not adequately analyze all feasible project alternatives and the four action alternatives identified include unrealistic and unachievable conclusory assumptions about the feasibility of relocating the LATC. Additionally, the Draft IFR fails to properly consider the importance of the rail yard's integral role in the national transportation infrastructure, effects on the human environment, and environmental justice and socio-economic factors. For these reasons, among others, the required analysis of the project is defective under CEQA and NEPA, thereby undermining reasoned judgment on the project and failing the required purposes of those environmental and information-gathering statutes. *See Citizens of Goleta Valley v. Bd. of Supervisors*, 52 Cal. 3d 553, 564 (1990) (An EIR's purpose is "to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR protects not only the environment but also informed self-government.") (italics and internal quotation marks omitted); Cal. Code Regs., tit. 14,4 § 15002(a)(2); *see also Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989) (noting NEPA's purposes are to ensure the agency will have detailed information on significant environmental impacts when it makes its decisions and to guarantee that this information will be available to a larger audience); 40 C.F.R. §§ 1502.1, 1502.14. 8

1. The Draft IFR does not adequately analyze all feasible project alternatives.

The purpose of the alternatives discussion in an EIR/EIS is to identify ways to reduce or avoid significant environmental effects. For this reason, an environmental document must focus on alternatives that avoid or substantially lessen a project's significant environmental effects and the alternatives discussed should be ones that offer substantial environmental advantages over the proposed project. See Cal. Pub. Res. Code § 21002; CEQA Guidelines[4] § 15126.6(a)-(b); *see also* 40 C.F.R. § 1502.14(a) (NEPA requires the lead agency to "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."); 42 U.S.C. § 4332(C)(iii).

Here, the Draft IFR's alternatives analysis fails in its attempt to address these CEQA and NEPA requirements. As part of the IFR process, the Corps used computer models to narrow down a list of 152 possible restoration plans to the four action alternatives identified in the Draft IFR. Initial plans were developed that excluded the LATC land parcel, but according to a mere one-sentence

[3] L.A. City Council Res. 10-0270-S3 (Aug. 23, 2013), *available at* http://cityclerk.lacity.org/lacityclerkconnect/index.cfm?fa=ccfi.viewrecord&cfnumber=10-0270-S3

[4] Hereinafter "CEQA Guidelines."

explanation in the Draft IFR, these options were later eliminated because "they did not meet the restoration objectives for restored habitat and habitat connectivity." Draft IFR, p. xxiv. The Draft IFR improperly rejected these alternatives without the reasoned explanation and analysis that both CEQA and NEPA require. Although habitat restoration objectives are an important component of the Draft IFR, without adequate analysis, they should not be pursued at the expense of significant adverse economic and social impacts expected to result due to the conversion of the LATC. For instance, the Draft IFR concedes, "[t]he long-term adverse impacts [of conversion] include the permanent loss of industrial land uses at [the LATC], the permanent closure of railroads and the resulting loss of rail capacity at [the LATC], and the loss of working class employment within the [LATC] neighborhood where minority and low-income populations will be disproportionately affected by that loss." *Id.* at p. 5-126. Given that at least some of the "rejected" alternatives would minimize identified adverse environmental impacts, the Draft IFR's dismissal of such alternatives is improper and deprives the public and decision-makers of vital information required for an informed analysis. 8

2. The Draft IFR includes unrealistic and unachievable conclusory assumptions about the feasibility of relocating the LATC.

Although the Draft IFR states that the City will provide relocation assistance for the affected businesses per the Uniform Relocation Act of 1970, there is no potential "suitable location in the region" identified for the LATC, and therefore, resulting socioeconomic impacts stated in the Draft IFR are not less than significant. The LATC is the largest single-owner property adjacent to the Los Angeles River, and the rail yard location is the only place in the greater Los Angeles region where such a single, large-scale project is feasible due to space constraints, cost, and environmental considerations. In short, the construction of a suitable replacement yard elsewhere in the Los Angeles Basin is not realistic or feasible. The Draft IFR is flawed in its analysis because it fails to provide any evidence to support a contrary conclusion, although CEQA and NEPA require agencies to consider all substantial evidence when analyzing significant impacts and to consider impacts within the setting in which they occur. *See* CEQA Guidelines § 15064(f); 40 CFR § 1508.27(a)).

3. The Draft IFR fails to properly consider the importance of LATC's integral role in the national transportation infrastructure, effects on the human environment, and environmental justice and socio-economic factors. 9

NEPA requires a "full and fair discussion of significant environmental impacts" as part of an EIS. 40 C.F.R. § 1502.1; *see also* 42 U.S.C. § 4332 (C); 40 C.F.R. §, 1508.7. This includes analysis of both direct and indirect environmental impacts of the proposed action. 40 C.F.R. § 1508.8. Direct effects are caused by the action and occur at the same time and place. 40 C.F.R. § 1508.8(a). Indirect effects are those caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. See 40 C.F.R § 1508.8(b). Both include "effects on natural resources and on the components, structures, and functioning of affected ecosystems," as well as "aesthetic, historic, cultural, economic, social, or health

[effects]." Id. (emphasis added). Not only does NEPA require that federal agencies explain and evaluate economic and social effects to the extent they are interrelated to the natural or physical environment (id. at § 1508.14), but federal agencies must also evaluate the extent to which a proposed action would have an adverse impact on low-income and minority populations (Exec. Order No. 12898).

Here, however, the Draft IFR does not adequately analyze or document the effects of the project on the LATC and the surrounding area, thereby ignoring significant environmental, economic and social impacts. Moreover, the Draft IFR fails to provide a factual basis for many of its most significant assertions and conclusions. Instead, when analyzing potential adverse impacts from each action alternative, and, in particular, foreseeable socio-economic impacts, the Draft IFR merely assumes that the "functions that occur at [the LATC], which are predominately intermodal freight transportation, would be replaced at a similar facility within the region." Draft EIR, p. 5-109 (emphasis added). This sweeping assumption is premature and unsupported by substantial evidence. 9

Likewise, any potential relocation of the LATC rail facilities will have dramatic effects on the larger national rail network and UP's goods movement activities. Not only has no suitable replacement location for the LATC been identified, if an alternate site could be acquired, the intensive permitting timetable required for multi-year planning and design processes to allow a similar rail transit facility would take many years before construction could even commence. For example, according to data presented during the 2012 economic summit of the Southern California Association of Governments, the California Department of Transportation ("Caltrans") reported that the average major transportation project in California takes 17 years to complete—one of the longest timelines in the country—and CEQA is often a major cause of such extended delays.[5] Such delays extend beyond transportation projects—the drafting of the Los Angeles River restoration project's feasibility study and environmental process alone has taken over 7 years and is still not yet complete. 10

It is also evident from the Draft IFR that low-income and minority communities in the area surrounding the LATC will disproportionately bear the brunt of adverse effects if the site is converted from industrial use:

> Though rail and freight operations will likely be relocated to another location within the Los Angeles region, it is unlikely that the operations will be relocated near the communities in and around the ARBOR reach due to lack of a suitable alternative location and commuting to the new location may no longer be feasible for local residents. Working class jobs at [the LATC] may 11

[5] M. Boarnet and W. Walrod, "Economic Benefits from Accelerating Transportation Infrastructure Investment" (Dec. 2012), *available at* http://economy.scag.ca.gov/Economy%20site%20document%20library/2012EconomicSummit_BenefitsTransInvest.pdf. It should be noted that CEQA does not apply to most railroad-sponsored projects due to federal preemption.

> be transferred-elsewhere in the Los Angeles regional economy . . . this may disproportionately affect the low-income and minority populations in and around the ARBOR reach study area if employees are from the communities in and around the current location and do not or are not able to retain their positions after the relocation of the facility to another location in the region. Indirect impacts may also occur to other businesses in the area that rely on clientele from the [LATC] workforce. [A]ny job growth predicted from urban renewal/redevelopment may not directly offset any initial job losses from closure of [the LATC] . . . and the specific skilled labor jobs at [the LATC] are not likely to be replaced in kind either during construction or over the long term. (*Id.*)

11

In fact, however, because relocation in the Los Angeles region is infeasible, these jobs would not be relocated—they will be eliminated.

4. Until an Alternative Location for the LATC is Identified, and STB approval is Obtained, the LATC Should Remain Screened from the Project Area.

The Corps should revise the identified Draft IFR action alternatives to take into account these significant and adverse socioeconomic impacts. See 40 C.F.R. § 1508.14. Appendix H in the Draft IFR includes a list of eleven sites that were "screened from the Project Area" due to various urban land use constraints, real estate unavailability, high infrastructure costs, prohibitive costs associated with relocating and replicating current uses elsewhere, and/or their importance as recreational activities in the local community. These "screened" sites include, among others, the Department of Recreation and Parks Central Service Yard, the DWP/Main Street Facility, which includes rail tracks, the Metro Union Bus Service Yard, and the Area with Restoration Benefits and Opportunities for Revitalization (ARBOR) Outlet, which includes rail and roadway infrastructure. Notably, the Corps chose at least one site, the Central Service Yard, for the list because "no available parcel was identified that is large enough to accommodate the existing uses in one place, and the largest available parcels are not located in areas of the City that are as advantageously located ...." Likewise, the Corps noted that for a number of other "screened" sites, restoration modifications were infeasible because of extensive rail infrastructure obstacles, complications with existing at-grade railroad tracks, and current and active rail uses. Based on the criteria identified in Appendix H, the LATC should also fall within the list of "screened" sites, at least until such time as a location of acceptable size and proximity is identified to facilitate relocation of UP's operations. And as noted above, STB approval would be required for any such compulsory relocation.

12

*****

For all of the reasons stated above, UP opposes the four action alternatives identified in the Draft IFR to the extent that they impact the LATC. In addition, a number of other individuals and organizations have submitted comments on the inadequacies of the Draft IFR, which relate to the topics discussed in this comment letter. Rather than restating all the same information and analysis, UP joins in those comments. 13

An EIR/EIS must be recirculated when significant new information is added, including "changes in the project or environmental setting as well as additional data or other information." CEQA Guidelines § 15088.5(a); 40 C.F.R. § 1506.9. The additional data and information that the Corps must provide to correct the deficiencies in the Draft IFR are significant. The new information may show that previously unanalyzed significant environmental impacts would result from the project, or that the severity of the identified environmental impacts would be substantially increased unless mitigation measures are adopted. These are all grounds for recirculation. See CEQA Guidelines § 15088.5(a)(1),(2); 40 C.F.R. § 1506.9. UP looks forward to an opportunity to review a substantially revised and recirculated Draft IFR. 14

Thank you for the opportunity to express our views. Please forward these comments to the decision-making bodies of both the Corps and City before any action is taken by those respective bodies with respect to Los Angeles River restoration efforts.

Regards,

UNION PACIFIC RAILROAD COMPANY

Melissa Hagan

Melissa B. Hagan

cc: Michael Steel, Morrison & Foerster

Union Pacific Railroad 2

UNION PACIFIC RAILROAD
10031 Foothills Blvd.
Roseville, California 95747

P 916 789 6015

Scott D. Moore Vice President Public Affairs - West

March 28, 2014

Josephine R. Axt
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

Re: Union Pacific Railroad Company's Comments to SPL-2013-003-NLH-Draft Integrated Feasibility Report for Los Angeles River Ecosystem Restoration Study

Dear Ms. Axt:

This letter follows up on discussions we have had following Union Pacific's comment letter of November 18, 2013 concerning the above-referenced study. In that letter we explained that UP's Los Angeles Trailer and Container Intermodal Facility ("LATC"), a 120-acre intermodal facility handling approximately 240,000 cargo containers per year, currently operates at near fluid capacity and is a key component of our national network. UP has no plans to relocate or close this facility, and is in fact planning a major modernization in the near term. Accordingly, UP stands by all of the issues raised in that letter and we understand that the Corps of Engineers will respond to them as it concludes the study process.

However, UP has a long history of working cooperatively with the City of Los Angeles on a wide variety of matters. It is possible that, 20 years or more in the future, a sale or exchange agreement could be reached, but only if, on terms acceptable to UP management in its sole discretion, the City acquires, in cooperation with UP, a suitable replacement facility with all necessary permits and approvals for UP to use as a rail yard comparable to LATC in terms of capacity, function and compatibility with the UP system and customer needs.

Please note that nothing in this letter or any comments by UP should be construed as in any way limiting or waiving any legal rights, protections or defenses UP may have, including federal preemption.

Please let us know if you have questions about this letter.

Sincerely,

Scott D. Moore

cc: Honorable Eric Garcetti, Mayor, City of Los Angeles
Mr. Guy Lipa, Associate Director, City of Los Angeles
Mr. Michael J. Steel, Partner, Morrison Foerster
Ms. Melissa B. Hagan, Sr. General Attorney, Union Pacific

URI

From: Meredith McKenzie
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] Los Angeles River ARBOR Study Comments
Date: Monday, November 18, 2013 1:50:18 PM

Dear Colleagues:

i am pleased to submit these comments on behalf of the Urban Rivers Institute (URI) relative to the USACE's current Los Angeles River ARBOR Study and recommended alternative.

The Army Corps is to be commended for its detailed research and study of the ecosystem and habitat restoration potential of the Los Angeles River as well as its support for an alternative that will help return one of America's urban rivers to natural hydrologic functioning.

Nonetheless, the Army Corps' preferred Alternative 13 falls short in addressing the complex issues and needs in maximizing restoration opportunities in the Los Angeles River.

The Urban Rivers Institute strongly urges the Army Corps to revisit its evaluation and to recommend Alternative 20 as its preferred alternative for restoring one of America's great rivers.

URI supports Alternative 20 for a number of reasons:

1. It is the only alternative that addresses restoration at two major tributary confluences. These habitat restorations are vital in the long term to ensure complete Los Angeles River Watershed health.

2. It is the only alternative that includes the vitally important Piggyback Yard, one of the last large scale contiguous land areas within the Los Angeles urban core that can be preserved and protected along the Los Angeles River Corridor.

3. It is the only alternative consistent with the goals and mandates of related federal programs, specifically the Great American Outdoors Initiative and the Urban Waters Partnership. The Army Corps' final recommendation of Alternative 20 will send a loud, positive message that USACE values and respects its federal partners, while reinforcing its historic role as the protector of America's navigable waters.

4. It is the only alternative that offers a sweeping vision for the next century - a vision that will protect and restore the maximum amount of habitat and riverine corridor along the Los Angeles River.

In essence, Alternative 20 is our only hope for best practices in championing the rebirth of the Los Angeles River into the 22nd Century. The fact that the Army Corps included Alternative 20 among its options is strong evidence that the Corps already recognizes that Alternative 20 is truly the best option for this exciting, complex restoration that will become a global showcase for inter-agency cooperation, public-private partnerships, and world-class greening of a major historic river because, after all, Los Angeles is as much an international city as it is an American one.

URI

With virtually unanimous local partner support for Alternative 20, whose members have committed to bringing extensive matching financial and in-kind resources to make this plan a reality, Alternative 20 is the *only* ARBOR Study option that will ensure that Los Angeles' future will start in the riverbed and face outward to the future.

URI recommends, without reservation, that the USACE adopt Alternative 20 of the Los Angeles River ARBOR Study.

Thank you very much for giving us the opportunity to comment on this exciting and bold river restoration initiative.

Best,

Meredith

Meredith McKenzie
President

URBAN RIVERS INSTITUTE
2548 El Molino Avenue
Altadena, CA 91001

O - 626-696-3824
C - 626-344-9755

Website: http://www.urbanriversinstitute.com
Twitter: @arroyolover
Facebook: www.facebook.com/arroyolover

November 24, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District;
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, California 90053-2325

The Urban Waters Federal Partnership in the Los Angeles River is pleased that USACE is set to move forward on the Los Angeles River Ecosystem Restoration Integrated Feasibility Report (ARBOR Study), and appreciates the opportunity to share comments about the three "best buy" alternatives that have been considered by the Corp, including the tentatively selected Alternative 13. The areas within consideration by all of these alternatives - including the more extensive Alternative 20 - have been designated as being high priority for revitalization among the 44 member organizations of the Los Angeles River Partnership, including the 9 federal partner agencies that actively participate.

In 2011, the US EPA brought together 12 (and later 13) federal agencies that shared the vision to revitalize urban waters and the communities around them – "transforming overlooked assets into treasured centerpieces and drivers of urban revival." On June 24, 2011 USACE Assistant Secretary Jo Ellen Darcy along with her colleagues in agencies that represent federal priorities ranging from conservation of natural resources to transportation infrastructure signed a commitment to form the Urban Waters Federal Partnership – in part to "break down government program silos and to ensure that our collective efforts will reverse past neglect, energize existing programs and engage new partners."

The Los Angeles River was designated later that year as one of the original Urban Waters location as a result of the strong collaboration of local stakeholders, the readiness of local government partners such as the City of Los Angeles to undertake the revitalization work, and the timing of key federal activities such as the ARBOR Study to support this work. The USACE local district staff has been full partners in the LA Partnership and has worked closely with stakeholders to bring ARBOR to this critical juncture. Accordingly, stakeholders are excited that nearly a decade from when the ARBOR Study was just a hope, we stand at the precipice of USACE setting the cornerstone for the implementation of so many other revitalization projects.

While there are many projects in which this description may seem to be hyperbole, the impact that ARBOR has on a full docket of federally-engaged or funded projects cannot be overstated. The Urban Waters Federal Partnership supports USACE's leadership in boldly advancing revitalization of the LA River. In corroboration with its Urban Waters LA River Workplan, the LA River Partnership would like to offer some comments that point out why the three Alternatives leverage the success of Urban Waters – and particularly from a broader perspective, why Alternative 20 provides opportunities not shared by the other Alternatives to achieve the outcomes that the other federal agencies are seeking.

We support USACE in considering the requests that have been made by various Los Angeles stakeholders to permit an allowance for a more progressive plan be approved

if other sources of funding can be obtained. We would also request USACE consider the possibility of including an Adaptive Management Plan that would allow the City of Los Angeles the capacity to evolve the project according to resource availability. 1

Federal Government – Working in Concert

Since Results Oriented Management practices were formalized in the 1990s, each of our federal agencies has been scrutinized for efficiency and the ability to deliver clear program outcomes. In an era where increased government need is inversely met with a decreasing pool of resources, the program performance of our federal partners is directly connected with that agency's ability to work in concert with other stakeholders, be engaged with local needs, and importantly - creatively find ways to leverage public investments from local, state and even other federal sources.

As a founding member of Urban Waters, USACE understood that the goal of revitalization urban waterways was a multifaceted endeavor; no one agency held all the tools or resources to bring about this goal, but yet each held pieces of expertise or resources that when leveraged with each other could produce results greater than the sum of its parts. The Urban Waters Program, itself, was designed to leverage US Department of the Interior's America's Great Outdoors program, and compliment the Federal Partnership for Sustainable Communities.

> *America's Great Outdoors Initiative*: "...21st Century conservation and recreation agenda...reworking inefficient policies and making the federal government a better partner with states, tribes, and local communities."
>
> *Federal Partnership for Sustainable Communities*: "Three federal agencies came together ...help places around the country develop in more environmentally and economically sustainable ways. To guide its work, the Partnership developed six livability principles: Provide more transportation choices; Promote equitable, affordable housing; Enhance economic competitiveness; Support existing communities; Coordinate and leverage federal policies and investment; Value communities and neighborhoods.

Among these initiatives and many others, there is a consistent theme of locally-driven priorities, cooperation, not bureaucracy across agency lines, and efficiency with federal investment. That USACE and many of its federal agency partners can work with and between these initiatives showcases government efficiency; efficacy, however, remains the true test – achieving individual program success through collective and strategic effort.

Leveraging Federal Investment

In the ARBOR Integrated Feasibility Report, it is clear that cost-benefit analysis is critical to the selection of Alternatives 13, 16 and 20 – each demonstrating a "best buy" for the work prescribed. The straight metric of cost per acre of restored ecosystem seems to be a direct way of assigning a value to restoration – and Alternative 20 has not been preferred because of its apparent high cost compared to the other Alternatives. This model, however, seems inadequate in measuring the outcomes for the level of place-based, leveraged and sustainable environmental return 2

that the Federal Government is seeking; the analysis stops short of developing a Return on Investment that captures benefits for all of the federal partners that have a stake in the revitalization of the LA River. This model, which has served USACE well with projects in less urbanized areas, seems insufficient to capture the full value of conserving prime urban land for ecosystem restoration: of relative scarcity of land (and thus a high cost), the environmental and logistical complication and expense of any modification to Los Angeles' current landscape, and the inherent cost of gaining an opportunity for a land use that normally cannot compete with usual urban market forces. In addition, several other elements should be included as valid consideration to the cost-benefit analysis, whether these costs are to be borne by federal or local funds. 2

- *Land and land related costs*: Land values in the City of Los Angeles are among the highest across the nation, and there is great private and public pressure to intensify development (Los Angeles is highest in property taxes nationally for most populated areas – CBSNews, May 2011). According to a CNNMoney report (November, 2013), Los Angeles is the second most unaffordable housing market in the country, underscoring the cost of property in Los Angeles and the premium placed upon any undeveloped land. In addition to the higher cost for acquisition, the entitlement processes, clean up and the logistics of restoration will be commensurate with these higher land costs. The City of Los Angeles, as sponsor, has acknowledged this and has agreed to pay for a large share of these costs. These factors are unfortunate, but reasonable in the context of location, and the cost analysis should be scaled accordingly. 3

- *Land Benefits*: The Federal Reserve Board of Washington, DC report, "Commercial and Residential Land Prices Across the United States" notes that values on or near undeveloped land, in particular, on average are higher because of the speculation around future development (Nichols, Oliner, Mulhall; 2010-16). To be considered is the positive impact restored areas will have on the property values in some of the neglected and frequently blighted areas. The Verdugo Wash area, in particular, will experience a change in land use but in many instances lose substandard infrastructure, obsolete industrial capacity and dirty processes; this may catalyze redevelopment in surrounding areas – inviting cleaner and progressive commercial and industrial businesses to both the Cities of Los Angeles and Glendale. 4

- *Competing Municipal and Regional priorities*: The history of Los Angeles is a story of massive public works to control, rather than coexist with that which is natural; this trend continues today with massive infrastructure projects that challenge the residents of Los Angeles to find a way to balance the benefits of large-scale development with securing illusive green space. Examples that continue to present a juggling act in Los Angeles are the transportation-related projects such as the $1.5 billion California High Speed Rail, expansion of existing freeways and Interstates, the growth of Los Angeles Union Station to accommodate the HSR and projected growth in regional rail usage. With a growing demand from residents to reclaim the Los Angeles River for public access and natural restoration, there has been a change in focus – a shift or perhaps a sharing of priorities. Restoration must be evaluated from this 5

benefits paradigm – that each acre "reclaimed" for restoration is a hard-fought, extremely valuable and unique opportunity.

- *Per Capita Benefit*: Analysis of habitat units is a useful gauge of restoration progress, but does not capture the benefit of an incrementally more robust habitat for the human population of Los Angeles. A healthy ecosystem must include benefits for all members of the environment, and the opportunity to improve the human condition through health, recreation, increased economic investment in the areas should be included in a multi-benefit model. The hundreds of thousands of residents that live in densely urban, green space-poor communities divided by rail and infrastructure and barred from the River - the linear park on the other side of barbed wire fencing running behind their homes. USACE and the City of Los Angeles have an opportunity to not only enhance habitat corridors for fish and wildlife in the Glendale/Verdugo area to Griffith Park, and Piggyback Yard to Cornfields/Los Angeles State Park, but to build corridors for these communities to access these natural areas. 6

Keystone Effect and Connecting Federal Priorities

The Urban Waters Federal Partnership has focused its coordination of federal engagement to produce tangible outcomes on high priority revitalization efforts related to the Los Angeles River. The Partnership has brought the ARBOR Study into the national spotlight, and has been recognized as an exceptional opportunity to bring about significant momentum in the Urban Waters goal of revitalizing urban waterways. This Workplan of federal priority projects includes several projects with extensive revitalization work predicated on the ARBOR Study, and in particular - the expanded reaches of Alternative 20.

Verdugo Wash + Glendale Riverwalk: The restoration of the Verdugo Wash is key in anchoring the investment that the City of Glendale has made in restoring the LA River frontage in its City. Past ecosystem restoration efforts by the City of Glendale have conflicted with USACE invasive plant maintenance activities in that there were no areas with clear designated for ecosystem restoration. With the opening of Glendale's Riverwalk and impending plans (Phase 3) with the City of Los Angeles to connect Riverwalk with natural and recreational uses in Griffith Park through bridges, this area will benefit from the establishment of ecosystem designation. While the City of Glendale has assembled some of the resources for this phase, both cities have planned to use the ARBOR designation to leverage additional funds from the US Department of Transportation.

Piggyback Yard + Cornfields/Los Angeles State Park : Acquisition and restoration of Piggyback Yard is considered by many stakeholders as one of the crown jewels of LA River ecosystem and restoration and storm water management. The yard is surrounded by some of the oldest and culturally significant neighborhoods in Los Angeles, and still home to diverse and often disadvantaged communities that have accommodated the rail, salvage and other industrial uses that pervade the area. The size, shape of the property and its proximity to the only other municipal green spaces throughout this historical core such the hard-won Cornfields/Los Angeles State Park make Piggyback Yard a lynchpin to completing the "archipelago" of green space and restoration from Glendale and Griffith Park through the La Noria/Water Wheel

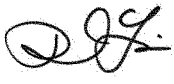
project currently under construction and Cornfields. The LA Partnership was very concerned that state and local investments that would total billions of dollars in these projects would not connect. It is clear how the cost of this piece would skew the cost of Alternative 20 high, but the leveraging opportunity is significant. We have received great interest from the financial community in developing a strategy to raise private funding, but even this effort would be moot without inclusion of this piece in the final selection.

High Speed Rail Engagement: The current proposals for the extension of the bullet train/High Speed Rail cross and impact the LA River at several points starting at the River headwaters north of the ARBOR area. In the Study area, however, the level of potential impact increases exponentially as the only alternatives cross through, over, or under many ecological sensitive areas. The US EPA has maintained close involvement in the project, and through Urban Waters has included the California HSR Authority as a partner at the table to facilitate coordination and communication. While several Urban Waters Workplan projects are impacted by the proposals, the ARBOR Study will provide a formal placeholder or buffer to enable the HSRA to create alternatives that will accommodate the River priorities. The Verdugo Wash is particularly sensitive to having this placeholder.

Greenway: There are several projects in the Workplan that are including greenways or passive recreation stretches as part of their restoration or revitalization plans; moreover, one of our partners has developed a project that will connect a greenway throughout all 51 miles – including the Verdugo and Cornfields stretches in Alternative 20. Their funding strategy largely depends on having the ARBOR designation which will leverage other federal funding sources.

As we hope to have articulated through our comments, all proposed work in the three alternatives represent a greatest opportunity for revitalization of the Los Angeles River, but perhaps Alternative 20 more fully aligns the billions of dollars of federal investment that has been or is in the process of being invested into other aspects of River and River-community revitalization. This is a unique moment in both environmental restoration and in sustainable land use planning, and we encourage the Corp to set a foundation for decades of sound federal, as well as local investment.

Respectfully,



Pauline Louie
Watershed Ambassador
Urban Waters Federal Partnership
Los Angeles River Pilot

Appendix A: Federal Engagement in LA River Revitalization
Appendix B: Urban Waters LA River Workplan*
Appendix C: List of New Projects for Consideration into Workplan
*As of current date, Workplan is being modified to include the new projects

Urban Waters Partnership - LA River Workplan Project Status

Workplan Projects within the City of Los Angeles

TYPE	PROJECT	LOCATION	LEAD	STATUS/BENCHMARKS
Capacity/Planning	LA River Corps	LA-wide	LA, Conservation Corps	Permanent Strategy for federal engagement not yet identified
Capacity/Planning	NELA Sustainability Challenge Grant	Glendale Narrows	HUD, LA CDD, LA Planning	Summer Policy Forums concluded; processing feedback
Feasibility Study	LA Basin Stormwater Conservation	LAR+Ballona+San Gabriel watersheds	USBoR, LACFCD	Finalizing scoping; 2 year project
Feasibility Study	LA River Ecosystem Restoration (LARBOR)	11mi; Headworks to Downtown	USACE, LA Eng	Final selection of Alternative #10 vs. #20. Ongoing public comment until Nov 15
New Const/Rehab	North Atwater Crossing/La Kretz Bridge	N. Atwater Park to Griffith Park	USACE, NPS, LARRC	Groundbreaking scheduled for late Spring '14. CEQA adopted. USACE wrapping up NEPA.
Study Other	Indicators of Watershed Health	Complement Arroyo Indicators report	CWH, EPA	Presenting at WaterSmart Innovations (Las Vegas); also at 10/10 Watershed event.
New Const/Rehab	Pacoima Wash Greenway	Pacoima Dam-Pacoima Wash/Tujunga	MRCA, USACE	Full Greenway Blueway (partial funding) in design
Study Other	Station Fire Restoration/Research	Foothills	USFS, National Forest Foundation	LA Center for Natural Resources to open on LA City; coordinator hired
Feasibility Study	Arroyo Seco Watershed Ecosystem	Angeles NF-Confluence	USACE, LACFCD	Moving Forward - USACE funding allocated.
Feasibility Study	Headwaters Ecosystem Restoration	Forest Lawn Dr	USACE, FOLAR, USFWS, LA DWP	Currently building reservoir; restoration phase alternatives being considered
Feasibility Study	Sun Valley Watershed	2.4Mac	LACFCD, USACE	Pre-Existing Conditions done, discussing Fr w/ FCDD model. Bradley Wetland a flagship project (LACo, LA City, DWP) at 65% design
Study Other	River Forecast Site	Downstream, near Downtown LA	NWS, LA, USACE, LACFCD	Site selection complications. Exploring alternatives for collecting/disseminating info.
Feasibility Study	Sepulveda Basin Concrete Removal	Upstream of dam, NW of 405/101	USACE, River Proj	Moving Forward - USACE funding allocated.
Demonstration	LA River Bioswale (GI) Demo Project	Bioswale/GI in Taylor Yards	USACE, LA-Eng, CA Parks	Concept plans being reviewed; awaiting additional funding.
Study-Other	Taylor Yard-GI Acquisition	GI Parcel	LA, LARRC, USACE, MRCA	Project inactive; land acquisition negotiations ongoing

Urban Waters Partnership - LA River Workplan Project Status

TYPE	PROJECT	LOCATION	LEAD	STATUS/BENCHMARKS
Los Angeles County Workplan Projects Outside of City of Los Angeles				
New Constr/Rehab	**Parque Dos Rios/Southgate Park**	7.6+ac; 710-LA River	NPS, South Gate, RMC	Design finished; construction underway?
Feasibility Study	**E. San Pedro Bay Ecosystem Restoration**	LA/San Gabriel rivers; between LA/LB ports	USACE, Long Beach	Council approved staff to revise 333 budget with USACE; still seeking funding from USACE.
Current Partnership Engagement Issues				
Engagement	**High Speed Rail - Palmdale to LA**	SF Valley to Union Station	EPA, DOT	Ongoing discussions; reviewing alternatives, identifying potential conflicts with UW projects.
Engagement	**710 Expansion**	South of Downtown LA	EPA, Metro, DOT, Gateway Cities, LA, FOLAR	Design Revisions.
Completed Projects				
New Constr/Rehab	**Hansen Dam Campground (Tujunga Wash)**	Tujunga; 1m down Little/Big Washes	USACE, LA-Parks/Rec	Open to the Public; Project in Post-Construction
New Constr/Rehab	**SouthLA Wetlands Park**	5413 Avalon Blvd	LA, EPA, Water Quality Control	Open to Public in Feb 2012; post-construction
Restoration	**North Atwater Creek**	3900 W. Chevy Chase Dr. , LA	LA, EPA, Water Quality Control	Opened to the public in Apr '12.
Restoration	**Tujunga Wash Greenway**	9ac Valley Glen near Sherman Wy	LACFCD, USACE	Open to the Public in Aug '12.
Regulatory	**LA Co Municipal Separate Storm Sewer System (MS4) Permit Renewal**	County-wide	Water Quality Control, EPA	LARWQCB renewed permit on 11/8; addresses muni stormwater discharges in LACo (except Long Beach).
				Project Completed
				Recent Project Activation
				Project On-Going
				Project Waiting/Pending

Urban Waters Workplan Timeline & Major Milestones

	2012			2013					2014					2015
	Summer		Fall	Winter	Spring	Summer		Fall	Winter	Spring	Summer		Fall	Beyond
NELA Sustainability Challenge Grant														
Creation of Advisory Board														
Place-Making; Signage, Access for Rec Zone														
Policy Forums														
Los Angeles River Corps														
Identify Funding for Paddling Evaluation Program														
Obtain Permit for Paddling Program														
Develop Multiyear Paddling Permit with USACE														
LA Basin Stormwater Conservation Study														
Finalize Scoping														
Implementation														
LA River Ecosystem Restoration (ARBOR) Study														
Selection of alternatives array														
Approval by USACE HQs														
North Atwater Crossing (La Kretz Bridge)														
Groundbreaking/Construction														
Indicators of Watershed Health														
Identify Stakeholders														
Hold Advisory Focus Groups/Data Gathering														
Report Issued														
Identify various hosts of information														
Identify resources for report card														
Pacoima Wash Greenway														
Open 8th St. Park														
Identify resources for Greenway design														
Station Fire Restoration														
Support Million Trees Campaign														

Urban Waters Workplan Timeline & Major Milestones

	2012			2013				2014				2015
	Summer		Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Beyond
Launch LA Ctr for Natural Resources												
Resource Center for Watershed Data												
Arroyo Seco Watershed Ecosystem Study												
Headworks Ecosystem Restoration												
Restoration Alternatives Finalized												
Complete Reservoir/Begin Park Construction												
Sun Valley Watershed												
F3 and F4 prepared and submitted												
Strathern Wetland Design												
Study Completed												
River Forecast Site												
Identify Site for Equipment; Coordinate with agencies												
Identify hosts of Fast Fact websites												
Sepulveda Basin Concrete Removal												
Submit Proposal to USACE for funding												
Determine feasibility of proposal												
LA River-Bowtie (G1); Demo Project												
Concept Plans Completed												
Identify Additional Resources												
Taylor Yard-G2 Acquisition												
Opportunities Report Completed												
Negotiations with Union Pacific; Expand Support												
Hansen Dam Campground (Tujunga Wash)												
Open to Public												
SouthLA Wetlands Park												
Completed; Opening												

Urban Waters Workplan Timeline & Major Milestones

	2012			2013					2014					2015
	Summer		Fall	Winter	Spring	Summer		Fall	Winter	Spring	Summer		Fall	Beyond
North Atwater Creek														
Open to Public														
Tujunga Wash Greenway														
Open to Public														
LA Co Muni Separate Storm Sewer System (MS4) Permit Renewal														
Hearings Held														
Training/Public Education														
Parque Dos Rios/Southgate Park														
Design Work														
Construction														
E. San Pedro Bay Ecosystem Restoration														
Revise 333 Budget														
Secure USACE funding														
High Speed Rail - Palmdale to LA														
Establish Coordination														
Mapping of UW Projects														
Challenge/Support Alternatives														
710 Expansion														
Challenge/Support Plans														
Provide input on Design														

Urban Waters Federal Partnership- Los Angeles River Work Plan
August, 2013 Ballot

Project	Organization	Description	Expected Completion Date	Milestones	Prioritizes Clean Urban Waters	Reconnects people to their waterways	Promotes water conservation and reduces reliance on imported water supply	Uses urban water systems as a way to promote economic revitalization and prosperity	Encourages community improvements through active partnership	Promotes Ecosystem Restoration	Fosters long-term environmental sustainability	Clean Federal Involvement	Major support funding
River Rover	FOLAR- contact Shelly Backlar	Mobile exhibit to provide information/education to residents and visitors; includes interactive displays with video, interactive educational signage and opportunities for lab analysis with scientific equipment.	January of 2014	1. River Rover assembly completion (Jan 2014) 2. Program upkeep	River Rover will regularly complete water quality tests	River Rover provides an opportunity for community especially schools to engage through education	Educates on the importance of water conservation		Opportunity to partner with schools, nonprofits, etc. surrounding the LA River.		River Rover helps teach values of our urban ecosystem through hands on engagement.		
Arroyo Seco Canyon	Arroyo Seco Foundation- contact Johnathan Frame	This is a partnership between Pasadena Water and Power and the Arroyo Seco Foundation. Arroyo Seco Canyon Project (ASCP) is a water resources enhancement, habitat restoration, and recreation improvement project funded by the state Integrated regional water management program and Pasadena Water and Power.	Construction Begins October 2014. Complete: October 2015, construction will take place only a few months at a time as a result of restrictions by CA Fish and Wildlife	1. Water resource enhancement, 2. habitat restoration, 3.recreation improvement project	Enhanced water quality	Public recreation will be enhanced and increased along the Gabrielino Trail, and throughout the Angeles National Forest.	This project promotes water conservation as a major component of a comprehensive plan. Depending on rainfall conditions, will increase Pasadena's local water supply by up to 1500 acre-feet per year.	Will increase awareness of urban streams as if their potential for recreation by LA Metro Area residents. Additional improvement to the Arroyo Seco Parks system, providing active and passive recreation opportunities from the Arroyo Confluence to the Angeles National Forest.	Restoration activities for ASCP will be partially implemented by community volunteers. ASP has partnered with Eaton Canyon Development to manage a nursery specifically for propagation of locally adapted plants for restoration work.	Habitat will be greatly enhanced, through the greenest habitat benefits will lag behind completion by a few years.		Major cooperation with the US Forest Service is necessary for successful completion of this project.		Pasadena Water and Power
Glendale Riverwalk II & III	City of Glendale, NE Trees, City of LA- contact John Pearson	Most of the Phase II trail extension is already built. The work starting now will add a small bridge connecting Phases I and II, an entry plaza with a river overlook where the two phases join, a park at the Verdugo Wash Confluence with the Los Angeles River, and additional interpretive signage. Phase II is scheduled for completion at the end of 2014. ‖ The Phase III work that is presently funded includes site selection and preliminary engineering for the Los Angeles River bridge that will connect Riverwalk to Griffith Park. Construction of the bridge is not yet funded. Site selection will focus on four alternative locations identified in the Phases II/III Master Plan, and will obviously involve significant coordination with the City of Los Angeles. Phase III site selection and preliminary engineering are also scheduled for completion at end of 2014.		phase I completed 2013, 134 Hwy alignments to be done early 2014 as part of phase 2, plans to integrate Verdugo wash also phase 2. Phase 3 includes bridge connecting Griffith park on LA City side, develop/select designs 2014, seeking US DOT funding.		Improving passive recreational opportunities and trails for bicyclists and peds		Yes - community/econ dev connection to LA City area recreational corridor	Work with Residents and local studios/businesses; partner with City of LA			Transpo corridor seeking USDOT funding	LA Rivers and Parkways, LA Co Regional Park/Open Space, Caltrans. Seeking DOT funding.
Bending the River Back into the City	Metabolic Studio- contact Mark Hanna, Michael Sagan	The project will divert water from the LA River, lift the water by use of a water wheel, treat the water through filtration and UV disinfection, and distribute the water for landscape irrigation use, offsetting nearly 80 AF of potable water demand per year. The diversion requires a 6-foot-high, computer-controlled inflatable dam to be installed in the LA River. Dry season flows will be captured and pooled water will extend approximately 1,220 feet upstream, creating a surface impoundment of approximately 16 acre-feet. During rain events, the dam will be lowered automatically, allowing stormwater flows to pass unimpeded. When the dam is raised, pooled water will be diverted through a side channel buried into the west bank of the river, immediately upstream of the dam. The side channel will direct LA River water to the water wheel, which will be powered entirely by the force of the diverted LA River flows. A small portion of these flows, approximately 80 gallons per minute, will be raised from the inlet tunnel in buckets attached to the wheel. These buckets will fill the water approximately 60 feet and empty it into a collection trough. The collection trough will convey the water under gravity to storage cells, which will connect to a treatment and distribution system.		1. CEQA, 2.IWM-designs, 3. property acquisition, 4. 401 groundbreaking in 2014	This project will capture, treat, and use dry weather flows in the LA River.	Yes, Focused installation to attract people to the LA River and to reconnect the River to the City.	Yes, will irrigate State Park, commercial parks, and supply a distributed system of cisterns	The project will intentionally reduce the historic concept of using the LA River as a resource instead of a trash and runoff collection area. It is anticipated that the water board, combined with recent land use designations adopted by the City, will result in significant residential and commercial growth in the area.	All end-users will have the benefit of the water produced, treated and delivered by the project by virtue of partnerships with Metabolic Studio.	As well, there will be a significant educational component to the project that will stress the importance of reducing urban stormwater runoff.	Regulatory Clearances	Metabolic Studios
Compton Creek	Coastal Conservancy- David Hawes	**The Coastal Conservancy will soon take on the next steps to advance detailed technical and habitat work in the earthen bottom creek channel within the Compton city limits. There is plenty of need for additional technical support to provide much needed performance based design elements that can be quantified and justify: flood capacity improvements, water quality, urban runoff benefits as well as habitat enhancements, and promote other benefits such as: open space, new recreational opportunities, awareness with local officials, and community involvement for long term sustainability. Outreach and awareness assistance would also rank high on my 'needs' list for this area.**	12/14	CEQA/NEPA-review ready (100% site plans)	yes	yes	within project area	yes	yes- lots of areas for collaboration			maybe- Small green infrastructure projects need to be planned from a quantifiable and cumulative impact approach of several projects, in order to achieve local, county, and state supports.	
LA River Expeditions	George Wolfe			not a distinct product	promote clean urban waters	reconnecting people to their waterways	Education through paddling programs	Yes -encourages recreational use; small business.	partnership with LACC, NPCA, City of LA, LARC2, River Project, Urban Semillas, ToSAR			yes	
Certification of Juan Bautista de Anza National Historic Trail:	NPS- Anna Dow, Patrick Johnston	Certification of Juan Bautista de Anza National Historic Trail; Continuous Recreational Trail	June 2013	Completed NPS Application Process		Yes- the historical trail provides additional room for engagement			Yes- by providing National Park Service Trail Certification by the Rec Trail			Yes- NPS	Yes- NPS

Urban Waters Federal Partnership- Los Angeles River Work Plan
August, 2013 Ballot

Project	Organizer Name	Description	Expected Completion Date	Milestones	Promotes Clean Urban Waters	Reconnectes people to their waterways	Promotes water conservation and reduced reliance on imported water supply	Uses urban water systems as a way to promote economic revitalization and prosperity	Encourages community improvements through native partnership	Promotes Ecosystem Restoration	Fosters long-term environmental stewardship	Clear federal involvement	Major support funding
LA River/Arbo Creek Confluence Project: Recreational Trail and Confluence Park	Robin Mark/Tod Kiger - TPL	Development of 2 ac park, 1.3 mi bike/ped path, public art, green streets BMPs in low-mod income area of Reseda. Land owned by DWP, LACoPW.			Yes - Green Street	Yes-active and passive recreation	Yes - Green Street		Community Engagement with residents; strong local support.			$2.5M (in CDBG leveraged with State and private funds. Needs completion of bike path.	
Greenway 2020: Connect 51 miles of bike/pedestrian paths for continuous recreational and commuting trail	Omar Brownson/Jennifer Hernandez - LARRC	Initiative to connect all 51 miles of LA River with a bike and pedestrian trail.	2020			Connects the community to the river with an adjacent path for recreation and commuting.		Greenway 2020 is part of a larger economic development strategy. Greenway creates a communitized transportation corridor, safe route option, more river access and open space in underserved neighborhoods	Connecting the 51 miles will require partnership among the cities, communities, and stakeholders.		Reconnecting Angelenos to the LA River for their commute and recreation will foster ownership and environmental stewardship.	Seeking USDOT and other federal programs for alternative transpo, connection to public transit.	
Viet/ Memorial Garden	City of LA, LACC	Development of community garden on Army National Guard Armory and facing LA River in Van Nuys. Memorial to Vets, and provides connection along LA River to nearby rehab and vets facilities.				Yes - passive engagement with River; would connect Bikeway			Active partnership with US Army, Operation Gratitude			Seeking engagement with VA and alternative transportation funding.	
Safe Routes to River	RTCA, MRCA, LAUSD	The Safe Routes to the River project is a pilot effort between the National Park Service's Rivers, Trails, and Conservation Assistance program, NRCA, and LAUSD to develop a suite of implementation strategies and recommendations for establishing safe physical connections between LAUSD school sites and the Los Angeles River. The Safe Routes project will focus on assessing conditions and engaging students at four identified school sites along the river (Cumpa Park HS, Reseda HS, John Marshall HS, and the LA River School at the Sonia Sotomayor Campus) to explore strategies and identify opportunities for increasing access to the river through enhanced routing, gateways, signage, and educational and interpretive facilities which improve opportunities to connect classroom curriculum and school-based activities to the natural environment.											
LA River Greenway Tree Planting & Trail	Community Conservation Solutions	Bridge gap in trail and connect to river public access parking garage. Located on Coldwater Canyon Ave to Whitsett Ave, San Fernando Valley. Concept and design phase, ongoing public outreach; three grants recently awarded, seeking remaining funding; permitting, construction 2014-2015	completion 2016	trail improvements		yes- improves access to river		yes- promotes activity along the river	yes- improving public access to and safety on river trail			yes- USACE	

ARBOR Study – LA River Project Connectivity

Arbor Study Zone Projects

North Atwater Crossing/ La Kretz Bridge-
Multimodal crossing bridge funded by private investment - symbol of river development in ARBOR Study zone. Part of connectivity of Greenway bike/ped paths.

Headworks Ecosystem Restoration-
Development of riparian habitat and wetlands, water quality improvement and passive recreation elements.

Bowtie Parcel: Demonstration Project-
Implement restoration plans of ARBOR Study; streams, wetlands, river bank terraces.

NPS Certification of de Anza Historic Trail-
Certification of historic trail follows LA River and promotes awareness of recreational corridor.

North Atwater Creek Restoration and Park-
Restoration includes native vegetation, stormwater infiltration, debris catchment before LA river. Recreation and entry point for bike/ped path along River.

Taylor Yard- G2 Parcel Acquitision-
Acquisition strategy for "crown jewel" property in ARBOR Study zone, currently held by private railroad interests.

Urban Waters Partnership, 2013

USC Architecture

USC School of Architecture

November 16, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

I am writing to encourage adoption of Alternative 20 as the fundamental long-term future of the Los Angeles River and its adjacent urban valley. I am the Director of the Discipline of Landscape Architecture at the University of Southern California. I am a former Dean of the USC School of Architecture and have been engaged with Los Angeles River studies since the early 1980's. Our program recently mounted a Los Angeles River Exhibition at City Hall. The focus of our graduate studies is the urban landscape with particular attention to landscape infrastructure.

I have rather thoroughly reviewed the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report. I have discussed it with our landscape ecology faculty as well as other faculty who are expert in landscape infrastructure design. I am providing comments in support of Alternative 20 presented in the document.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare, Draft Integrated Feasibility Report. The Tentatively Selected Plan, while including initiatives of importance to the future of the River and its environs does not go far enough to incorporate both near-term actions and long-term ecological recovery and high quality.

All large scale landscape infrastructure planning and implementation studies inherently cut across not only ecological, but also cultural, economic, social and ethnographic conditions and futures. Matters that are not considered do not disappear but simply continue to be deficient or in disarray. Alternative 20 comes very much closer to the necessary inclusivity of our current opportunity than Alternative 13. It should be chosen, implemented, and then over the years further augmented. I agree with the following assessment being communicated to you by numerous other individuals and organizations:

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)

University of Southern California
Watt Hall 204, Los Angeles, California 90089-0291 • Tel: 213 740 2723 • Fax: 213 740 8884 • http://arch.usc.edu

- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7,015 more jobs and $386 million more in wages during construction
    - Creates 3,700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1,094 more new permanent jobs valued at $62 million more
- The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas essential to improve air quality

Substantial restoration of the Los Angeles River is crucial to City and the region. The added costs for Alternative 20 represent the additional wise investment required to achieve of the objectives stated above that were not sufficiently counted in the report comparisons. I strongly urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Robert S. Harris, FAIA, Hon.ASLA
Emeritus Professor and Director
Discipline of Landscape Architecture
ACSA Distinguished Professor

USC Architecture

USC School of Architecture

Sunday, November 17, 2013

Josephine R. Axt. Ph.D.: Chief Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt

I am writing comments for the ARBOR Study to suggest that the Army Corps should strongly reconsider their recommendation of Alternative 13 and select Alternative 20 as their recommended alternative. 1

My qualifications for this assessment are the following: I am an assistant professor in the USC School of Architecture in the Landscape Architecture Program where I run the Landscape Morphologies Lab, a lab that often focuses on the LA River and other (landscape) infrastructures and collaborates with the Army Corps of Engineers, Bureau of Engineering, and Department of Water and Power; I am an author of the original Los Angeles River Revitalization Master Plan and creator of many of its maps, including the habitat analysis, as part of the Mia Lehrer & Associates team; I am the co-author of an internationally published (English, French, German, and Chinese editions) and recognized book on complex landscape systems, including river restorations (Living Systems: Innovative Materials and Technologies in Landscape Architecture, Birkhauser 2007) and contributor to the book Landscape Infrastructures: Case Studies by SWA Group, Birkhauser, 2011; and finally I was Landscape Architecture Foundation Fellow, a funded researcher of metrics for landscape architecture.

According to the Los Angeles River Revitalization Master Plan, the publicly-vetted plan that preceded and set the stage for the ARBOR study, the first goal of the master plan was to "Revitalize the River... As a very long-term goal, its ecological and hydrological functioning can be restored through creation of a **continuous riparian habitat corridor within the channel**, and **through removal of concrete walls where feasible.**" This goal, as related to the river channel is understandably difficult, but remains the most important goal and has been well vetted and is the major impetus for seeking the ARBOR study.

My analysis of Alternative 13 and Alternative 20 suggests that there is a significant difference in these two alternatives in terms of the restoration of the river channel itself and thus it's ability to function as an effective ecosystem, ecological corridor, public recreation zone, and 1

University of Southern California
Watt Hall 204, Los Angeles, California 90089-0291 • Tel: 213 740 2723 • Fax: 213 740 8884 • http://arch.usc.edu

USC Architecture

acceptable outcome for the city residents. For example, in terms of linear in-channel restoration Alternative 20 restores twice as long a stretch (excluding invasive management) of the concrete channel, or a little more than half to the ARBOR area.

My primary comment is, that of the many reasons Alternative 20 should be selected over Alternative 13, I believe there are inconsistencies in the study and missing considerations that have resulted in an undervaluing of improvements to the linear river corridor / channel. My specific comments are listed below: 1

1. **The first planning objective of the ARBOR study is to restore Valley Foothill Riparian *Strand* habitat. However, the CHAP analysis appears to under-value restoration that occurs within the primary Riparian zone – the riverine channel itself and directly adjacent banks. This is particularly problematic given the emphasis on the CHAP analysis within the report in the selection of alternatives and the subsequent explanation to the public and entities.** While "strand" is never defined in the report, presumably this refers to the historic pattern of Riparian vegetation to congregate around long, linear, and sometimes narrow river and stream corridors.
   a. According to figure ES-4, and contrary to the statement that CHAP is not acreage based, the analysis appears to be more or less correlated with area. This would bias Alternatives, such as 13, with fewer channel modifications and more adjacent large-parcel restorations. 2
   b. While clearly stated in the report, CHAP analysis is known not to value connectivity, such as hydraulic, linear, and regional. This results in parcels that are within the actual river or directly adjacent having equal or greater value than parcels that are not as well connected. While other tools were used to measure connectivity, CHAP analysis remained *the* pivotal decision making / alternative selection tool. For example, in table ES-1: Comparison of Final Array of Alternatives, connectivity is not referenced.

2. **"Increase Habitat Connectivity" is the second objective of the study and its importance is explained extensively in multiple sections within the report. Improving connectivity is clearly a critical part of this study as it supports the Army Corps purpose "... to restore significant structure, function and dynamic processes that have been degraded." However, the report appears to be inconsistent in its relative valuing of connectivity.**

a. The ARBOR study was limited to the 11-mile Glendale narrows reach because of the evaluations of the importance of this section in terms of ecosystem connectivity and restoration:

From the ARBOR Study:
"...the iterative study process resulted in a narrowing of the Study's geographic focus from the entire 32 miles to the 11 mile soft-bottomed Glendale Narrows stretch because that area shows the most promise for ecosystem restoration (Figure ES-3).

"The upper and lower reaches of the river have less potential to connect nationally and regionally significant ecological zones because of the state of existing development. "

"The technical significance of restoration in the ARBOR reach is also based on the importance of nodal habitat connectivity (i.e., large and small aquatic habitat patches connected via habitat corridors). 2

"The proposed LA River ecosystem restoration project would provide ***an essential backbone*** *of physically connected habitats along a primary wildlife movement corridor/migratory pathway."*

These statements would suggest that the recommended alternative would address connectivity and restoration in a comprehensive fashion within the ARBOR section, given that it is the greatest opportunity within the 51 miles river and must function as a "backbone". This further emphasizes the importance the value of making a connection to the Verdugo Mountains, as does Alternative 20. However, this justification or consideration is not present in other parts of the study and the recommended alternative is justified without addressing this larger context. If the study was consistent with its original statement I would expect this would be part of the final consideration for the final recommendation.

b. Frequent mentions are made to the fact that Alternative 13 provides a incremental improvement of 309% in Nodal Connectivity over Alternative 10 and is used as a justification for adopting this recommended plan. However, I find this statement to be arbitrary, given that Alternative 10 providing no significant Nodal Connectivity improvement 3

over the existing / baseline conditions. Deduced from the percentages stated, Alternative 20 provides an over 1200% improvement over existing conditions, or 407% improvement over Alternative 13. Given that connectivity has been stated as a critical part of this study, it seems that the radical improvement that 20 provides should be better represented and considered, especially since CHAPs does not represent connectivity and gives the impression that it is a linear progression of improvements between the alternatives, rather than nearly an order magnitude in important aspects. 3

3. **Visual Quality and public Acceptability of the River Channel has and will likely have large implications in the extent that the large adjacent human populations function as stewards vs. disturbance and affect the extent that this project is perceived and ultimately supported. This study recognizes that the existing conditions of the trapezoidal concrete channel invites a number of unattractive uses and degradation, but does not consider how future alternatives may be more suitable to prevent this. Given that the impetus of this study is largely based on the unfavorable perception of the river, its current un-"Acceptability" it seems appropriate that the study evaluate alternatives within this light.**

   By my initial analysis the trapezoidal concrete visual character of the entire 11 miles reach of the ARBOR study is currently universally considered un-"Acceptable" and induces poor stewardship, marginal recreation, and unattractive uses. Alternative 13 reduces the extent of this condition by 3.2 miles, leaving 7.8 miles in more or less the same un-"Acceptable" state. Alternative 20 on the other than hand, reduces this condition by 6.4 miles, leaving more 4.6 miles, less than 50% of the area in an un-"Acceptable" state. The extent that the unattractive river channel itself is improved has disproportionate significance in terms of restoration as it represents the river itself. It should be considered that Alternative 20 is the only alternative that improves most of the existing river channel within the ARBOR reach. This improvement will have measurable impacts in terms of stewardship, public recreation, and overall sentiment that will in turn have substantial impacts of the habitat quality itself and Acceptability of this public investment. 4

   This topic, of how to design a river restoration, that best interfaces with the dense surrounding human population in terms of visual quality and recreation, in ways that are safe, appropriate, and cost effective, is a topic of particular interest to my research and for the USC Landscape

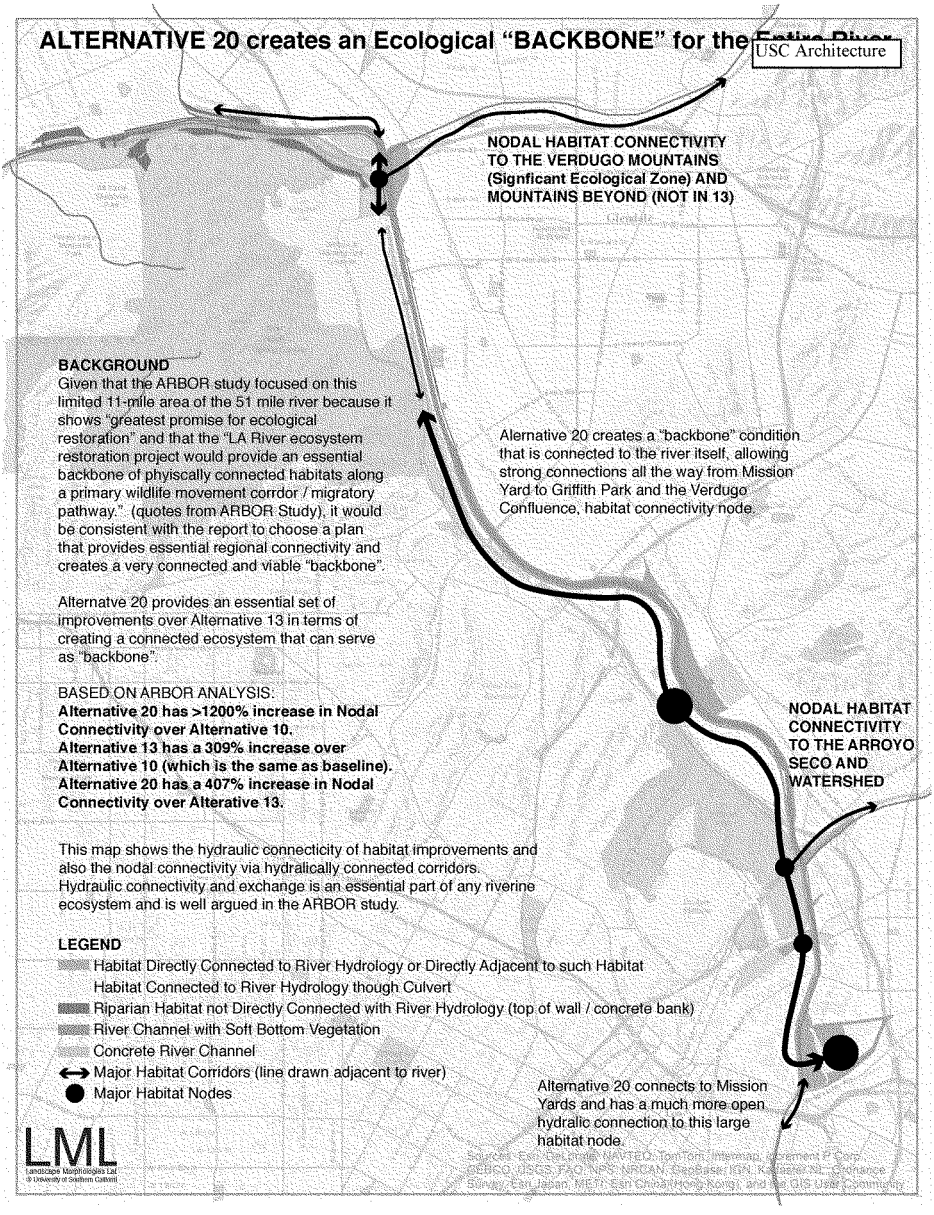
Architecture department. We would be very interested to participate in further research with the Army Corps as the project proceeds.

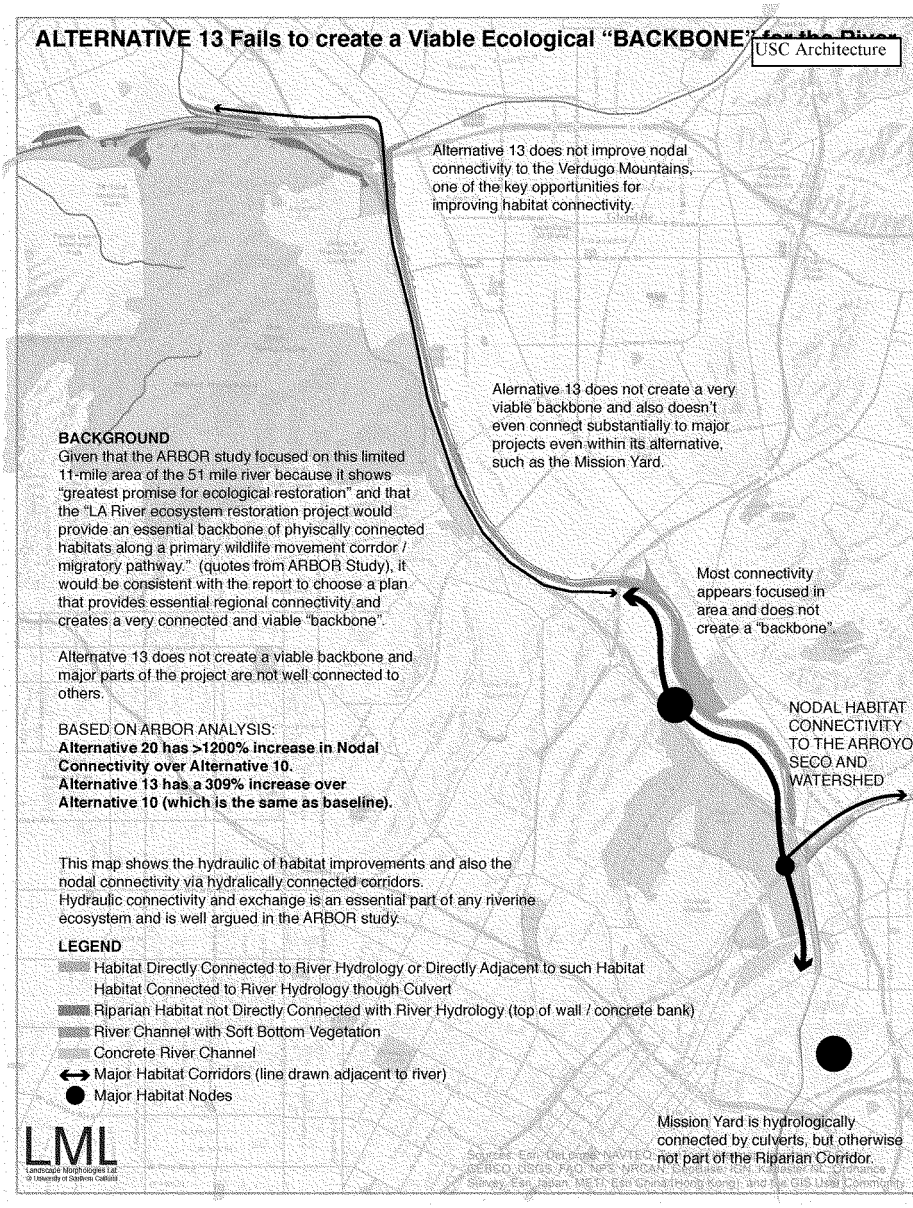
Please also review the attached maps.

Thank you for this landmark study and I hope you find these comments helpful in finding the best possible outcome for this project. 5

Best,

Alexander Robinson
Director, Landscape Morphologies Lab
Assistant Professor, USC Landscape Architecture Program


ALTERNATIVE 20 creates an Ecological "BACKBONE" for the Estiva River
USC Architecture
NODAL HABITAT CONNECTIVITY TO THE VERDUGO MOUNTAINS (Signficant Ecological Zone) AND MOUNTAINS BEYOND (NOT IN 13)
BACKGROUND
Given that the ARBOR study focused on this limited 11-mile area of the 51 mile river because it shows "greatest promise for ecological restoration" and that the "LA River ecosystem restoration project would provide an essential backbone of phyiscally connected habitats along a primary wildlife movement corrdor / migratory pathway." (quotes from ARBOR Study), it would be consistent with the report to choose a plan that provides essential regional connectivity and creates a very connected and viable "backbone".
Alternatve 20 provides an essential set of improvements over Alternative 13 in terms of creating a connected ecosystem that can serve as "backbone".
BASED ON ARBOR ANALYSIS:
Alternative 20 has >1200% increase in Nodal Connectivity over Alternative 10.
Alternative 13 has a 309% increase over Alternative 10 (which is the same as baseline).
Alternative 20 has a 407% increase in Nodal Connectivity over Alterative 13.
Alernative 20 creates a "backbone" condition that is connected to the river itself, allowing strong connections all the way from Mission Yard to Griffith Park and the Verdugo Confluence, habitat connectivity node.
NODAL HABITAT CONNECTIVITY TO THE ARROYO SECO AND WATERSHED
This map shows the hydraulic connecticity of habitat improvements and also the nodal connectivity via hydralically connected corridors. Hydraulic connectivity and exchange is an essential part of any riverine ecosystem and is well argued in the ARBOR study.
LEGEND
Habitat Directly Connected to River Hydrology or Directly Adjacent to such Habitat
Habitat Connected to River Hydrology though Culvert
Riparian Habitat not Directly Connected with River Hydrology (top of wall / concrete bank)
River Channel with Soft Bottom Vegetation
Concrete River Channel
Major Habitat Corridors (line drawn adjacent to river)
Major Habitat Nodes
Alternative 20 connects to Mission Yards and has a much more open hydralic connection to this large habitat node.
LML
Landscape Morphologies Lab
@ University of Southern California
Sources: Esri, HERE, NAVTEQ, TomTom, Intermap, increment P Corp., DeLorme, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community


ALTERNATIVE 13 Fails to create a Viable Ecological "BACKBONE" for the River
USC Architecture
Alternative 13 does not improve nodal connectivity to the Verdugo Mountains, one of the key opportunities for improving habitat connectivity.
Alernative 13 does not create a very viable backbone and also doesn't even connect substantially to major projects even within its alternative, such as the Mission Yard.
Most connectivity appears focused in area and does not create a "backbone".
NODAL HABITAT CONNECTIVITY TO THE ARROYO SECO AND WATERSHED
BACKGROUND
Given that the ARBOR study focused on this limited 11-mile area of the 51 mile river because it shows "greatest promise for ecological restoration" and that the "LA River ecosystem restoration project would provide an essential backbone of phyiscally connected habitats along a primary wildlife movement corrdor / migratory pathway." (quotes from ARBOR Study), it would be consistent with the report to choose a plan that provides essential regional connectivity and creates a very connected and viable "backbone".
Alternatve 13 does not create a viable backbone and major parts of the project are not well connected to others.
BASED ON ARBOR ANALYSIS:
Alternative 20 has >1200% increase in Nodal Connectivity over Alternative 10.
Alternative 13 has a 309% increase over Alternative 10 (which is the same as baseline).
This map shows the hydraulic of habitat improvements and also the nodal connectivity via hydralically connected corridors.
Hydraulic connectivity and exchange is an essential part of any riverine ecosystem and is well argued in the ARBOR study.
LEGEND
Habitat Directly Connected to River Hydrology or Directly Adjacent to such Habitat
Habitat Connected to River Hydrology though Culvert
Riparian Habitat not Directly Connected with River Hydrology (top of wall / concrete bank)
River Channel with Soft Bottom Vegetation
Concrete River Channel
Major Habitat Corridors (line drawn adjacent to river)
Major Habitat Nodes
Mission Yard is hydrologically connected by culverts, but otherwise not part of the Riparian Corridor.
LML
Landscape Morphologies Lab
@ University of Southern California
Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

Why should USACE choose Alternative 20 over Altern USC Architecture

It's all about the River . . .

The existing condition of the Los Angeles River* is universally considered to be "unacceptable" (or worse) by most criteria. It also is the impetus for the ARBOR study – we *need* the USACE in order to improve this wounded part of our watershed.

Alternative 20 restores ** **more than TWICE as long a run of the river channel as Alternative 13.**

By this criteria Alternative 20 is twice as "acceptable"† as Alternative 13.

Furthermore, USACE is the only entity with the means to restore the channel and this is a primary goal and expectation of the project.

Luckily, Alternative 20 is a "best buy" and should be selected by the Corps as the only acceptable option.

Within a 1/2 mile of Alternative 20 river channel restorations vs. Alternative 13...

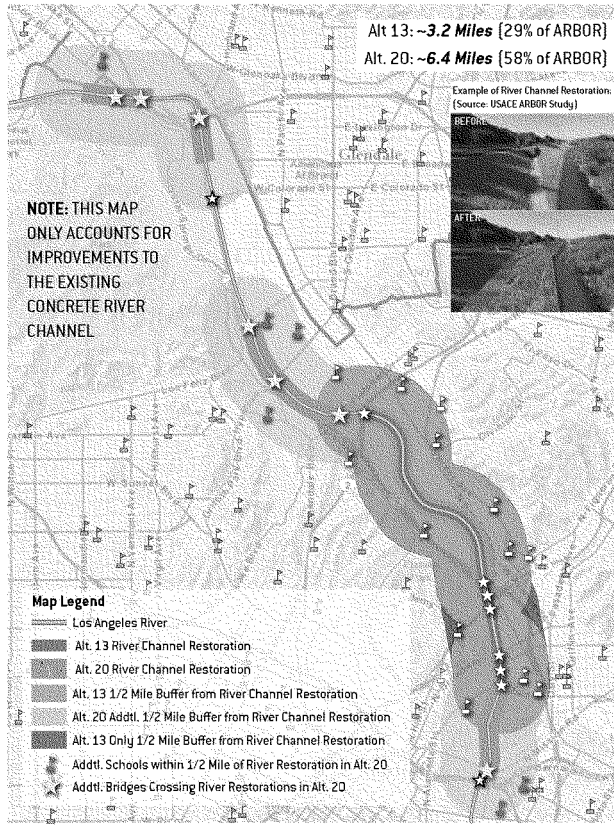
...there are twice as many people who will have easy access to an "acceptable" river channel with improved habitat.

...there are ~50% more schools that will have easy access to an improved river channel, inspiring children to become river ecosystem stewards (19 vs. 13).

...there are over twice as many bridges carrying people over restored sections of the river channel (13 vs. 6), communicating the value of this restoration and use of the river.

(USACE is the United States Army Corps of Engineers)

Map and measurements are re-drawn from the Draft Integrated Report from September 2013 and are therefore approximate.



**The Los Angeles River is identified as the area designated to function as a flood management channel (not including the top of bank). While it's valuable that all these alternatives look beyond the river itself, alternative 20 exemplifies itself by its expanded focus on restoring the river channel.*

***Restoration refers to habitat or aesthetic modifications of the concrete flood management channel (the River) and does not include invasive removal or top-of-bank planting.*

†Acceptability is a USACE criteria for "workability" or "acceptability" with state and local entities and the public.

LML
Landscape Morphologies Lab
©University of Southern California

VICA

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District;
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, California 90053-2325

SUBJECT: Los Angeles River Revitalization Plan – Public Comments

Dr. Axt and Ms. Jones,

The Valley Industry and Commerce Association (VICA) would like to thank you for all of the work you have done and continue to do for the Los Angeles River. We have carefully reviewed the Revitalization Plan and all corresponding alternatives. After much deliberation VICA has decided to support Alternative 20, as we feel that it will have the deepest impact on our region.

Alternative 20 will create jobs through construction, increase natural habitat, provide open space for recreation and boost the region's economy. If executed properly, this plan has the potential to transform the Los Angeles River into a world-class tourist destination and improve the quality of life for all Angelenos. 1

The other alternatives proposed in the report use a more piece-meal approach to address the river. These plans will not improve all aspects of the 11-mile stretch of river and will end up costing more for continuous improvements in years to come. Alternative 20 provides a complete and holistic approach to revitalization and while the upfront costs seem prohibitive, we are pleased that federal funding has been allocated to help ease the financial burden of this consummate project.

To ensure that this proposal is carried out in the most impactful manner, VICA has outlined foreseeable concerns regarding the plan and possible areas of improvement. We feel that if these concerns are addressed before construction begins, the project will be carried out efficiently and effectively.

1. **Protect Industrial Zones –** Certain parcels that will be acquired under Alternative 20 are zoned for heavy industry and manufacturing. While we understand the need to transform these zones into open space for the vision of the plan, we must ensure that those acres are replaced elsewhere in the city. It is currently very difficult to recode zones in the city to industrial zones, and with the shrinking of these zones due to river projects we must be fair to the manufacturing industry and ensure that this vital part of our economy has adequate space to produce. 2

2. **Focus on Stormwater Capture –** This aspect of the plan, while second in priority to revitalizing natural habitat, must remain a central focus during development and planning. By developing storm water capture and storage systems into the development of the river, the city will send a 3

VICA

message to the rest of California that we are committed to utilizing local water sources before turning to imported water.

3. **Maintain the Core of the Proposal –** VICA supports this plan based on the information originally presented, and in order to ensure successful completion of this project, the city must hold to its original financial proposal. The actual cost should not exceed original estimations. Additionally, development on a project should not begin until complete funding for that project has been identified and allocated. The city's share of funding for this project should come from holdings meant to be spent on habitat, open spaces, parks, storm water capture and infrastructure. This project should in no way equate to depleted funds for other city necessities. Finally, if funding is not available at the start of a project, the city must not pass this cost along to another city department or to Angelenos. 4

Should these concerns be addressed and considered throughout the entire development of the river, we believe this plan will be successful and beneficial for residents, businesses and visitors. Alternative 20 envisions the most robust restoration of the L.A. River and we look forward to working with you toward this vision.

Sincerely,

David Adelman
Chair

Stuart Waldman
President

Making Glendale a City where
Everyone Feels Safe to Walk and Bike

Walk Bike Glendale

Dear Glendale City Council,

On behalf of Walk Bike Glendale, I am writing to give our utmost support for Alternative 20 of the Los Angeles River Ecosystem Restoration Integrated Feasibility Report. Alternative 20 is the only one which will transform 11-miles of the Los Angeles River into a much more complete ecosystem, providing Glendale residents with significantly greater access to much needed open space and walking/biking trails.

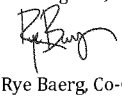
As a local organization that supports greater access to safe walking and biking access for Glendale residents, Walk Bike Glendale believes that it is within Glendale's very own interest to support Alternative 20 wholeheartedly. We can only gain from what Alternative 20 proposes to do. Our City will be better off and the quality of life for many Glendale residents will likely improve substantially from the greater connection to nature that will result.

Our City should not lose sigbt just bow mucb more Alternative 20 will provide Glendale residents than the other alternatives. Our City fronts most of the 11-mile stretch that Alternative 20 aims to transform, which is within walking distance to many South Glendale residents. Most of those Glendale residents today have insufficient access within close proximity to adequate open space and safe trails to walk and bike on. Alternative 20 would change that by adding a substantial amount of access for these residents to many outdoor amenities.

Additionally, Alternative 20 aims to transform the connection to the Verdugo Wash substantially by making it a natural habitat with trails for people to walk and bike on. This would be in close alignment with Glendale's own goals, as outlined in the Bicycle Transportation Plan passed in 2012, to make the Verdugo Wash into a continuous path for pedestrians and bicyclists to enjoy.

Please give your unanimous support for Alternative 20 and send a strong message to the Army Corp of Engineers, Congress, and the President that our City has much to gain from having Alternative 20 selected.

Best regards,



Rye Baerg, Co-Chair
Walk Bike Glendale

WALK BIKE GLENDALE

WHP

WILD HERITAGE PLANNERS
P.O. Box 50260
Los Angeles, CA 90050
Email: Jack.Eidt@wilderutopia.com
Phone: 323 362 6737

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, California 90053-2325
SENT VIA EMAIL

Re: Comments on Los Angeles River Ecosystem Restoration Integrated Feasibility Report

ATTN: Ms. Erin Jones, CESPL-PD-RN

Wild Heritage Planners (WHP) is an organization dedicated to sustainable urban planning and environmental design, based in Los Angeles, California. As Director, I have worked on environmental planning in the LA Region for the last twenty-five years and gained my Master's Degree from UCLA in Urban and Regional Development. I have also lived around the river for the last twenty since I moved to Echo Park and now reside in Highland Park.

WHP has been following the ongoing upgrades to the LA River for many years and fully supports efforts to restore habitat, reinvigorate the hydrologic cycle of the river, and introduce recreational open spaces into the area of the river. This process requires ambition and dedication of stakeholders and agencies, as well as significant investment. We laud the Los Angeles area community for supporting an ambitious re-discovery of our long disabused watershed, and thank the Army Corps for moving the process forward.

The Problem...

We have made mistakes in the planning of our cities, failing to protect wildlife habitats and ecological systems in favor of subdivisions and shopping centers, freeways and power lines. Turning the 51-mile serpentine-flowing wild river, once-teeming with water fowl, fish, and coyotes into a flood control channel seemed the responsible thing to do to protect property and public safety. Yet, we know the world's great cities provide spaces and places for people to live, play, and work, integrated with wild natural forces and the needs of the ecosystem. We must

clean our surface waters and protect our dwindling water supplies. Urban sustainability in this era of climate disruption and energy and transportation re-imagination requires reclamation of the natural systems that provide us life, solace, sustenance, and connection. Call it ecological urbanism. Call it LA River Revitalization NOW!

We recognize the Integrated Feasibility Report and associated EIR has done an excellent job in letting us know what is at stake. The long process that brought us to his point reminds us it is imperative to seize the moment. The time is now to take responsibility for the problems of the past. If we settle for half measures now, no one knows how long we must wait to pick up where we leave off. Thus, WHP does not prefer the chosen Alternative 13.

We have concerns that the preferred alternative is not compatible with national initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people. We recommend the Corps of Engineers consider the will of the people of Los Angeles who have called for more, as well as the needs of this long-maligned biodiversity hotspot.

Choose Alternative 20...

If Houston can move forward on its $1 billion reclamation of their Buffalo Bayou system, Los Angeles can certainly do the same. We favor Alternative 20 because it best understands the process Los Angeles must undergo to reconnect its people and wildlife to the river, as well as rethink the natural systems at play. Alternative 20 employs a more comprehensive vision by restoring the Verdugo Wash and the wetlands at the LA State Historic Park, in addition to significant restoration at Piggyback Yard and the confluence of the Arroyo Seco.

Alternative 20 provides superior connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13). Thus, the Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains.

Revitalization of the Piggyback Yard would include real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections.

Restoration of the Cornfields areas also would include meaningful restoration with higher value habitats by terracing the bank and creating a freshwater marsh. In addition, the Cornfields can provide wildlife and human recreational connection to the Elysian Park, which is mostly an island cut off from the city except for some Echo Park neighborhoods.

By choosing Alternative 20, we would reduce the distances between the revitalized habitat nodes which would enhance their intrinsic value and closer replicated the ecosystem that historically existed prior to the channelization.

The length of area restored would be two times greater (6.4 miles vs. 3.2), with more than three times the concrete removed (117,918 cubic yards vs. 36,891). Alternative 20 would create 131 more acres of restored habitat (719 vs. 588). As well, the habitat restored would render a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes.

Alternative 20 would more likely be sustainable and resilient over the life of the project because of the size and added connectivity. It measures the highest of all alternatives against the 19 performance targets established under the two objectives of the study. Furthermore, it best meets the four evaluation criteria (effectiveness, completeness, efficiency, acceptability).

The Regional Economic Development analysis shows Alternative 20 provides 7,015 more jobs and $386 million more in wages during construction. It creates 3,700 more new jobs and $251 million more in wages for redevelopment over the long term. It creates 1,094 more new permanent jobs valued at $62 million more.

The Other Social Effects analysis shows Alternative 20 with its larger scope will produce a greater connectivity with the people and communities. It will reach more of the census tracts with high poverty and high minority populations. It will provide more green areas to encourage physical activity. It will provide more green areas to reduce air quality effects.

At Wild Heritage Planners, we advocate for green-built-cities interconnected by public transit, bicycle, and pedestrian paths. We also have worked to advise government and industry in Southern California how to protect open spaces and wilderness habitats, while serving the urban needs of the populace and making room for economic growth and community prosperity. Choosing the more ambitious option will only further encourage gentrification of the neighborhoods along the river, improving the environment and the local economy. We must also take steps to protect the integrity and affordability of existing neighborhoods, as considerable mixed-income housing opportunities exist in the area and must not be lost.

By increasing public access to the river, these local communities with nowhere to walk from their overcrowded apartments could suddenly set out on an odyssey on their bicycles, race each other across the river bridges, and relax and read a book as the river flows by. Maybe they could walk to work at a new river-oriented-development as well.

We Need a More Comprehensive Watershed Revitalization

Let's just say even Alternative 20 does not nearly approach the massive endeavor we face in reorienting the people of Los Angeles with the maligned Southern California hydrologic cycle, water flowing down from the mountains, replenishing underground aquifers and greening the riparian valleys through the lowlands all the way to Long Beach and the Pacific Ocean. Small restoration projects threaten to be washed away by a potential deluge or dried to a bone by drought that will happen as part of the ongoing process of greenhouse-gas-induced climate disruptions. We are a founding member of the SoCal Climate Action Coalition 350 Group, and we would like to see more action in this study and in the community to protect the city from

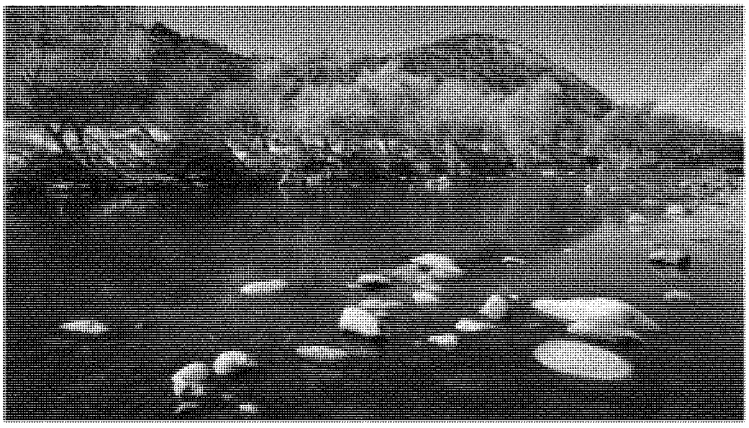
climate change, while cleaning up the runoff flowing down the watershed into the ocean, which is basically a sewer for all our sins. We can and will do better.

We do believe Alternative 13 is an excellent beginning, but we have to get more ambitious, or we might be waiting a generation more to breathe life into our river.

More Work to Do…

Today, earth scientists, urban planners and designers, hydrologists, neighborhood activists, and even real estate developers and civil engineers agree on the importance of reclaiming and restoring our river as a habitat, an ecosystem, a watershed, and a world class place to live, work, and play. Public agencies may not always have the luxury to think big, so here the activists in the community are speaking it loud. The time is now. ***Alternative 20 for a greener, more sustainable LA!***

Jack Eidt
Director
Wild Heritage Planners
Editor and Publisher
WilderUtopia.com



Petitioning Josephine R. Axt, Ph.D., Chief, Planning Division

Select Alternative 20

Petition by
LA River Corp

Los Angeles, right now we have a unique opportunity to have our voices heard and make real change.

Last week, the U.S. Army Corps of Engineers selected Alternative 13, the second cheapest of four options detailed in the much-anticipated Los Angeles River Ecosystem Restoration Study. Alternative 13 is good, but we can do better. Alternative 20 presents a much more comprehensive and dynamic approach to LA River Revitalization.

Alternative 20 is the only option that will create a publicly accessible, cherished, and celebrated natural resource in our world-class city. It is the most expansive LA River ecosystem restoration plan, one that includes 6 key sites: Arroyo Seco Confluence, Cornfield-LA State Historic Park, Piggyback Yard, Taylor Yard/Bowtie, Taylor Yard/G-2 and the Verdugo Wash Confluence

River aficionados and Los Angeles officials are unanimous in their support for the most expansive and ambitious restoration program, a plan that will include all of these major sites under consideration.

In early August, our State legislature came out in support of the study. Congressman Becerra said, "We've reached a fork in the history of the Los Angeles River. I support the study's Alternative 20 restoration plan that is an inclusive ecosystem restoration, increases green space and truly connects people and the river. Let's grasp this opportunity to reimagine a once blighted and neglected waterway into a foundation for more sustainable and livable communities."In late August, the Los Angeles City Council unanimously passed a resolutions introduced by Councilmembers Mitch O'Farrell and Gilbert

Cedillo endorsing the most expansive alternative. And last week, the Los Angeles Times Editorial Board agrees that Alt 13 is adequate and wrote their support for an alternative that includes terraced walkways.

Let's match their support.

Sign this petition now to call for an alternative that would inspire our imaginations, build positive community investment and grow our regional economy.

If we restore the Los Angeles River to the full potential of Alternative 20, we will be miles closer to a destination worthy of Los Angeles that everyone can access and enjoy.

Now is the time to show grassroots support for the best plan. The LA River, which was once entirely buried in concrete, can live again.

Sign this petition to tell the US Army Corps of Engineers that Angelenos support Alternative 20.

To:
Josephine R. Axt, Ph.D., Chief, Planning Division, U.S. Army Corps of Engineers
Select Alternative 20

Sincerely, [Your name]

Total Signatures: 205

Supporters

Reasons for signing

Kevin Kipnis NORTH HOLLYWOOD, CA

Unity of people and wildlife for our land.

Lila Roberts LOS ANGELES, CA
Living in elysian Valley my whole life. The river is like your backyard. You go out to enjoy it, watch the ducks and fish. My children fish the L.A. and I would like my future grandkids to be able to fish there as well.

Diana Lejins LONG BEACH, CA
This is a no-brainer. We have this wonderful resource and it should be available to citizens.

Carol Peterson LOS ANGELES, CA
...for the good of the environment and of the city of Angeles, which I love

Betsy Mines LOS ANGELES, CA
Bringing the river back from a concrete ditch to its natural habitat is an environmentally positive step.

Paul McDermott LOS ANGELES, CA
Alternative 20 will bring life to the community.

Signatures are on file at USACE, LA District. Available upon request.

Kate Hoffman LOS ANGELES, CA
I live here. The river has been lost to us for so long - it's time to bring it back!

Jason Rice LOS ANGELES, CA
The LA river currently is an eyesore and a terribly execute plan from an era when concerns were primarily about mitigation. Unfortunately, the natural mitigation measures that were already inplace were ignored and resulted in a sterile, unhospitable place. Alternative 20 does the most to correct the mistakes we have made, this is why it should be selected.

Dennis Martinez LOS ANGELES, CA
The vibrant future of the LA River is tied to the direction that the City of LA needs to be headed.

Cynthia Hirschhorn PACIFIC PALISADES, CA
The LA River is a reality and metaphor which connects our city. It can be a beautiful bridge to all the cultures and communities along the river and give people an opportunity to experience both nature and culture at the human pace of walking and bicycling together rather than enclosed in a car on a freeway. As a world class city we should also invest in a world class riverfront like most every other major city in the world! Our time is now!

Glenn Wolf LOS ANGELES, CA
Rivers are important part of drainage. wildlife and recreation opportunities. Going for a basic design doesn't really improve anything. Going for a more extensive fulfilling project is really beneficial over time. It is something we can be proud of, improves neighborhoods and land values near the project. New York has Central Park which was a dump and shanty town, it has served very well and pride of the city.

Pablo Garcia LOS ANGELES, CA
Because I live one block from the LA river

Athenas Lopez LOS ANGELES, CA
Revitalize the viaducts along the 51 mile Los Angeles River, they deserve more appreciation. Thanks

miuchael pigneguy LOS ANGELES, CA
one of the few peaceful, carless walkways for me and my dogs.... less cars...more people spaces please. Oh, and while you're at it can we have a proper public transportation system, you know, like HongKong's ??

Heng Zhang CAMBRIDGE, MA
LA river is a great masterpiece of concrete channel, yet with greater urge for human accessibility, natural restoration and other needs, we should try our best to give the river back to LA people, flora and fauna alike.

Bao Quoc Doan LOS ANGELES, CA
Because i live here...

Jennifer Zell LONG BEACH, CA
Cleaner water downriver and a local example of how best to integrate ecological and recreation systems with engineered systems. Alt 20 is the most effective proposed alternative.

Bonnie Fisher LOS ANGELES, CA

Los Angeles is a city worthy of a decent greenbelt. Let's do it right.

Kris Sanders PASADENA, CA
For the health and welfare of all Angelenos, it's critical to have open space that is preserved and respected.

Marian Dodge LOS ANGELES, CA
We need to wildlife connectivity this alternative provides.

Lawrence Sanchez LOS ANGELES, CA
The Los Angeles River and its rich plant and animal habitat provided a livelihood for the Gabrielino Indians (Tongva), one of the largest group of Indians in North America who established a settlement on the banks of the River near where Los Angeles City Hall stands today, nearly 1000 years ago.

The Los Angeles River changed course between flowing west into the Santa Monica Bay along the course of Ballona Creek and flowing south towards San Pedro Bay between 1815 and 1825.

Channelization of the LA river began in 1938, and by 1960, the project was completed to form a fifty-one mile engineered waterway. Channelization provided flood control for the increasingly developed region and a consistent path for the River course, but changed the utilization of the River as a source of water, and system of streams, wetlands, and swamps of the natural lands and ecosystems, into single use infrastructure. By the time the channelization was complete, the natural and historic Los Angeles River, which for centuries had sustained the inhabitants on its shores, had essentially disappeared. The new metropolis could now rest safely. In later years, the river banks provided the simplest, most accessible right of way for freeways, railways, and power facilities, essentially turning the City's back on its Mother Ditch.

A hint of the original L.A. River survives along three large, soft-bottomed sections – about 10% of the total channel. There, water splashes over boulders, and ponds and rush-lined eddies are home to fish and frogs. Among the groves of willows, scores of species of birds hunt and drink and rest. It's all visible from a series of parks, from bike and walking paths and equestrian trails, and from visitor's overlooks serving as a living reminder of the waterway's original charm.

The LA river once fed the people and wildlife of Los Angeles. LA is seeing changes for the better, in public transit, bicycling culture, art and music and public events. After two centuries of changes, and designing our backs to the River, the City's most basic resource, we now have an opportunity to reclaim and improve what gave life to the Tongva tribes who first settled here. We have done so much to make the river safe for the millions that live here, now let us equal that effort by make it accessible and enjoyable too.

Jennifer Olsen WOODLAND HILLS, CA
We've spent the last century destroying our natural surroundings. For the future of Los Angeles, we need to restore the river and all of it's life-giving capacity.

Bergen Moore LOS ANGELES, CA
The river has so much potential, it could transform the East Side into a glorious thing, and reconnect LA with its river

Bergen Moore LOS ANGELES, CA
I love the LA river, and already enjoy it's bike lanes, flora and fauna. I think it can transform East LA to restore it well.

Cynthia Hubach LOS ANGELES, CA
The river can and should be the center of a newly imagined Los Angeles, one that prioritizes recreation and green space, environmental stewardship and sustainability. Alternative 20 is the plan that best achieves these goals.

Tracy Stone LOS ANGELES, CA
The river is the most important greenspace in our community, and the health and beauty of the river has a direct impact on the health and well-being of our residents. I support Alternative 20's inclusive restoration plan wholeheartedly.

George Villanueva LOS ANGELES, CA
It will help the northeast neighborhoods and Los Angeles thrive socially, environmentally, economically, recreationally, and culturally!

Susanna Schick LOS ANGELES, CA
I bike the LA river every weekend. It's my sanctuary in LA. This city desperately needs a healthy wetlands. The birds need it. Our air needs it. Our EYES need it.

Mary Beth Sorensen LOS ANGELES, CA
The river should be a resource available to the community of Los Angeles and all citizens and tourists alike, not just given the least expensive update. Alternative 20 provides for that.

John Palmerton LOS ANGELES, CA
This is a rare opportunity to impact our city for many generations to come. We're spending much more than a billion dollars on airport renovations; let's give Angelinos and tourists more reason to love L.A.!

John Kim CHICAGO, IL
I love the bike path and would love it to be even better!

Charles Savinar NORTH HOLLYWOOD, CA
Where there is a living river, there is living life!! We need the river, and now, the river needs us. Its just another symbol of the need for maintaining local, sustainable resources to benefit us all.

Scott Epstein LOS ANGELES, CA
The Los Angeles River has the potential to be our great city's signature public space. We're already seeing a miraculous transformation, with new parks and pedestrian and bicycle paths along the river, and the opening of the river for boating this summer for the first time in decades. Alternative 20 of the Army Corps study would accelerate this transformation by adding new habitat along the river, improving the quality of water in the river, and giving Angelenos and visitors to our city access to incredible recreational opportunities. At the same time, we will create jobs, jump start economic development in riverside communities, and promote healthy lifestyles. Please support the most expansive transformation of the river by signing this petition and writing to the Army Corps.

Brian Burke SANTA MONICA, CA
Most Americans mock our LA for its unnatural, unhealthy, disgusting cement channel, once called a river.

What a wonderful opportunity to create a real living riparian natural environment.

Vyki Englert LOS ANGELES, CA
I want a safe space to ride my bike, and clean air in my neighborhood!

Mary Rodriguez LOS ANGELES, CA
This is the future of Los Angeles. A re-birth of the city connecting us to the earth, water and Life.

Deborah Murphy LOS ANGELES, CA
i live very close to the la river and it is a vital part of my open space network. we need more habitat as well as passive and active recreation space in my community and the city as a whole. the river connects many important neighborhoods that lack resources and the river can help to fill that gap.

Doris Brown EVANSTON, IL
LA should have the same river access and enjoyment that San Antonio has and which Chicago is working toward!

Steve Garcia GLENDALE, CA
I live 1/4 mile of the L.A. River

Lisa Cole LOS ANGELES, CA
We live right near the now ugly LA River and really want to see it live up to its potential. Its so embarrassing that LA has so much access to nature yet is so lacking in natural rivers and more parks, etc. Please Pick Alternative 20!!!

Elizabeth Dymond STUDIO CITY, CA
Los Angeles has been working since the late 90's to bring back the LA River. The Corps is selling Los Angeles short with a less then adequate proposal. Now is the time to make the river accessible to everyone and have the waters of the LA River serve this magnificent city.

Renee Curtis L.A., CA
This is the only option that will most benefit the City and make L.A. a world class destination.

Lauren Logan LOS ANGELES, CA
The LA River is an unknown and underutilized connector in this city and represents an opportunity for Los Angeles to reach its potential as a connected, green, urban community. It is and should be the heartbeat of this city; let's value it as such.

Boris Mindzak LOS ANGELES, CA
The Los Angeles river has the potential to become one of LA's most valuable natural resources. We should do all we can to transform it into a major landmark. Where else can you find a nature preserve in the middle of a city?

Sean Leonard BURBANK, CA
Any chance we are presented that involves given nature an opportunity to florish once again should be seized upon.

Darren Embry LA, CA
This is an opportunity not to be missed, not a time for half measures. Do the most we can NOW...who

knows what the future holds.

Gregory Haynes LAKEWOOD, CA
Our City should ALWAYS be doing what it can to improve itself. Bringing the river back to a usable and accessible amenity in the area only encourages good things.

Joanna Sanchez LOS ANGELES, CA
I live in Elysian Valley and personally love the LA River, bike path, kayak tours and everything else that is going on along the river. I look forward to the LA River becoming a place all of LA wants to come and enjoy.

Rohan Gupta LOS ANGELES, CA
Its the closest large body of water to where I live, work and play.

Damian Robledo LOS ANGELES, CA
I live and work along the LA River and use it's banks and paths as a commuter. I'd like more amenities and better recreation for pedestrians equestrians and bicyclists. It is an amazing untapped resource and we have a great opportunity to improve the lives of Angelenos and visitors to LA. Now is the time to be bold and the Alt 20 cost will look like a small cost in about 10 years when the River is plush and healthy. The return on that investment will be 10 fold.

Jessie Thurston LOS ANGELES, CA
The river deserves it, and so do we.

Jackson Piper NEWBURY PARK, CA
This is an opportunity to provide Los Angeles residents and the people of Southern California, as well as visitors from elsewhere, with a great new public space along it's long-neglected river. Alternative 20 is the most ambitious and the most expensive, yet it is also the alternative that would best allow the river to become the new heart and soul of the city. This moment in the history of Los Angeles and of the river that bears its name deserves better than half-measures and minimum alternatives. It deserves the full effort of all involved. Please select Alternative 20 as the plan to implement for the Los Angeles River.

Kevin Mulcahy LOS ANGELES, CA
Restoring our river, revitalizing Los Angeles and our access to both in this single act will become and define our City's future. If we do not do the right thing now, I ask when? We can not, in good conscience, float such a significant component of this repair another generation further down stream as would be the result of selecting anything short of Alternative 20. Failure to act and complete a mission is not a principle tenet of the Army Corp. and should not be the goal now. To be clear, Alternative 20 is provided precisely because it is the complete mission while remaining reasonable, achievable, cost effective and balanced. Please support and select Alternative 20 and give us, all of Los Angeles, the future we deserve and want to pass to our children.

Katherine McNenny LOS ANGELES, CA
Because downtown needs a connection with this restoration project- hopefully, consideration will be made to extend this down to the 6th St. bridge (or further)

River Love LOS ANGELES, CA
Because the LA River can change LA for the better!

Restore the LA River Petition

Sign our Petition - Restore the L.A. River

Official Resolution in Support of the Selection of Alternative 20

WHEREAS, the Los Angeles River is the lifeblood of our community and a vital resource to be restored and protected; and

WHEREAS, in 2006, the Los Angeles City Council approved an agreement with the US Army Corps of Engineers (Corps) for the Los Angeles River Ecosystem Restoration Feasibility Study (Study); and

WHEREAS, in 2013, the Corps has developed a final array of four alternatives for the Study, and only Alternative 20 includes both significant restoration at the Los Angeles River's confluence with the Verdugo Wash near the City's border with the City of Glendale, and the only substantial western bank connection-providing a profound hydrological link between the Los Angeles State Historic Park and the river; and

WHEREAS, these two areas provide critical wildlife habitat connectivity to the Verdugo and Elysian Hills, respectively, and are included in the five key opportunity areas of the City Council-adopted Los Angeles River Revitalization Master Plan, which the US Congress directed the Corps to consider; and

WHEREAS, ***Alternative 20*** provides the most robust ecosystem restoration outcomes while also providing four times more jobs than the Corps-preferred alternative, and will thereby most appropriately redress historic environmental injustices that resulted from the river's channelization—providing new public access to natural open spaces, improving public health, stimulating regional and local economies, and enhancing the quality of life in Los Angeles

NOW, THEREFORE BE IT RESOLVED, that the undersigned supports the selection and full implementation of Alternative 20 by the United States Army Corps of Engineers to restore our Los Angeles River.

By signing, you agree to submit your name as an official public comment regarding implementation of the Los Angeles River Ecosystem Restoration Feasibility Study.

Total signatures: 8104

Signatures are on file at USACE, LA District. Available upon request.

St. Sebastian Catholic Church

St. Sebastian Catholic Church
1452 Federal Avenue
Los Angeles, CA 90025

November 12, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corp of Engineers; Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Josephine Axt,

As community members at St. Sebastian Catholic Church in West Los Angeles, we fully **SUPPORT** Alternative 20 because it is the most expansive and visionary plan for the future of the L.A. River. On behalf of our parish, we have collected **185 signatures** from parishioners who support Alternative 20.

Moreover, Alternative 20 is vittal in improving habitat connectivity while ensuring that adjacent river communities have access to green space. It is noted, that communities adjacent to the river are composed of low-income communities, which lack resources to live a healthy lifestyle.

Furthermore, Alternative 20 will be a great benefit to Angelenos and their families. Providing new public access to natural open spaces, improving public health, stimulating regional and local economies, and enhancing the quality of life in Los Angeles.

We look forward to monitoring your public position on this vital issue that directly impacts the City of Los Angeles. If you have any questions, please contact David Cortes at (310) 966-0878 or via email at david.cortes712@gmail.com. Thank you!

Sincerely,
St. Sebastian Catholic Community

Enclosed: Additional pages with signatures.

Signatures are on file at USACE, LA District. Available upon request.

Agner

Dear Dr. Axt:

My name is Herb Agner, a 17 year resident of Los Angeles (originally from Nashville, TN) and 9-year resident of LA's Silver Lake neighborhood, near the Glendale Narrows section of the LA River. I bike the river a few times a week, along the LA Bike Path, and often take my son with me to see the wildlife in and along the River too. I have a Bachelors Degree and have worked as a Vice President of Marketing and Product Development for over a decade for 2 major record companies. I'm a member of FoLAR, and have participated in their annual river cleanups. I come from a part of the country where rivers, streams, and creeks run through cities and towns of all sizes, and have been puzzled and saddened to see the state of the LA River during most of my time here in LA. After getting involved with FoLAR, though, and working to make positive change, I've become excited about the momentum toward making the LA River a better place.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City (this is a major factor, in my opinion)

Alternative 20 is far superior to Alternative 13 for the following reasons:

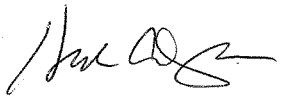
- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and

Agner

wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
  - Provides 7015 more jobs and $386 million more in wages during construction
  - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
  - Creates 1094 more new permanent jobs valued at $62 million more
  - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,



Herb Agner

Aguilera-Gonzalez

From: Emiliana Aguilera-Gonzalez
To: SPL Comments LA River Study
Cc: Judy King
Subject: [EXTERNAL] Re: Los Angeles River EIR
Date: Tuesday, November 19, 2013 6:37:46 PM

Josephine R. Axt, Ph.D.,
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Erin Jones
CESPL-PD-RN
Los Angeles, CA 90053-2325

November 18, 2013

Dear Dr. Axt.,

I would like to start off by saying how excited I am that this project is still moving forward. As a former resident of the Arroyo Seco community, I recall the buzz of "What if" questions stirring around the neighborhood and a few artistic pieces setting the stage of transforming the river's presence. However, after carefully reviewing the Los Angeles River Draft Ecosystem Restoration Integrated Feasibility Report, written by the Army Corps of Engineers, I noticed a few issues that need more clarification. My main focus is centered on Appendix A of the draft design which entails the safety aspects of wildlife access. I will also key in on the positive approach to Daylight Streams in restoring the riparian and marsh habitat. I will also point out a few concerns that I noticed with the materials that will be used to help during the restoration of our wonderful river. 1

On page 11 of appendix A under the 3.1.3 Wildlife Access the measure states that it will provide access and crossing for wildlife between the River and adjacent landscapes which will include bridges, under-crossing and tunnels. I would have to say that I am glad that the Army Corps is taking this approach and concern for wildlife. However, is the community along the river open to this concept? With concerns of wildlife such as a bob cats, coyotes or black bears roaming around a suburb community have caused local media attention and chaos. The impact from a few examples of media attention have not been

positive and has caused a concern to both the safety for wildlife and people being able to coexist since the project is approximately from Griffith Park to downtown Los Angeles. I am also concerned with what type of vegetative planting will be used along this river as a food source for wildlife. I understand that in your report that in order to stabilize planting and reduce erosion potential that turf reinforcement mats (TRM) or geotextile fabric is proposed for the design, however, what will happen to burrowing animals that might stake claim along the river. My concern is due to both TRMs and geotextile being thick fiber, ultraviolet resistant materials that can be an ecological problem for burrowing wildlife. 1

As for your approach to Daylighting Streams to help restore both riparian and marsh habitat, it is a great idea. I was thrilled that the existing storm drains would remain in place and be modified to convey peak storm flows. The thought process of restoring the wetlands or ponds is a creative design measure in your report and I am pleased that the source of water will be used for water quality treatment and wildlife use.

According to page 6 both the low-flow diversion and high-flow bypass would allow the existing storm drain's nuisance flow and first pollutants to be diverted from the storm drain line to the wetland area for treatment and infiltration and then return back into the River. I was just wondering how this diversion process would work and will it be an effective idea since Los Angeles only gets roughly 7 inches of rain per year? 2

My last concern with the report is on page 8 with the modification to the channel of removing concrete by excavating and creating an uneven bottom pool and shallow zones that will be stabilized with boulders or weirs to help with the wetland and riparian vegetation. I wonder why this approach was not put into use before the laying of the concrete of the death of the Los Angeles River.

As well as from page 19 to 60 in the compacted fill and maintenance road section of fencing that would be constructed to separate areas of access from the maintenance road, on both the potentially private right-of-way and the river. Is additional fencing needed for this 11 mile stretch since there is already an existing fencing separation? This portion of appendix A was not clear enough and is this separation intended for the safety of the 3

restoration project and wildlife?

In closing I honestly thought this is a great start for the rebirth of the Los Angeles River. Roughly 11 years ago this river was not an ideal walkway to enjoy and I am ecstatic with the concepts that have been proposed and I honestly hope that this project will be able to restore back to how it use to flow. I understand that the Los Angeles River is a meandering river which poses much more challenges in the future, however, the concrete of this channeling needs to go and to help restore Los Angeles water table is a breaking start. 4

Sincerely,

Emiliana Aguilera-Gonzalez

Alas

From: Kelvin Alas
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA river restoration project
Date: Monday, November 18, 2013 7:50:51 PM

I strongly suggest, in regards to the LA river restoration project, that you should take Alternative 20.

Alexander

From: Peter Alexander
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA RIVER RESTORATION
Date: Thursday, October 03, 2013 11:32:56 PM

As a native Angeleno living within walking distance of the Los Angeles River, I urge you to please consider Alternative 20 as the final restoration option for this potentially great civic resource.

In this vast urban landscape, a natural oasis is desperately wanted and needed by the residents.

Sincerely,
Peter Alexander
2436 Hidalgo Ave.
Los Angeles, CA 90039

Alpern

From: EstherLee Bnc Alpern
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River. Alternative Plan. 20
Date: Sunday, November 17, 2013 11:45:34 AM

There is no doubt in my mind that a more neighborhood friendly plan is required.
Parks, soccer fields and development of commercial endeavors like eating areas and restaurants, something like what was accomplished in San Antonio.
EstherLee Alpern, area resident

Sent from my iPad

Amsden

From: Liz Amsden
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support for LA River ecosystem restoration - Alternative 20
Date: Friday, October 11, 2013 6:58:28 PM

My grandmother had a saying, "If a job's worth doing, it's worth doing well."

We need a truly revitalized river in Los Angeles after decades of degradation.

Alternative 20 is more costly but the return is proportionately more and it will benefit more people, create more jobs and provide an ecosystem that has the best chance to stabilize the area.

Please opt for Alternative 20

Sincerely

Liz Amsden
5158 Almaden Drive
Los Angeles, CA 90042

Anderson C.

From: From CGA
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angees River Restoration - please adopt Alternative 20
Date: Saturday, November 16, 2013 1:36:02 PM

Dear Friends at USACE:

As a permanent resident of the city of Los Angeles, I support adoption of Alternative 20 to restore and revitalize the Los Angeles River. It is the most comprehensive plan, benefiting the most natural habitat. Mayor Eric Garcetti has demonstrated his commitment to river restoration by campaigning in Washington, D.C., for Alternative 20 funding. Please heed the needs and desires of the citizens of Los Angeles and adopt the plan that provides the most comprehensive restoration of the Los Angeles River.

Sincerely yours,
Carolyn Gray Anderson
Los Angeles 90034

Anderson M.

Dear Kathleen & Erin,

By way of introduction, I worked at the Los Angeles County Flood Control District (LACFCD)/Los Angeles County Department of Public Works (LACDPW) from 1981 to 2000. In 2000 I returned to Colorado where I now live and work. (I'm in Denver and we did not get the severe flooding that hit the front range last week that you see in the news)

From June 1990 to May 1992, Jon Sweeten at the Corps and I were ex-officio advisors to Mayor Bradley's Los Angeles River Revitalization Task Force effort which was facilitated by Peg Henderson from the National Parks Service Rivers Trails and Conservation Assistance Program. This Task Force was created by Mayor Bradley at the behest of FOLAR and the NPS provided the framework and facilitation needed for everyone to work cooperatively. The result was a guidance document laying out the vision, three pilot projects and recommendations for further action. One of the recommendations was to prepare a Master Plan for the entire River.

In July 1991 I worked with Peg Henderson to prepare the Scope of Work for the County to prepare it's Los Angeles River Master Plan.

This Plan was prepared under the guidance of Diego Cadena & Chris Stone & Manuel Quezada from the County Public Works, Peg Henderson from the NPS, Cynthia D'Agosta & Bertha Ruiz from County Parks, and Sorin Alexanian & Ellen Fitzgerald from County Regional Planning. The plan preparation included cities, agencies and environmental group stakeholders along the entire river corridor
Here is the website: http://ladpw.org/wmd/Watershed/LA/LA_River_Plan.cfm
It was adopted in 1996.
I see that it is cited in the References page 14-9 of your report (pdf page 492, lines 12 & 13).

In 2005, the City of LA selected Tetra Tech with Bill Wenk, a noted Landscape Architect from Denver as sub-consultant, to prepare a Master Plan for the portion of the River within the City of LA which would also consider urban land use and design guidelines for the River Corridor within the City of LA. Due to jurisdictional limitations, the County Plan could only look at the lands owned by the County & Corps whereas the City's could take into account adjacent uses and zoning issues.
I do not view the two plans as contradictory or mutually exclusive. Both are great guidance documents. 1

First, I want to say that it makes me proud to see how far the restoration efforts have come and continue to grow since those early days!

2 Comments and a Quesstion:

1. While FOLAR is duly credited, sadly, I did not see recognition to Mayor Bradley and the Task Force which gave birth to the governmental planning and restoration efforts that continue to this day.

I hope that you can find the Task Force Report and note its importance to the history of this effort in the introductory text of the report and "Recognition Section" and include it in your references.

2. There is another study I did not see referenced that specifically looked at Taylor Yard.

In 1992 we got a grant from the California Department of Water Resources'' Urban Streams Restoration Program to conduct a study in partnership with FOLAR. 2

Anderson M.

The grant was established to encourage agencies and municipalities and government entities to partner with environmental groups for a common good.

The study was finalized in 1993 and is called "Multi-use Study on the Los Angeles River at Taylor Yard" It was prepared by consultant Robert Bein, William Frost & Associates (at that time they were in Irvine) and Bill Wenk was a sub-consultant on that study. (I see his name listed in the "Document Recipients" of your Report.)

The concept was to utilize Taylor Yard as peak-shaving/detention of flood flows in the LA River to mitigate the flood threat to downtown that was identified in the LACDA Planning Study underway at that time. 2 4

The detention was "tiered" to have 3 levels of uses, the lowest area being for wetland restoration. Unfortunately, I loaned my copy to someone who never returned it and I was left with just the Technical Appendices.

I am pleased to see Taylor Yard on the cover of your report and wanted to bring your attention to this study for consideration in your final plans.

Comment: Please obtain a copy of this study and discuss the feasibility of its recommendations in your report and include it in the References Section.

Question: Would the proposed improvements in your plan at Taylor Yard provide flood mitigation to downtown LA that was identified in the LACDA Planning Study in addition to ecosystem restoration? 3

Thank you for your consideration,

Michael Anderson | Senior Engineer

DENVER THE MILE HIGH CITY

Public Works-Capital Projects Management | City and County of Denver

720.865.3023 Phone

Mike.Anderson@denvergov.org

"This email transmission from the City and County of Denver, and any documents, files, or previous email messages attached to it, are intended solely for the individual(s) to whom it is addressed and may contain information that is confidential, legally privileged, and/or exempt from disclosure under applicable law. If you are not the intended recipient, you are hereby notified that any unauthorized review, forwarding, printing, copying, distribution, or use of this transmission or the information it contains is strictly prohibited. A misdirected transmission does not constitute waiver of any applicable privilege. If you received this transmission in error, please immediately notify the sender and delete the original transmission and its attachments. Thank you."

Antos

519 Fano Street Unit E
Monrovia, CA 91016
626-226-6691
mike.antos@ucla.edu

November 16, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

Dr. Axt,

I appreciate the opportunity to provide my comments on the ARBOR Study for the Los Angeles River. I am writing as a local stakeholder who lives in the greater Los Angeles region. I am also a PhD Candidate at UCLA in the department of Geography.

My research seeks to explain the root causes of successes and failures of Integrated Water Management efforts in California. Through this research I have come to understand the significant value of a strong vision in integration efforts. Because Alternative 20 is by-far the most integrated vision of a revitalized Los Angeles River, **I am eager to have the Army Corps select Alternative 20 as the final recommended Alternative.**

Today, we know that the Los Angeles River we have is insufficient to our 21st century needs. Undertaking the ARBOR Study with a large group of local stakeholders has been an extremely important step in moving towards a Los Angeles River that provides integrated benefits. Alternative 20 places the US Army Corps at the forefront of envisioning a Los Angeles with revitalized urban habitats, sustainable local water supplies, and a strong ethic of integrated solutions.

The pilot work the US Army Corps of Engineers has undertaken in the Santa Ana Watershed with "watershed based budgeting" is a very important step forward for the Corps. It is my hope that some of the principles enunciated in that effort could be engaged in the selection of the appropriate Alternative for the Los Angeles River. The calls for Alternative 20, echoed throughout the Los Angeles Region, seems a quintessential example of local project priorities.

Antos

Please pass my personal thanks to your entire staff that was engaged in this effort. You and your team should be very proud of the ARBOR Study. And when Alternative 20 is selected, I look forward to seeing how the Corps and local partners work collaboratively to achieve integrated benefits. The LA River will become known the world over of what can be accomplished by strong partnerships following an expansive and sustainable vision.

Sincerely yours,

Michael A. Antos

Appleton

Steven Appleton
2426 Meadowvale Ave. No.3
Los Angeles, Ca 90031
steven.evmc@gmail.com
310 740 7294

R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District P.O. Box 5327
Los Angeles, CA 90053-2325
ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Ms. Axt,

As an elected (but unpaid) official representing the Elysian Valley Riverside Neighborhood Council as its President I have spent considerable time over the years involved with the Los Angeles River. I am a professional artist by occupation and over 13 years ago I placed waterwheel (by permit) into the LA River for a short exhibition that involved using the waterwheel to filter and bottle water ("50 Bottles of Clean LA River Water".) Recently when the Trial Rec Zone opened in Elysian Valley I formed a local business to provide interpretive kayak tours of the river (lariverkayaksafari.org.) I live right next to the river and am involved on many levels with stewardship of the Los Angeles River.

I am writing to make comments on the Los Angeles River Ecosystem Restoration Feasibility Study ("ARBOR Study".) Before I get into details of my comments I want to commend you and the Army Corp for undertaking this study and for the efforts you have made to present the study to the public and provide opportunity for feedback.

Comments:

1. **Future Public Involvement:**
   Once an Alternative has been formally chosen and further detail design ensues, I urge you to form anew a River Restoration Advisory Design Committee that will be brought in early to review, make comment and communication with local stakeholders about progress of plans.

2. **Prioritization of Plans:**
   Once an Alternative is selected I urge ranking of plans related both to their Habitat Connectivity impacts and their feasibility. Where issues may exist with real estate acquisition and clean up (Taylor Yard and even more Piggyback Yard,) other more immediately feasible plans should move forward. A new rubric should be considered that ranks immediate feasibility.

3. **Habitat Connectivity Between Elysian Park and LA River:**
   Elysian Park, the second largest park in Los Angeles, aligns with the habitat-rich section of the river in Elysian Valley. I urge consideration of habitat connectivity opportunities between Elysian Park and LA River. I offer two scenarios that are both feasible and likely "good buys:"

a. Acquire the 4 acre parcel across from G2,("Bimbo Bakery Parcel") which has an owner who is a willing seller. Other undeveloped parcels also align here (such as the "Public Storage" open lot.) By a small scale pedestrian bridge this west bank park could be connected to Taylor Yard, creating a "bulge" of river centered parks. Connection to Elysian Park possible via greened Blimp St (with possible additional acquisition of three lots to expand the park) and tunnel under 5 freeway to Riverside Drive, Riverside Drive connection to Elysian Park Expansion via ped bridge or lighted crossing. Acquisitions mostly involve willing sellers, limit clean up, possible fold in with economic development and utilization of rights of way already owned by City, County or State.

b. Create a pedestrian/wildlife bridge from the base of the current Riverside Bridge (soon to be torn down) over the relatively narrow span of the 110 freeway directly to trails of Elysian Park. This is the shortest span bridge of any referenced in the Arbor Study but would produce substantial habitat connectivity and public access between Arroyo Seco, LA River and Elysian Park.

(Note: I am well-aware that these proposals may not fit within the scope of the Army Corps restoration efforts, except to the degree they might involve improvements of trails and points of connection such as contemplated in Griffith Park. These proposals would require local sponsor, City of LA, participation in acquisitions and or pedestrian bridge or tunnel.)

4. **Chain Link Fences are Incompatible with Local Rules and Aesthetics.**
In many locations of the ARBOR study plans describe providing "chain link fencing." Chain link fencing is incompatible with local aesthetics as well as pending City of Los Angeles "Rio Plan." I urge all subsequent design and planning to reference local aesthetics and standards as well as any possible City of LA Planning Documents pertaining to fences and boundaries at river's edge.

5. **Lack of Defined Public Access to the River from Pathways:**
None of the alternatives specify direct access from Bike and Pedestrian Pathway to the LA River. I am especially concerned about Reach 6. Without substantial modification or additions the plan may actually have the affect of blocking access to river's edge from LA River Bike and Pedestrian Pathway. Since paths are also to some degree habitat paths I submit that this issue needs to be carefully considered.

Many parcels in this area currently hold fee ownership of portions of land in the LA River with their titles only restricted to providing LA County Flood Control District an "easement for the purposes of flood control." Arguably, owners of these properties have perfectible rights to access the river for activities that do not interfere with flood control function. Due to these facts as well as a general lack of governmental attention to the LA River for many years, generations of people in this community have accessed and utilized the river for recreation. Reach 6 has also played a very important role in increasing public stewardship of the LA River via various clean up efforts and participation in the Trial Rec Zone. It is a Reach of the river that is accessible not only to immediate residents but also from major freeways, streets and multiple districts.

Based on all of the above, I urge that further design carefully consider how to provide habitat paths and access points (longitudinal and crossing) along the river especially in Elysian Valley.

These issues require special attention given the fact that the local community utilizes its LA River access as a key element of its health and well-being. Continued and improved access would be consistent with Executive Order 12989.

6. **Possible negative Impacts of Increased Public Use of Substandard Pathway:**
In Reach 6 the Bike and Pedestrian Pathway is only 13' wide. Due to a scatter of ownerships and easements it is not viable to enlarge path width on the side of the path facing residences and businesses. Since all parcels of land along this Stretch extending into the river itself prior to channelization, the constrained borders are a direct result of choices made about where to cut channel border. Landscape borders, habitat pathways and recreational path widths are constrained as a direct result of the historical channelization activities that occurred in the 1940's whereas subdivision of land occurred in 1922. Issues with appropriate flood capacity are technically feasible to manage within the scope of proposed restoration, especially because the proposed widdening of the channel at Taylor Yard gives some engineering flexibility. I submit that terracing, widening or cantelievering over towards the river is both an appropriate and feasible restoration.

Increased public use is likely to result from restoration efforts, with possible negative impacts on local community. I urge consideration of ways to provide additional path width or parallel seasonal terraces running along the river.

7. **Concern over Vertical Walls as a Method of River Widening at Reach 6:**
ALT 13, describes changes to Reach 6 as follows-

"Reach 6 – The main channel would be reconfigured and widened to take advantage of the Taylor Yard 'Bowtie' parcel. This section of the channel (the 'Bowtie' parcel) would be widened on the left bank to allow an increase in the channel invert width and to set-back the channel slope to meet the original ground elevation. Planter boxes would be built into channel walls on the right bank for vegetation planting/establishment through the entire Reach. Riparian planting and restoration of riparian habitat corridors out of the channel along the top of the bank would be implemented. **Trapezoidal walls in this reach would be reshaped to vertical to increase channel invert width.** Channel geomorphology would be rebuilt in this reach to provide habitat features and flow regimes supportive of in-stream biota." (from AppADesign.pdf, page 67)

The bold typed section causes me great concern. I have inquired with both local City staff and with Army Corp staff about this . They report there will not be an reshaping of trapezoidal wall to vertical in Reach 6. Possibly, this is an error in the text. None of the cross-sections or renderings in Reach 6 indicate vertical walls being employed here.

If such walls were to be employed it would negatively impact on public safety on the much used pathway. It would also disrupt movements of animals (other than birds) and limit public access by residents and others to the river (see # 5 above.) Finally such a method of river widening would harm various recreation and interpretive businesses that have been formed by locals as an outgrowth of the Trial Rec Zone.

Appleton

8. **Error in Written Description :**
Note that page 44 of AppADesign.pdf states:

Preliminary Channel Design – As seen in Figure 4.14, "Cross-Section 6b, Glendale Freeway to Interstate 5," the proposed design would replace the existing channel's grouted rock or concrete paved 3H:1V slopes with TRM, topsoil, and vegetation on the left/east bank and the widened right/west bank. The right/west top of bank would be widened by 316 feet to provide room for the construction of wetlands.

In other locations and based on public presentations, I understand that the left/east bank of the river will be widened NOT the right/west bank.

9. **Technical Concerns with Proposed Wetlands in Taylor Yard:**
I am concerned that in high velocity storm situations the river will carve into the soft slope and deposit sediments, most likely on the east bank. My primary concern is that sediment deposit may strand the wetland water east of the river so that it eventually dries up and that such deposits may also isolate wetlands from the river flow.

I have personally observed a location along the Taylor Yard proposed wetlands where water springs from the ground. I suggest careful examination of these springs. Possibly spring waters from the site can provide a source of water for the proposed wetlands. Wetlands at a strategic height above the river flow could be filled with spring waters but also connect to the river by occasional inflows and constant spring water infiltration and runoff.

10. **Proposed Wetlands and Vector Control:**
I am the City of Los Angeles Trustee to the Greater Los Angeles Vector Control District. In that role I have become aware of the ongoing issues with West Nile Virus in Southern California. I urge that all wetlands development be created in consultation with Scientific and Operations Staff of the Vector Control District. It is in the public's interests to construct wetlands projects in such a manner that vector control issues are managed properly so as to avoid need for future use of spraying in habitats.

11. **Final Comments:**

Overall, I want to comment that local residents to Los Angeles are faced with a complex situation in trying to respond and provide public comment to this study. Several levels of government are involved in this process. Local City of Los Angeles elected officials as well as most non-profit entities and business groups have focused their efforts on advocacy for Alternative 20, the most costly and rich of the Alternatives. In many ways, I echo and support the consensus position of Los Angeles: Alternative 20 is the most complete and full plan which goes farthest to creating connectivity and economic parity in terms of the spending of local sponsors and Army Corp.

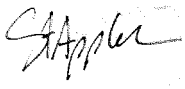
However, in this advocacy process there may not have been sufficient attention to considering the detailed design elements of the various plans. I am aware that there is much detailed planning and design to go, with plenty of chance for public feedback but it seems best to me to register some specific design concerns now. My comments address a few specific concerns, urge prioritization and analyze "connectivity" with a mind toward parity and fairness. In one case, I have proposed a new design

Appleton

possibility (connections between Arroyo Seco, LA River and Elysian Park.) I urge that as this process moves forward that design process not be closed to ways that the most immediate, equitable and cost-effective benefits can be achieved.

Thank you again for the efforts of the Army Corp and as a river community member I look forward to our future work together.

Sincerely,



Steven Appleton

Aronson

From: Robert Aronson
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please choose Alternative 20 as the Taylor Yard G-2 Parcel Restoration Plan
Date: Friday, October 11, 2013 7:55:21 PM

Hi Dr. Axt,

I am writing to ask that the Corps please re-evaluate the TSP for the habitat restoration of Taylor Yard, and choose Alternative 20 instead of Alternative 13.

We only have one opportunity to get this right, and Alternative 20 is far superior to the other alternatives.

Thank you for considering my opinion.

Robert Aronson
108 Catamaran Street #1
Marina del Rey, CA 90292-5708

Babila

From: PHYLLIS BABILA
To: SPL Comments LA River Study
Cc: pbparlor@juno.com; kflores@FOLAR.org
Date: Friday, November 15, 2013 10:21:33 PM

11/15/2013 the LA RIVER COMMENTS link on your petition for alternative 20 doesn't open....I will not sign Garcetti's page (don't like him/press monger, too much face) I live by the LA River 12 years, and the concrete walls/ embankment are a BAD IDEA....tagging, grafitti, skribble, & there is NOT enough "good traffic" to deter the bad traffic who hang there & deface property, dump, start fires,drugs & alcohol.... (Atwater Village) * Garcetti's office/Angela Motta ignored requests & told me to maintain a trash can there for the garbage/dumping.... also can't get the cops to TICKET illegal parking by the Acresite Gate and nobody really responds good enough to the needs/care/prevention of the East bank/LA river between Hyperion Bridge & Fletcher Bridge....the wild life needs to be protected & the river cleaned, some "signage" would help too .....what ever alternative 20 is it's got to be better than who ever is suppose to be maintaining it now (Marine corp.? heard they mess up a lot) even the councilman's office staff La Bonge/Garcetti don't know who maintains it.....my vote is w/ FOLAR for alternative 20.....

Bander

From: Felicia Bander
To: SPL_Comments_LA_River_Study
Subject: [EXTERNAL] the new plan for the L.A. river
Date: Friday, October 11, 2013 6:24:38 PM

Must include work done on the steep banks of the river so that the public can gain easy access.

Banner

From: mbanner1954@yahoo.com
To: SPL Comments LA River Study
Cc: Michael Banner
Subject: [EXTERNAL] LA River Revitalization
Date: Tuesday, November 19, 2013 11:56:04 AM

Alternative 20 is far superior to Alternative 13 for the following reasons:

CHAP is only one tool that should have been used to value the habitat
Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
Cornfields provides connection to the Elysian Park
Reduction of distances between the habitat nodes greatly enhances the value
It is more similar to the ecosystem that historically existed prior to the channel
The length of area restored is 2 times greater (6.4 miles vs. 3.2)
More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
Creates 131 more acres of restored habitat (719 vs. 588)
The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
The Regional Economic Development analysis shows Alternative 20:
Provides 7015 more jobs and $386 million more in wages during construction
Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
Creates 1094 more new permanent jobs valued at $62 million more
The Other Social Effects analysis shows Alternative 20 with its larger scope will:
Produce a greater connectivity with the people and communities
Reach more of the census tracts with high poverty and high minority populations
Provide more green areas to encourage physical activity
Provide more green areas to reduce air quality effects
Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Michael Banner
Sent via BlackBerry by AT&T

Barden

From: Lane Barden
To: SPL Comments LA River Study
Subject: [EXTERNAL] In support of Alt 20
Date: Monday, November 18, 2013 4:34:44 PM

Dear Ms. Axt,

As a river activist and artist involved in the movement to restore the Los Angeles River for more than 16 years, I'm writing in support of Alternative 20.

While this option may seem expensive, it is actually far from transformative in terms of it's total impact. It is also worth noting that the return on a project like this is incalculable, and the revenues it will create will more than pay for it over time.

I would also point out that urban rivers have been restored county-wide, and no city has waited longer than Los Angeles for significant change. The movement to restore the river began almost 30 years ago. There will not be another chance any time soon to get this right. Please do the right thing and support Alternative 20.

sincerely,

Lane Barden

Lane Barden
2450 Daly St. #4
Los Angeles, CA 90031

Lane Barden Photography
213.804.5415
www.lanebarden.com

blogging at www.lanebardenwaystation.com/

Barker

From: Urte H.Barker
To: SPL Comments LA River Study
Cc: Friends of LA River; Nancy L.C. Steele
Subject: [EXTERNAL] LA River Study Comment
Date: Sunday, November 17, 2013 12:50:45 PM

Dear Dr. Axt:

My name is Urte Barker and I am a retired Chemical Engineer. I have worked for many years on environmental clean-up and restoration projects for a major energy company at sites all across the United States. One of our main goals was to not just clean up the pollution left behind by many decades of industrial activity, but also to reclaim civic resources in the communities where the companies had operated. I have lived in Los Angeles for nearly forty years and the absence of green space within the central Los Angeles area and the lack of a potentially vibrant access to the riverside has always been incomprehensible to me. Given our climate and outdoor life style that Los Angeles affords in other parts of the basin, we owe it to our community to make the most of this wonderful resource! Alternative 20 goes along way towards creating true breathing space in the dense urban landscape that is downtown Los Angeles.

We should look at this LA River restoration opportunity in the broadest perspective possible and make a solid investment in the future! Since we are not dealing with fixing a river control problem, but rather with a re-conception of the LA River's role in the social, civic and environmental life of the LA metropolitan area money along should not be the deciding factor. I therefore strongly support the Alternative 20 as the right course of action.

In addition, I agree with the comments submitted by the Friends of the LA River.
Please support our community with a wise decision and choose Alternative 20 as the path forward!
I appreciate your efforts and consideration of comments.
Sincerely,
Urte Barker

Urte H. Barker
udbarker@ix.netcom.com
626.577.9784 (H)
626.379.7471 (C)

Barnett

From: Geoff Barnett
To: SPL Comments LA River Study
Subject: [EXTERNAL] RE: Los Angeles River Feasibility Study Alternative 20
Date: Monday, September 23, 2013 4:07:24 PM

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, Califomia 90053-2325

Dear Ms. Axt,

I'm writing this letter in response to the U.S. Army Corp of Engineers Los Angeles River Feasibility Study. I stand with Councilmembers Mitch O'Farrell and Gil Cedillo in support of Alternative 20 to the plan.

I believe that Alternative 20 is an important opportunity to breath new life into the Los Angeles River Valley, and to restore precious ecosystems that have suffered the consequences of many years of mistreatment and neglect. As a local resident, I'm also enthusiastic about the prospect of being able to share the river with my family, friends and neighbors. This plan is an incredible step towards remaking Los Angeles into the vision of a truly modern city, which can serve as a beacon of progress and modernity throughout the United States, and the world at large.

Thank you for allowing the community a voice in this process. I hope this will be considered when making a determination on the future of the LA River Valley.

Sincerely,

Geoff Barnett
Resident, Atwater Village

Barngrove

From: SallyBarn@aol.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] Devil"s Gate
Date: Sunday, November 17, 2013 3:48:05 PM

I am greatly concerned about the proposed County excavation of the Devil's Gate Dam area.

The proposed destruction and impact on human and animal life is overwhelming.

Please down-scale the project. Where is the money to accommodate this project at this time? Is it really critical? or is there an agency just wanting to justify their existence and maintain their salaries?

Sally Longmoor Barngrove

Baron

From: Victor Migenes
To: SPL Comments LA River Study
Subject: [EXTERNAL] L A RIVER RESTORATION....
Date: Saturday, November 02, 2013 10:05:11 AM

I am a native to the L.A. RIVER AREA (LOS FELIZ) and i use the bike path weekly for over 30 years... i love the current changes and the trend to completey restore the river. The so called "ALTERNATIVE 20" is most usefull for transforming the river in its many capacities for both human and natural animal usage.
thank you,

VIC BARON
P.O.BX 411154
L.A.CA. 90041

Barretto

From: Brandon
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA river
Date: Saturday, September 14, 2013 12:49:17 PM

Hi,
Please take this opportunity to really make something out of this project. This is an asset for the city and we cannot take for granted what this will do for the city and the state. Los Angeles is truly a beautiful city and we need to make sure that the investment in this project is done right.

All the best,

Brandon

Sent from my iPad

Bartrosouf

From: Alek Bartrosouf
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support Alternative 20
Date: Tuesday, November 05, 2013 2:08:18 PM

Dear Army Corps,

I holeheartedly support Alternative 20. I stand with Glendale City Council, Los Angeles City Council and Mayor, and many local state and federal representatives who realize the outstanding benefits that come only with Alternative 20's proposal. As a Glendale resident who works in Los Angeles, I see the great potential in creating an urban fabric using the river as its backbone. Connecting people to the river can be accomplished best with Alternative 20. LA has made great strides in increasing connectivity to the river, a natural gem and a habitat that has a lot of room for improvement. This alternative will only help realize the ultimate goal of bringing the river back to its natural state as possible.

Please adopt Alternative 20.

Alek Bartrosouf
302 N. Louise #11
Glendale, CA 91206
818 359 0108

Russell Bates
2359 Lake View Ave.
Los Angeles CA 90039
(213) 985-7505

9/28/13

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, California 90053-2325

I am writing to express my strong support for **Alternative 20** for the LA River Ecosystem Restoration project.

Alternative 20 is endorsed by the City of Los Angeles, and I appreciate my city's leaders making this wise choice.

While Alternative 13 contains many worthy elements, it does not provide the level of restoration that the LA River deserves. We have an opportunity here to make a dramatic, life-changing improvement to a huge section of Los Angeles. We shouldn't waste it.

Please join me in supporting **Alternative 20!**

Sincerely,

Russell Bates

Battin

From: susannabattin@alum.calarts.edu on behalf of Susanna Battin
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA RIver Study- SUPPORT FOR ALTERNATIVE 20!
Date: Monday, November 18, 2013 12:09:56 PM

Dear Josphine R Axt,
I am writing to emphasize the importance of choosing an LA river restoration plan that enables public and environmental health across LA. To adequately do this, we must select a plan that removes more concrete, creates more habitat, connects important corridors, and conserves more open space. From my research, I find that Alternative 13 does not do this. Alternative 20 is the only plan that will create the future LA we envision and strive for.
Thank you for listening, please consider this seriously,
Susanna Battin
LA resident
213 858 7077

Belden

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

November 18, 2013

Dear Dr. Axt:

My name is Edward Belden, resident of Los Angeles County and small business owner in the City of Los Angeles. I am an avid nature lover, urbanite, and promoter of sustainability. My passions and love for the outdoors are coalesced in the existing and potential habitat of the Los Angeles River. I have enjoyed riding my bike, kayaking, and bird watching along the LA River for more than eight years! I hold a BS in Biology and a Masters in Environmental Science and Management and recently started a small business in Los Angeles (Peddler's Creamery). I previously worked for the Council for Watershed Health as the Water Programs Manager and briefly participated on the advisory committee for the Los Angeles River Ecosystem Restoration Feasibility Study. I am writing in support of the Alternative 20 of the study as it is the best alternative for achieving true ecosystem restoration by providing much needed additional habitat and connectivity throughout the region.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

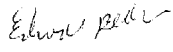
Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains

- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,



Edward Belden
Owner, Peddler's Creamery
458 S. Main Street
Los Angeles, CA 90013

Benoit

From: Benoit, Jason
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River Ecosystem Restoration Project
Date: Monday, November 18, 2013 8:29:26 AM

To Whom It May Concern:

As a resident of Los Angeles County and someone who works firsthand to improve the natural environment in our area, I strongly encourage the U.S. Army Corps of Engineers to choose ALTERNATIVE 20 for the Los Angeles River Ecosystem Restoration Project. The tentatively selected Alternative 13 falls far short of achieving meaningful transformation in our degraded urban watershed.

Please reconsider your tentatively selected plan and instead choose the more comprehensive ALTERNATIVE 20.

Thank you,

Jay Benoit
Director, The School for Environmental Studies at John Marshall High School
3939 Tracy Street
Los Angeles, CA 90027

Bevilaqua

From: Anthony Bevilacqua
To: SPL Comments LA River Study
Subject: [EXTERNAL] In Support of Alternative 20
Date: Sunday, November 17, 2013 12:09:36 PM

To USACE of Los Angeles,
I strongly support and encourage all involved parties to approve Alternative 20 to enhance habitat, recreation, and social connectivity along and across the Los Angeles River. LA needs this river for too many reasons to mention, but I'll list a few here; many people living close to the river not only have no access to the river but they have little to no access to safe parks and/ or open space close to home.

The more habitat the better. Can you imagine how many more birds and wildlife the river could support if Alt. 20 is enacted? As habitats everywhere are being reduced, here we have a chance to restore a significant chunk of this tortured river.

Finally, the river in its current cement and unaccessible state isolates people and communities from each other. This is another barrier that can be broken with major river restoration and increased access. Money should not be the issue, now is the time, and this could be one of the greatest projects on the West Coast in some time if we choose Alternative 20. Please listen to the people of Los Angeles and it's Mayor, we don't want Alt. 20, we need it!

Sincerely, Anthony Bevilacqua

Bilson

From: Ribilson@aol.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] support for alternative 20
Date: Wednesday, October 16, 2013 9:25:29 PM

To whom it may concern:

I strongly support, as do elected officials at many levels of government, that the best long term solution would be to adopt Alternative 20 for the restoration of the LA River and the LA River Watershed.

Alternative 20 removes more concrete which will lead to the creation of habitat, restoration of wetlands that will encourage the return of wild life and, just as important, provide access for the public to the river, a sorely needed requirement for the citizens of Los Angeles and the San Fernando Valley.

The highly degraded Los Angeles Watershed must be restored not only for the above obvious reasons but also for the unforeseen benefits to future generations to come. Alternative 20 is best suited to these objectives.

The scope of restoration within Alternative 20 will not come around again. If the opportunity to go with Alternative 20 is not recommended and adopted by the Corps, it will be too late to say "I wish we had chosen Alternative 20 instead of Alternative 13."

Please listen to all those who support Alternative 20.

Sincerely,

Renne Bilson, 12505 Sarah St., Studio City, CA 91604

Bise

From: Ava Bise
To: SPL Comments LA River Study; contact@folar.org
Subject: [EXTERNAL] LA River Study Comments
Date: Sunday, November 17, 2013 9:57:02 PM

TO: Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District

ATTN: Ms. Erin Jones, CESPL-PD-RN

FROM: Ava Bise
3515 Griffith Pk. Bl.
Los Angeles, CA 90027

I was born (in 1952) and raised in Los Angeles, and have been a resident of Los Feliz since 1984. I am writing to voice my support of Alternative 20 that is under consideration by the U.S. Army Corps of Engineers among other less ambitious plans.

I am gratified that so many elected representatives are supporting this more rigorous and comprehensive plan to restore part of the LA River. We owe it to the residents of Los Angeles to do all we can to recreate a lost river treasure. The efforts of the community based group, FoLAR (friends of the L.A. River) have already yielded visible improvement in our sightings of birds along the river near where we live near Los Feliz Blvd. With the full resources of the Army Corp, amazing progress will be achieved. This is a well-populated area of Los Angeles, and as a result, the lives of millions of children and adults will be enhanced in addition to native plants and animals.

I was struck by the sight of herons when I was at the Lewis and Clark National Historic Trail Interpretive Center in Great Falls, Montana this past Summer. When I asked the park rangers about the birds, they said their landings resumed after restoration efforts were completed along the river, and that those birds migrate through Southern California. Seeing those majestic herons reminded me that restoring the LA River is relevant to our whole country. Just as Montana moved forward, the LA area needs to do our utmost to heal this long-neglected habitat and potential recreational area. Thank you for your consideration.

Ava Bise

Bossone

From: ul Bosler
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] FOLAR"s endorsement of ARBOR Alternative 20
Date: Saturday, November 16, 2013 1:19:49 PM

Dear Corps,

I am a volunteer docent with the Audubon/Ballona School Program which has been in existence for almost 20 years. We docents have over the past 6 years visited the FOLAR headquarters several times and had tours with Shelly Backlar. I have always been impressed with not only the rehabilitation but the expertise of the individual staff members, many of whom are volunteers like me.
Since we lead tours at the end of a tributary of the LA River, Ballona Creek, (used to be the LA River estuary) we are most interested to know about the health and future plans for this important waterway.
I am sure that the proper choices for rehab now will effect the future of the precious few acres of wetlands at our end.
I support wholeheartedly the Alternative that FOLAR and the Mayor are advocating.

Thank you very much,

Lynn C. Bossone
Culver City

Bouville

Fabienne Bouville
3837 Brunswick Ave
Los Angeles, CA 90039

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, California 90053-2325

Dear Mrs. Axt,

RE: Los Angeles River Feasibility Study Alternative 20

I'm writing this letter in response to the U.S. Army Corp of Engineers Los Angeles River Feasibility Study. I stand with Councilmembers Mitch O'Farrel and Gil Cedillo in support of Alternative 20 to the plan.

I believe that Alternative 20 is an opportunity to breath new life into the Los Angeles River Valley, and to restore precious ecosystems that have suffered the consequences of many years of mistreatment and neglect. As a local resident, I'm also enthusiastic about the prospect of being able to share the river with my family, friends and neighbors. This plan is an incredible step towards remaking Los Angeles into the vision of a truly modern city, which can serve as a beacon of progress and modernity throughout the United States, and the world at large.

Thank you for allowing the community a voice in this process. I will be attending the October 17th public meeting to reiterate my opinion, and hope this will be considered when making a determination on the future of the LA River Valley.

Sincerely,

Fabienne Bouville
Resident and homeowner, Atwater Village
Tel: (323) 304 9341
Email: fbouvil@yahoo.com

Bowers

From: paul bowers
To: SPL Comments LA River Study
Subject: [EXTERNAL] Place to row
Date: Monday, November 18, 2013 6:09:03 PM

Dear Dr. Axt:
My name is Paul Bowers. I have lived in Echo Park very close to the LA river for 15 years and my 2.5 year old son lives even closer in Atwater Village. I am a former LAUSD elementary school music teacher and community activist. I am also paraplegic as a result of a spinal cord injury I sustained in a motorcycle accident. I have traveled to destinations from Long Beach, CA to Boston, MA to row as it is a great form of recreation and rehabilitation. It is one of the best ways to stay fit for persons with SCI and everyone else as well. I feel the LA river offers a unique opportunity to create a great environment for rowing here in LA. I have witnessed the amazing work being done with students, the disabled and others at Community Rowing in Boston and would like to see us emulate their success here. The future development of the surrounding neighborhoods would also be enhanced by the major environmental improvements that would result from more serious investment. I am dedicated to creating a better balance of our environment and urban community.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.
Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)

Bowers

- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.
Sincerely,

Paul Bowers
323-665-1581
323-337-2033

Bowling

From: William Preston Bowling
To: SPL Comments LA River Study
Subject: [EXTERNAL] ARBOR Comments
Date: Monday, November 18, 2013 1:02:47 PM

Hello,

Please select alternative 20 as it uses the majority of the soft bottom section of the Los Angeles River including the area of the new "Water Wheel" at Spring Street that will take LA River water into the Los Angeles State Historic Park (Cornfields).

William Preston Bowling
Sent from my iPhone
310-428-5085

Brenner

From: Maya Brenner
To: SPL Comments LA River Study
Subject: [EXTERNAL] support for Alternative 20
Date: Monday, November 18, 2013 2:46:55 PM

Hi-
My son is a 4th grade student in Los Angeles. He has been learning about the proposed LA River project.

We both believe that Alternative 20, instead of Alternative 13, would be better for the Los Angeles ecosystem, environment, and community at large.

We live very close to this project and would be so excited to use it once it is complete.

thank you for your time,

Maya Brenner
Jack Einziger

Please note this is my new email.

Brotman

From: Daniel Brotman
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA river revitalization
Date: Saturday, September 14, 2013 9:14:36 AM

To whom it may concern,

I am writing to express my support for Alternative 20 supported by Friends of the Los Angeles River. I believe the larger up front investment will pay significant dividends to the economy of Los Angeles for years to come.

Regards,

Dan Brotman
6211 Murietta Ave
Valley Glen, CA 91401

Brown L.

From: Lynn Brown
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Restoration
Date: Sunday, November 17, 2013 8:15:48 AM

To Whom it may concern;

There is not time to bring this before the Board of Equestrian Trails Inc (ETI) or the LA Equine Advisory Committee, therefor I speak for myself only.

Knowing the minds of most equestrians, we support Alternative 20 and the habitat restoration, connecting wildlife corridors and open space preservation contained in Alternative 20.

We support FOLAR's efforts on this issue,

Sincerely,

LYNN BROWN
LA EQuine Advisory Committee V.P.
ETI Trail Coordinator Corral 38

Brown S.

From: Syd Brown
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Saturday, November 16, 2013 1:08:37 PM

I heartily endorse #20 as the approach. Army Engineers hardly ever see the whole picture.

Brye

From: Steve Brye
To: SPL Comments LA River Study
Subject: [EXTERNAL] FW: Letter of Comment
Date: Friday, November 15, 2013 6:56:33 PM

From: Brye, Steven [mailto:BryeS@metro.net]
Sent: Friday, November 15, 2013 5:12 PM
To: 'bryesteve@att.net'
Subject: Letter of Comment

Josephine R. Axt, Ph.D., Chief, Planning Division, U.S. Army Corps of Engineers, Los Angeles District, P.O. Box 532711, ATTN: Ms. Erin Jones, CESPL-PD-RN, Los Angeles, CA 90053-2325

Dear Dr. Josephine Axt,

Thank you for the opportunity to comment on the Draft Feasibility Study and Environmental Impact Statement/Environmental Impact Report for the Los Angeles River Ecosystem Restoration Study, Los Angeles County, Calif. I am writing you today in my capacity as a private United States citizen and any opinions I might express do not necessarily represent the opinion of my employer nor of any private business, government body or any organization whatsoever, so far as I know.

Some of the alternatives within this Draft Environmental Impact Statement propose the acquisition of the Union Pacific Railroad Yard sometimes known as "the Piggyback Yard" or as the Los Angeles Transportation Center; described, for example, on Page 4-55, Lines 38 to 46 and continuing on Page 4-56, lines 1 to 10. I do not wish to comment on the appropriateness or the feasibility of the proposal to buy the Piggyback Yard. Rather I wish only, strictly as a private citizen, on one aspect of the reuse of the Piggyback Yard if it is purchased.

Page 4-55, Line 4-55 states "The Piggyback Yard site would be restored with113 acres of riparian habitat. The site appears somewhat larger than 113 acres and the balance of the site would presumably go to the supporting functions of restrooms, trails, parking lot etc. shown in the Draft EIS illustrations.

I recommend that the Final EIS include a commitment of the shared use of a small portion of the total Piggyback Yard site, if it is purchased, for a College or University level center to study the restored wetlands and related higher level educational subjects. The small portion of land dedicated to higher education would greatly increase the utility of the Project to adjacent neighborhoods within East Los Angeles. The youth of local residents could study there. The land so dedicated need not be subtracted from the Riparian habitat, but designed to be integrated within it. 2 acres of land, if accessed by foot, bicycle and any of the many adjacent transit lines and dispensing with auto parking, could support the daytime studies of a few hundred students in biologically sensitive small structures. These students could be all from one university or from several universities sharing the space simultaneously or at different times. Part of the education could be in how to study riparian areas without damaging them.

If a larger portion of land (say 5 to 10 acres) were partly dedicated to higher education it might be possible to have as many as 1,000 or more students there and the functional equivalent of a small college.

The project should not be expected to pay for any of this. It should however commit to reserve this small portion of land for a higher education use, fully compatible with the proposed riparian habitat, as a perfectly suited betterment to the project design and a mitigation for any community impacts during construction. The cost of fully recyclable small scale teaching structures with features like solar power, on site riparian planting and tutoring for younger students would have to be raised outside the project, but might be somewhat comparable to the cost of well landscaped portable trailers such as one might imagine at many elementary schools or high schools throughout Southern California.

Steve Brye
255 South Grand Avenue
Apartment 808
Los Angeles Ca 90012

Budzik

From: mike budzik
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] LA River Project
Date: Saturday, November 16, 2013 10:32:53 AM

Josephine R. Axt, Ph.D.; Chief, Planning Division 11/16/13
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711

ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

My name is Mike Budzik, a resident of Glendale CA near the Los Angeles River. I've lived here for over 15 years and enjoy my walks along the river. In a growing city where nature takes a back seat to progress, relaxing near the river provides a welcomed stress relief. I am a college graduate working in the entertainment industry as a production audio technician. I support the Friends Of the LA River because I too believe in the importance of improving the condition, public use and preservation of the LA river. My children have asked while walking along the river why we are not allowed to fish or boat or play in it. My best attempt at answers to them frustrate me and are an embarrassment to this future generation. I know we can create a better balance of our environment and urban community and I am encouraged by examples of other communities where such efforts have had wide sweeping success.

I appreciate the time and efforts the Corps and City of LA have expended to work with the community and prepare the LA River Ecosystem Restoration Feasibility Study and Environmental Impact Report. I am also thrilled that the Corps and City see the benefits in the LA River restoration. I am writing to promote my support of Alternative 20 presented in the document instead of Alternative 13 (identified in your study as the Tentatively Selected Plan). I believe Alternative 13 does not do enough to recognize the importance of the LA River to habitats, species, and the residents of this city.

Alternative 20 will do more that Alternative 13 by:
Providing greater connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
Providing connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains via the Verdugo Wash
Restoration that removes concrete walls and creates wetlands at Piggyback Yard to increase hydrologic and wildlife connections
Restoration with higher value habitats at Cornfields by terracing the bank and creating freshwater marsh and providing connection to the Elysian Park
Reducing distances between the habitat nodes to greatly enhance the overall value
Creating a similar ecosystem that historically existed prior to the channel
Restoring a length of river 2 times greater (6.4 miles vs. 3.2 in 13)
Removing more than 3 times the concrete (117,918 cubic yards vs. 36,891)
Creating 131 more acres of restored habitat (719 vs. 588)
Creating a higher quality of ecosystem because it restores more natural river connections, rather than using culverts or pipes
Promoting the long term sustainability and resilience over the life of the project because of the larger scope and added connectivity
Meeting more of the 19 performance targets established under the 2 objectives than all the alternative plans (including 13)
Meeting the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly

The Regional Economic Development analysis shows Alternative 20:

Budzik

Provides 7015 more jobs and $386 million more in wages during construction
Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
Creates 1094 more new permanent jobs valued at $62 million more

I urge you to consider Alternative 20 because I believe the long term social and economic benefits outweigh Alternative 13 and the additional investment. Alternative 20 reaches more of the census tracts with high poverty and high minority populations, provides more green areas to encourage physical activity and connectivity to the river, and provides more green areas that will improve air quality. Restoration of the LA River is crucial to my family and our City! I believe the added values of Alternative 20 were not sufficiently considered in the report comparisons. I urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability. I want to explore the river with my children to it's fullest, instead of pointing at it from behind a chain link fence atop a concrete culvert and making up excuses why we cant enjoy it. Thank you for your consideration.

Sincerely,
Mike Budzik
spyfilms@earthlink.net

Cabrera

From: Mirella Cabrera
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please choose Alternative 20
Date: Monday, November 18, 2013 3:06:56 PM

To whom It may concern.

As a resident of Los Angeles country I strongly encourage The U.S Army Corps of engineers to please choose the ALTERNATIVE 20 for the Los Angeles River Ecosystem Restoration project because restoring the half of the LA river would help but if chosen ALTERNATIVE 20 instead of 13 would help the LA river more.

A student from JOHN MARSHALL HIGH SCHOOL .. from AP Environmental science...please

Camacho

From: Maria Camacho
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support Alternative 20
Date: Monday, September 30, 2013 9:41:45 PM

I support Alternative 20, which envisions the most robust restoration of the L.A. River. The time is now! Don't let the Angelenos down!
Maria

Campbell

Alice M Campbell
355 Canebrake Road, Canebrake
Julian CA 92036

Comment Letter

TO: Josephine R. Axt, Ph.D.,
Chief, Planning Division,
U.S. Army Corps of Engineers,
Los Angeles District,

FROM: Alice Campbell, PG, CEG, CHg*
Speaking as Private Citizen

DATE: November 2, 2013

SUBJECT: Review of: Draft Feasibility Report, US Army Corps of Engineers, Los Angeles Office, River Ecosystem Study, Which is Not a Flood Study, dated September 2013.

++

Introduction:

This letter contains my comments on the Draft Integrated Feasibility Report, which includes a Draft Feasibility Study and Environmental Impact Statement/Environmental Impact Report for the Los Angeles River Ecosystem Restoration Study, Los Angeles County, Calif., as generally described above. Thank you for extending the comment period. The USACE (Corps) study, which is **not** a flood study, describes various alternatives to 'beautify' the Los Angeles River, a nebulous and unquantifiable goal. The reach discussed is a stretch of the river between Glendale and downtown Los Angeles. This reach, which is visible from the Golden State freeway and from bridges, has an earthen bottom and concrete banks over earthen levees or berms, except for reaches with vertical concrete walls where the channel is constrained by immovable infrastructure such as bridges, railroads, and freeways. The riverbed is currently choked with vegetation, and the banks are not everywhere in good repair. It is obvious that the area has had little or no maintenance since it was built. The current

Campbell

appearance of the river is not very attractive, but at least it is functioning as a flood control structure, although hampered by the vegetation growing in the open channel.

My comments are mainly related to the Hydrology Appendix. This Appendix is quite different in tone than the front matter of the study, and in many ways actually contradicts some of the conclusions in the main study. Since I would support only the No Project alternative, my remarks focus on the Hydrology Appendix, which does **not** contain a flood study (but actually does).

Specific Comments:

1. Note how often the Appendix's author states that flood hazards were specifically excluded from the study. Note how the author states that existing channel was not designed for a Corps 100-year flood, but for Los Angeles County's 'capital' flood which comes out to about a 50-year flood (the two kinds of floods are calculated differently between the County and the Corps). (The capital in the name may refer to the county's lack of capital for a 100-year flood control system, and this is all they could afford.) The correct title of the study, if it accurately reflected the hydrology appendix, would be "US Army Corps of Engineers Los Angeles River Ecosystem Study, Which is Not a Flood Study, Just Saying."

2. The Appendix states that FEMA, the Federal flood insurance program, has not updated its maps of this part of the Los Angeles River to show the Corps' calculated extent of the 100-year flood, despite being provided with maps on three different occasions. Because FEMA has not updated the maps, many properties are in a 100-year flood zone and the owners do not know of it. One wonders why, in 20 years, FEMA could never find an engineer and have her spend a couple hours updating 4 or 5 maps and sending them to Los Angeles County. Since FEMA's mission is to protect the people of the US from having to pay out insurance for properties known to be in a 100-year floodplain, it is strange that they would not try a little harder to warn the people living in an area where the USACE, an ordinarlly reliable engineering firm, has repeatedly stated that there is a serious flood hazard. It's almost as if FEMA is being prevented somehow from updating their maps. One wonders whether FEMA also had letters from the Corps on flood hazards in and around New Orleans and in the area affected by Hurricane Sandy area before the events, and FEMA similarly **did not act** on the information.

3. Note how the alternatives analysis sidesteps the **100-year** flood protection impacts for the alternatives, instead describing the **relative** flood protection of the alternatives. In essence, the study says, 'well, given the current un-maintained state of the channel (that only gives 25-year flood protection), this or that alternative won't make it any worse, or only a little worse'. This is not the

same as saying that these changes to the river will provide similar or better flood protection than the current design. It is a careful sidestepping of the flooding issue, because the study was **not** a flood study, as the study is careful to point out repeatedly, because the proponents and their vague funders, who are not named, did not want a flood study (why not?).

4. The Appendix shows the 25-year, 50-year, 100-year, and 500-year extent of flooding along the Los Angeles River. It thoughtfully provides maps, although it is **not** a flood study. The Appendix describes how the new maps were created, using computer programs to analyze the volume of floodwater and actually calculated the additional friction caused by vegetation in the river, vegetation that **should not be there** and that is reducing the capacity of the channel to handle even a 50-year storm. This is all present in an appendix which repeatedly states it is **not** a flood study, because, after all, nobody who wanted the beautification study was interested in knowing about whether the whole project would increase flooding along the river. Because FEMA shows it's not in a 100-year floodplain.

5. Any alternatives analysis that honestly included the flooding costs would need to include the costs of flooding of contaminated sites which have been cleaned up assuming they were not subject to 100-year flood hazards, but which actually **are** within a flood zone. A search of public databases for contaminated sites within the Corps 100-year floodplain would have been interesting, but it was beyond the narrow scope of the Corps study. Nonetheless, contamination caused by unexpected flooding is a cost that will be borne by somebody, likely the property owners and taxpayers, who seem to be assumed to be inexhaustible sources of money after such 'totally unexpected' disasters. Technically, a disaster by definition is an 'unlucky' event, but if one has been repeatedly warned that they are doing something that will have very bad consequences, then the outcome is not really a disaster, but a perfectly predictable result of a series of dumb decisions, hoping that luck would dump the consequences on somebody else.

6. Projected dollar costs for the alternatives appear to be unusually low, considering the number of properties along the river that are contaminated by leakage of petroleum products, solvents, plating fluids, herbicides, pesticites, lead, and whatnot. The alternatives analysis does not include the possible costs associated with removal of soils that are found to be contaminated. But in an area that has been industrialized for over 100 years, such contamination is inevitable and is commonly found in highway and other projects along the river corridor.

7. One wonders who might derive the most benefit from this project, given the inherent flood risks that both the current state of the channel, and any modification of the current state, would cause to properties along the river.

Looking at the last few developments in the area, it seems to me that there is much residential development going in along the river, and that beautifying the river would increase the property values for these developments, so near to jobs in Downtown. So, the likely beneficiary of the beautification would be land developers, who, because of the incorrect flood zoning, can currently build on a 100-year floodplain without doing any expensive mitigation work, then dissolve the LLC and absolve themselves of any responsibility, after selling the development to some unlucky new owner who, because FEMA is bought off or asleep at the wheel, has no idea they are in a flood zone until the flood hits, after which their flood insurance goes sky-high. It seems that there is a wilful neglect, by several layers of local and federal government, of **real** flood hazards, concerted among many agencies to fob legitimate flood mitigation costs off on either FEMA, future buyers, or the State and County who will bear much of the cost of the cleanup after the inevitable and entirely predictable flood.

8. I agree with the anonymous engineer who prepared the appendix. The appendix is a not-so-subtle attempt to protect the USACE, and the engineer herself, from any liability that this project could create. After all, the study did **not** include the cost of mitigation of flood hazards, because the feasibility study was required to **not** acknowledge the flood hazards. The study itself is pretty vague about the source of funding for all the work, which is interesting in itself. The history of environmental studies for dams, levees, and canals in California shows that these studies commonly include vastly inflated 'recreational' benefits to 'justify' the project and drum up taxpayer support, but somehow the taxpayer never gets that value, and some moneyed interest, such as big agriculture, timber or mining interests, actually reaps the main benefit. This seems to underlie the repeated assertion in the Appendix that this is **not** a flood study, because if the true cost was actually known, and everyone was actually being honest about the main benefits going to developers, who will shirk their part of the cost, then the project would not show a benefit to the people of Los Angles City and County.

9. There is a risk to life from this project which has not been articulated. Every time there is a moderate flood along the Los Angeles River, there are casualties, and swift-water rescues and drownings occur, mainly among the young and irresponsible, homeless, and luckless. A 15-year-old named Adam Bischoff died in a flood during the El Nino year 1992, Earl Higgins died in the Los Angeles River in 1980 while trying to rescue a child, Derrick Ashe and Ray Wells drowned in the Los Angeles River in October 2000. LA's 2010 population was 3.8 million, so the annual risk (really, only the wet-year risk) of drowning is approximately 1 in about 2.5 million population. This is at the current 25-year flood protection level of the River. In a 100-year event, I estimate that the risk will increase about an order of magnitude, so probably 8 or 10 additional lives will be lost, some of whom may be in areas where they did not know they were at risk. The current dilapidated state of the river is simply not being discussed,

which amounts to concealing facts that mature adults can use to make decisions. Should 8 or 10 random people die to beautify the river and increase property values along the river? Is this fair? Who is it fair to?

Conclusions and Recommendations

1. The study by design does **not** show the true costs of the project in lives lost during the 100-year flood, property damage, damage to historic structures, damage to infrastructure such as roads and bridges and railroads, and the spread of contamination, despite these being impacts of the project. However, to be fair, they are also consequences of the current state of neglect of the River by the County or by whoever is supposed to be maintaining it. Nonethless, there will be costs in lives lost by flooding along the river, which flood-control structures are expected to mitigate, but not when neglected or deliberately undone to make them prettier.

2. This project is a bad idea, and will end up costing lives and money and leaving people in ignorance of real and dangerous flooding hazards around the river. Furthermore, those responsible should instead bring the channel back to its admittedly inadequate 50-year flood design capacity, and at least save a few lives when the flood hits.

3. The Cities of Glendale and Los Angeles should survey and post flood evacuation routes in the 100-year flood plain as defined by the Corps, so that residents in those areas will know local evacuation routes and not be trapped by flooding. Pretending that there is no hazard, when in fact, this and other studies demonstrate that an unacknowledged hazard exists, is irresponsible, breaks the public trust, and is in fact a malfeasance of public authority.

4. I recommend the project be withdrawn and money be used to repair the flood control infrastructure and security fences along the River, and FEMA update the flood maps so that the real risks of the River be known.

5. Like the author of the Appendix, as a licensed professional I can't support this ill-advised scheme, that benefits only developers and puts its costs on the general population, without clearly stating the real flood risks. The true costs of the project should be borne by those who plan to get rich off it.

Questions regarding this letter should be directed to Ms. Alice Campbell* by contacting her at 818-717-8366 or 760 765 4862.

*California Professional Geologist, Certified Engineering Geologist, Certified Hydrogeologist

Camphuis

From: Kay Camphuis
To: SPL Comments LA River Study
Subject: [EXTERNAL] in SUPPORT of Alternative 20, attn: Erin Jones
Date: Saturday, November 16, 2013 3:37:02 PM

Dear Ms. Axt,

Yes, I am a member of Friends of the LA River. So, yes I support Alternative 20. Let's start at the beginning. I moved to Los Angeles from San Diego about 4 years ago when I retired. Not many people move TO Los Angeles to retire and I met many puzzled people when they learned of my decision. Since I've been here I've learned so much about this lovely city and have not regretted my move for a minute. I live about one mile from the river and walk along its edges frequently. There is so much wildlife along the Glendale Narrows, one can only imagine what the entire river might look like if an aggressive project were to go forward. This is the reason I joined FOLAR.

This city, or more to the point, the **people** in this huge city, need parkland, and access to nature on a daily basis. Not everyone can afford vacations away from home, but everyone can enjoy a mini-respite in their own backyard. Whenever I go to a public park, there are lots of people there. This tells me there is a yearning for a connection to nature to restore our bodies and our minds. It's been a long time since our great city has undertaken a project that will benefit everyone, everywhere. Let's not be shy about taking the reins of an imaginative project and actually make it happen. This project really is "for the people", a concept often forgotten. Please.

Kay Camphuis
3776 Tracy Street
Los Angeles, CA 90027

kaycamphuis@gmail.com

Carpenter

From: Cathy Carpenter
To: SPL Comments LA River Study
Subject: [EXTERNAL] L A River
Date: Wednesday, October 09, 2013 12:37:34 PM

Please consider Alternative 20, which is broader in scope and encompasses more restoration activities. Thank you.

Cathy Carpenter
4617 La Barca Drive
Los Angeles, 91356

Carrillo

From: Juliette C.
To: SPL Comments LA River Study
Subject: [EXTERNAL] A plea
Date: Saturday, November 16, 2013 7:52:57 AM

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Date (letters must be mailed no later than Nov 18)

Dear Dr. Axt:

My name is Juliette Carrillo and I had the privilege of working with residents and concerned citizens around the LA River in a theater production near Frogtown. The production was called "Touch the Water" and it included stories and current issues regarding the LA River. I am a theater director with a graduate degree from Yale University. I represent Cornerstone Theater Company. Part of our mission includes dedicated to creating a better balance of our environment and urban community.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat

Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Juliette Carrillo

Casillano

From: Matt Eysee
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please choose Alternative 20
Date: Monday, November 18, 2013 5:27:41 PM

To whom it may concern, I strongly suggest that Alternative 20 is the best course of action, for the LA river. The currently selected Alternative 13 falls short of of achieving any sort meaningful change for our watershed.

Please choose Alternative 20 to leave a lasting change to LA's river.

-Matthew Aribon Casillano, AP Environmental Science Student

Chauser

From: Lee Chauser
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River feasibility study
Date: Tuesday, November 19, 2013 9:24:42 AM

I am taking a course at CSUDH and we are studying the EIR, and my assignment was the "Management Value" appendix. Its an enormous undertaking, and I congratulate you for taking on this renovation. I hope you can bring back the "natural beauty" of the river; eventough it primary concern is safety of the surrounding communities.

Lee H. Chauser
CSUDH
Earth Studies Department

Chesler

From: Stewart Chesler
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River Ecosystem Restoration Integrated Feasibility Report
Date: Saturday, November 02, 2013 3:32:57 PM

Dear US Army Core of Engineers:

I support the Core's Alternative - Alternative 4. It is cost effective, affordable and preserves Union Pacific's Los Angeles Transportation Center Rail Yard (LATC). Los Angeles is home to the largest amount of port traffic and freight activity in the North America. Due to the size of LATC and that fact this is linked to the Alameda Corridor, the spine of Freight movement in Los Angeles, it plays a vital role in both LA economy and the nation's. If LA were to loose LATC, Union Pacific will not be able to replace it and will hurt both Union Pacific and the region as a whole economically. Therefore, I urge the Core to reject any alternative the calls for the elimination of LATC and to select Alternative 4 since its the most cost effective.

Respectfully,

Stewart Chesler, AICP
Sherman Oaks, CA

Colacion

From: Edward Colacion
To: SPL Comments LA River Study
Subject: [EXTERNAL] Yes on PLan 20!!
Date: Thursday, September 19, 2013 8:41:31 PM

Yes go with Plan 20 let shave high expectations with high support, this is transformational moment we need to aim for~student, the youth are environmentally grounded with core values that will make this new LA River a huge success..move for ward with Alt.20 Mitch!!

Conway

From: Rebecca Conway
To: SPL Comments LA River Study
Date: Thursday, October 17, 2013 11:23:36 AM

I support "Alternative 20" for the L A River.

Rebecca Conway

Crane

From: Rebecca Crane
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support for Alternative 20 for the LA River
Date: Monday, November 18, 2013 10:08:42 AM

Dear Dr. Axt:

My name is Rebecca Crane and I am a Family Medicine physician. I have lived in Los Angeles since 2001 and currently live in Silver Lake. I have two children who I take regularly with me to ride bikes along the river. To have the river, in its current state of wilderness, is a true gift, to have it in my city. The river, like Griffith Park and the San Gabriel Mountains, bring a little bit of wild to the city and give it the spirit that allows my family to thrive in Los Angeles. My children have learned of the city's history and it's ecology through the LA River. My patients have started exercise regimens around activities at the LA River. The river is a vital and beautiful part of my existence in Los Angeles.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and **I am providing comments in support of Alternative 20 presented in the document.** While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value

Crane

- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
  - Provides 7015 more jobs and $386 million more in wages during construction
  - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
  - Creates 1094 more new permanent jobs valued at $62 million more
  - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Rebecca Crane, MD, MPH

Cruz

From: Ray Cruz
To: SPL Comments LA River Study
Subject: [EXTERNAL] Aerial Tramway to Elysian Park Point Grandview - Concept Proposal
Date: Tuesday, November 12, 2013 1:35:55 PM

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
ATTN: Ms. Erin Jones, CESPL-PD-RN
P.O. Box 532711
Los Angeles, California 90053-2325

Aerial Tramway to Elysian Park Point Grandview - Concept Proposal

From the end of the old Figueroa Street bridge in Los Angeles (slated for demolition) you can see looking south the top of Elysian Park Point Grandview. This concept proposal would be to build an Aerial Tramway from the old Figueroa Street bridge to the top of the Elysian Park hill at Point Grandview.

The tramway would allow visitors to easily ascend to the beautiful resources of Elysian Park and to enjoy several splendid views of the Los Angeles River and other parts of the city. Tramcars should be designed to accommodate bicycles, wheel chairs and people (of all sizes and shapes).

Point Grandview is a hidden gem in Elysian Park Los Angeles. Although I've lived in the Northeast part of Los Angeles nearly all my life, and have frequented this large park many times, not until this year (2013) did I stumble upon Point Grandview while looking for a point to take photographs of the new Figueroa-Riverside Drive bridge currently under construction (construction site immediately below Point Grandview). Other notable view points include Angel's Point and Buena Vista Point.

Looking up from Figueroa Street you can see the palm trees at the top of the hill that provide a signature for Point Grandview. Most people know of Elysian Park because of the Dodger Stadium and the Los Angeles Police Academy that are located in or by this park. There are thousands of people every week who also enjoy its many picnic areas and hiking trails, as well as a few tennis courts, a golf course and other recreational amenities.

The concept perspective is that people who are endeavoring to enjoy the natural scenes of the Los Angeles River should also have easy access to the adjoining natural views and amenities of Elysian Park. Currently the artificial constructions of roads, freeways and river embankments prevent this from happening. The steep cliffs surrounding the north side of Elysian Park also present a natural barrier. How can you get to Elysian Park from the Los Angeles River on foot? Without a tramway of some sort it remains nearly impossible. And yet the two are only a stone's throw apart!

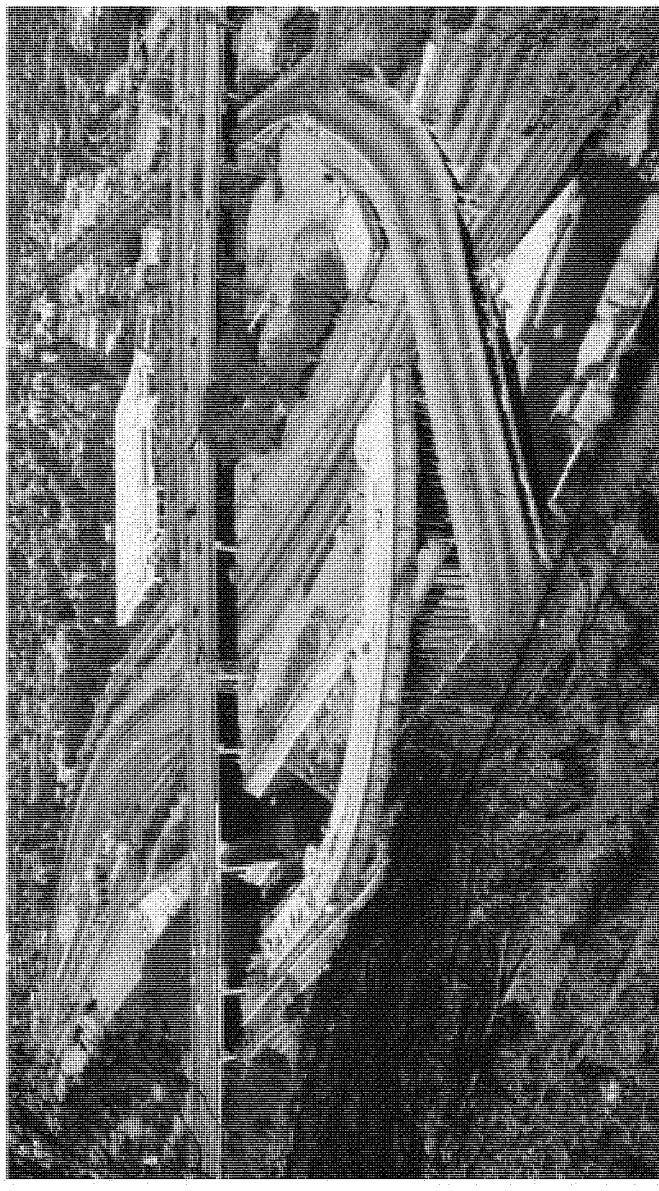
Before we demolish the old Figueroa Street bridge, we should consider this proposal. Although it is possible that a tramway could be constructed from other points along the way, this may be the most proximate and feasible point.

Photos I've taken from Point Grandview and Buena Vista Point can be seen here:
https://plus.google.com/photos/102764666155636634799/albums/5932125969207215233?banner=pwa

Ray Cruz

Mt. Washington, Los Angeles

Cruz



Dawson

From: Robert Dawson
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] Los Angeles River Ecosystem Restoration Integrated Feasibility Report
Date: Monday, November 18, 2013 7:22:43 AM

As someone born and raised in Los Angeles who lives two miles from the Los Angeles River, I would like to voice my strong support for Alternative 20 of the Ecosystem Restoration Integrated Feasibility Report by the U.S. Army Corps of Engineers.

I believe that Alternative 13 falls short of achieving meaningful transformation of the city's degraded urban watershed. Instead, I strongly endorse the more comprehensive Alternative 20, which removes more concrete, creates more habitat, connects important corridors and conserves more open space for the health of the wildlife and people of Los Angeles.

I appreciate the opportunity to comment on the river revitalization project, and I urge you to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Robert Dawson
4039 San Rafael Avenue
Los Angeles, CA 90065

de Zamaroczy-1

From: Nicolas De Zamaroczy
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comment on L.A. River Study
Date: Saturday, November 16, 2013 5:21:54 PM

Dear Army Corps of Engineers,

Please select Alternative 20 for the L.A. River Study, per the recommendations of FOLAR.

Thank you.

Best regards,

Nicolas de Zamaroczy

--
Nicolas de Zamaroczy
PhD Candidate, Political Science and International Relations
University of Southern California
Los Angeles, CA 90089-0044
nicolas.dezamaroczy@usc.edu

de Zamaroczy-2

From: Nicolas de Zamaroczy
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comments on Study
Date: Friday, October 11, 2013 7:27:35 PM

Dear Army Corps of Engineers,

Please make Alternative 20 your TSP for the LA River moving forward. I believe in the Friends of the LA River and their plan for rehabilitating the LA River.

Thank you for your consideration,

Nicolas de Zamaroczy
2618 Ellendale Pl. Apt. 7
Los Angeles, CA 90007

Deptula

From: Anthony Deptula
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, November 04, 2013 7:37:21 PM

Hello,

I'd love to see the river restored back to its beautiful glory. I see Alternative 20 being the best option. Although, slightly more expensive-- I am sure it the fraction of what it cost to to our river into a concrete fortress. The river deserves to be free and I support opening up more locations to bring back some nature to the Los Angeles River.

Thanks so much for your work,
Anthony Deptula

--
My new short is a Vimeo Staff Pick!
Twitter me?

Deutsch

From: Lauren Deutsch
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] Supporting Recommendation # 20 of the Integrated Feasibility Report, EIR for the Los Angeles River Ecosystem Restoration Study, Los Angeles County, Calif.
Date: Friday, November 15, 2013 11:34:32 PM

Dear Dr. Axt:

My name is Lauren Deutsch and I have lived in the Los Angeles County region since 1977. I came to Los Angeles from Philadelphia, home of the Delaware and Schuylkill rivers, and was born in northern New Jersey, across the Hudson River from New York City where I also lived, prior to moving to Los Angeles. When I visited New Orleans and St. Paul, I made a pilgrimage to the Mississippi. Rivers are critical to life in the USA.

I am writing to urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

When I first visited downtown LA, I was on Alameda Street and went over the 1st St. Bridge to East LA. I had no idea there once was a river there, but it certainly reminded me of a place where a river *should be.* Then, a native told me the LA River had been paved over, and I had no idea how that could be possible, much less why.

I have volunteered with Friends of the LA River (FOLAR) for a number of years and have marveled at this citizens' initiative to restore the natural habitat of our region. This past year I also began working with Los Angeles Waterkeeper (LA Waterkeeper) and have learned how, tragically, the LA River watershed has become dangerously polluted, particularly in areas where low-income families are able to reside. We also know that the LA River is a critical component of our region's capacity to develop local water resources. Prior to this, I also worked for Global Green USA and the Girl Scouts of Greater Los Angeles. When Girl Scouts was planning the merger of six smaller regional councils into a county-wide nonprofit, I began a campaign the unify our memberships by the theme "A River Runs Through It".

Thus, I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I have reviewed the report in detail, and I am lending my support and endorse the principles provided by FOLAR to this end in **support of Alternative 20 presented in the document.**

- While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River. Major concerns are that the following were not adequately recognized in the selection:
- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Deutsch

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
- Provides 7015 more jobs and $386 million more in wages during construction
- Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
- Creates 1094 more new permanent jobs valued at $62 million more
- The Other Social Effects analysis shows Alternative 20 with its larger scope will:
- Produce a greater connectivity with the people and communities
- Reach more of the census tracts with high poverty and high minority populations
- Provide more green areas to encourage physical activity
- Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to me and to all residents of our City and County! **The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons.**

I urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Lauren Deutsch

Lauren W. Deutsch
lwdeutsch [at] earthlink (dot) net
835 S. Lucerne Blvd., #103
Los Angeles CA 90005 USA
Voice Message: 323 930 2587

Devereaux

From: Toni Devereaux
To: SPL Comments LA River Study
Date: Thursday, October 17, 2013 7:35:03 AM

I support Alternative 20 for the LA River revitalization. After all these decades of neglect, this is not a time for half measures. A vibrant, accessible river will be a centerpiece for our city, putting it in the ranks of other major cities around the world.

Dillard

From:	Joyce Dillard
To:	SPL Comments LA River Study
Subject:	[EXTERNAL] Comments to SPL-2013-003-NLH-Draft IFR for LA River Ecosystem Restoration Study due 11.18.2013
Date:	Monday, November 18, 2013 1:52:47 PM
Attachments:	1-Open Space Element.pdf 2-Conservation Element.pdf 3-Service Systems Element-Public Recreation Plan.pdf 4-Ordinance 171353.pdf 5-Richard MacNaughton Esq Letter (Housing Element).pdf 6-Community Plan Adoption Status accessed 11.18.2013.pdf 7-2010 Urban Area Facts (US Census Bureau).pdf

PRIMARY PURPOSE AND NEED:

You state that the PRIMARY PURPOSE is:

The primary purpose of the proposed project and alternatives considered in this Study is to restore approximately 11 miles of the Los Angeles River from Griffith Park to Downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the River to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo mountain ranges while maintaining existing levels of flood risk management.

Comments:

The Flood Risk Management is the main concern considering the history of the river of flooding and of meandering. Compton Creek was joined to the LA River through the 1938 paved channeling.

Flooding in the entire City of Los Angeles occurred in 16 times in the last century:

* 1914
* 1916
* 1927
* 1934
* 1938
* 1941
* 1943
* 1952
* 1956
* 1969
* 1978
* 1980
* 1983
* 1993
* 1995
* 1998

1

Flooding occurred this century in 3 years;

* 2003
* 2004
* 2005

City of Los Angeles ordinances include:

1. Ordinance 154,405-Specific Plan for Management of Flood Hazards

Dillard

2. Ordinance 163,913, CF 83-1373-S1-Amending the Specific Plan for Management of Flood Hazards, July 26, 1988.
3. Ordinance 172,801, CF 98-1023-Amending the Specific Plan for Management of Flood Hazards, June 17, 1988
4. Ordinance 178,881, CF 07-0600-S11-the Los Angeles Specific Plan for Management of Flood Hazards (Ordinance 172081) and the National Flood Insurance Program, June 6, 2007
5. Ordinance 180,063, CF 08-0600-S11, Amending the Municipal Code regarding fees, July 8, 2008

City of Los Angeles FLOODPLAIN MANAGEMENT PLAN was approved in April 16, 2010 as an update to the 2001 plan developed with the following purpose:

(1) identify the City's known flood problem areas;
(2) establish goals, objectives, policies, and implementation programs to reduce flooding and flood related hazards; and
(3) ensure the natural and beneficial functions of our floodplains are protected.

Achievement of this purpose is accomplished through reviewing existing studies and plans, the maximum utilization of existing programs and resources involving those most affected by flood hazards in the planning process, and ensuring that the policies and programs identified in the implementation plan are carried out.

Existing levels of flood risk management are based on the approved General Plan and its Elements including Community Plans.

ACCESS TO THE RIVER has been a selling point for this Study by the City of Los Angeles , Open access to the LA River and flood control protection are contradictory. 2

You state:

City General Plans, 2012
General Plans have been prepared for the purpose of guiding and regulating development and protection of land uses within each city that borders the study area, including the Cities of Los Angeles (2012), Burbank (2012), and Glendale (2012). These General Plans, prepared and maintained by the cities' planning departments, have a comprehensive, long-range declaration of purposes, policies, and programs for developing lands and protecting common uses into the future. They provide a comprehensive strategy for accommodating long-term growth should it occur as predicted. General Plans are regularly amended and updated.

Comments:

You are in error regarding the City of Los Angeles General Plan .

The approved General Plan was readopted on August 8, 2001, CF 01-1162 and originally adopted December 1, 1996, CF 95-2259, not in 2012.

The Elements are:

1. Land Use Element Including 35 Community Plans (and adoption status) 3
2. Air Quality Element adopted November 24, 1992, CF 91-2003
3. Conservation Element adopted September 26, 2001, CF 01-1094 superseding the Open Space Element originally adopted June, 1973 and the Conservation Element originally adopted December, 1973
4. Historic Preservation and Cultural Resources Element (not written)
5. Housing Element adopted August 13, 2008, CF 08-1933 and re-adopted on January 14, 2009, CF 08-1933-S1. The
6. Infrastructure Systems Element (not written)
7. Noise Element adopted February 3, 1999, CF 96-1357 superseding the 1975 Noise Element
8. Open Space Element (June 1973 General Plan)
9. Public Facilities and Services Element (not written)
10. Safety Element adopted November 26, 1996, CF 96-1810 superseding the 1975 Safety Plan, the

Dillard

1974 Seismic Safety Plan and the 1979 Fire Protection and Prevention Plan
11. Service Systems Element-Public Recreation Plan (1980 General Plan)
12. Transportation Element adopted August 8, 1999, CF 97-1387 superseding the Scenic Highways Plan adopted in May 13, 1978, CF 98-0894 and the Highways and Freeways Element adopted in 1959

Open Space Ordinance 171,753 was adopted October 14, 1997.

Governor's Office of Planning and Research now requires Complete Streets and Circulation Element and the Community and Military Compatibility, which the City of Los Angeles has not prepared.

Housing Element 2013-2021 has been completed and is pending City Council approval. Final Environmental Impact Report FEIR is an Addendum to the City of Los Angeles General Plan Framework EIR-SCH# 94071030 (1996 FEIR). The City determined that the Housing Element would have no new significant environmental effects beyond those identified in the 1996 FEIR.

There are three lawsuits pending against the Hollywood Community Plan:

1. BS138369 LA MIRADA AVE NEIGHBORHOOD ASSOC OF HOLLYWOOD VS CITY OF L A
2. BS138370 SAVE HOLLYWOOD ET AL VS THE CITY OF LOS ANGELES ET AL
3. BS138580 FIX THE CITY INC VS CITY OF LOS ANGELES ET AL

Richard MacNaughton, Esquire is challenging the City's Housing Element (Council File 13-1389).

You state:

Section 4018 of the Water Resources Development Act of 2007 provided authorization for a "feasibility study for environmental ecosystem restoration, flood risk management, recreation, and other aspects of Los Angeles River revitalization that is consistent with the goals of the Los Angeles River Revitalization Master Plan published by the city of Los Angeles ...." The implementation guidance for this section identified that the scope and substance of the study under the Senate resolution is identical to the study mandated by section 4018 and directed that the ongoing study incorporate the section 4018 study. The feasibility study incorporates, where applicable, conceptual elements and addresses restoration goals from the City's Los Angeles River Revitalization Master Plan.

This feasibility study provides an interim response to the study authority, and the study efforts will determine the feasibility of ecosystem restoration of the Los Angeles River and surrounding environment. There is no sponsor available to investigate flood risk management at this time.

Comments:

LA River Revitalization Master Plan LARRMP does not address Floodplain Management in the Los Angeles County Drainage Area under the current Urban Built dense environment.

4

The plans are too old to address the current issues. Without proper flood risk management under current conditions and a sponsor funding a study, the Preferred Alternative or any other Alternatives are meaningless.

There are no Plans or Environmental Documents reflecting the current situations to determine feasibility of this Project.

The City of Los Angeles is undergoing RECODE LA, a project to revision zoning codes including a Unified Downtown Development Code.

You state:

NEED
The Los Angeles River was once a 51-mile-long backbone of a vast system of riparian foothill, riverine,

Dillard

and freshwater marsh habitat that carried seasonal rains and subterranean flows to the coastal plain and the Pacific Ocean . Over time, the River has been degraded by a cycle of increasing urban development, flooding, and channelization, culminating in the mid-20th Century with the Federal flood risk management project, the Los Angeles County Drainage Area (LACDA) project. The LACDA project encased the river in concrete banks and a mostly concrete bed, and straightened the river's course, thereby diminishing its plant and wildlife diversity and quality, and disconnecting it from its floodplain and significant ecological zones. The entire river corridor is degraded due to historic activities. Apart from the Sepulveda Basin , the San Fernando Valley area of the River (upstream of the study area) is characterized by large segments of channel that are entirely concrete with very few opportunities for adjacent land acquisition. The lower reach of the river is highly constrained by development, including downtown Los Angeles and a heavy industrial corridor that also includes a major transmission corridor and a freeway system. The upper and lower reaches of the river have less potential to connect nationally and regionally significant ecological zones because of the state of existing development. These considerations make the potential for habitat connectivity and expansion very difficult in the near term.

Comments:

Not considered in this document are several plans in and around the Study Area.

1. METRO Union Station Master Plan
2. LA-RIO Los Angeles River Improvement Overlay Supplemental Use District
3. LAC+ USC Medical Center Master Plan
4. Los Angeles Convention and Event Center Expansion
5. Farmer's Field (NFL Football) at the LA Convention Center 5

Projects proposed are:

1. BOE Bending the River Back into the City (An Art Installation)
2. LADWP Elysian Park-Downtown Water Recycling Projects
3. NELA Riverfront Collaborative

. LA-RIO states the following:

BACKGROUND
Los Angeles experienced rapid growth in the 20th century, which ultimately left most of Los Angeles covered with impermeable surfaces. The resulting lack of significant on-site water infiltration has caused the diversion of large amounts of polluted urban stormwater runoff into the channels, resulting in polluted water draining directly into the Pacific Ocean . Consequently, the amount of groundwater available in our aquifers is diminishing due to restricted infiltration.

Furthermore, as Los Angeles ' population increased, the unpredictable patterns of rain and flooding contributed toward loss of human life and property. In an effort to protect existing development and ensure public safety and the safety of future development, most rivers were channelized with concrete.

These channelized rivers function today primarily as part of the stormwater drainage system. In addition to the Los Angeles River, the City storm drainage system consists of numerous channelized tributaries, rivers, streets (including gutters), approximately 1,500 miles of storm drains beneath the streets, approximately 50,000 catch basins that collect runoff from the streets, several large spreading grounds, and several pumping facilities. During dry weather the combined County and City storm drainage systems carry tens of millions of gallons of runoff (e.g., treated waste water, lawn irrigation, etc.) daily. During storms it carries billions of gallons of storm runoff per day via open flood control channels directly to the ocean or to collection systems.

These river channels have largely become neglected, inaccessible urban landscapes that have attracted a high concentration of blighted land uses. Over the past two decades, the City and other organizations have recognized the loss of recreational, environmental and financial value resulting from these

Dillard

channelized waterways and have engaged in efforts to address the public safety issue in ways that simultaneously revitalize the City's rivers, streams and creeks.

RIO DISTRICT

The purpose of a RIO District is to assure that development within river adjacent areas is in accordance with design policies adopted in the City's General Plan Framework while also contributing to the overall environmental and ecological health of the City's watersheds. Increased attention to the way development affects the watershed is critical to the sustainability of Los Angeles . With these objectives in mind, staff has developed a set of basic development regulations that all projects within any future RIO will have to abide by.

These standards will facilitate the provision of native habitat, support local species, facilitate the removal of invasive plants, establish a positive interface between river adjacent property and the river, provide an aesthetically pleasing environment for pedestrians and bicyclists accessing the river area, increase access to the river, and provide exterior lighting that contributes to a safe and inviting atmosphere without casting light into the night sky, adjacent properties, or sensitive habitat areas.

PLANNED DEVELOPMENT:

CORNFIELD-ARROYO SPECIFIC PLAN CASP Water Supply Assessment approved by the LADWP Board of Commissioners has allowance for:

* Residential Dwelling Units-6,960 units
* Retail and Restaurant Space-505,611 square feet
* Commercial Space-1,891,439 square feet
* Industrial Space-6,534,661 square feet

City Planning anticipates:

* Surface Parking: 769,877 square feet
* Landscaping Area: 2,067,333 square feet

CASP has allowance for TFAR Transfer Floor Area Ratio with payments to the Cornfield Arroyo Seen Specific Plan Floor Area Payment Trust Fund, a public benefit trust fund. Community Benefits qualified for TFAR are:

1. Open Space
2. Community Facility
3. Passageway

City of Los Angeles has changed booking policy for the LOS ANGELES CONVENTION CENTER to focus on citywide events and increased hotel bookings. The inventory of hotels in the area cannot accommodate the policy without an increase in hotel inventory.

Remaining from the previous LOS ANGELES CONVENTION CENTER EXPANSION is Transfer Floor Area Ratio, as a Public Benefit.

Please consider the increase of density, building height, traffic and population with the increase of development on and around Downtown Los Angeles and the Cornfield Arroyo Specific Plan and the Sporting Events of the area. 6

The Native Americans of the area are not recognized Federal tribes and have no claims on the land. There have been State legislative attempts for recognition. Please consider the river area as a staging 7

Dillard

7

area for future gaming casinos in this study and the effects on the restoration,

BENDING THE RIVER BACK INTO THE CITY is described as follows:

Project Description:
The proposed project would involve construction and operation of a water wheel, loosely modeled after the historic wheel that existed near the project location and would include excavation of a 1,300-cubic-yard pit and maintenance area for installation of the water wheel. It would also include construction of a side channel to the LA River, connecting the LA River to the water wheel pit and installation of an inflatable dam within the LA River channel, creating a water impoundment area upstream of the proposed inflatable dam. The purpose of the proposed project is to physically divert water from the LA River and create an aesthetic/educational statement, showing that the LA River can be used as a source of water. Additional purposes include enhancing connections between the surrounding community and the LA River; and providing a viable long-term non-potable irrigation water source for the State Park and other local demands

This is a private art installation planned by Metabolic Studio (Annenberg Foundation) on Public Facilities property without consideration of flood control or the Clean Water Act and its permitting.

ANALYSIS OF YOUR STUDY

Your study:

Alternatives 10, 13, 16 and 20 are compared for restoration and economic impacts under:

* National Ecosystem Restoration NER
* Regional Economic Development RED

Redevelopment Long-term Economic Activity Cumulative Impacts produces jobs consistent through Alternatives 10, 13 and 16 at 625, 678. 678. 678 respectfully and Local Taxes at $5.383 million, $5.789 million and $5.789 million respectfully.

Alternative 20 produces 2,671 jobs and Local Taxes of $22,896 million.

Net Gains from AAHU Average Annual Habitat Units at a Unit Price per Investment Cost is:

1. Alternative 10 ART: $70,663
2. Alternative 13 ACE: $77,262
3. Alternative 16 AND: $126,594
4. Alternative 20 RIVER: $162,194

Estimated Real Estate Investment Cost is:

5. Alternative 10 ART: $312,000,000 (83%)
6. Alternative 13 ACE: $315,000,000 (69%)
7. Alternative 16 AND: $387,000,000 (47%)
8. Alternative 20 RIVER: $506,000,000 (46%)

Estimated Cash Cost is:

9. Alternative 10 ART: $64,000,000 (17%)
10. Alternative 13 ACE: $141,000,000 (31%)
11. Alternative 16 AND: $437,000,000 (53%)
12. Alternative 20 RIVER: $594,000,000 (54%)

Planning Objectives are:

· Restore Valley Foothill Riparian Strand and Freshwater Marsh Habitat
· Increase Habitat Connectivity
· Increase Passive Recreation

Dillard

Missing is the application of existing habitat in Repetto Hills and Ascot Hills.

HAZARD PARK WETLANDS RESTORATION is not addressed in this Report. Any project that would contribute to the HAZARD PARK WETLANDS RESTORATION inUnited States and State of California ex rel. California Regional Water Quality Control Board, Los Angeles Region v. City of Los Angeles , D.J. Ref. No. 90-5-1-1-809/1 was eliminated.

Habitat Restoration should embrace habitat as known by the wildlife, not by the humans. The flow of a natural state should not be limited if true restoration is anticipated. 8

LAC+USC MEDICAL CENTER MASTER PLAN use HAZARD PARK for campus purposes.

SIGNIFICANT ECOLOGICAL AREA SEA designation is applicable to ecosystem restoration. Without this designation, we anticipate that the study area will be used as a front for development which would interfere with aspects of habitat restoration.

The City of Los Angeles has grown in density and the region is the densest in the country with 6,999.3 persons per square mile (US Census Bureau). We cannot see that Construction Jobs are the answer for long-term sustainable Economic Development for the area.

SOIL CONTAMINATION:
You state:

For the groundwater contamination that cannot be addressed prior to construction, the City will undertake necessary dewatering activities including treatment and disposal, at 100 percent non-project cost in areas with contaminated groundwater.

The City of Los Angeles is aware of these requirements, and has accepted responsibility for delivering lands suitable for ecosystem restoration and addressing groundwater contamination during dewatering.

Although excluded from cost shared project costs, effort and costs of HTRW response and remediation have been considered in evaluating and comparing plans for implementation.

The City understands its responsibility to ensure completion of remediation efforts on affected parcels and provide sites cleaned to the standard required to support the restoration project prior to project construction being undertaken on those sites, and its responsibility for addressing contaminated groundwater during dewatering, including treatment and disposal.

Comments:

These hidden costs need to be address upfront. The estimated cost for industrial remediation for the Taylor Yard G-2 Parcel is estimated at $30-$45 million.

We need to know firm estimations for soil contamination costs for all Alternatives. Soil contamination is a continuous problem in projects that are rarely identified in the environmental planning stage.

This project could balloon upwards to $3-$5 billion. City of Los Angeles has not identified funds to finance such an undertaking. 9

City of Los Angeles recognizes failed streets, needed water and power infrastructure, Convention and Event Center upgrades, streetcars and other infrastructure necessities. We need to see the project capital costs and anticipated revenue to pay for the capital costs. LA Fire Department has substandard response times. 10

Debt service will balloon without consideration of cash flow for day-to-day City Operations including Operations and Maintenance of existing Capital Assets.

ALTERNATIVES

Dillard

There is not sufficient information to determine if there will be economic benefit to the communities surrounding the Project. NELA RIVERFRONT COLLABORATIVE has not encompassed existing projects whose efforts are to revitalize the area economically. Simple outreach is not sufficient as the area is facing gentrification because of the increased desirability due to the Project. 11

ALTERNATIVE 13 ACE makes sense matching benefit to outlay.
ALTERNATIVE 20 RIVER is the overwhelming public's choice but is an extreme undertaking economically and logistically 12

Both Alternatives have with no safeguards that restoration would endure with surrounding future development and density. Disease issues have not been addressed. The City would remain a concrete jungle amongst a small strip of water. 13

The cities and regional governance entities downstream were not consulted on the effects of this study. 14

We implore you to protect the PUBLIC HEALTH AND SAFETY. The public expects to put their toes in the LA River. 15

When the river rages during storm events or when fires produce toxic runoff, we rely on protections of those government agencies tasked to prevent disasters and disease. 16

Do Flood Control first. 1

All funding from all entities need to be identified NOW. Bankruptcy should not be an issue for the residents and taxpayers of the City of Los Angeles . 17

Joyce Dillard
P.O. Box 31377
Los Angeles, CA 90031

Attachments:

1-Open Space Element
2-Conservation Element
3-Service Systems Element-Public Recreation Plan
4-Ordinance 171353
5-Richard MacNaughton Esq Letter (Housing Element)
6-Community Plans Adoption Status accessed 11.18.2013
7-2010 Urban Area Facts (US Census Bureau)

Attachments are on file at USACE, LA District. Available upon request.

Dillon

From: Raquel Maria Dillon
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20 is better for LA.
Date: Monday, November 18, 2013 9:31:12 AM

To Whom It May Concern:

Please count me and my family in favor of the more comprehensive restoration plan for the Los Angeles River.

I bike, walk and picnic along the banks of the river with my friends and family. We live just a couple miles away. The area has so much potential. Please give the river the chance is deserves to serve the people of Los Angeles. This is money well-spent to provide recreational opportunities in an underserved area.

Thank you for your consideration.

Sincerely,

Raquel Maria Dillon

1575 Hazelwood Ave.
LA, CA 90041

Din

From: Stephanie Din
To: SPL Comments LA River Study
Date: Monday, November 18, 2013 2:01:37 PM

To whom it may concern,

I would appreciate it if you select Alternative 20 for the Los Angeles River Restoration Program. Me being a student under the Advanced Placement program of Environmental Science from John Marshall High School would highly appreciate it for the sake of our community.

Sincerely,
Stephanie D.

Sent from my iPhone

Dragert

From: T Dragert
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, October 28, 2013 4:24:12 PM

The prospect of a restored river is very exciting, especially when one envisions the possibilities of walkways, bike paths, wildlife, on and on. Add to that the stunning existing bridges, which would actually serve the normal purpose of a bridge (let's hope we keep those in good repair!), and downtown Los Angeles would offer one of the most beautiful and exciting destinations in the country!

It worries me that a "cost-saving" measure is being considered (Alt 13). While it is understandable that improvements that cost half of what the more desirable alternative (Alt 20) would cost, this once in a lifetime opportunity should not be disregarded because of a penny-pinching mentality. The investment will pay for itself many times over, in so many different ways, that it is disturbing to even consider the "cheaper" alternative.

Please listen to the people of the city, and choose Alternative 20!

Tobi Dragert
800 W. 1st St.
Los Angeles
213-304-5206

Egeler

From: David Egeler
To: SPL Comments LA River Study
Subject: [EXTERNAL] King Middle School Supports Alternative 20
Date: Sunday, November 17, 2013 2:54:57 PM

Dear Dr. Axt:

My name is David Egeler. I hold a masters in education, and I am the garden coordinator and Resource teacher at T. S. King Middle School in the Siverlake area. I've been using the Los Angeles River as field trip site to learn about habitat and biomes, and issues related to trash and civic responsiblilty. Each year, for the past nine years, my students have been involved with a community service learning project connected to environmental solutions for the local community, and our local Los Angeles River watershed. Many other teachers at my school site have been doing the same. We are educators dedicated to creating a better balance of our environment and urban community, and we want to teach those values to our students.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. Cities

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)

Egeler

- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
  - Provides 7015 more jobs and $386 million more in wages during construction
  - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
  - Creates 1094 more new permanent jobs valued at $62 million more
  - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us, and our City! The project is worth the additional costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

David Egeler
Resource Specialist
Sp Ed Dept. Chair
Garden Coordinator
Environmental Studies Magnet
T. S. King Middle School
Los Angeles Unified School District
4201 Fountain Ave.
Los Angeles, CA 90029
Off. 323.644.0067
Fax 323.913.3594

"Education is the most powerful weapon you can use to change the world."
- Nelson Mandela

Epstein

From: Scott Epstein
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please support Alternative 20
Date: Monday, November 18, 2013 1:25:45 PM

Dear Dr. Axt:

I am writing to strongly encourage the Army Corps of Engineers to endorse Alternative 20 of the ARBOR study.

I deeply appreciate the hard work that the Army Corps has put into the ARBOR study, and evaluating different alternatives. However, I believe the study does not capture all of the important benefits from revitalizing the LA River. Alternatives other than #20 fall short in terms of offering Angelenos access to the river for recreation and transportation. Benefits from access to the river include improved public health, reduced carbon emissions from car trips, increased investment in river-adjacent neighborhoods, and increased economic activity due to both residents and tourists taking advantage of new recreational activities. These important benefits are not adequately weighed in the ARBOR study.

The LA River can be the Emerald Necklace that LA so desperately needs. Please support Alternative 20!

Sincerely,

Scott Epstein
Los Angeles resident

Erasmo

From: erasmorocio01
To: SPL Comments LA River Study
Date: Monday, November 18, 2013 2:01:28 PM

-------- Original message --------
From: erasmorocio01 <erasmorocio01@gmail.com>
Date: 11/18/2013 1:59 PM (GMT-08:00)
To: comments.lariverstudy@usace.army.mil
Subject:

To whom it may concern I would appreciate if you select Alternative 20 for the Los Angeles river restoration program. Me being a student of an Advanced Placement Enviornmental Science class would highly appreciate it for the sake of our surrounding community.

Sincerly , Rocio Erasmo john marshall high school.

Sent via the Samsung Galaxy S™III, an AT&T 4G LTE smartphone

Ferrufino

From: Chantelly Ferrufino
To: SPL Comments LA River Study
Date: Monday, November 18, 2013 2:01:27 PM

To who it may concern,

Please reconsider your decision. Please choose Alternative 20.

Thank You
Chantelly Ferrufino

Field

From: Corey Field
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River support for alternative 20.
Date: Thursday, October 17, 2013 7:19:55 AM

Please spend the extra money on alternative 20 to better restore the LA river.

Thank you,

Corey Field

Studio City

Sent from my iPad

Fine

From: Jocelyne Fine
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] LA River Restoration - Public Comment
Date: Sunday, November 17, 2013 8:19:19 PM

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Ms Erin Jones, CESPL-PD-RN
comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

We have lived in Los Angeles for thirty-seven years, the last fourteen in the San Fernando Valley, so the upcoming selection by the Corps of a plan to restore the Los Angeles River is extremely important to us. We believe the best plan is "Alternative 20" covered in your LA River Ecosystem Restoration Report, which we have viewed at your website (http://www.spl.usace.army.mil).

The consequences of this decision will be with us for years. Alternative 20 should be embraced as the best option to achieve the desired balance between our environment and urban community. That is why I agree with FoLAR, Mayor Garcetti, Senator Boxer and so many other people throughout the region who urge you to adopt it.

Alternative 20 is the most comprehensive and sustainable. Selecting any other plan may very well lead to decades of unresolved issues requiring additional funding to mitigate. In the aggregate over the long term those costs could easily dwarf the hefty price tag of Alternative 20. Do it now, save billions later.

Please do not miss this opportunity to restore the river in a way Los Angeles can be proud of. Doing it right will restore your reputation as well.

Thanks for your attention.

Sincerely,

Jocelyne and Steve Fine
5715 Beck Avenue
North Hollywood, CA 91601
jocsto@yahoo.com

Ford

From: Chris Ford
To: SPL Comments LA River Study
Subject: [EXTERNAL] L.A. River Study, I support Alternative 20
Date: Wednesday, November 20, 2013 8:02:32 AM

I enthusiastically support Alternative 20 for the LA River.

Thank you.

November 18, 2013
Josephine R. Axt, Ph.D., Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN; Los Angeles, CA 90053-2325

Forster

Snbject: Alternative 20 -- Los Angeles River Ecosystem Restoration

Dear Dr. Axt:

My name is Peggy Forster. I live in Studio City near the Little Tujunga Wash, a small tributary where recently improved pathways invite public walks along side the steep concrete walls of the Los Angeles River. Surprisingly, within this uncommonly dry and densely populated urban corridor, nature perseveres and continues to delight us with a small slice of blue sky, here -- a few green trees and woody thickets, there -- and the flutter of wildlife amidst the humming of traffic -- all providing a hint of the natural world yet to be revealed by the Los Angeles River Ecosystem Restoration. We are thrilled by the thonght of open sky, expansive greenery, natural shorelines, and the restored ecosystems -- re-connected once again as the concrete slowly disappears and a thriving River unites our communities.

Knowing this dream of a revitalized river will soon become a reality, I want to thank the Corps, and all others who have worked so hard for this long-awaited urban transformation.

While Alternative 13 has been identified as the Corps' Tentatively Selected Plan, for a number of reasons, I am supporting Alternative 20, and am asking the Corps to reconsider their choice, believing that Alternative 20 is the most transformative and significant option -- insightful and futnre-oriented in this age of global warnning and increasing urban growth.

Having recently studied the science of climate change, and acquired a certificate in Global Sustainability, I have become acutely aware of the close relationship between many human and industrial activities and the heat-island effect of urbauization. Prior to the Industrial Revolution, large quantities of carbon dioxide, a significant "greenhouse gas," were naturally sequestered within Earth's numerous carbon sinks -- the oceans, lakes, rivers, soil, and vegetation.

As small towns throughout the world transitioned into large metropolitan centers, millions of acres of trees and soil were removed and replaced by concrete and asphalt, barring absorption of carbon by Earth's natnral seqnestering systems; and initiating more than a century of atmospheric pollution and climate change. Only in recent decades have nations and cities sponsored reforestation and tree-planting campaigns in order to reinstate the function of Earth's natural carbon sinks..

The importance of these efforts can be found in The Kyoto Protocol which indicates that natural sequestering of carbon within the roots and leaves of trees, and within the soil as well, is as effective in reducing "greenhouse gas" emissions, as are reductions in the use of fossil fnels. Breaking through concrete and removing asphalt -- wherever and whenever possible -- re-enables carbon sequestration and helps to stabilize global temperatures and cool the planet.

A new awareness of glacial nielt and rising seas also suggests that time is short, and we can no longer postpone our responsibilities or transfer massive debts to future generations. Reparation is required now, and mitigation must begin on a very large scale if we are to avoid the cascading effects of climate change.

Within the next few decades, Alternative 20 will result in untold benefits and advantages, not only hastening the renewal of local natural resources, but providing a national model for reducing the carbon footprint of one of the world's largest cities. I believe Alternative 20 is a brilliant and timely plan for the restoration of ecosystems and a reduction in global warming. A future, which must include urban farming to insure food security, must also depend npon an accessible Los Angeles River. Alternative 20 is a plan which embraces this potential for reshaping Los Augeles, insuring food security and the safety and health of future generations.

Thank you for your consideration.

Sincerely,

Peggy Forster
Founder and Director
The Environmental Relief Center
peggy.forster@prodigy.net

Fourier

From: Jason Fourier
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20 for L.A. River
Date: Thursday, October 17, 2013 1:49:31 AM

Greetings,

I'm a resident of Toluca Lake, California, and I'm writing to urge you to select Alternative 20 for the revitalization of the Los Angeles River. Over the last few years, I've experienced the L.A. River opening up to the public bit by bit with programs such as river kayaking trips, and I was amazed to discover this oasis of natural beauty right in the middle of our sprawling urban metropolis. At some points in our kayaking trips, I couldn't tell our river apart from the middle of the wilderness! Some L.A. residents carry a perception of the River as empty or filled with pollution, but I've experienced firsthand that this is not the case, nor should it be. City residents need a way to reconnect with nature more than ever, and Alternative 20 would help make this possible. The L.A. River should be there for everyone to enjoy, not forgotten and neglected. Please select Alternative 20.

Thank you,
Jason Fourier

--
Jason Fourier
fourier@acm.org

Franco

From: Veronica Franco
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Tuesday, October 15, 2013 5:38:15 PM

HI,

I will be attending the public meeting on Thursday and would like to have Alternative 20 discussed as part of the plans that are up for discussion.

Thank you.
Veronica.

Freilich

From: LF
To: SPL Comments LA River Study; mayor.garcetti@lacity.org
Subject: [EXTERNAL] Owens Valley residents in strong support of Alternative 20
Date: Monday, November 18, 2013 12:35:24 PM

As a resident of the Owens Valley, the source of a considerable share of Los Angeles' water supply, I'd like to lend my support for the fullest restoration of the Los Angeles River possible.

The City of Los Angeles is participating in a major river restoration program up here with the Lower Owens River (which feeds the Los Angeles Aqueduct), we need your help to do the same for Los Angeles' river. It can, and should be done.

Sincerely,

Lawrence Freilich

135 S Jackson St

Independence, CA 93526

Frimmer

From: Justin Frimmer
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Saturday, November 16, 2013 11:37:37 PM

Given the options, I give my support to Alternative 20, or RIVER (Riparian Integration via Varied Ecological Introduction). 1

The better options would be to tear out all of the concrete walls and have a true river that flows all the way to the Pacific Ocean. 2

Not sure why we are sending these emails to the U.S. Military? I assume federal dollars will pay for the final decision? 1

If not, I hope the people of L.A. rip out those concrete walls, build serious river bank beauty, find more eco-water, make it navigable by real boats and turn it into a centerpiece of the city that will make the Seine in Paris look like an afternoon trickle. 2

Frye

November 18, 2013

Josephine R. Axt, PhD., Chief Planning Division
U.S. Army Corps of Engineers, Los Angeles District,
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, California 90053-2325
comments.1ariverstudy@usace.army.mil

SUBJECT: **Los Angeles River Ecosystem Restoration Study**

Dear Dr. Axt,

I have a Master's Degree in City and Regional Planning and 25 years of professional experience. A comprehensive evaluation of the entire watershed should be considered when proposing ecosystem restoration for the Los Angeles River. Reviewing alternatives for less than a quarter of the approximately 50 mile river and not considering the hydrology of the watershed is a piece meal approach to environmental review and the planning process. Although my preferred option is the total restoration of the entire LA River, I support the adoption and implementation of Alternative 20.

The reasons given in the Study for not considering full restoration are summarized as follows: 1

1. Require Adoption of Best Management Practices for entire watershed

2. Increase permeability

3. Substantially reduce peak flows

4. Floodplain buy back program

The factors identified as reasons for not considering total restoration are the very issues that need to be addressed to ensure successful river restoration efforts. It is very important to consider the River's ecology within the larger hydrologic context. I concur with the conclusions of the Integrated Resources Plan (Adopted 2006) that considers water supply, waste water, and storm water as interdependent systems. 2

I believe water quality and the reduction of peak flows are the two most critical issues impacting the Los Angeles River. Water containing bacteria, heavy metals, pesticides and a wide variety of other pollutants should not be entering a river ecosystem. Water velocity above 12 feet per second makes maintaining plant material within the river channel very difficult. Reducing peak flows will help to ensure stable riparian vegetation and provide a measure of flood protection. These concerns can only be addressed at the watershed level. 3

To address water quality and quantity issues I have developed a concept known as Blue Boulevards. My approach is a comprehensive system for collecting, treating, and storing storm water. The main component of my proposal is the placement of underground cisterns within existing road rights-of-way to capture storm water.

Frye

Based on the estimated 10 billion gallons of water per day during rain events identified in the study, I calculated the size and number of cisterns required to capture the maximum amount of urban runoff. My assumptions are as follows:

- The cisterns would be approximately the width of two travel lanes (30 feet).
- A 15 x 30 x 100 foot cistern holds 336,623 gallons of water.
- Three cisterns can be accommodated under the roadway in an average 300 foot block (holding over 1 million gallons of water).
- It would take approximately 1,000 miles of roadway to accommodate 10 billion gallons of water if ten blocks (3,000 feet) of each mile contained the specified cisterns.

Accommodating the required cisterns should not be problematic in an area containing hundreds of thousands of miles of roadway. I recommend first evaluating the streets adjacent to the existing storm water system for potential conversion to Blue Boulevards.

3

In my Blue Boulevard concept the cisterns are only part of a larger system designed to collect, treat, and store storm water before it is strategically released into the river ecosystem. The underground cistern (or combinations of cisterns) fill one third of the width of an average roadway. The other two thirds of the street contain urban orchards and holding tanks for "clean" treated water. If an agricultural strip 30 feet wide was incorporated into every block containing a cistern I estimate three acres of irrigated farmland would be created for every mile of roadway converted to a Blue Boulevard. The agricultural component will significantly increase water infiltration throughout the study area by introducing 3,000 acres of well-drained soils and eliminating impervious road surface. Ideally, the onsite urban farmers could manage the maintenance and operation of these block size storm water reclamation systems as part of their lease agreements.

I suggest the Army Corps and the City of Los Angeles consider a comprehensive approach to managing water quality and quantity as part of the river ecosystem restoration effort. Please evaluate my Blue Boulevard concept and consider the hydrology of the entire watershed when considering future alternatives.

Sincerely,

Lauren Lajoie Frye

865 Toro Street
San Luis Obispo, California, 93401
(805) 459-7240
Lajoie.lauren@gmail.com

Cc: Friends of the LA River (FOLAR)

Funaro

From: Charles Funaro
To: SPL Comments LA River Study
Subject: [EXTERNAL] ARBOR = In support of Alternative 20 for the Los Angeles River
Date: Monday, November 18, 2013 7:58:59 AM

During the summer of 2013, I had the good fortune of kayaking down the Los Angeles River with LA River Expeditions, led by George Wolfe. It was my first outing in a kayak, and it was a wonderful introduction to the beauty of our river.

Although Alternative 20 is the most expensive alternative, it also delivers the most "bang for the buck" by enlarging our urban oasis. The city needs more recreational areas to serve the constantly-growing population, and maximizing the remediation of our river affords the best opportunity to meet that need.

Opting for a less-expensive alternative will only delay implementation of necessary changes, and increase expense, as costs of remediation invariably creep upward. Also, the sooner we can address the issue, the sooner our river will be healed, and our community blessed.

Thank you for considering my comments.

Charles Funaro

--
Charles W. Funaro II
Attorney at Law
221 E Walnut St #255
Pasadena, CA 91101-1554

(626) 578-0440 office
(626) 578-0923 fax

CharlesFunaro@Hotmail.com

This email is free from viruses and malware because avast! Antivirus protection is active.
http://www.avast.com

Gallardo

From: Ruth Gallardo
To: SPL Comments LA River Study
Subject: [EXTERNAL] Endorsement for Alternative 20
Date: Saturday, November 16, 2013 1:20:20 AM

Dear Dr. Axt:

My name is Ruth Gallardo, I am an Architectural and Landscape designer in Hollywood and now reside and work in the Elysian Valley. I often hike and bike along the river to get away from the bustle of this metropolis. I also see the locals, visitors, and tourists come to enjoy the river. The Los Angeles is River is our little jewel right here in the city. We no longer have to travel to the ocean or mountains to enjoy nature, its right here in our midst! and it can even be greater by connecting more communities and creating more habitat to the river. Alternative 20 is the most comprehensive plan that will connect the mountains to these urban river corridors, further enhancing biodiversity for an eco-rich habitat for wildlife. The river corridor to the mountains provide crucial connections for animals in the eco-system. The connectivity of the Verdugo Wash to the mountains is a critical component of any ecosystem plan and must be included in the Federal project. With the emergence of these cumulative natural resources, other major benefits would be cleaner air and water that are key to health of the habitat, people, and the planet.

Let's choose the plan that is essential for long term sustainability, that will transform our degraded urban watershed into a riparian rich habitat that it can be once again!
Thank you,
Ruth Gallardo

Garlington

Todd Garlington
2675 Rich Street
Los Angeles, CA 90039

November 7, 2013

Josephine R Axt, PhD, Chief, Planning Division
US Army Corps of Engineers, Los Angeles District
PO Box 532711
Los Angeles, CA 90053

ATTN: Ms. Erin Jones, CESPL-PD-RN

Dear Ms. Jones,

I am writing to you in regards to the Los Angeles River Ecosystem Restoration Feasibility Study, in particular, Reach 6 / The Taylor Yard.

The study identifies the Taylor Yard as a key area "because it provides an opportunity for restoration of large contiguous expanses of riparian and aquatic habitat." As an Elysian Valley homeowner and Los Angeles native, I urge the US Army Corps of Engineers to realize the full potential of this opportunity by selecting Alternative 20 as the means to achieve this vision.

Clearly, the revitalization of downtown Los Angeles and adjacent communities has brought about significant change to the area. The culture of the region recognizes and supports what can broadly be described as a Green ideology. Alternative 20 not only impacts the ecology of the Los Angeles River but goes further to promote the health of Angelenos and improve their quality of life overall.

The time has come for the people of Los Angeles to learn from prior mistakes in urban planning. When I was a boy, my grandfather would tell me of the streetcars that once ran along Exposition Boulevard from Downtown to Santa Monica. Generations later, Metro construction inches along at an astronomical cost. If only the railways had been preserved. If only a long term approach based on vision and balance had been implemented.

Management of the Los Angeles River tells a similar story. Let us not only rectify past decisions that have resulted in a highly-degraded watershed, but put in place a robust plan, namely, Alternative 20 to restore habitat and provide more green spaces for people to enjoy for generations to come.

Best Regards,

Todd Garlington

Garrison

From: Elizabeth Garrison
To: SPL Comments LA River Study
Subject: [EXTERNAL] la River
Date: Monday, November 18, 2013 4:32:36 PM

Do as much as you can to bring the river back to a more natural state. Also work with the cities this river passes through so there is a more cohesive existence between them. Let recreation take place that doesn't require any additional concrete. Pocket parks!!! yay! Make it possible for the sand to make it's way back to the sea, rather then selling it all to Vulcan.

Gedeon

From: Someone [mailto:louderr3@gmail.com]
Sent: Friday, October 25, 2013 4:09 PM
To: SPL Comments LA River Study; Axt, Josephine R SPL; Colloton, Kimberly M COL SPL
Cc: carol.armstrong@lacity.org; patti.berman@dlanc.com; dlanc.jr2brown@gmail.com; dianadelpozomora@yahoo.com; edward@casa0101.org; jay@empowerla.org; kflores@folar.org
Subject: TIME SENSITIVE request

Ms. Axt and All Parties,

I'm the blue-haired community volunteer who spoke as chairman of the DLANC-BHNC Joint River Oversight Committee at your Oct 17 Public Hearing and collected your emails directly afterward. The Joint River Oversight Committee is an effort by two adjacent neighborhood councils to gather stakeholder opinion and supervise all activities straddling the bridges and riverfront areas of most of downtown LA and Boyle Heights. Therefore it's a huge responsibility and unique opportunity at the same time. We just started the Committee earlier this year so I am rushing to catch up with you all.

I have planned a public comment meeting at 7 pm on Monday Oct 28 at the Vortex Community Center, 2341 E Olympic Bl LA CA 90021 and you are all invited. In fact, I need help promoting it. But that's not the purpose of my letter. To be on the safe side, I am going to take OFF my Neighborhood Council Director hat right now and speak to you as a private citizen. Also, I am cc'ing our parliamentarian Jay to make sure I don't cross any ethics boundaries :)

Ms Axt, here is my concern as a regular citizen: As a private community volunteer who has seen the work cycle of many Neighborhood Council meetings, the public comment period you have provided isn't tenable. The public is at a huge disadvantage, scientifically and logistically. My father was a rocket scientist, I grew up surrounded by scientists and have been well aware of ACE and its illustrious history since age 5. It's well-known you are a top-flight organization and have the best of everything. What is easy for you is not so easy for mom and pop. You have the whole govt and its resources on tap. You may not even realize what you are asking of the public :)

I've partly reviewed the Draft IFR PDF report you sent Patti Berman (DLANC President). She asked me for the 'reader's digest' version. Well...This is a 500 page book. And 11 Appendices!

I'm a serious cat and I wanna do my diligence on behalf of the community but that isn't possible under the circumstances. in section 8-1 of the Draft IFR, you list a 45-day public review period. Yes, that corresponds to the postmark on Patti Berman's package. However, the Neighborhood Council is staffed with volunteers who work in the daytimes and further, they are required by law to follow procedures to assure that the stakeholder opinions they collect are representative of the public at large. That means that if we are to respond correctly as citizens, using the Neighborhood Council system, we have to go through the established channels which have their own pre-existing time frames. Realistically, a safe turnaround time is 3 months.

The Neighborhood Councils are definitely your best source of 'one-stop shopping' for informed stakeholder opinions. They can educate stakeholders and collect responses, that's what they were designed for. But they are somewhat slow as are all govt agencies, even more so because they are part-time, unskilled volunteers. You need to give them a chance to do their job--you have had a great deal of time and the world's most cracker-jack tech crew to prepare your presentation :)

in reviewing the Draft IFR, I'm a bit saddened to see the excellence of your efforts go unrecognized. I mean it--I can see that 20 different proposals were painstakingly merged and reorganized to result in the 4 active proposals. They are AWESOME, every one of them. But where are the companion magazine articles and news stories to inform the public? Where's the rallying and flag-waving? This is an historic project and yet-- I see mostly media silence and an under-informed public. This is not what you want. I can see why the project has turned into a vague question of (ACE recommended) Alt 13 vs. (Mayor-supported) Alt 20. The public has had limited education or involvement. I think it's a waste of your cost-benefit efforts (yes i analyzed that section) to have all of LA blindly clamoring for the 'biggest' option unless we can provide scientific and social opinions somewhat on a par with what you have provided us &

Gedeon

give you good cause to take our feedback seriously. And what about the 'in-between' proposals? You put a lot of effort into offering us a reasonable set of options, give us time to look at them and understand your logic.

AS AN EXAMPLE of an informed stakeholder opinion: My Joint River Oversight Committee represents both sides of the Downtown LA area, a large geographic area. One of the proposals, Alt 20, brings the River Project to 'northern' Downtown LA. That's very exciting. But I also serve as DLANC Board representative to the Alameda East District (SOUTHERN downtown LA, a largely undeveloped area). I can see the future clearly. IF the River Project comes to 'northern' Downtown LA, it will trigger tourism, intense media-industry activity, and development in all adjacent areas. That's awesome but adjoining areas not under USACE or City Of LA control will immediately be grabbed by big developers for obvious reasons. That could cause reckless development in south Downtown LA. Therefore, the area I serve may be more vulnerable to 'collateral' exploitation than any other part of urban LA.

I have worked long and hard to create a committee that can forestall that and other problems. This issue may be outside the scope of your study & may not something you are able to consider. But I am presenting it as an example of what sufficient forethought from the public could accomplish to aid you in your decision making. I've not yet found mention of collateral development and its impact in your book.

To conclude, I had a wonderful time at your meeting on Thurs and it seemed that you ladies were enjoying it too. Please understand that I'm trying to help you fulfill your mandate to collect stakeholder opinions and my comments herein are not on behalf of my two constituent groups because actually I don't have enough time to bring this before my board for a vote and bring you an 'official' DLANC letter! I am barely able to formulate an opinion myself.

Thanks for your time and excellent work. I am delighted at how thorough the Draft IFR study is. For a science geek like me its a fascinating read. Please give me a chance to digest and 'translate' it and show it to a few people before you decide. My suggestion is that you extend the public comment period to Dec 31.

Thanks for your time.

Friends,

Geza Gedeon
speaking as an individual citizen

Gill

From: Jones, Erin L SPL
To: SPL Comments LA River Study
Subject: FW: Alternative 20—the most expansive ecosystem restoration
Date: Monday, November 18, 2013 8:47:44 AM

-----Original Message-----
From: Jennifer A. Gill [mailto:geneffer@pacbell.net]
Sent: Sunday, November 17, 2013 1:54 PM
To: Jones, Erin L SPL
Subject: [EXTERNAL] Alternative 20—the most expansive ecosystem restoration

Hello Erin:

The completion of the LA River Ecosystem Restoration Feasibility Study is a remarkable moment in the revitalization of the LA River. The Study lays the groundwork to bring millions of dollars in investment to the river and to the City of LA.

I would like to support the City's preferred alternative which is Alternative 20—the most expansive ecosystem restoration possible and it is the only one that specifically includes the following priorities:

Verdugo Wash Confluence and the LA State Historic Park (former Cornfields site). And, I expect that this

will help connect the L. A. River Bike Path through the industrial area of downtown Los Angeles. Please,

take note that that Alternative 20 is my preference.

Thanking you in anticipation.

Jennifer A. Gill, Board Member D-1
Los Angeles Bicycle Advisory Committee

213-427-0759 (cell)

Giroux

From: Helen Giroux
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support Alternate 20
Date: Saturday, October 12, 2013 4:52:49 PM

I support Alternate 20!

Helen R. Giroux
Studio City, CA 91604

Gleason

From: Patricia Gleason
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Tuesday, November 19, 2013 5:51:36 PM

Dear Dr. Axt,

My name is Patricia Gleason, and I have been a resident of Los Angeles since 1995

(I have also participated in the annual L.A. River cleanup).

I would like to express my opinion that Alternative 20 is far superior to Alternative 13.

Restoration of the Los Angeles River is very important to a greener future.

We urge the Corps and City to select Alternative 20, as it provides the best restoration and the best sustainability for the future.

Sincerely,

Patricia Gleason

Patricia Gleason
6767 W. Sunset Blvd. #117
Los Angeles, CA 90028
Phone (323) 828-3153
Fax (323) 375-3249
Email: pm.gleason@verizon.net

Gomez

From: Horacio Gomez
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River IFR Comment
Date: Sunday, November 17, 2013 10:11:01 PM

To whom it may concern,

I would like to submit the following comment for consideration with regards to the LA River IFR.

Comment:

The various alternative plans are presented, "...based on incremental increases in costs and benefits" according to the Integrated Feasibility Report. However, the benefits could easily be interpreted as being more than just incremental but exponential. For example, the extensiveness in public accessibility and activity afforded by Alternative 20 creates benefits to the community that fail to be fully acknowledged by the metric of increased nodal habitat connectivity, additional restored acreage, and habitat increases. Furthermore, green spaces that are accessible by a lower-income and minority demographic help rectify the marginalization experienced by these communities as Environmental Justice issues. Many of these benefits may not be immediately quantifiable but are no less significant. Indeed, some of these issues are touched on in the report but there is a clear indication that they fail to be fully included in the assessment of additional benefit. Perhaps it would be prudent to take on these additional considerations with the same weighted validity as the quantative measures already employed. In doing so, it may be apparent that Alternative 20 yields the best 'bang for the buck' outcome that merges both primary and secondary purposes into a holistic approach. Also, the report noted that the four plans, "...present a reasonable range of alternatives." (xxvi) As such, why not pick the plan with the maximum amount of benefit.

Thank you,

Horacio Gomez

GTZOOM@Gmail.com

Gonzalez

From: Gonzalez, Jay
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comments LA River Study and Proposals
Date: Monday, November 18, 2013 12:36:04 PM

Dear Army Corps –

I am writing in support of Alternative 20 as stated in your Feasibility Report – Sept 2013:

"Alternative 20 is called RIVER (for Riparian Integration via Varied Ecological Reintroduction) as it includes all the elements of Alternatives 10, 13 and 16 and additional features in reaches 2, 3 and 7, including restoration of the Verdugo Wash confluence and the Cornfields site. It includes widening in Reach 2 on the west bank. In reach 3, this alternative restores the confluence with Verdugo Wash by softening the bed of the stream and significantly widening the mouth of the wash thus providing riparian habitat and an additional connection to the San Gabriels through the Verdugo Hills. In Reach 7, daylighted streams also included in Alternative 10 are reintroduced in lieu of channel bank vegetation features that were in Alternatives 13 and 16. Also in reach 7, wetlands are restored at the Los Angeles State Historic Park with a terraced connection to the mainstem. For Alternative 20, the there is some degree of channel naturalization and restoration in nearly all reaches, and inclusion of two major confluences (Verdugo Wash restoration bordering the City of Glendale is added, along with a connection between the river and its western bank at the Los Angeles State Historic Park(Cornfields/Chinatown area))."

Alternative 20 is the one proposal that most closely adheres to the stated restoration Key Considerations and Policy Issues,

"Purpose: "... to restore significant structure, function and dynamic processes that have been degraded." (EP 1165-2-501)
• Intent: "... to partially or fully reestablish the attributes of a naturalistic, functioning, and self-regulating system." (EP 1165-2-502)
• Scope: "Nationally and regionally significant wetlands, riparian and other floodplain and aquatic systems" (ER 1105-2-100)"

The Los Angeles Unified School District has approximately 120 schools within one mile of the River and having a restoration project that encompasses the greatest amount of watershed accomplishes two things: First, it reestablishes, to a greater degree than alternative proposals, a "functioning, self-regulated system" which is congruent with the basic Science principles our students study and learn about the functioning of ecosystems, Second, it addresses, to a greater degree, restoration and establishment of "...wetlands, riparian, and other floodplain and aquatic systems" that all students need to see and interact with in order to become knowledgeable stewards and champions of the world in which they live, and to effect critical change in their living and working habits that will help to ensure the quality of life of all Los Angeles residents into the future.

Since the River runs through LAUSD, and our students have this unparalleled resource to use for hands-on, real-world science projects that can connect them in new ways to their communities, Alternative 20 offers the greatest potential for the LA River to be incorporated into students' daily learning activities, service learning, and citizen science projects. But more than this, with a fully functioning River, our students can be the data collectors, monitors, and contributors to the health of their River now and for generations to come.

Gonzalez

Alternative 20 for all the children of Los Angeles.

Best,

J. Gonzalez

J. Gonzalez
Division of Intensive Support and Intervention
Los Angeles Unified School District
333 S. Beaudry Ave, 20th Fl
LA, CA 90017

213-241-1280 ofc
818-645-3736 cell

Goodman

From: Howard Goodman
To: SPL Comments LA River Study
Subject: [EXTERNAL] L.A. RIVER COMMENT
Date: Thursday, October 17, 2013 11:21:52 AM

I strongly support "Alternative 20" as the plan which will best serve the public and maximize access to the Los Angeles River in the future.

Thank you,

-Howard Goodman

Gray

From: EVegan Gray
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Thursday, October 17, 2013 6:03:17 PM

As a native born and lifelong Los Angeles resident, I am asking to move the "alternative 20" plan forward.

Thank you
Evelyn Gray
16653 Hamlin St
Lake Balboa, CA 91406

Griffin

From: Linda Griffin
To: SPL Comments LA River Study
Subject: [EXTERNAL] Funding of LA River
Date: Thursday, October 17, 2013 9:24:35 AM

I am writing to express my support of funding the master plan for revitalizing the LA River. The River is an eyesore in the middle of our town, and the recent changes that have been made to the River by a community of volunteers has been extraordinary. Cleaning up the River, extending the areas that are still unnavigatable, and the surrounding park areas and bikeways would be a great step toward bridging our neighborhoods and making our community safer for our children.

Thank you.

Linda Griffin

Haagenson

From: Kathleen Haagenson
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please chose Alternative 20
Date: Monday, November 18, 2013 10:37:52 PM

Thank you for working on a report about the restoration of the ecosystem of the Los Angeles River. With such an huge population affected by your report and decisions that will come from this report in the future, it is important to me as a concerned California citizen that this report not be based just on economic reasons, but also other reasons, like social effects and water quality.

After reading the report carefully and listening to educated, informed people on this subject, I believe the report should be recommend selection of Alternative 20.

Thank you very much for your consideration. I look forward to hearing of the final decision, and look forward to a change in the Tentatively Selected Plan to Alternative 20.

Sincerely,

Kathleen Haagenson

Concerned Citizen of California

Gedeon

Hall

From: C. Andrew Hall
To: SPL Comments LA River Study
Cc: FoLAR
Subject: [EXTERNAL] support for Alternative 20
Date: Friday, November 15, 2013 8:53:32 PM

Dear Dr. Axt:

For the reasons that have been well articulated by FoLAR, I am writing to express my support for Alternative 20 rather than Alternative 13.

I have lived in Atwater Village for over 5 years. I have recently married and am putting down roots in this neighborhood. The nearby river is important to me and my family. I use the bike path a few days a week. And my wife heads up a local running school that uses the bike path and tunnel to Griffith Park daily. And in 2011, I even made a film that prominently featured the river. We know the river well, are connected to the it, and want to see it flourish and improve the lives of all Angelenos.

Thank you

C. Andrew Hall
Atwater Village

Hanna

Mark Hanna
760 Loma Drive
Hermosa Beach, CA 90254

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

November 17, 2013

Subject: Comments on the Draft Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Dear Dr. Josephine R. Axt:

I respectfully submit the below comments to the United States Army Corps of Engineers regarding the September 2013 Draft Los Angeles River Ecosystem Restoration Integrated Feasibility Report (Report). As a water resources engineer with education and training in ecology I have an appreciation for the intricacies of habitat restoration, and the multiple metrics that can confound the valuation of habitat. I will focus my comments on how habitat valuation in the Los Angeles River should consider the compounding benefits to habitat from improved water quality, and the positive impacts to habitat in the Colorado, Eastern Sierra, and Bay-Delta watersheds from increased local water supply in Los Angeles.

According to the Report, there is an increase of 131 acres of habitat between Alternatives 13 and 20. Open space acres such as these, adjacent to impaired water bodies, are repeatedly identified as critical pieces that can contribute greatly to the region's water quality solution. And currently the municipalities within Los Angeles County are spending millions of dollars in implementation planning to develop a comprehensive framework to improve water quality in these same regional water bodies. Water quality benefits from land use changes, natural treatment capacity, and in-stream flow management from 131 acres of additional open space can combine to provide significant improvement in the water quality of the Los Angeles River. For example, the Piggyback Yard project under Alternative 20 *can reduce pollutant loading from the site and tributary areas by 50% to 100%* (MRCA's Piggyback Yard Feasibility Study, 2013). And a recent study of stormwater capture in Los Angeles County identified that <u>each acre</u> of land that receives "well sited" retrofits could yield *more than 200 pounds of pollutant reduction annually* (WRD's Stormwater Recharge Feasibility and Pilot Project Development Study, 2012). Incorporate the Treatment Area Ratios (TARs) developed by the Green Solutions methodology, where *each acre of habitat can potentially provide treatment for 6 to 20 acres of upstream tributary drainage* (Green Solutions Project Technical Report, 2008; GLAC-IRWMP OSHARP, 2012), the 131 acre increase between Alternatives 13 and 20 becomes even more significant. These water quality improvements will in turn contribute to enhanced ecological health for all components within Alternative 20, and to the Los Angeles River as a whole.

Hanna

Mark Hanna
760 Loma Drive
Hermosa Beach, CA 90254

In addition to water quality benefits, important water supply benefits will also accrue. The water supply portfolio for the City of Los Angeles consists of 15% local supplies (groundwater, recycled water, conservation) and 85% imported water (Colorado River, Eastern Sierras, and the Bay-Delta). Recent studies buy the Arid Lands Institute and the Council for Watershed Health have identified between 90,000 and 180,000 acre feet of stormwater runoff per year in the Los Angeles River watershed that could possibly be captured and beneficially used. This new resource, if developed, can *double or triple the City's local water supply* hence reducing imports by 15 to 30%. Currently another $3,000,000 is being spent for implementation planning by the City and County of Los Angeles, the United States Bureau of Reclamation, and multiple regional water districts to understand the feasibility of improving stormwater capture for water supply. Between Alternatives 13 and 20, Alternative 20 offers a much greater opportunity for significant increases in the capture and beneficial use of dry-and wet weather flows. Combined with the fact that these additional 131 acres are all *adjacent to major waterways*, and *situated directly above some of Southern California's most productive groundwater aquifers*, namely the San Fernando and Central Basins, there is a direct link between water supply and habitat that this Report should consider. Any and all opportunities to increase local water supply should be taken to reduce Southern California's reliance on the Colorado River, the Eastern Sierras, and the Bay-Delta, which in turn increases successful habitat restoration in these far away watersheds.

Habitat valuation for the Los Angeles River should consider the compounding benefits to habitat from improved water quality, and the positive impacts to habitat in far reaching watersheds from increased local water supply. And with the paucity of wetland and riparian habitat in a densely populated urban environment such as ours, the additional 131 acres that Alternative 20 offers should be compared to a much higher standard.

Thank you,

Mark Hanna, PhD, PE
wmarkhanna@yahoo.com
(310) 245-4708

CC: Carol Armstrong, PhD

Hardin

From: Cindy Hardin
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, November 18, 2013 6:36:29 AM

Dear Army Corp of Engineers,

Regarding the proposed project to improve habitat and public access of the Los Angeles River, I urge you to choose Alternative 20. This is an incredible opportunity to create something that will be used by wildlife and enjoyed by the residents of our park poor city for generations to come.

I am the Education Coordinator for the Los Angeles Audubon Society. We provide field trips to the Ballona Wetlands and Kenneth Hahn State Recreation Area to over 3,000 schoolchildren annually, with the help of a volunteer staff of 50 people. Last spring I arranged to take our volunteers on their own field trip to the Atwater Extension portion of the River, with lunch afterwards at Bette Davis Park. Those in attendance were thrilled to be able to access the river, see a daylighted stream, and marvel over the native vegetation that was thriving where once there was concrete. We saw abundant bird life, and some of us even dangled our toes in the water.

Alternative 20 will enable our residents to enjoy the river, recharge precious groundwater, expand already established public park space by linking it to the river, and create a more robust habitat for wild life. The other alternatives fall far short of these very worthy goals. I do understand that Alternative 20 has the highest projected costs of all the alternatives, but in the big scheme of things it will be money well spent. Jobs will be created during both the construction phase of the project and for future care and maintenance of the system, and priceless open space will be woven into the fabric of our ever growing city.

Thank you for your consideration.

Sincerely,
Cindy Hardin

Hatrick

From: ADRIENNE HATRICK
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles river project.
Date: Monday, November 04, 2013 5:06:49 PM

I am co president of Democrats for Neighborhood Action and our group would like to urge the Army Corp of Engineers to opt for the Alternative 20 Plan for the Los Angeles River. Thank you for this opportunity to voice our opinion.
"Adrienne"

Adam Hauck
3511 Greensward Road
Los Angeles, 90039

September 23, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers

ATTN: Ms. Erin Jones, CESPL-PD-RN

P.O. Box 532711
Los Angeles, California 90053-2325

Dear Mrs. Axt,

RE: Los Angeles River Feasibility Study Alternative 20

I'm writing this letter in response to the U.S. Army Corp of Engineers Los Angeles River Feasibility Study. I stand with Councilmembers Mitch O'Farrel and Gil Cedillo in support of Alternative 20 to the plan.

I believe that Alternative 20 is an opportunity to breath new life into the Los Angeles River Valley, and to restore precious ecosystems that have suffered the consequences of many years of mistreatment and neglect. As a local resident, I'm also enthusiastic about the prospect of being able to share the river with my family, friends and neighbors. This plan is an incredible step towards remaking Los Angeles into the vision of a truly modern city, which can serve as a beacon of progress and modernity throughout the United States, and the world at large.

Thank you for allowing the community a voice in this process. I will be attending the October 17th public meeting to reiterate my opinion, and hope this will be considered when making a determination on the future of the LA River Valley.

Sincerely,

Adam Hauck
Resident, Atwater Village

10509 Blythe Avenue • Los Angeles California 90064 • 310/558-3538 • sirrohh@sbcglobal.net

18 October 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

My name is Sarah Hays. I am a resident of Rancho Park in West Los Angeles. I grew up in Los Angeles and have seen (or not seen) the LA River all of my life. I have also lived in other cities like Rome, Italy and Cambridge and Boston, Massachusetts where rivers are a focal point of the urban fabric, and I have always wished that our river could be more than a concrete storm drain. As an architect I know what a profound effect the existence of a living and accessible river can have on the city's identity. And as an advocate for the Expo Light Rail Line here in West Los Angeles, I look forward to being able to put my bike on a train to be able to access the great biking opportunities along the river. Improvements to the LA River will benefit not only the residents adjacent to it; they will create a space that residents from all over the city can relate to and enjoy. I am writing you in the name of millions of residents of Los Angeles who can benefit from the better balance of our environment and urban community that this project can provide.

Thank you for the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report. Of the four alternatives studied, you have recommended one, Alternative 13. However, Alternative 13 does not go as far as it should to restore the river ecosystem and integrate the river into the neighborhoods it traverses by expanding access. Though your study is meant to address solely ecological benefits of a river restoration, the LA River ecosystem includes the human residents of the city, and an effort to restore ecosystem is wasted if it does not take this into account. Alternative 20, though more expensive, would provide several key elements that are important to this project:

- The inclusion of a connection to Verdugo Wash and its river corridor to the mountains provides life-supporting connections for the animals in the ecosystem. It is a critical component of any ecosystem plan.

- The inclusion of Piggyback Yard connects the Los Angeles River with over 100 acres of open space by removing concrete from the channel and replacing it with terracing and new riparian habitat in a highly urbanized area of the City. This increases biodiversity and the ability of species to find refuge in biologically stressed situations as well as providing opportunities for people to interact with this habitat. Piggyback Yard is fundamental to ecosystem restoration.

- The doubling of the length of the river included in the project is of incalculable value both to plant and animal species and to the human environment and minority communities in particular in a city with seriously inadequate open space and recreational opportunities.

Alternative 20 is the most complete, cost effective, and acceptable plan in terms of true ecosystem restoration and sustainability. If you are going to spend the money to restore part of the river, don't go half way! I urge the Corps to select Alternative 20 as the final Federal plan. This is the right plan for restoring the ecosystem values lost by the channellization of the Los Angeles River and for increasing the connection to the river for the people of Los Angeles.

Sincerely,

Sarah Hays
Co-Chair Light Rail for Cheviot
Member of the Urban Design Committee for the Expo Light Rail Line Phase 2

Cc Friends of the Los Angeles River
Councilmember Paul Koretz, District 5
Councilmember Gilbert Cedillo, District 1
Councilmember Tom LaBonge, District 4
Councilmember Mitch O'Farrell, District 13
Councilmember Jose Huizar, District 14

Hedge

From: Joanne Hedge
To: SPL Comments LA River Study
Cc: joanne@hedgereps.com
Subject: [EXTERNAL] SUPPORT FOR ALT. 20 L A RIVER RESTORATION PLAN
Date: Monday, September 30, 2013 1:23:14 PM

9-30-13

THIS IS TO PERSONALLY SUPPORT THE LOS ANGELES RIVER RESTORATION PLAN ALTERNATE 20, AS A LONGTIME RIVER-ADJACENT PROPERTY OWNER. THE GLENDALE RANCHO NEIGHBORHOOD ASSOCIATION AND RIVERSIDE RANCHO RESIDENTS WORKED TO ADVANCE AND ENJOY THE NEW GLENDALE NARROWS RIVERWALK PARK AND RESIDE STEPS FROM THE BELOVED RIVER WHICH SO MANY BELIEVE NEEDS TO BE MORE RECREATION- AND CONSERVATION-FRIENDLY WHILE REMAINING SAFE FROM FLOODING. THANK YOU!

JOANNE HEDGE
1415 GARDEN STREET
GLENDALE CA 91201
hedgegraphics@earthlink.net

Associated with:
Joanne Hedge, President
GLENDALE RANCHO NEIGHBORHOOD ASSOCIATION
1415 Garden Street, Glendale CA 91201
818-244-0110
hedgegraphics@earthlink.net

The information transmitted is intended only for the person or entity to which it is addressed and may contain **confidential and/or privileged material**. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender and delete the material from any computer.

Hernandez

From: Gene Hernandez
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River.
Date: Saturday, November 16, 2013 11:13:42 AM

Why are you being so obstinate in regards to the L.A. River- I can remember when the ARMY CORP OF ENGINEERS RUINED HANSON DAM BY DUMPING MILLIONS OF TONS OF CONCRETE AND REFUSING TO REMOVE IT. YOU SIMILARLY WILL NOT COOPERATE WITH THE CITIZENS OF SYLMAR TO CREATE A RIPARIAN HABITAT TO INCREASE WATER ABSORBATION FROM THE PACOIMA DAM. IT APPEARS YOUR AGENCY EXIST TO HARM THE PEOPLE NOT HELP THEM-THAT NATION REMEMBERS THE SHODDY AND CORRUPT WORK YOU DID IN NEW ORLEANS.

Eugene Hernandez

Hess

From: Peter Hess
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comments on Los Angeles River Ecosystem Restoration Draft Integrated Feasibility Report
Date: Wednesday, November 06, 2013 8:55:37 PM

Dear Dr Axt or To Whom it May Concern--

Regarding the restoration of the Los Angeles River ecosystem, I wish to indicate my support for **Alternative 20**.

I believe we owe it to the river that we largely decimated, the wildlife which depend on it and to the citizens of the city to restore the system to as close to something approximating a natural state as we possibly can. While the cost is tremendous, I think that the future economic and environmental benefit is incalculable.

Thank you for your consideration.

Sincerely,

Peter and Marguerite Hess
336 S. Ave 52
Los Angeles, CA 90042

Hidalgo

From: Kimberly Hidalgo
To: SPL Comments LA River Study
Subject: [EXTERNAL]
Date: Monday, November 18, 2013 2:05:07 PM

To whom it may concern:
Alternative 20 would be the best choice because the LA river requires to be completely fix. There would be no point on fixing the beginning of the rive if the end is the most important part of it because it is the part that filters the water that is leading to the ocean.

Hildebrand

From: Charlotte Hildebrand
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20 for the LA River
Date: Thursday, October 17, 2013 9:13:48 PM

Dear Army Corps of Engineer;
I long to see our river become a river again. The best plan for that is Alternative 20. $1.08 billion is not a lot for future generations, and for present and future wildlife that will need more habitat in an ever increasing crowded urban environment. Alternative 20 would restore Verdugo Wash and link it to the Verdugo Hills, which would open up a wide swath of nature. I'm all for nature and not so much for half measures, which Alternative 13 would turn out to be. Thank you.

Best,
Charlotte Hildebrand
4267 San Rafael Ave.
Los Angeles, CA 90042

Hoopkins

From: Alexandra Hopkins
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please choose Alternative 20 for restoration of L.A. River
Date: Friday, October 11, 2013 6:59:58 PM

Dear Army Corps:
I urge you to switch your selection for the restoration of the L.A. River to Alternative 20, which will enhance community use of the L.A. River by creating additional green spaces and paths.
Sincerely,
Alexandra Hopkins
La Crescenta, CA 91214

Horne

November 18, 2013

Dr. Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325Dr.

ATTN: Ms. Erin Jones, CESPL-PD-RN

SUBJECT: Request to Select Alternative 20 in the Draft Los Angeles River Ecosystem Restoration Feasibility Report

Dear Dr. Axt:

Thank you for your tremendous effort over the past several years in bringing the subject report to fruition. The importance of the restoration of the ecosystem of the Los Angeles River cannot be overestimated, for the region, or the nation. This river feeds and drains the most populous county in the United States. Over 10 million people who are a part of this ecosystem will benefit from the vision your plan clearly defines.

I believe the report should be concluding with a selection of Alternative 20 as the recommended alternative. It appears the recommendation for Alternative 13 is completely based on the economic analysis of costs per habitat unit. Throughout the report, tables and graphs indicate respective outputs as the planned features incrementally increase across the alternatives. I understand how the graphs show that the bulk of the habitat units—almost 6,000 average annual habitat units (AAHU)—are realized by $21M in annual cost, and that less than 1,000 AAHU more would cost an additional $30M in annual cost. I agree that—purely through the use of the incremental analysis tool, IWR-Plan—the larger alternatives appear to be less cost effective. However, I suggest the Corps of Engineers has not considered numerous other indicators in your decision-making as outlined below.

I strongly encourage you and your organization to reconsider your recommendations, and select Alternative 20, for the following reasons:

1) Regional Economic Development benefits. I understand that RED benefits are often examined in less detail for most water resources planning projects than National Economic Development (NED) benefits or National Ecosystem Restoration (NER) benefits. However more recent Corps narrative and indeed one of the objectives for revising the Principles & Guidelines is for greater emphasis on non-traditional factors in the planning of water resources projects, with greater consideration for the environment, social effects, and public safety by using "assessment methods that reflect the value of projects for low-income communities." Indeed, your own Engineering Circular, EC 1105-2-409, "Planning in a Collaborative Environment," places a "much greater emphasis on the broad range of considerations in planning besides the National Economic Development (NED) effects," and, ostensibly, besides the NER effects. To this end, the results of the RED analysis are included in the report but don't seem to be used in the decision of a Tentatively Selected Plan (TSP). The RED comparisons between Alternative 13 and Alternative 20 are actually staggering (all figures approximate):

a. In the category of construction impacts related to ecosystem features, an increase in Jobs from 2,000 to 9,000, in Labor Income from $114M to $518M, in Sales from $274M to $1.2B, and in the Gross Regional Product from $160M to $724M – all representing a 450% increase.
b. In the category of construction impacts related to redevelopment, an increase in Jobs from 1,280 to 5,090, in Labor Income from $85M to $336M, in Value from $116M to $460M, and in Output from $193M to $767M – all representing an approximate 400% increase.
c. In the category of long-term economic impacts related to redevelopment, an increase in Jobs from 2,670 to 675, in Labor Income from $965M to $3.8B, and in Local Taxes from $5.8M to $23M – all representing an approximate 400% increase.

In today's economics, with ongoing discussion of additional stimulus authorities, and with the Administration calling for Increased spending on infrastructure because it "creates jobs, it puts people to work," this differentiation in RED benefits among the alternatives cannot be ignored.

2) Use of IWR-Plan as a sole indicator of economic benefits. All of the final array alternatives including Alternative 20 are indeed cost effective—"Best Buys," in fact, according to the IWR-Plan terminology. So the additional cost over Alternative 13 still returns a valid return on the investment albeit with diminishing returns. This is typical of incremental analyses, of course, but doesn't mean that Alternatives 16 or 20 are not cost effective. I would expect that even if only IWR-Plan were used as a criterion for decision-making, as it appears to have been, the additional value of larger alternatives that were still cost-effective would provide justification for their selection. Through review of the alternative matrix and additional plan formulation information in the report, there were numerous other "Best Buy" and cost effective alternatives that were identified, e.g., tunneling and underground storage, but that were discounted due to reasons including cost considerations. Because of this, Alternative 20 does not truly rank as "the most expensive alternative" and should not be viewed as such.

3) Other Social Effects benefits. EC 1105-2-409, "Planning in a Collaborative Environment," mentioned above, also puts a greater emphasis on the importance of social factors in plan selection. The Draft report contains a paragraph exactly indicative of the importance of the Other Social Effects (OSE) account:

> "Social effects in a general sense refer to a concern for how the constituents of life that influence personal and group definitions of satisfaction, well-being, and happiness are affected by some condition or proposed intervention. Well-being is an ensemble concept composed of multiple dimensions. While economic factors are very important in characterizing well-being there are many more factors which come into play. In particular the distribution of resources; the character and richness of personal and community associations; the social vulnerability and resilience of individuals, groups, and communities; and the ability to participate in systems of governance are all elements that help define well-being."

Per the Corps of Engineers' guidance in applying OSE analyses to plan selection, the Draft Report also contains numerous examples where these social effects—health and safety, economic vitality, social connectedness, community identity, community participation, and recreational activities—are improved across the array of alternatives. Admittedly more difficult to model quantitatively, your report nevertheless includes a myriad of examples and investigative data supporting the connection and relevance of habitat, environmental health, and recreation to the very factors considered in an OSE analysis. It is clearly stated that the scale of the respective alternatives supports the differentiation between them. And so, the increases in economic development, mentioned above, as well as an increase of 22% in the amount of habitat alone from Alternative 13 to Alternative 20

provides support for determining that Alternative 20 would result in the greatest inerease in OSE benefits.

4) Water Quality. While not a direct mission of the Corps, water quality is of course of concern. Here, again, Alternative 20 outperforms Alternative 13 by virtue of its greater acreage of wetland marsh that would provide a cleansing effect on surrounding stormwater flow. It provides almost 50% more acreage of freshwater marsh habitat, and is more effective in helping to meet TMDL wet-weather targets especially for heavy metals (copper, lead, and zinc) and bacteria. The percentage of constituent concentration reduction required to meet TMDL targets that is achieved by in-stream freshwater marsh habitat is expected to be approximately 75% higher in Alternative 20 compared to Alternative 13. This truly speaks to multi-objective planning.

Thank you very much for your consideration. I look forward to the final decision, and look forward to a change in the Tentatively Selected Plan to Alternative 20.

Sincerely,

Mark Horne

Hough

From: jhoughca .
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please choose Alternative 20
Date: Saturday, November 16, 2013 11:20:34 AM

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711

ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Josephine R. Axt

My name is Jessica Hough and I live in the Los Feliz neighborhood of Los Angeles. I'm a bird watcher and deeply appreciate the habitat that the river provides for local and migrating birds. My daughter is an elementary school student at Ivanhoe Elementary School and has learned about habitat, diversity, and adaptation through the river. We want to use the river more often for exploring, learning, and exercise but access is limited and we don't always feel safe and are often disappointed by the trash and neglect. I have a five month old son and I hope that when he is in elementary school the river will be an even stronger and more lively habitat than it is now.

Please seize this opportunity to remove more concrete, create more habitat, connect important corridors, and conserve more open space for the health of the wildlife and people of Los Angeles by choosing ALTERNATIVE 20. Through this action you will teach our children that the health of our environment matters and that fighting for it is imperative.

Thank you,

Jessica Hough
3167 Rowena Avenue
LA CA 90027

--
Jessica Hough
(510) 881-3072

Hrenda

From: Cathy Hrenda
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20 is the right choice for Los Angeles River
Date: Monday, November 04, 2013 10:13:18 AM

Hi Army Corps of Engineers!

The best LA River restoration plan is the most comprehensive.

Please support Alternative 20.

Use this opportunity to give Los Angeles the river connection that it needs.

Thank you for your help!
-Cathy Hrenda
-Stephen Meek

PO Box 10026
Glendale, CA 91209

Hudnut

From: Alec Hudnut
To: SPL_Comments_LA_River_Study
Subject: [EXTERNAL] Alternative 20
Date: Sunday, November 17, 2013 9:28:08 AM

Please consider Alternative 20 and not Alternative 13
We think it will make a better urban river system
Thank you
Alec hudnut
4093 San Rafael ave
La ca. 90065

Sent from my iPhone

Husseini

From: Husseini, Salah
To: SPL Comments LA River Study
Subject: [EXTERNAL] I support Alternative 20 - LA RIver Restoration
Date: Tuesday, September 24, 2013 9:27:48 AM

Dear Ms. Axt:

I am writing to give my support to Alternative 20 of the Army Corps' LA River revitalization options. As a resident of the area who utilizes the river's bike path regularly, this river and surrounding infrastructure represents what LA is in dire need of – accessible public parks and pedestrian-friendly pathways that create linkages between various neighborhoods in the area. The Griffith Park to Downtown corridor is a vibrant and thriving part of the city, but neighborhoods within this zone are isolated and not connected. The city and river deserve the most comprehensive renovation of this crucial resource, one that maximizes its potential to create a cohesive and vibrant area that will connect neighborhoods and bring isolated communities together.

I urge the Army Corps of Engineers to reconsider its selection of Alternative 13 in favor of Alternative 20.

Best,

Salah Husseini
Senior Analyst
International Labor Standards
The Walt Disney Company
500 S Buena Vista St, Burbank, CA 91521-6706
Phone: 818-627-4576 | Tie Line: 8655-4576 | Fax: 818-627-4602
salah.husseini@disney.com

Please consider the environment before printing this e-mail.

This e-mail message is confidential, intended only for the named recipient(s) above and may contain information that is confidential, privileged, attorney work product or exempt from disclosure under applicable law. If you have received this message in error, or are not the named recipient(s), please immediately notify the sender at 1-818-627-4576 and delete this e-mail from your computer. Thank you.

Hutchins

From: Michele Hutchins
To: SPL Comments LA River Study
Subject: [EXTERNAL] Embrace Alternative 20
Date: Sunday, November 17, 2013 11:09:11 PM

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Ms Erin Jones, CESPL-PD-RN
comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

As a longtime resident of the San Fernando Valley, I would like to give you my opinion about the restoration of the Los Angeles river. I feel strongly that the best plan is "Alternative 20" covered in your LA River Ecosystem Restoration Report, which I have viewed on your website (http://www.spl.usace.army.mil).

The consequences of this decision will be felt for a very long time. Alternative 20 should be embraced as the best option to achieve the desired balance between the environment and the urban community. Therefore, I agree with FoLAR, Mayor Garcetti, Senator Boxer, and many, many others who urge you to adopt it.

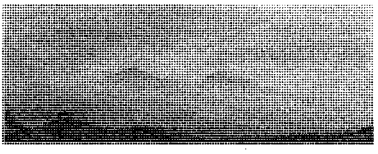
Alternative 20 is the most comprehensive and sustainable of the plans being considered. Selecting another plan could lead to decades of unresolved issues requiring additional funding to mitigate. Over the long term, those costs could easily dwarf the larger price tag of Alternative 20. Selecting another plan would be "penny wise and pound foolish."

Please do not miss this opportunity to restore the river in a way Los Angeles can be proud of.

Yours sincerely,

Michele Hutchins
6904 Ranchito Avenue
Van Nuys, CA 91405
meeshie4peace@yahoo.com

Hutson



Clifford Hutson

November 16, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

Dear Dr. Axt:

The purpose of this letter is to urge the adoption of Alternative 20, as presented in the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report, as the means to restore the river to its rightful state.

I am a Nature Interpreter at Rancho Santa Ana Botanic Garden in Claremont, California. I work at the intersection of research, education, and outreach through my participation in various programs that instruct the general public and students about the importance of California's native plants, natural history, and indigenous cultures. However, it should be noted that these comments in support of Alternative 20 are my own.

While I am no longer a resident of the City of Los Angeles, some sixty years ago, I spent many hours of my formative years playing in the river and along the banks of what was them known as Frogtown. I grew to appreciate that patch of nature in an environment of homes, factories, and railroad yards. The river still holds a special place in my heart. And, of course, the it is of great regional importance and ultimately affects all residents of Southern California.

I understand that Alternative 13 has been identified in your study as the Tentatively Selected Plan. However, I find this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River system.

1320 Washington Av Pomona CA 91767 909-623-9584

Hutson

I suggest that Alternative 20 is preferable to Alternative 13 for the following reasons:

- It is more similar to the ecosystem that historically existed prior to the channel Connectivity for wildlife migration, seed dispersal, and hydrology
- The creation of more acres of restored habitat
- The Verdugo Wash is critical to providing connectivity from the LA River to the Verdugo and San Gabriel Mountains
- The Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to Elysian Park
- The reduction of distances between the habitat nodes greatly enhances the value
- The length of area restored is greater
- Much more concrete is removed
- The habitat restored creates a higher quality ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the nineteen performance targets established under the posited objectives
- The Other Social Effects analysis shows Alternative 20 with its larger scope will:
  - Produce a greater connectivity with the people and communities
  - Reach more of the census tracts with high poverty and high minority populations
  - Provide more green areas to encourage physical activity
  - Provide more green areas to reduce air quality effects

It is my sincere belief that Alternative 20 is worth any additional costs because of the added values stated above that were not sufficiently counted in the report comparisons. I implore the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future. Your attention to this matter is appreciated.

Sincerely,

Clifford Hutson

Jackson

From: Jackson, Malcolm
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River restoration - Do Alternative 20
Date: Tuesday, November 19, 2013 12:34:44 PM

To whom it may concern,

There's no other option, but as much restoration as possible. LA and Angeleno's deserve it. We're a world class city, lets keep it that way.

Please do Alternative 20.

Thank you.

MALCOLM JACKSON
flash production artist

RPA ADVERTISING
2525 colorado ave. santa monica ca 90404
T 310-633-6533
mjackson@rpa.com

This email may contain information that is confidential or is otherwise the property of RPA or its clients. Any use of this information for purposes other than that for which it was intended, including forwarding the information to unauthorized parties or using the ideas or materials contained in this email, may violate U.S. or foreign laws, and is prohibited. If you received this message in error, please let the sender know and delete the message immediately.

Javier

From: Linda Javier
To: SPL Comments LA River Study
Subject: [EXTERNAL] Restoration of the Los Angeles River
Date: Thursday, October 31, 2013 2:48:55 PM

I am writing to you regarding the restoration of the Los Angeles River. Please note I strongly support Alternative 20. I am aware that the cost of Alternative 20 is much higher than other options, but I feel that it will provide the highest long-term benefit.

Thank you.

Linda Javier
343 N. Niagara St.
Burbank, CA 91505

NOTICE: This communication may contain privileged or other confidential information. If you are not the intended recipient of this communication, or an employee or agent responsible for delivering this communication to the intended recipient, please advise the sender by reply email and immediately delete the message and any attachments without copying or disclosing the contents. Thank you.

Jessler

From: darynne jessler
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River Ecosystem Restoration
Date: Tuesday, October 15, 2013 4:04:17 PM

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, CA 90053-2325

Dear Planning Division,

I emphatically support Alternative 20, the most robust habitat restoration plan. I know a large coalition of environmental groups and elected officials at all levels of government join me in support this significant investment in the highly-degraded Los Angeles Watershed.

Although I live in Studio City, an area not directly affected by this current project, I walk my dog along the river/wash twice a day. We've done this for the past 10 years. I pick up trash, call in graffiti removal and requests to remove bulky trash from the wash. All of this because there is still life trying to keep going along the wash. They won't give up so I don't give up. Ducks, Horned owls, Copper's Hawks, Red Tail Hawks, all sorts of smaller birds, Herons, possums, squirrels, racoons, coyotes, insects of all sorts can all still be seen even tho the place is solid concrete.

In addition I work for a major studio in Burbank that borders the river - still not part of the directly affected area BUT the impact of this project will have a huge effect up river and I want it to be supportive of wildlife. Please choose Alternative 20.

Sincerely,
Darynne Jessler
4408 Gentry Ave
Valley Village CA 91607

Jocoy

November 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
Email: comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

My name is Christine Jocoy and I am a resident of Long Beach, CA. I moved to Long Beach in 2004 after completing my PhD in Geography for a faculty position at California State University, Long Beach. I feel connected to the ARBOR Reach restoration plan in numerous ways. First, living at the mouth of the river, I understand the importance of restoration upstream to improve water quality and flow downstream. I see the impact on the beaches of trash that flows from all part of Los Angeles. Second, as a geography professor, I teach my students about the history of the river and it is a valuable site for research and educational opportunities for students. I am passionate about changing their relationship to the river so they view it for its ecological and cultural value. I am dedicated to creating a better balance of our environment and urban community.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked together.

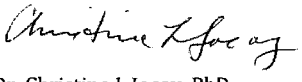
I support Alternative 20 as presented in the document for the following reasons:

1) Because only 11 of the 51 miles of the river have been identified as having the highest potential for restoration, it is crucial that these areas be addressed to the fullest extent possible.
2) With the focus on connecting the river to major tributaries and the mountains, it is important to include the Verdugo Wash confluence in the plan.
3) Because buffer areas between development and the river are generally rare, it is important to leverage the locations where current parks provide the opportunity to widen, terrace, and restore the river channel and wetlands. Alternative 20 is the only one that includes Bette Davis Park and LA River State Historic Park, two areas where these restoration strategies can be implemented.
4) Because Piggyback Yard connects the Los Angeles River with over 100 acres of open space, the plan for removing concrete from the channel and replacing it with terracing and new riparian habitat has immeasurable benefits to a highly urbanized area of the City. The biodiversity created and the ability of

species to find refuge in biologically stressed situations makes this part of the plan fundamental to ecosystem restoration.

I urge the Corps to select Alternative 20 as the final Federal plan, going beyond recognizing it is the locally preferred plan. This is the right plan for restoring the ecosystem values lost by the channelization of the Los Angeles River and the benefits to the people of the region will go beyond the ecological benefits by changing their relationship to the river.

Sincerely,



Dr. Christine L Jocoy, PhD
420 Redondo Ave Unit #305
Long Beach, CA 90814

Professor of Geography
California State University, Long Beach

Juergens

From: Juergens, Kate
To: SPL Comments LA River Study
Subject: [EXTERNAL] support for LA River restoration project
Date: Monday, November 18, 2013 6:13:06 PM

I would like to add my name to those who endorse the more comprehensive **ALTERNATIVE 20**.

This is an amazing opportunity to impact the future of Los Angeles and add to the diverse habitat and beauty of this city. Let's seize this opportunity to remove more concrete, create more habitat, connect important corridors, and conserve more open space for the health of the wildlife and people of Los Angeles.

Thank you,
Kate Juergens

Kammerer

From: Carolyn Kammerer
To: SPL Comments LA River Study
Subject: [EXTERNAL] Select Altenative 20
Date: Saturday, October 12, 2013 9:13:00 AM

We must seize the opportunity to remove more concrete, create more habitat, and restore more wetlands for the health of the wildlife and people of Los Angeles. Please select Alternative 20 to restore and heal the Los Angeles Watershed.

Sincerely,
Carolyn Kammerer

Kaplan

From: Fred Kaplan
To: SPL Comments LA River Study
Subject: [EXTERNAL] Fred Kaplan"s comments regarding Alternative 20 of the Los Angeles Restoration
Date: Monday, November 18, 2013 2:05:07 PM

My name is Fred Kaplan. As I life-long resident of Los Angeles, I have always curious about the Los Angeles River but it wasn't until I got laid off from my job at the Tonight Show in 2008 that I approached the river. My 90 day walk along the banks of the river resulted in a short documentary called the "The River Under the City of Angels" www.fredkaplan.net . The documentary has been seen in over 90 countries by 50,000 people as well as in 12 film festivals.

The Los Angeles River changed my life, while walking my thoughts would often drift to compassion for others and the acceptance of the changes in my life. The River is part of my healing watching people from diverse cultures interacting with the river confirmed the importance of the revitalization of the river and the need for more open spaces in south Los Angeles. The alternative 20 would bring value to the city that would be returned many times over and create a healthier city.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the

bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Fred Kaplan

Kapoor

From: Daveed Kapoor
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River Ecosystem Study
Date: Monday, November 18, 2013 1:23:01 PM

Dear Dr. Axt:

My name is Daveed Kapoor, I am an architect and property owner near the Los Angeles River. I work at RAC Design Build, a planning, development, architecture, and construction firm with headquarters right on the river path in the Glendale Narrows soft bottom portion of the river. I use the river walk/bike path as my primary means of transportation. I love the birds and wildlife that populate the river, but I despise the blighted neglected concrete banks and yearn for an upgrade to the channel.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)

Kapoor

- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
  - Provides 7015 more jobs and $386 million more in wages during construction
  - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
  - Creates 1094 more new permanent jobs valued at $62 million more
  - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Daveed Kapoor AIA

3048 North Coolidge Avenue
Los Angeles, CA 90039
c | 323.252.8510
f | 888.808.3711
www.racdb.com
www.studiocortez.com
www.vimeo.com/racdb

Kasperkovitz

From: Christian Kasperkovitz
To: SPL Comments LA River Study
Subject: [EXTERNAL] yes on 20
Date: Monday, November 18, 2013 9:40:05 PM

---

to whom it may concern,

please choose alternative 20.
The state of the river and the city is as it is because since the beginning of the city short term solutions were found for civic development.
We rank among the lowest for parks per capita, which affects deeply the quality of life, education, and opportunities for youth and future generations.
We are in a state of constant water difficulty because the channelization of the river did not accommodate the hydrologic cycle of the basin.
Our natural heritage is at risk by being even further fragmented.
Ocean health is very impacted by the "flushing" of the concrete environs of the river bed.

Choosing alternative 20 represents taking a step in the direction of planning a robust, vibrant, and unique Los Angeles of the future.
It provides the best solution for continuing development of healthy and diverse neighborhoods with more equal access to all Los Angeles offers.
It provides an opportunity to make a green city, connecting us to our unique natural environs, something in the future which will truly distinguish Los Angeles as a liveable place.
Making a choice now to build on a plan that supports our native wildlife is humane and offers the most flexibility for ensuring a beautiful and diverse future city-scape.
Evidence abounds about the precarious and under-protected state of our oceans. As a coastal city and riparian city we gain immensely from our access to water. Lets utilize that in an intelligent and sustainable way.

with many thanks,
Christian Kasperkovitz

Kaye

From: Dessa Kaye
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Restoration Comments
Date: Thursday, November 14, 2013 3:37:03 PM

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Ms Erin Jones, CESPL-PD-RN
comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

As a native and lifelong resident of the San Fernando Valley, I am a stakeholder in your plans for the restoration of the Los Angeles River. I believe we have a once-in-a-lifetime opportunity to create a better balance between our environment and urban community.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with Friends of the Los Angeles River (FoLAR) and other community groups in developing these options. After reviewing the report and many commentaries, I am writing **in support of Alternative 20** presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

As detailed by FoLAR, many major concerns were not adequately recognized in Alternative 13, such as the richness of this biodiversity hotspot and the rarity of the region's Mediterranean climate.

I agree with FoLAR, Mayor Garcetti, Senator Boxer and others that Alternative 20 is far superior to Alternative 13. Alternative 20 most robustly meets the four evaluation criteria (effectiveness, completeness, efficiency, acceptability).

Kaye

Having grown up in the Valley in the 1950s and 1960s, I understand that we don't want to go back to a totally wild river that changed course with every rainy season, but we have one chance here to restore this ecosystem to something more likely to be sustainable and resilient over the life of the project because of the size and added connectivity. There's no point in saving money if it doesn't get the job done.

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values it will produce that were not sufficiently counted in the report comparisons. I urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Dessa Kaye
P.O.Box 1397
Studio City, CA 91614
dlkaye@juno.com

Keiner

From: T Scott Keiner
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support Alternative 20
Date: Wednesday, October 16, 2013 1:06:15 PM

Alternative 20 is the only proper solution to restore the LA River. Please support it.

Thank you,
Scott Keiner

Kelley

From: Celeste Kelley
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Tuesday, October 22, 2013 11:57:42 AM

Hi Dr. Josephine Axt,

I am a proud Angeleno in support of Alternative 20. Please support this Alternative to invest 1 billion in the L.A. River and provide greening of our city, habitat restoration, and recreation opportunities for the people.

Thanks,

Celeste Kelley

Kirschbaum

From: Saran Kirschbaum
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Wednesday, October 09, 2013 11:49:46 AM

Alternative 20 makes more sense because it will avoid future problems, so in the long run it will be less expensive.
Thank you,
Saran Kirschbaum
Los Angeles

Klengler

From: joan klengler
To: SPL Comments LA River Study
Subject: [EXTERNAL] L.A. River
Date: Monday, November 18, 2013 12:07:09 PM

In the **Los Angeles River Ecosystem Restoration Integrated Feasibility Report**, the U.S. Army Corps of Engineers chose Alternative 13 as their Tentatively Selected Plan.

FoLAR and a large coalition of elected officials and environmental groups agree that this plan **FAILS TO CONSIDER** key factors of our unique environment and **FALLS FAR SHORT** of achieving meaningful transformation in our degraded urban watershed. Instead, we strongly endorse the more comprehensive **ALTERNATIVE 20**.

Alternative 20 removes more concrete, creates more habitat, connects important corridors, and conserves more open space for the health of the wildlife and people of Los Angeles.

We urger you to adopt Alternative 20.

Thank you for considering our views.

Joan and Ingolf Klengler
klengler@sbcglobal.net

Kugelman

From: Francie Kugelman
To: SPL Comments LA River Study
Subject: [EXTERNAL] Teacher supports Alternative 20 for the Los Angeles River
Date: Saturday, November 16, 2013 5:34:51 AM

Every year I take my students to the Los Angeles River on a field trip. What surprises the students is how beautiful the river is. Everyone thought before we left that it was just concrete, and no animal life could live. Instead, they see trees, birds, frogs. Alternative 20 will help the river have more areas like this. People will learn to come to our river and enjoy it.

Please support Alternative 20. I believe it is the right choice for Los Angeles.

Francie Kugelman
Dahlia Heights Elementary School
5th Grade teacher
5063 Floristan Avenue
Los Angeles, CA 90041

Kuppers

From: noreply@dma.mil [mailto:noreply@dma.mil]
Sent: Saturday, November 02, 2013 12:15 AM
To: Walters, Candice S HQ02
Subject: [EXTERNAL] Headquarters U.S. Army Corps of Engineers Contact Form: L A River

This message was sent from the Headquarters U.S. Army Corps of Engineers website.

Message From: Fred & Sheri Kuppers
Email: skuppers@verizon.net
Response requested: Yes

Message:

Army Corp of Engineers,

After visiting Germany and traveling on the River Rhine, we began to wonder what happened to the LA River. After hearing about the beginning of its revival, we were excited. It could add both beauty and nature to our big city, which needs more of both.

It could be much more than the proposed restoration. The residents should have better access. The steel concrete walls leading down to the river need to be removed and landscaped terraces on its banks created so there are points of access for recreational use.

We understand you are making a final decision next Spring. The residents of L A deserve a good plan and the use of their river. We hope that you will think of the people you represent when making this decision.

Sincerely,
Fred & Sheri Kuppers

Sent from my iPhone

Lamm

From: Jim Lamm
To: SPL Comments LA River Study
Subject: [EXTERNAL] L.A.River Restoration Comments
Date: Sunday, November 17, 2013 9:01:18 PM

Dear Dr. Axt:

I am writing to express my strong preference for Alternative 20 rather than Alternative 13.

My name is James W. (Jim) Lamm. Although currently a Culver City resident, I was born in Bell, spent my first 3 ½ years in South Gate near the Los Angeles River, and was raised in Monrovia with many experiences of the Rio Hondo and San Gabriel Rivers. Most of my 30-year architectural career was based in Los Angeles, particularly in downtown. While there, I also served as a project unit manager for the Universal City Metro Rail station situated on the route of the historic LA River and next to the rerouted channel. However, my life has been focused more on people and places, especially natural places and waterways.

While serving on the AIA/Los Angeles Urban Design Committee in the early 1990s, I resonated with colleagues' interest and work in watersheds, rivers, and the like. Soon I began participating in the Los Angeles and San Gabriel Rivers Watershed Council, whose founding president Dorothy Green was an early mentor of mine and Ballona Creek Renaissance (BCR), a 501c3 organization dedicated to connecting creek and community. Serving as BCR President since late 1998, I and BCR have experienced many interactions with both the LA River and its stakeholders, coming to appreciate both very much.

Now retired from architecture and in addition to leading Ballona Creek Renaissance and co-founding the Ballona Creek Watershed Task Force, I currently serve on the State Senate District 26 Environmental Cabinet and the Bay Watershed Advisory Committee. And I have enjoyed teaching very hands-on Urban Ecology and Wetlands Ecology classes and workshops at Antioch University-Los Angeles.

With a long professional and nonprofit experience of working collaboratively with all stakeholders, including the U.S. Army Corps of Engineers and the City and County of Los Angeles, I really appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. Along with many of my L.A.River friends, I am very pleased that the Corps and City have worked with the community to be on the same side of the Los Angeles River Ecosystem Restoration!

After reviewing the report, I am providing just a few comments on the document which support my preference for Alternative 20 rather than Alternative 13, the Tentatively Selected Plan. Key areas in which I share FoLAR's points include the following:

- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh

- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20: Provides 7015 more jobs and $386 million more in wages during construction, creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term, and creates 1094 more new permanent jobs valued at $62 million more.
- The Other Social Effects analysis shows Alternative 20 with its larger scope will produce a greater connectivity with the people and communities.

Restoration of the Los Angeles River and Ballona Creek is crucial to us and to greater Los Angeles! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. Therefore I urge the Corps and City to select Alternative 20 because it provides the best restoration, the best example from which to teach and to lead, and the best ecological and economic sustainability for the future.

Sincerely,

Jim Lamm
President, Ballona Creek Renaissance (BCR), www.ballonacreek.org
Urban and Wetlands Ecology Adjunct Instructor, Antioch University, Los Angeles, www.antiochla.edu
Co-Founder, Ballona Creek Watershed Task Force, http://tiny.cc/7k3V2
Elder, St. John's Presbyterian Church, Los Angeles, www.stjohnspres.org
Resident and Former Planning Commissioner, Culver City, www.culvercity.org
310-839-6896, 310-367-0336 (c), www.facebook.com/jim.lamm, jim.lamm@ballonacreek.o

Lange

From: langefunds@gmail.com on behalf of Trent Lange
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River -- Please implement Alternative 20
Date: Tuesday, October 22, 2013 2:13:14 PM

Hi --

As a nearly lifelong Los Angeles resident, I strongly support making the LA river as natural, connected, and open to both the public and to wildlife as possible. So please add my name to the list of people who strongly urge you implement Alternative 20 of the LA River study.

Thank you,

- Trent

424 Kelton Ave, Apt 510
Los Angeles, CA 90024

Lavalley

From: tim.lavalley@me.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Sunday, November 17, 2013 7:18:41 AM

Dear Dr. Axt and Ms. Jones

This is a very exciting and inspiring moment in the history of Los Angeles. The opportunity that lies before all of us is to revitalize the Los Angeles river in a way that will turn it into a resource of hitherto unknown geographical, economic, civic and even psychological importance to the Angeleno community. I believe that Alternative 20, as endorsed by the Friends Of the Los Angeles River, is the most promising of the options available. I thank you for the attention and stewardship that the Corps expends on the river, and hope that Alternative 20, rather than Alternative 13, is as attractive an option to you and the Corps as it is to FoLAR and myself.

Sincerely
Tim LaValley
6200 Franklin Avenue
Los Angeles, CA 90028

LeBoeuf

From: Elaine LeBoeuf
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Friday, September 13, 2013 7:25:37 PM

I support Alternative 20!,

Elaine LeBoeuf
323 240-7004
1838 N.Alvarado St
Los Angeles, CA90026

LaGras

From: Larry Legras
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Thursday, October 17, 2013 9:35:45 AM

To you,

My family and I support having the entire LA river as natural as possible so adults and children that live in the inner city will be able to experience and learn about the Nature of a beautiful river.

Nature and beauty are healing elements that this city sorely needs.

Sincerely,

The LeGras family.
1300 Micheltorena St.
LA, CA. 90026

Lerner

From: Erik Lerner
To: SPL Comments LA River Study
Subject: [EXTERNAL] The public needs LA River Access
Date: Thursday, October 17, 2013 7:48:49 AM

Please open the river to the public.
Urban access to outdoor activities is an essential civilizing benefit to the urban environment.

ERIK LERNER
REAL ESTATE BROKER
AIA CGBP LEED AP

REALESTATEARCHITECT COM ®
ERIKLERNER@REALESTATEARCHITECT.COM

800 775 5582 TOLL FREE
310 729 4597 MOBILE
888 861 8293 FAX

CA BRE BROKER LICENSE #01225073
C/O KELLER WILLIAMS REALTY
439 N CANON DR #PH
BEVERLY HILLS
CA 90210

Lester

From: Ely
To: SPL Comments LA River Study
Subject: [EXTERNAL] Select Alternative 20!
Date: Sunday, November 17, 2013 11:38:12 PM

Dear Dr. Axt,
I am a resident of Glendale, and am writing to urge you to select Alternative 20. Only Alternative 20 addresses the problems of the current river on a sufficient scale. Please don't leave Glendale and the Verdugo Wash out! A more naturalized river means a more livable region. Please don't settle for half measures - take this historic opportunity!

Sincerely,

Ely Lester
1411 Hillcrest Ave.
Glendale, CA 91202

Sent from my iPad

Lindsey

From: PHILIPPE LINDSEY
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Ecosystem Rejuvenation
Date: Saturday, November 09, 2013 7:02:33 PM

Dear Josephine R. Axt, Ph.D., Chief, Planning Division, U.S. Army Corps of Engineers, Los Angeles District, P.O. Box 532711, ATTN: Ms. Erin Jones, CESPL-PD- RN, Los Angeles, CA 90053-2325

I am writing to express my support for Alternative 20 of the LA River Ecosystem Rejuvenation. I relocated to Los Angeles last year from Chicago. Specifically, my girlfriend and I moved from Evanston, IL to Downtown Los Angeles (DTLA) for work. We love living downtown, we especially love the continuous local business improvements and new public locations to visit in DTLA. It is with this perspective that I send this note, supporting the comprehensive approach to rejuvenating the LA River.

Chicago (Hyde Park), the city of my birth really benefited from the Burnham plan for the creation of livable space for it's residents. See http://en.wikipedia.org/wiki/Burnham_Plan Specifically, the idea of public space that is for all the people in the city has been a tremendous success for Chicago. I like to refer to this as a "public commons" of parks, libraries, and river walks that all families regardless of income or station in life can enjoy. Moreover, these public common places remind people of the importance and beauty of the environment, why we all have to work together to care for our cities and our planet. It is my belief, Los Angeles would benefit from a similar approach to the LA River Basin which Alternative 20 represents. Specifically, the restoration of 719 acres of the LA River basin would be a wonderful public space/ public commons "to green" Los Angeles. People could come to the park to stroll, exercise, or have family outings like picnics. I love the idea of connecting the LA River with the LA Historic State Park by re-creating wetlands and marshlands.

I also think the rejuvenated river will create business opportunities, like Millennium Park has for Chicago. See http://en.wikipedia.org/wiki/Millennium_Park I have read of discussions to open a brewery, a kayak tour, and new restaurants along the river. As a DTLA resident, I can tell you that we as a couple love walking to Pershing Park, which is across the street from our home to listen to concerts. We also went to the Grand Performances and loved it. If the restored LA River project, Alternative 20 would provide more space for this kind of thing we as a young couple would love it. As we look for places in LA to lay deeper roots and start a family, a thing like an Alternative 20 type LA River Walk would be persuasive to remain in DTLA. May I also suggest a Metro Stop or Stops close to the rejuvenated LA River so people can take public transportation to reach it and patronize its' businesses.

Thank you for your attention these matters, please contact me should you like further support for this initiative.

Respectfully,

Philippe Lindsey, Esq
(312) 208-7538 (mobile)

Lizama

From: Dalmatia Lizama
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, November 18, 2013 2:04:07 PM

To whom it may concern as a resident of Los Angeles County, I strongly encourage the US Army Corps of engineers to choose alternative 20 for the Los Angeles River Ecosystem Restoration project and not alternate 13.

Please reconsider your selected plan and choose the more comprehensive alternative 20.

Thank You,
Dalma Lizama

Lloyd

From: gracesadye@gmail.com on behalf of Grace Phillips
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20 !!!
Date: Tuesday, November 19, 2013 2:40:05 PM

Dear ACE,
Please listen to the members of the public. We want Alternative 20. We don't want other alternatives. If we don't get Alternative 20, there's no telling what we might do. Like try to get the ACE under the purview of locally elected bodies, for example.

Please show the United States that you can be responsive at the local level - you have such a bad reputation as tone-deaf bullies who fire anyone who disagrees with them.
You can do better, starting here, starting NOW, with ALTERNATIVE 20!!
Best,
Grace Lloyd
1131 Hill Street
Santa Monica, CA 90405

--
www.civilityplease.com

Lundy

From: Ian Lundy
To: SPL Comments LA River Study
Subject: [EXTERNAL] Recommendation of Alternative 20
Date: Tuesday, November 19, 2013 12:23:36 AM

I am writing because I am excited about the opportunity to give one of the largest populations in the United States the greenway and public space that the Los Angeles area needs. The city lacks a central park of main area, however the creation of an active river way can increase the quality of life for millions and millions of Americans. Please choose this alternative for our city to give it the revitalization that it truly deserves and the public space it needs.

Thank you for your work and I look forward to hearing the results.

Best,

Ian Lundy

MacAdams

From: John MacAdams
To: SPL Comments LA River Study
Cc: Senator.Pavley@outreach.senate.ca.gov
Subject: [EXTERNAL] Please choose Alternative 20 for LA River
Date: Wednesday, October 09, 2013 10:07:21 AM

Dear Army Corp,

As a 30 plus year resident of Los Angeles, and a lifelong outdoors person, I greatly appreciate the benefits of access to outdoor space for the maintenance and growth of the human spirit and societal sanity.

I urge you to adopt the proposed "Alternative 20" plan for the partial restoration of the LA River segment described there in.

I am eager to increase my taxes to help fund this effort.

Warm Regards,

John MacAdams
kiltson1@gmail.com
mbl 818-621-9890
off 818-727-9890

Magali

From: Magali
To: SPL Comments LA River Study
Date: Monday, November 18, 2013 2:05:26 PM

To whom it may concern:
I strongly encourage the US army Corps to choose alternative 20 instead of alternative 13. As a resident of Los Angeles County I care about our environment and we must solve our degraded urban watershed.
Thank you.

Marks

From: marksjay
To: SPL Comments LA River Study
Cc: marksjay@earthlink.net
Subject: [EXTERNAL] L.A. River
Date: Sunday, November 17, 2013 11:49:59 AM

Dear USACE,

I support the Mayor's proposal to renew the Los Angeles River. As an elementary school teacher, I have used the river as a wonderful resource for environmental education as well as for recreational/ physical education activities. Each year my class takes two walking field trips to the L.A. River. Many parents join the class as I want the community to become more aware of this local natural resource. In my teaching community the families need more free or low cost recreational and natural history resources. This great river provides that. I support the new extensive plan to revitalize and expand the use of the river, and I thank the many Angelenos who have worked so hard to develop this plan.

Sincerely,
Mrs. Marilyn Marks
Third Grade Teacher
Glenfeliz Blvd. Elementary

Mather

From: Evan Mather
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River - ALTERNATIVE 20
Date: Monday, November 18, 2013 10:02:37 AM

Dear Dr. Axt:

My name is Evan Mather and I am a resident of Eagle Rock and a practicing landscape architect.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river

Mather

connections, rather than just culverts or pipes

- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
  - Provides 7015 more jobs and $386 million more in wages during construction
  - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
  - Creates 1094 more new permanent jobs valued at $62 million more
  - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Evan Mather

Mayreis

From: rmayreis@earthlink.net
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River Restoration
Date: Tuesday, November 19, 2013 7:36:02 AM

Dear Josephine R. Axt and Erin Jones,

I hope that you can still accept this note as input for the Los Angeles River restoration project. I have enjoyed the annual LA River bicycle ride the past 10 years, particularly the shore birds and the plant ecosystem across from Griffith Park, so I can easily see the potential for great satisfaction for residents and appeal for tourists if the River is allowed to go natural again. I urge you to select Alternative 20 to help bring that about. Thank you for considering this!

Rex Mayreis
397 E. Las Flores Drive
Altadena, CA 91001
Rmayreis@earthlink.net

Mazzoleni

FoLAR Community Template
Letter of Comment

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Date Nov 16, 2013

Dear Dr. Axt:

My name is Ilaria Mazzoleni. I am an practicing architect and professor of sustainable design and biomimicry at SCI-Arc. In the past several years I worked near the river and while teaching we had several design studios focusing on the area adjacent downtown (where sciarc is located). In writing this letter I think I am representing not only myself, but also my students in saying that the river is a fundamental environmental element for LA and for the design community.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

A major concern in my review was that the value of the ecosystem restoration appears to have been determined solely using the Combined Habitat Assessment Protocols (CHAP) model. The CHAP model is designed to address wildlife habitat on a site-specific basis. But does not, however, capture a number of ecosystems values which are important in an urban environment such as Los Angeles. These are values which were essentially eliminated when the Los Angeles River was channelized, and must be considered in reaching a decision on a meaningful ecological restoration alternative.

As a primary example, a principal value not considered by the model is the enormous benefit of connecting major tributary and mountainous areas to the river. Having spoken with several members of the Corps/City/resource agencies team who designated specific values for the model, we believe these connections were not valued or weighted highly enough in the model. A well-balanced ecosystem needs these mountainous connections to be sustainable genetically and in terms of food, cover, refuge, and territories for the flora and fauna that once thrived in and along the LA River. The connectivity to other large expanses of habitat ensure ecological resiliency and long term sustainability. It is precisely these types of historic connections and corridors that could enable the reintroduction of Steelhead and other species into the river by restoring the historic aquatic habitat that once existed in this area.

Verdugo Wash and Piggyback Yard are of particular importance in creating a sustainable ecosystem. The Verdugo Wash tributary to the Los Angeles River northeast of Griffith Park connects the both of these waterways to the San Rafael Hills and the Verdugo Mountains. The river corridor to the mountains provides life-supporting connections for the animals in the ecosystem. During times of biological stress caused by urbanization, fires, floods, and climate change, the survivability of plant and animal life and sustainability of the ecosystem depends on the large expansive connections of the rivers and mountains. The connectivity of the Verdugo Wash to the mountains is a critical component of any ecosystem plan and must be included in the Federal project.

The Piggyback Yard is important in the ecosystem restoration because it connects the Los Angeles River with over 100 acres of open space by removing concrete from the channel and replacing it with terracing and new riparian habitat in a highly urbanized area of the City. The importance to the ecosystem is again the biodiversity created and the ability of species to find refuge in biologically stressed situations. Piggyback Yard is fundamental to ecosystem restoration.

Mazzoleni

Other values also should be considered in the decision in determining an adequate alternative. These include air quality benefits in a heavily stressed air quality region, hydrologic values, river water quality and storm water capture which are essential to sound habitat restoration, and the value to the human environment and minority communities in particular in a city with seriously inadequate open space and recreational opportunities.

The CHAP model should be considered as an important tool in the planning process, but should not be the only factor used in selecting the alternative plan. The model itself is probably as good as any other; it just did not recognize the appropriate weighted value of other ecosystem restoration benefits. The inclusion of the Verdugo Wash and Piggyback Yard, coupled with the other elements of the plan, provides double the length of channel restoration as Alternative 13, but provides an exponential benefit in the ultimate sustainability of the entire ecosystem.

A second major concern with the Integrated Report is that the Corps has set numerical decision criteria which are inadequate considering it own analysis. As one of a number of examples of this, the Draft, (Executive Summary, p. xxv) states that both the Piggyback Yard and Taylor Yard are "critical to provide restoration benefits" and achieving a more natural hydrologic regime. We would add Verdugo Wash to this considering the importance given by the Draft to connectivity. However, the "objective performance criteria" (P. 4-5) state this goal will be satisfied if *only one* large area river-contiguous area is restored. By establishing an artificially low numerical criteria, Alternative 13, which includes only the Taylor Yard, is clearly inadequate even by the Corps own analysis.

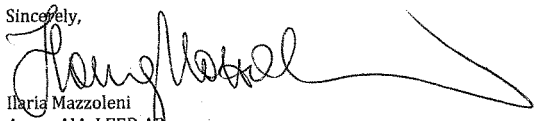
Cost is a factor in today's constrained economic environment, but any real ecosystem restoration plan will take several decades to implement. We cannot take a shortsighted view of today's economics for this vital long-term plan. The Verdugo Wash and other components of Alternative 20 capture the long-term watershed value by linking the Los Angeles River to multiple large corridors and refuges in the mountains and along the river banks. In so doing we will restore a balance for the species in the ecosystem and the public within an urban setting.

Real estate costs are a major factor in any development in an urban area, including ecosystem restoration developments. Land acquisitions in the City of Los Angeles will be expensive. However, the scarcity of habitat and ecosystems in an urban area are far more valuable than in other parts of the nation because of that scarcity. The City of Los Angeles is the second largest city in population in the U.S. The value of the ecosystem is should be valued even higher in light of the dearth of such habitat in the area.

Alternative 20 is a "Best Buy" plan. It was determined to not be the most efficient of the four final plans as measured by the CEICA. However, Alternative 20 is the most complete, cost effective, and acceptable plan in terms of true ecosystem restoration and sustainability! We believe that if the decision criteria are structured to conform to the Corps' own analysis, and other values discussed above are given adequate consideration, either in additional habitat units or by some other means, it will become clear that the incremental benefits of Alternative 20 relative to the costs will make Alternative 20 the Preferred Plan.

We urge the Corps to select Alternative 20 as the final Federal plan. As Angelenos we will do our part to shoulder our cost-sharing responsibilities. This is the right plan for restoring the ecosystem values lost by the construction of the Los Angeles River and for the people of our great City.

Sincerely,



Ilaria Mazzoleni
Assoc. AIA, LEED AP
SCI-Arc Faculty

McCain

From: Brian McCain
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please Support Alternative 20
Date: Saturday, November 16, 2013 8:44:29 PM

Hello,

I live in Council District 1 in Los Angeles, in the neighborhood of Glassell Park. Revitalization of the LA river is a tremendous opportunity to connect the river with its surrounding neighborhoods in a way that makes it accessible to a great number of the residents around the river, and Alternative 20 is the only plan that integrates the river into the community around it. The idea that we could spend hundreds of millions of dollars on a river revitalization project, and still be left with a beautiful park that isn't connected to the river is insane to me. I ask that you please support Alternative 20.

Thank you,
Brian McCain

McCreary

From: Dianemccreary@aol.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] do not remove the flood control
Date: Wednesday, October 09, 2013 10:12:58 AM

I live 1 1/2 blocks from the flood control channel area Tujunga Avenue and Bakman Ave in the 91602 zip code. We have old family photos of this area under water before this flood control on the LA River was built and we still have flooding problems at Moorpark and Tujunga, Bakman and Moorpark when it rains. So why the need to spend money to take this flood control channel out if it will place all of the surrounding property in jeopardy of flooding. When it rains this control channel gets very high and I fear that our property will be flooded out if this safe guard is removed. Also all along the flood control channel in this area there are many large apartment buildings, condo complexes and expensive homes that will be put in jeopardy of flooding if the flood control channel is removed.
Diane McCreary
A concerned property owner that wishes not to be placed under flood control insurance.

Corps McQuiston
McQUISTON ASSOCIATES
6212 Yucca St, Los Angeles, CA 90028-5223
(323) 464-6792 FAX same
consultants to technical management

November 13, 2013

STATEMENT of J.H. McQUISTON on
DRAFT IFR LOS ANGELES RIVER, SEPT. 2013

Honorable Corps of Engineers:

McQuiston is a graduate of the California Institute of Technology and is a Licensed Engineer practicing engineering in Los Angeles since the 1960's.

He experienced the great flood of 1938 and remembers it vividly.

1. McQuiston observed that before flood-control, **ordinarily there was no flow in Valley watercourses except for some storms. Important streets were just paved across watercourse-bottoms and used regularly.**[1]

2. McQuiston's remembrance of the 1930's Valley, East of Sepulveda above Vanowen, is **of a desert populated by sand and gravel production,** except for the presence of "Pop's Willow Lake" in the Tujunga Wash area near the present site of the Hansen Dam lake. 1

3. McQuiston's remembrance of the "narrows" railroad yards and Downtown during the great flood is of great destruction; water, rail cars and massive debris propelled by high-energy flows battered properties below the narrows. Pop's Willow Lake was scoured into extinction by the 1938 great flood. The Valley became a big lake.

4. McQuiston is grateful the United States constructed its system of Hansen and Sepulveda Dams, other dams and catch-basins, and flood-control channels to **reduce** the damage from flooding.

5. Large ponds now occur behind Hansen and Sepulveda dams; other ponds are now widespread in the area. Creatures now can wander at will on wildlife-paths and will find sufficient water and food for their needs.

I. System Flaws

IFR states that **criteria by which the system was designed were flawed.** Remembering the saga of human-error in 1938, noting IFR's data that **current banks are over 5 ft too low for flood-control,** and remembering water "haystacks" that **wet the Los Feliz bridge in minor weather** not long ago, **I believe Southern California is unsafe unless the flood-control channel is re-configured.** 2

Vegetation must be removed from the watercourse. **Occasional water must be enclosed.** Urban **effluent must be removed from the channels. Flood-channel bed** must be smooth and **machine-sweepable.** Rough-wall geometry must be amended to **reduce friction. Enlarge capacity** at choke-points. Channel **must withstand major seismic displacement** where it crosses seismic faults.[2] 3

IFR shows Los Angeles will be destroyed by a 1938-type storm with a 7.2 (Richter) seismic event.[3] 2

1. E.g, Riverside Drive at Camarillo (Tujunga Wash in 1930's) was dry at crossing, but after rain stopped McQuiston saw a house, undermined, fall into the torrent there. The wash was relocated later.
Wilbur Ave at Victory (in 1950's) was dry at crossing (L A River), but after a 1950's storm a bridge was built.

2. Responsible authority predicts a displacement from 6 to 30 ft on the Raymond-Hollywood-Santa Monica (etc) fault, compared to 23 ft on the San Andreas fault in 1906.

3. 1938, rain poured without letup for 7 days straight. Climate-change could make the next occurrence more-intense.

McQuiston

II. PURPOSE per IFR

"The Los Angeles River is a **central component in the [ ] flood risk management project.** [ ] [A]s originally constructed [ ] was **designed to carry a design flood, not a specific frequency event** [ ]. [T]he [ ] channel and dam flood control system **had a relatively low level of flood protection for a metropolitan area."** IFR at 3-23.

"Existing vegetation within the channel further decreases the [flood protection]." IFR at 3-24.

"[T]he River is an **effluent-dominated waterbody.** Nearly **70 percent** [65 cfs] of the **volume in the River** [93 cfs] is from **Water Reclamation Plant** [ ]." IFR at 3-27.

"**Bacteria impairments are not supportive of [any recreational use**, active or passive]. [ ] Reaches [ ] are listed as **impaired for [toxic metal and organic compounds].** [ ] Trash impairments are **not protective of [any recreational or wildlife]** uses. [ ] Nitrogen impairments are not **protective of aquatic life** beneficial uses [ ]. " IFR at 3-27 & 3-73.

"[C]hannel is **designed to be maintained free of vegetation** [ ]. **[L]ack of funds for maintenance has resulted in substantial vegetation growing in the main channel.** [ ] [Vegetation [ ] is **degraded.**" IFR at 3-34.

"Inventory of larger regional parks [ ] demonstrate the **lack of regional parks and open space in the greater Los Angeles area."** IFR at 3-61.

"River usually contains a **low volume** of slow moving water which is often **restricted to a concrete slot in the centerline** [ ]." IFR at 3-70.

"[D]uring periodic storms, the channel volume increases with **rapidly-moving water** [ ] dramatically **increasing the risk of accidental death and injuries to people and animals** [ ]. **Much of the River is fenced and signed to prevent accidental injury or death."** IFR at 3-70.

"283 stormwater **outfalls throughout** the study area that **allow stormwater** to enter the River." IFR at 3-81.

Proposed estimated alternative **construction** cost ranges from **$2 million to $1100 million.**

Proposed estimated **annual maintenance** cost ranges from **$146 thousand to $53,616 thousand.** IFR at 4-38.

"**Objective 1:** Restore Valley foothill riparian and freshwater **marsh habitat.**" IFR 4-42.

"**Objective 2:** Increase **habitat connectivity**." IFR 4-44.

There are no other Objectives listed.

III. General Issues with IFR

A. The paramount objective of the channel is ignored.

It is unreasonable to make a channel as large as it exists, to carry **only 28 cfs of water.** The reason for the channel is **flood control.** 2

Objective 3 must be set forth: Safety of Los Angeles from natural and preventable disasters.

Objective 3 must be paramount and not be mitigated to permit unnecessary Objectives. 4

B. The IFR states the flood capacity of the channel will not safeguard the City of Los Angeles.

The IFR states a reasonable flood will over-top the banks over 5 ft. That would be disastrous. 2

It offers no specific cure and cost thereof.

McQuiston

The IFR states the design criteria were flawed. The **New Orleans design criteria were also flawed.** Los Angeles cannot be subjected to a "New Orleans" disaster just because Corps used improper design criteria. 2

Particularly, the intrusion of **vegetation must be eliminated by means not involving substantial maintenance.** The channel must be completely-lined with vegetation-inhibiting, permanent materials. 3

Particularly, **humans must not be able to approach** the channel. Otherwise, objects such as noxious and bulky items will continue to clog the channel. **Airborne (and thrown) refuse must be addressed and blocked.** 5

Particularly, there must be specific descriptions of how each inadequate reach will be modified to obtain appropriate protection for the City. 2

It must be possible to clean the channel by mechanical means. What little "normal" flow that occurs should be enclosed in a covered channel to make a smooth bottom which is easily-cleaned of debris. 3

C. Effluent should be addressed as a primary issue in the IFR.

California faces water shortages. **Los Angeles Basin cannot support itself with just its area's water alone.**

Far-off communities now have "their" water taken for the Basin's use.

Other areas in America purify and re-use effluent flowing through channels in their areas. 6

There is no reason why the Basin's effluent is wasted by discharging it to the Ocean through the channel.

Effluent, especially if treated, **should not be permitted in the channel.** It should be re-used or should re-charge the Basin's groundwater. **Proper re-use is necessary to alleviate California's water shortage.**

D. Specific data necessary for reasonable IFR assessment of Listed Objectives is absent.

There is no comparative **data,** other than cost **estimates,** on current-deprivation by Objective, the net increase obtained by Objective, and comparison of Objective with activity in surrounding Southern California area. 7

Data on **shift from surrounding area to study area** for each part of each Objective is necessary to make a reasonable assessment of the worth of each part of each objective.

It appears from inspection of what is presented that BOTH OBJECTIVES ARE UNSUPPORTABLE. Constitutionally, more data proving necessity is **required before funding may occur.**

E. Area of IFR already contains sufficient regional parks for IFR area's inhabitants.

Recreational use of IFR area is currently-unsafe due to multiple-menaces to public-health.

Importantly, the IFR area is **not within necessary-distance of almost all the Basin's inhabitants.** The City Plan disallows the IFR area as necessary for its "neighborhood recreation" element. 8

Locals already have Debs, Griffin, Elysian, Elyria Canyon, Griffith, North Atwater, Verdugo, Johnny Carson, Buena Vista, North Hollywood, and Weddington Park for **regional-park access.**

F. City of Los Angeles cannot afford the IFR's construction and maintenance estimates.

Hollywood part[4] of the Los Angeles City Plan requires **105 more 5-acre recreational-parks** for its size and population. Each park requires $30 million for establishment. **IFR maintenance would disallow adding such parks,** which are required to be within walking or short distance from their usage-populations. 9

---

4. Per Calif Govt Code §65301(b), Los Angeles' §65300- City Plan is a collection of area-elements and general-elements.

McQuiston

Los Angeles said it cannot afford even one of the 105 parks it requires to be added to that area. It says the same un-affordability applies to each part of the City's statutory-plan.

Current City budget barely-supports its Police and Fire Departments; current support is described as inadequate. Other City services are woefully-understaffed. There is movement to curtail-further Park facilities and services. 9

McQuiston believes **IFR cost-estimates are inaccurately-low**, and are nonetheless unaffordable and unfair.

Construction cost, **even if financed entirely by the United States (unlikely and unjustifiable)** will carry substantial maintenance costs. Maintenance of IFR recreational use by the United States **would clearly-be improper. The City cannot afford any of the IFR's maintenance costs. Funding local parks would be much-more important throughout the City.**

The amount of unlawful-dumping and trespassing currently-experienced in the area is admitted in the IFR as being economically-impossible to prevent with current resources. 5

Opening the channel-area to trespass will **aggravate ocean pollution, public danger**, and financial hardships.

G. IFR failed to address appropriate alternatives to Options 1 & 2.

This comment does not apply to suggested Option 3; **Option 3 is vitally-required and must be addressed.**

One must begin by defining the need for habitat, assess various locations for the habitat, and the suitability for the habitat contrasted by other considerations.

Options 1 & 2 were discussed *as if they were alternate configurations of a building to be built at one place.*

The alternatives to constructing an *optional-habitat* **in one place are constructing the habitat** *somewhere else*, **not alternative-***configurations* **of habitat before** *factual proof justifies the location* **of the habitat.** 7

The IFR fails to do so. It ignores existing habitats, their linkages, and their connections to the Options.

The failure of proving other **locations don't satisfy Options' needs can't justify the IFR projects.**

Unless the existing habitats are proved deficient, the IFR **must conclude Options 1 & 2 are un-needed.**

Moreover, loading a *basic public-safety* facility with construction *unrelated to public safety, while doing nothing to correct its acknowledged flaws affecting public safety,* **could produce a New-Orleans type of disaster.** 4

IV. CONCLUSION

The projects in the IFR are not yet appropriate nor justifiable to be committed to approval.

Issues raised in this Statement need to be addressed.

Respectfully submitted,

J. H. McQuiston

c: Interested parties

Medberry

Mike Medberry
2005 W. Heron St.
Boise, ID 83702
208-629-6858
Mikecmedberry@msn.com

Kathleen Bergman
Erin Jones
US Army Corps of Engineers

Dear Ms Bergman and Ms Jones

Please consider my comments on the EIS to restore parts of the Los Angeles River. It is time to do this restoration and yours is a very ambitious plan indeed. It may only be11 miles of this 52 mile intermittent arroyo that once served Los Angeles's water, but this is *in the middle of LA!*

I support the Friends of the LA river plan to increase funding from Alternative 13 to support Alternative 20. It is a large increase from a total of $800 million to 1 billion dollars and while it is an enormous amount of money, it is the minimum amount for repairing and restoring what was originally there. And of course, nothing will really replace what was originally the Los Angeles River but it is wonderful to make the attempt to restore this river in LA. While the 11mile stretch of the river is only a short piece of a larger FOLAR plan, I can appreciate the difficulty of bringing back this superb and high profile portion of the river. You deserve great congratulations!

Much has been done to this river over the years in the name of the people of Los Angeles, but the tenor of what people expect has changed rapidly in the last decade. Many are asking to have their river back. The city council says the same. Governor Brown reiterates that message. No one wants to have a river that is only a quick route for sewage. (I'd like there to again be steelhead…) But few want to pay for the real estate, reroute the river to its original route, move their homes, nor want to see the sorts of floods that rampaged the city in the 1880s and 1930s. So what you've come up with is a compromise, and a pretty sweet one at that. I want more sinuosity for the lower river but that may be a long, long term goal. What are your long term goals? Are they as visionary as they seem to be?

Once upon a time I was from LA. Hancock Park was a nice place to grow up—there were tangerine trees, alligator lizards, and a stunning variety of butterflies that lived in my backyard in LA. I hardly knew that there was a river, but my father told me about that river when he grew up there in the 30s and 40s and he talked about orange groves and the purely straight street that was Western. My father caught rattlesnakes in Riverside County and once bragged that he snapped their heads off in a whip-snap way. My friends captured desert tortoises and kept them as pets and I suppose that they died in the maze of LA. Of course that was all foolish. My father told a story about taking his rowboat into the La Brea Tar pits when he was a kid, but you know, what the hell, that was only a story, right? Well, we need a good story about the LA River coming back to life! And you've got a good start on that. The problem isn't money it is one of motivation, chutzpah, and a good story to tell. Well, and money… The LA River has a great

Medberry

story to tell! I mean, hey--this is Hollywood! And Raymond Chandler and Joan Didion and many others to depend on.

I will support the Corps of Engineers, a group that I've long hated and opposed, as long as you keep dreaming that the LA River can be what my father once dreamed that it was. Do you want to know what he dreamed? He dreamed that it was a river.

It will be a hard, long fight, I reckon. But know that I will be on the side of restoring the river to what was. I can see the impediments that you've studied and delivered in your NEPA plan. Good job. And I ask you to grant me a two simple requests for this simple desert arroyo: more sandy bottoms and less concrete. Thank you!

Best,

Mike Medberry

Medford

From: rmedford@ucla.edu
To: SPL_Comments_LA_River_Study
Subject: [EXTERNAL] Alternative 20 for the L.A. River
Date: Monday, November 18, 2013 10:58:46 AM

Dear Dr. Axt,

Thanks for hearing my comments and for all the time and efforts of the Corps and City on the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report.

I have worked at many of the river clean-up days, and now help weed etc. at Glendale Narrows Riverwalk Park. I live in the Montrose community of the City of Glendale.

I support a robust effort to restore our river to sustainability and that is Alternative 20. It is well worth the extra cost.

Sincerely,
Roberta Medford
2715 Sycamore Avenue
Montrose, CA 91020

Mehta

From: Michelle Mehta
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support for Alternative 20 of LA River Feasibility Report
Date: Tuesday, October 22, 2013 4:42:32 PM

To Dr. Josephine Axt
Army Corps of Engineers,

I'm writing to give my support for Alternative 20 of the Los Angeles River feasibility report. It is time to restore our river to the best of our means, and Alternative 13 fails in that endeavor. I am urging you to please adopt Alternative 20.

Sincerely,
Michelle Mehta
Los Angeles, CA

Melchiorre

From: Marion Melchiorre
To: SPL Comments LA River Study
Cc: Karin Flores
Subject: [EXTERNAL] Alternative 20 is The WISE Choice
Date: Saturday, November 16, 2013 2:19:58 PM

Dear USACE.Army,
For thirty years, I have lived and still live by the L.A River. I request that the Alternative #20 be used in shaping our water way. It would be worth very penny spent for the benefit of each community that the river passes through.

The cement river that was originally built is a environmental disaster.
We need the water to go into the ground.

We want more green space to freshen our cities air.

Our communities need the river's recreational and restorative qualities that had been taken away by cementing it into a tunnel.

Pollution from our drains goes directly into the ocean.

Reconsider, change your philosophy, make us proud of our government.
Make the wise decision for the long run, not the shortcut that leads to disappointments .
Alternative 20 is the wisest way to go. Our Los Angeles community is asking for what is best.

Sincerely,
Marion Emerson Melchiorre

Marion

Mendelson

From: Jodie Mendelson
To: SPL Comments LA River Study
Subject: [EXTERNAL] A statement in support of Alternative 20
Date: Tuesday, October 29, 2013 4:21:03 PM

To whom it may concern:

Alternative 20 offers the only opportunity of the various proposals to connect the LA River with the urban fabric in a meaningful way. I've kayaked on the River for the last two summers, and I can clearly see its potential to bring joy and environmental awareness to Angelenos.

Thank you for your consideration,
Jodie Mendelson
416 S. Spring St. #809
Los Angeles, CA 90013

Menzies

From: Leila Menzies
To: SPL Comments LA River Study
Subject: [EXTERNAL] Select Alternativre 20
Date: Sunday, November 17, 2013 5:05:39 AM

As a long-time user of the LA River as a bike-rider and nature watcher on the lower portion (Long Beach), I support alternative 20 rather than 13.
Alternative 20 brings more jobs to our City and more crucially it goes much further in terms of making the LA River actually a river again. I have spent much of my childhood and adult life being blessed to live near major and minor water-ways--the LA River as it exists now offers very limited recreational opportunities and gives no real sense of the River's historic importance to the settlement of Los Angeles.
Please bring real change to the LA River by developing alternative 20. Someday, I hope to see the lower LA River developed with as much creativity as Alternative 20 will bring to downtown LA (which has far more limited outdoor and recreational opportunities.)

Leila Menzies
4617 E. La Vante Street
Long Beach, CA 90815

Mersola

From: MICHAEL MERSOLA ,JR
To: SPL Comments LA River Study
Subject: [EXTERNAL] La River
Date: Saturday, November 16, 2013 8:40:16 PM

Please I encourage the army corp of engineers to go with the Alternative 20 plan for the LA River. This is worth the reinvestment for the future generations of LA. Why half ass it when we can get it right the first time.

Michael Mersola Jr

818.631.5636

B.R.E License # 01503186

PLG Estates

Beverly Hills, CA 90212

www.MersolaGroupEstates.com

Milam

From: Ron Milam
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River: Support for Alternative 20
Date: Wednesday, November 06, 2013 7:09:17 AM
Attachments: twitter32.png
facebook32.png
linkedin32.png

Dear Army Corps of Engineers,

I'm writing to state my enthusiastic support for Alternative 20 for the Los Angles River. My grandfather grew up along an unpaved section of the Los Angeles River in Atwater Village in the 1930's. During his childhood, he swam and fished in the Los Angeles River, only to later watched it get paved. My father, growing up in Burbank in the 1950's , experienced the building of the 5 freeway, which further separated him from the river. By the time I was a kid growing up in the 1980's, my only interaction with the Los Angeles River was noticing the beautiful cats the artist Leo Limon painted on it as we sped by on the 5 freeway for field trips headed to the zoo. As an adult in the late 1990's, I worked to enhance access to the Los Angeles River during my tenure as Executive Director of the Los Angeles County Bicycle Coalition. Working with the city and a broad spectrum of other supportive organizations, we secured funding and the city ultimately built several new sections of the bike path along the River, which the Bike Coalition has introduced thousands of Angelenos to through the Los Angeles River Ride. Now, I'm a father with two eight-week old twin boys. Like their grandfather, I want the Los Angeles River to be an important part of their lives. The best way we as a city can do this is to fully fund and implement Alternative 20. It's the option that will create the most places for kids to play. It's the option that most reconnects out great city with its River. It's the option that will generate the most jobs. Yes, it costs a little more than the other options, but its an investment worth making. Thanks for choosing Alternative 20.

Sincerely,
Ron Milam
1704 Morton Ave.
Los Angeles, CA 90026

cc: Xavier Becerrra, Jimmy Gomez, Eric Garcetti

Ron Milam Consulting
(323) 793-0591

Miller

From: Blair Miller
To: SPL Comments LA River Study
Subject: [EXTERNAL] Subject: Comments on Los Angeles River Ecosystem Restoration Draft Integrated Feasibility Report
Date: Thursday, October 10, 2013 5:28:23 PM

This is a once-in-a-lifetime opportunity to create major environmental and economic benefits in multiple Los Angeles neighborhoods. This is the time to Dream Big! Please select Alternative 20.

Mills

From: mmills8935@aol.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, November 18, 2013 6:44:48 AM

Dear Sirs:

I support Alternative 20 for the LA River because I want to remove as much concrete as possible and it is a far more comprehensive plan.

Cordially,
Melissa Mills
2187 Alexdale Lane
Rowland Heights, CA 91748

Mischke

From: Gerald Mischke
To: SPL_Comments_LA_River_Study
Subject: [EXTERNAL] I support Alternative 20
Date: Sunday, November 17, 2013 7:14:39 PM

Hello,

I think we need to think big and that is why I support Alternative 20.
Los Angeles is a great city and it needs a great river.

Thank you,

Gerry Mischke
1412 Gordon St, Los Angeles, CA 90028

Montealegre

From: andrew montealegre [mailto:montana.alegre@yahoo.com]
Sent: Thursday, September 19, 2013 4:00 PM
To: Jones, Erin L SPL
Subject: Support for Alternative 20 -- LA River

I would like to voice my support for Alternative 20 of the LA River Feasibility Study.

As a retired planner from the City of Los Angeles we first did a report around 1989 on the feasibility. That report also had a picture of me in a canoe on the river.

It's a long time.

Andrew Montealegre
Chair, Glassell Park Neighborhood Council Economic Development and Land Use Committee

Casa de la Montaña Alegre
3854 Cazador Street
Los Angeles, CA 90065
montana.alegre@yahoo.com
cell 323-317-2966 land line /fax 323-474-6416
website: urbanplanningstudios.com

Morales

From: Ashley Morales
To: SPL Comments LA River Study
Subject: [EXTERNAL] To whom this may concern...
Date: Monday, November 18, 2013 2:05:28 PM

As a resident of the Los Angeles County, I strongly encourage the US Army Corps of Engineer to choose Alternative 20 for the Los Angeles River Ecosystem restoration Project. We need to solve our degraded urban watershed. Thank you.

With respect, Ashley

Sent from my iPod

Morton

From: Pat Morton
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Study
Date: Saturday, October 12, 2013 1:26:31 PM

As a resident of Atwater Village next to the LA River, I applaud your choice of Alternative 13 for the restoration of habitat and creation of more public use of the LA River. Your decision to prioritize habitat restoration over recreational uses of the River is exactly right.

The LA River is essential wildlife habitat. Using it for more intensive recreational uses will displace wildlife that have no alternative habitat, a truly awful choice given the degraded state of our wetlands and waterways.

The idea of terraced banks to give humans access to the River is not a good one. The current seasonal use of part of the River for small craft is ridiculous and should be stopped.

Restore as much of the River as you can, but keep it for the wildlife, not the humans. Stay with Alternative 13.

Patricia Morton
4400 Brunswick Ave
Los Angeles, CA 90039

Moyer

From: Harlan and Virginia Moyer
To: SPL_Comments_LA_River_Study
Cc: contact@folar.org
Subject: [EXTERNAL] LA River Ecosystem - Approve Alternative 20
Date: Saturday, November 16, 2013 1:57:35 PM

My husband and I, Harlan and Virginia Moyer, have been residents of Mount Washington for 20 years. We frequently walk along the river and have marveled at how nature is willing out – with lush growth of trees and other plants, lots of birds and water fowl. We love the Los Angeles River and think it is time for it to be a real river again.

It is apparent from the endorsements across many diverse communities that Alternative 20 is the best choice for the Los Angeles River.

We appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. We are thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! We have reviewed the report in detail and are writing to voice our support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Please join all the groups who have endorsed Alternative 20 and make this the choice for making our river thrive.

Regards,

Harlan & Virginia Moyer
957 Nordica Dr
LA 90065

Myers

From: Kalisa Myers
To: SPL Comments LA River Study
Subject: [EXTERNAL] The LA river- our water, our security
Date: Monday, November 18, 2013 10:05:04 PM

Dear Dr. Axt:

My name is Kalisa Myers, a research scientist at USC. I first learned of the LA river when I realized the USC shuttle drove right over it; I only knew it was a river because of the sign saying so. If that sign had not been there I would have assumed it was a massive ditch made only for the filth of LA to flow down. Won't you consider making this an eco-resort, with lots of well-paying tourists paying for expensive bike rentals and $20 Hot Dog Sticks, like we have at Santa Monica? Instead of the Super Spot where my friend's dog got MRSA from accidentally falling in? (True. She has records and he still has toe-weirdness!) Instead of the Spot I'm scared to go in- not just because if I fell in, I might die of MRSA, but because my rotting body would not change the overall odor of the place and my corpsified self is never found.

I'm a microbiologist, folks. And I will offer my entire inheritance to the first engineer who will swim in the LA river for 10 minutes during the first heavy rains. No takers? Why not?.. Hmmm.....

Yeah, I wouldn't take it either. You couldn't pay me enough to swim in the LA River. Is that really what we want for our own watershed? Why not make it a clean watershed and sit back like Kings, as we watch tourists from all over the world come to it. As time goes by, it will only get more valuable as more watersheds get destroyed. Look at Santa Monica. What earned us more- Hyperion allowed to dump sewage galore, or deciding, no, we'll make that a tourist beach. Over time, the tourists have made it worth it. They have turned Santa Monica into a cash cow. Why not get a piece here? We have a whole gorgeous river. Let's love her and watch her pay us back bigtime!

From FOLAR-

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people

- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
  - Provides 7015 more jobs and $386 million more in wages during construction
  - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
  - Creates 1094 more new permanent jobs valued at $62 million more
  - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely, Kalisa Myers and FOLAR

Nachtrab

November 17, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

<comments.lariverstudy@usace.army.mil>

Dear Dr. Axt:

I'm Tom Nachtrab. I live in a distant part of the City of Los Angeles called Chatsworth. A tributary of the LA River drains the Simi Hills and runs, at times and between concrete walls, through my neighborhood.

I, without reservation, urge the USACE to step up and make maximum use of the rare opportunity we now have to make significant improvements in the quality of life for some of LA's flora and fauna (human and all the rest).

Please submit ALTERNATIVE 20 to Congress for approval. We do not want to pay (less) for a token improvement.

We need robust improvements to the LA River corridor, so we need to pay the price, as an investment in a healthier future.

Please don't let us squander this chance. Please revise your TSP to #20 RIVER.

Sincerely,

Thomas A Nachtrab

Thomas A. Nachtrab
10530 Larwin Ave. unit 7
Chatsworth, CA 91311-0352
tnachtrab@gmail.com

Nemtzow

From: David Nemtzow
To: SPL Comments LA River Study
Subject: [EXTERNAL] In support of Alternative 20 on the LA River
Date: Monday, November 18, 2013 2:34:35 PM
Importance: High

Dear Dr. Axt:

I am a resident of Santa Monica and a frequent user of the Los Angeles River and its surroundings for bike riding and even a wonderful kayaking trip during one of the allowed kayak trips.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am very pleased that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration. I have reviewed the report and I am providing comments **in support of Alternative 20** presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, **Alternative 13 lacks the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.**

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in LA, the US's 2nd largest city

Alternative 20 is far superior to Alternative 13 for many reasons that have been well articulated by the Friends of the LA River (and I support their work on this issue), particularly as it would better improve the River (in both quality and quantity) and make the River more similar to the ecosystem that historically existed prior to the channel.

Restoration of the LA River is crucial to me and the region. The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. I respectfully urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Please let me know how the issue develops and thanks in advance for considering my views.

Sincerely,

David Nemtzow
1254 9th Street
Santa Monica, CA 90401
310-622-2981

==========
David Nemtzow
david@nemtzow.com

Ng

From: Carol Ng
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Choice
Date: Saturday, November 02, 2013 11:01:38 PM

I want to express my support for Option 20. I feel that although this is the costliest choice, it can be completed and funded in stages. I feel it best accomplishes the goal of cleaning the River, and consequently, the runoff to the Pacific. Moreover, it will protect and enhance the surrounding flora and fauna. It will provide a game-changing scenic focus for our City.

Thank you for your consideration.

Nicholson

From: Sonia Nicholson
To: SPL Comments LA River Study
Date: Thursday, October 17, 2013 7:27:30 AM

Dear Army Corps of Engineers:
Please adopt alternative 20 as the best course of action for the Los Angeles River and the Angelenos of the present and future. Alternative would provide recreation, habitat improvements, and stormwater management at the same time. This is an enormous opportunity to create a better city that will improve the lives of humans and wildlife that should not be missed.
Sincerely,
Sonia Nicholson
Architect
Landscape Architect

O'Brien

From: Frank <frank@hwedc.com>
Date: Thu, Oct 17, 2013 at 9:39 PM
Subject: LAR Notes
To: michael.affeldt@lacity.org

here is a PDF of my notes. notion is to get key ACE decision metrics of Alternative 20 > Alternative 13.

this isnt via smoke / mirrors etc but by really scrubbing the numbers and making sure all the benefits are identified and quantified.

also, i'm assuming the costs are accurate or if not that any variations would occur across all the alternatives. this may be incorrect.

i'm happy to talk further at your convenience.

obviously there will also be a persuasion process w city and federal officials. better and more accurate data would help this.

thanks for the work on the river project. it's very important.

regards
frank o'brien
///

O'Brien

COMMENTS on ACE LAR PLAN 101713

Comments focus on Alternatives analysis.

A. Need to Consider Watershed as Inter-Connected Total Natural System.

Compton Creek is omitted as an LAR tributary. Figure 3-1 and narrative at page 61. [1]
Historical Dominquez riparian areas not accurate. Figure ES-1. Rely on secondary sources rather than original sources. [2]

Why is this important?

- Downriver is affected by what happens upriver
- Natural Resources and Water Quality in tidal prism and San Pedro Bay.directly [3]
- City of Compton & LA Watts portions, Central Ave – 103rd St – Watts Towers. indirectly

Alternative analysis should include a tabulation of not just "footprint" area but entire watershed benefits.

NOTE: Downrange Congresspeople not on distribution.

B. CE / ICA. Cost Effectiveness and Incremental Cost Analysis

Alternatives Not "Self-Contained and Policy Neutral" : Different alternatives generate different levels of learning, technical expertise and example modeling. Upper watershed projects have benefits elsewhere regionally, in the nation and internationally.

LA River Aesthetics enlarge the sense of the possible. Individually and shared futures. [4]

These features can be Translated into a Quantity Value for the Alternative Analysis.

Notion of Incremental Dollar. Accurately evaluate alternatives Marginal Dollar allocated back to all prior dollars to capture benefit of infrastructure investment.

- Ie Green Line Trolley to LAX

C. TOO AMBITIOUS / TOO EXPENSIVE. TOO MODEST.

- "Cultural Literacy" includes Sense of Wild Nature, A Past that isn't past, Alternative Futures and Textures of Life. [5]

- For example, does not include restoration of Chavez Ravine to prior condition. ///

O'Brien

ROUGH BACK OF ENVELOPE CALCS

Reference Table 4-10; not changing any costs

Net Average AHO for Alt 20 from $6,782 to $8,225

Incremental Unit Cost Alt 20 $7,750 v $7,900 for Alt 13.

Result: Alt 20 : Not As Locally Preferred but NER Plan.

6

7

SUMMARY RECOMMENDATIONS:

- Original sources not secondary sources
- Comprehensive analysis to include total watershed benefits within Net Average AHO.
- To degree permissible within CE / ICA model include all benefits including public policy and aesthetic benefits that are real although difficult to quantify.

8

//

Ocas

From: Beverly Ocas
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, November 18, 2013 1:57:56 PM

I strongly suggest, in regards to the LA river restoration program, that you choose Alternative 20.
-Beverly

Sent from my iPhone

Olson C.

From: olson@lafn.org
To: SPL Comments LA River Study
Subject: [EXTERNAL] Save the Water
Date: Wednesday, October 09, 2013 11:24:39 AM

Dear Sir:

2/3 of the water in LA River flows out to ocean and is thus wasted. Check dams and settling basins would be great to save this valuable resource for all Angelenos. Hansen Dam has successful settling basins. This could save LA hundreds of millions of dollars for water it no longer would need to purchase.

Carl Olson
P. O. Box 6102
Woodland Hills, CA 91365
818-223-8080

This message was sent using Endymion MailMan.
http://www.endymion.com/products/mailman/

Olson E.

From: Eraina Olson
To: SPL Comments LA River Study
Subject: [EXTERNAL] I support the LA River Protect
Date: Thursday, October 17, 2013 10:53:56 AM
Attachments: image003.png

I support the LA River Project. LA needs more urban, green open spaces especially river recreational areas close to inner cities, instead of ugly, concrete, empty riverbeds which are extremely unsightly and of no use to anyone (with the exception of controlling flooding). Therefore I support the "Alternate 20" for LA River future.

Eraina Olson
Underwriting Administration
1700 Greenbrair Lane
Brea, CA 92821
714 255 5002
Fax 714 255 5096
eolson@mercuryinsurance.com

This e-mail message, including any attachments, is for the sole use of the intended recipient, and may contain material that is privileged or confidential and legally protected from disclosure. If you are not the intended recipient or have received this message in error, you are not authorized to copy, distribute, or otherwise use this message or its attachments. Please notify the sender immediately by return e-mail and permanently delete this message and any attachments.

O'Neill

From: william o"neill
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] ALTERNATIVE 20, we strongly endorse this more comprehensive plan.
Date: Saturday, November 16, 2013 10:09:33 AM

Hello.
ALTERNATIVE 20, we strongly endorse this more comprehensive plan.

In the **Los Angeles River Ecosystem Restoration Integrated Feasibility Report,** the U.S. Army Corps of Engineers chose Alternative 13 as their Tentatively Selected Plan.

FoLAR and a large coalition of elected officials and environmental groups agree that this plan **FAILS TO CONSIDER** key factors of our unique environment and **FALLS FAR SHORT** of achieving meaningful transformation in our degraded urban watershed. Instead, we strongly endorse the more comprehensive **ALTERNATIVE 20**.

There is still time to influence this decision. Let's seize this opportunity to remove more concrete, create more habitat, connect important corridors, and conserve more open space for the health of the wildlife and people of Los Angeles.

Thank you.

William O'Neill

Oswald

Friday, November 15th, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division

U.S. Army Corps of Engineers, Los Angeles District

P.O. Box 532711

ATTN: Ms Erin Jones, CESPL-PD-RN

Los Angeles, CA 90053-2325

comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

My name is Ben Oswald, owner/operator of PlantNativePlants, and a nearby resident of the Los Angeles River for over 20 years. Native California ecosystems are very important to me personally and professionally, and it is of critical importance to me in these respects, as well as on a global scale, for people to understand and appreciate the value of Native, natural ecosytems. This appreciation and knowledge will lead us to become better global citizens, and I believe there is no better opportunity to do so in my large, under-parked area of Eastern Los Angeles, than restoring the LA River to it's most full and most natural state.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate, including scores of endemic species.
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains

Oswald

- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Ben Oswald
4223 Portola Ave.
Los Angeles, CA 90032

Otto

From: Harry Otto
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River study alternatives
Date: Sunday, September 29, 2013 8:10:35 AM

Please indicate my support for Alternative -20 for the revitalization of the Los Angeles River.

Thank you,
Harry Otto

Sent from my iPad

Padilla

From: S. David Padilla (dP3)
To: SPL Comments LA River Study
Subject: [EXTERNAL] Letter in support for the Los Angeles River Restoration
Date: Monday, November 04, 2013 1:33:53 PM

Good morning,

Over the past few years, Angelenos, like myself, have come to realize that many decisions taken during the last century have lead Los Angeles to grow in a way that is not sustainable. Much of our water that would normally be absorbed into the water table has been carried out into the ocean, carrying whatever substances it picked up along the way with it. When touring the city with friends from out-of-town, they laugh at the idea of Los Angeles having forests, let alone a river. However, as we drive through Griffith Park, next to the 134 and down the 110 Parkway, they come to realize that Los Angeles isn't just the textbook definition of urban sprawl, but that some wilderness was left behind. As we dig deeper to the history of the city, it becomes clearer that the Los Angeles we know only came about around 1930. Earlier pictures show open spaces and pastures, earlier articles talk about building bikeways from Pasadena to Downtown, and some tell stories of unusual snow on the ground.

Projects such as the LA river restoration don't come by often and they are at the whim of the political climate, funding, and taxpayer attitude. The timing for this project to be completed is not at its prime, but it is as good as one could wish. The city is revitalizing itself and creating new initiatives to combat decades of myopic planning, creating a rare opportunity to revert developed land into its original state. Although people need space to grow, it cannot be done in spite of the ecosystem around us--greenscapes that help the city breathe and purify our air, open land that help filter the water before it can pollute our beaches were we swim, reduced impermeable surfaces to mitigate the heat island effect, and breaks in urbanized space to create opportunities for businesses to prosper and stand out. In cities where space is limited, such as New York, the most desirable land is where city meets nature, where dwellers can seamlessly travel from the city to a forest and effortlessly return again--all without leaving city boundaries.

Many studies have equated tree cover to income levels across the United States, some as far as Washington D.C., but we don't need to go so far to see this, when it is obvious in our own communities in Southern California. Access to clean air and open space should not be a luxury, but rather a benefit for everyone to use. Many of the areas affected by the LA River project are adjacent to working-class neighborhoods or in spaces that will be used by the entire spectrum of Angelenos--spaces such as the Cornfield, which serves as an event space for all ages. Taylor Yard is adjacent to Mount Washington, Highland Park, and Garvanza, which have all been historically of modest income. By increasing the natural space available to residents, the value of their land will increase and will have nearby access to prime open areas, rather than disused train yards.

Conversely, areas such as Downtown LA are in the middle of booming growth that has proven to create a community that is diverse and vivacious. However, this growth will continue to push outward as it always does, it is then crucial to secure open-space areas now, while financial pressure is lower, rather than in 10 years when such a project would be deemed financially impossible. We can look to Griffith Park as a case study, had this space not been protected for future generations, it

would be covered completely in exclusive mansions of various sizes, rather serving the city as a whole, while maintaining the feeling of the community around it. To re-create it today would take a gargantuan effort and a litany of problems.

For all these reasons, I support a complete and thorough plan encompassed in Alternative 20.

Thank you for helping Los Angeles evolve.

Sincerely,
--
S. David Padilla

Paravecchio

From: Robin
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA RIVER PLAN
Date: Thursday, October 10, 2013 5:04:27 PM

To whom it may concern,

I appreciate your availability to comments from locals. Please accept this email as a message of representation regarding the recent voting on the rehabilitation of the LA RIVER. I am in full support of the plan to make this flowing heart of our city as welcoming and healthy as possible for all its inhabitants. I encourage the powers that be to choose a financial plan that recognizes how important the River program is to the city, instead of the cheapest option.

Thank you for your time and stewardship.

Robin Paravecchio

Pardinas

From: Fly PR
To: SPL Comments LA River Study
Subject: [EXTERNAL] WRITING IN SUPPORT OF ALTERNATIVE 20
Date: Friday, October 11, 2013 9:49:20 PM

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, CA 90053-2325

Dear Josephine R. Axt, Ph.D,

I would like to express my full support for L.A. River transformation referred to as ALTERNATIVE 20. Los Angeles is an amazing city and the potential to offer the people that live here this kind of green space has seldom been possible.

We need this transformtion of the Los Angeles River to move L.A. to the next stage of development as a liveable city, gorgeous city.

I hope you'll decide to make ALTERNATIVE 20 a reality.

Sincerely,

Ilka Erren Pardinas
home owner in Glassell Park
proud citizen of Los Angeles

Fly PR
2658 Griffith Park Blvd., № 816
Los Angeles, CA 90039
T. 323-667-1344
flypr@flypr.net
http://www.flypr.net/

"Imagination is more important than knowledge, since knowledge is limited."
- Albert Einstein

Paredes

From: Daniel Paredes
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Revitalization
Date: Monday, November 18, 2013 9:19:07 PM

To Whom It May Concern,

When my grandparents first moved to Elysian Valley more than 40 years ago, they never imagined that their daughter would later return to the same neighborhood, meet my father, a man from the same small town in Mexico who she had never met, and raise a family of four.

My parents still live in Elsyian Valley, and I returned for graduate school at UCLA after finishing my studies in UC Berkeley. Now, with a degree in Political Science, in Sociology, a minor and Masters in Urban Planning, I feel that my community, and those that surround the LA River, are in dire need of local jobs.

I support Alternative 20 for my city, but I also support local hiring for the work that is to be done in our neighborhoods. For the sake of our futures and the future of out youth, please include Local Hire provisions in Alternative 20.

Thank you.

Daniel Paredes, Research and Policy Analyst

LAANE

Parke

From: Andrew B. Parke
To: SPL Comments LA River Study
Subject: [EXTERNAL] The Army Corps should choose "Alternative 20" as the best plan for the LA River"s future.
Date: Thursday, October 17, 2013 8:45:23 AM

The Army Corps of Engineers should choose "Alternative 20" as the best plan for the Los Angeles River's future.

--
Andrew Parke, S.O.C.
andrewBparke@gmail.com

Pearce

From: Richard Pearce
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Monday, November 18, 2013 10:32:31 AM

Nov 18, 2013

Richard Pearce
240 Bentley Circle
Los Angeles, CA

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325

Dear Dr. Axt:

My name is Richard Pearce. I am a film-maker who has lived in LA for over 35 years. I have taken a kayak trip with George Wolf on the LA River and as a result feel passionately concerned about its preservation and future development.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river

Pearce

connections, rather than just culverts or pipes

- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,
Richard Pearce

Pedersen

From: Karen Pedersen
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Study comment
Date: Thursday, October 17, 2013 2:55:47 PM

Dear Engineers:

Thank you for providing opportunity for public comment. I live in the Mt. Washington neighborhood of Los Angeles, and have lived here for 35 years. I support the Alternative 20 plan as the most expansive, transformative and beneficial option. It will provide maximum habitat for wildlife, create the richest and most diverse opportunities for residents' and visitors' appreciation of the river area, and generally the best enhancement of a long-neglected part of Los Angeles ecological and cultural heritage.

Thank you.

Karen Pedersen
Elyria Drive
Los Angeles, CA 90065

Perez

From: Gladys ..
To: SPL Comments LA River Study
Subject: [EXTERNAL] Restoration Project
Date: Monday, November 18, 2013 2:01:25 PM

To whom it may concern,

I am writing to ask you, The US Army Corps of Engineers, to please reconsider the decision on the Los Angeles River Restoration Project. I believe it would be best to choose Alternative 20 on the project because it would be the best choice for the pollution problem on the ocean.

Thank you,
Gladys Perez

Petteway

From: sue petteway
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Alt 20
Date: Tuesday, November 12, 2013 11:31:02 AM

I strongly support Alt 20 for reclaiming our river. As a Chinatown resident, I look forward to re-integrating my neighborhood with a restored LA River, honoring the City's fundamental relationship with the River and enjoying the resurgence of wildlife Alt 20 will bring.

Thank you,
Susan Petteway
808 N Spring St # 616
Los Angeles, CA 90012

Phan

From: Marjorie Phan
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comments for the LA River"s Alternative 20
Date: Monday, October 21, 2013 8:52:26 PM

Hello,

I am a committed discretionary public transit user, hoping to minimize my carbon footprint, save money and support the movement towards a more sustainable urban life. I own a car, but I choose to use buses or trains to travel within the LA County for work, errands and fun activities almost every day.

During my free time, I enjoy venturing to Southern California's Great Outdoors (National Forests, urban rivers, city parks, beaches or lakes) to decompress and explore, but these places are almost never accessible by public transit, so I have to drive and struggled through gridlock traffic and stand up to rude drivers. My enjoyment of nature ironically generates pollution to our air, water and soil and also burn a hole in my wallet. However, I am aware that many people can not afford to enjoy Southern California's Great Outdoors even if they want to because a car, any car, is not affordable and the scant public transit options to trails, forests, nature centers are slow, time consuming and confusing.

My wish for the new LA River is to involve local and regional transportation planning authorities near the area to establish cost effective, efficient and reliable public transit options for patrons of the LA River from every direction and from every socioeconomic background. Please include a spatial layout of current transit routes that bring people to or close to the LA River and include potential new and improved routes. It would be great if existing walking and biking paths are improved upon to be better connected to public transit options to make traveling to, from and within the River easy and painless.

Thank You.

Phillips G.

From: Grace Phillips
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA RIVER: I WANT ALT. 20!!
Date: Tuesday, October 01, 2013 7:36:27 PM

PLEASE give us Alternative 20 for the LA River!! Army Corps of Engineers could be the hero for every single person in Los Angeles, or you can look like a stingy meany. After scraping everything up at the Sepulveda Basin, ACE needs to prove to the citizens of LA that it actually gives a hoot about us! My kids love the river and want to see it come to life. Please pursue ALTERNATIVE 20!!
Thanks,
Grace Phillips
Santa Monica, CA

Phillips S.

From: Shane Phillips
To: SPL Comments LA River Study
Subject: [EXTERNAL] In support of Alternative 20
Date: Wednesday, October 02, 2013 12:52:58 AM

To whom it may concern,

I'm writing to put my support behind Alternative 20 for the restoration of the LA River. While I believe the restoration of the river is crucially important, I see this as more than just an environmental project. It is also an outstanding opportunity for economic development, the chance to build a premier cultural landmark, an entertainment and recreation hotspot, and a way for Angelenos to be more active in a beautiful, inviting, and safe environment.

Even beyond that I believe this can be a project representative of the restoration of Los Angeles itself. Along with the expansion of the light rail system and the revitalization of downtown and other neighborhoods, this is a way for us to build a more sustainable city--one that is built for people, not just cars. Alternative 20 will reinforce that vision and contribute most to making it a reality.

I understand that the cost of Alternative 20 is exceptional, but I am confident that it is well worth the expenditure. The diversity and magnitude of benefits are justification in their own right, and I am confident that in the long run this will be a positive financial investment as well--an outstanding project will draw tourism and growth in the coming generations that will surely be sufficient to offset the additional costs of this most ambitious proposal.

Thank you for taking seriously the concerns and input of the public, and particularly those who are excited to take best advantage of this resource for themselves in the coming years.

Best,

Shane Phillips
(425) 780-0738

Piane

14 November 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Attn: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, California 90053-2325

Dear Dr. Axt:

I am a long-time resident of the Northeast Los Angeles community, Glassell Park. Much of my neighborhood's southwest border is defined by the Los Angeles River. During the time I've lived here, the Los Angeles River hasn't changed much, but, with only minimal improvements--a park here, a path there, some artistic gates--my fellow Angelenos's perception of it certainly has. The River is no longer an obstacle to be circumvented on our way out of the neighborhood; it is now a vital part of our landscape and a reason--in an area historically short of them--to celebrate our community.

If such a change of awareness can occur with comparatively minor improvements, imagine what a full restoration of the River would do for our region!

I am grateful for the time and effort you and your staff put forth to carry out your study and to prepare such a thorough report. I read it with great appreciation and enthusiasm, and attended your presentation at the River Center as well. Thank you for involving the community and providing this opportunity for comment.

I believe that rivers are truly the life-blood of cities, and that it is an imperative of this generation to restore our River to the fullest extent possible. It is for that reason that I implore you to recommend Alternative 20 as the only plan that will provide the level of connectivity that is essential to effect a comprehensive and sustainable restoration.

Once again, thank you for all your efforts on behalf of our River and the people and wildlife it benefits. I ask you to please reconsider your initial recommendation, and recognize that only Alternative 20 can truly create a River for our future.

Sincerely,

Marge Piane

marge piane / 2267 moss av / los angeles ca 90065 / 323-255-5763 / margepiane@mac.com

Pierola

From: Antonio Pierola
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support for LA River Alternative 20
Date: Wednesday, October 30, 2013 10:57:43 AM

The selection of the most appropriate alternative for the revitalization of the Los Angeles River should rest on the benefits to the connection of riperian habitats that enhance the lives of the residents closest to its watershed.

LA took a major step forward when portions of the LA River were allowed to look like a river and no longer a concrete channel. Nevertheless, there are communities in the vicinity that still have no tangible connection to the natural habitats that a healthy river would nourish.

It would be a shame that, having the opportunity, after years of waiting for a greater inclusion of this revitalization, Downtown Los Angeles, Glendale, and the NE Los Angeles communitites remain left out.

Alternative 20 includes key portions of the watershed in the revitalization project. Alt 20 is the most appropriate way to realize the hopes for connectivity with existing revitalized corridors within the LA River as well as with its tributaries, like the Arroyo Seco and Verdugo 'confluences.'

The quality of life for children, the active retired, the enhanced economic values in the surroundings, access for green educational opportunities, and the stimulus for flora and fauna diversity are worth every effort to achieve an integrated revitalization.

Let's not leave this for the future. The time is now to provide the connection between urban living and our natural habitat for our children and theirs.

My choice is Alternative 20. Please listen to my voice and those of my fellow watershed residents from Altadena to Downtown and up beyond Glendale.

Thank you.

Antonio Pierola
626.627.9017

Plamondon

From: Anthony Plamondon
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Monday, November 18, 2013 2:05:03 PM

I support option 20 for real change to the LA River. Please reconsider.

Anthony Plamondon
3733 Rolle St
Los Angeles, CA 90031
213 618 6175

Pollock

From: Mikaela Pollock
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] Please Choose Alternative 20
Date: Monday, November 18, 2013 9:38:32 AM

Dear Dr. Axt:

My name is Mikaela Pollock and I'm a new resident of Elysian Valley. I've lived in the neighborhood for almost two years but have visited the river and its bike paths for much longer. My family and friends frequently (1-3x per day) utilize the space for recreation- biking, walking, dog-walking, running, kayaking, photography, etc. And it was our love of the river and the spaces surrounding, that called us to move into the area. Though I work at The Getty, all the way across Los Angeles, the commute it worth coming home, back to the river. I can't believe how lucky Los Angeles is, that among the ridiculous traffic and endless concrete sprawl, we have such an incredible natural resource just waiting for revitalization!

Thank you for your time and effort working with the community for the benefit of the river. I have reviewed the report and urge you to support Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, this alternative to lacks the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Alternative 20 is far superior to Alternative 13 for a number of reasons including: providing for additionally restored habitat, more concrete removal, wildlife connectivity affecting migration, sustainability, job creation, etc. Alternative 20 would provide the amount of space needed to bring Angelinos together to enjoy wholesome outdoor activities and exercise.

Living on one of the more popular streets for river access, I watch families access the path almost every single day. They bring with them children that would otherwise never see a blue heron, egrets, and other wildlife in its habitat. Children that would otherwise likely be watching tv or inside playing video games are getting exercise together with their families outdoors. It's a fantastic site and we need to ensure that this step in the revitalization effort is great enough to sustain this movement.

I urge the Corps and City to select Alternative 20 because it provides the best restoration and is the most sustainable option.

Sincerely,

Mikaela Pollock

Pryor

November 17, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
ATTN: Ms Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

My name is Larry Pryor and I am an associate professor at the Annenberg School for Communication and Journalism at the University of Southern California. I wish to urge the adoption of Alternative 20 for many reasons, but on behalf of the many young people who have become familiar with the river and its immense possibilities..

Many of us who teach in Southern California, from grade school to graduate school, use the Los Angeles River as our laboratory. Its urban setting and the heroic efforts that have been made over the years by Friends of the River and its supporters offer an ideal context to demonstrate that environmental restoration can succeed. The unique partnership that has been forged between concerned citizens and the local, state and federal government serves as a model for our students to study. They not only absorb this lesson from studying documents but also through interviews and visits to the river to see the setting first-hand.

I teach a course in Environmental Journalism at USC and not only spend several class hours on the history and promise of the Los Angeles River but also a day on the river, using a USC bus to transport the class. We visit key parts of the river, plus the FOLAR office, where Lewis McAdams spends time giving the students his views on the importance of restoration of the river to the community. The students are then required to write news stories based on their experience.

This valuable resource had been all-but abandoned, but we now have the opportunity to turn it into a vital part of the local environment. We may not have a chance to accomplish this later as Southern California continues to build out. Alternative 20 offers the most long-term benefits. I hope the many young people and students who have been, and continue to be, exposed to the river's possibilities will have their faith in government boosted by seeing Alternative 20 selected.

Sincerely,

Larry Pryor
Associate Professor
University of Southern California
University Park
Los Angeles, Calif. 90089

Ragosine

From: Dorrit Ragosine
To: SPL Comments LA River Study
Subject: [EXTERNAL] L.A. River - Alternative 20
Date: Wednesday, October 09, 2013 12:27:15 PM

Dear Army Corps of Engineers,

As a resident of Los Angeles who lives near the river, I would like to submit my vote for the Alternative 20 option. Los Angeles is in desperate need of green space and an artery for bicycle traffic.

Although Alternative 20 is more expensive, it is a wise, long term investment in the future of our city.

Please consider changing your stance.

Best,

Dorrit Ragosine
Social Change Public Relations & Marketing
213-509-7748
dorrit@socialchangepr.com
Visit us on the web at: www.socialchangepr.com

Rahman

From: abir rahman
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River
Date: Monday, November 18, 2013 1:59:28 PM

To whom it may concern,
Please choose Alternative 20 for the Los Angeles River Ecosystem Restoration Project. As a student who is concerned about the environment, I believe Alternative 20 is the more efficient plan as opposed to Alternative 13.

Thank you,

Abir Rahman
Student at John Marshall High School

Ramseyer

From: William Ramseyer
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Project
Date: Monday, October 28, 2013 2:36:15 PM

After careful consideration I feel Alternative 20 best meets the needs of Los Angeles.
William Ramseyer

Rand

From: Jae Rand
To: Jones, Erin L SPL
Subject: [EXTERNAL] LA RIVER OPEN COMMENT PERIOD
Date: Thursday, October 17, 2013 9:06:21 AM

Hi Erin,

I'm writing to add my vote for making the project #20. If we are going to spend the time and every ones money, it should be the most inclusive of possibilities. There are a lot of people living in and out of the area that could benefit from using the revitalized river.

Sincerely,

Jae Moreno Rand
860 N. Ave 65
Los Angeles, CA 90042

Rapp

ATTN: Ms. Erin Jones, CESPL-PD-RN
Josephine R. Axt, Ph.D., Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District,
P.O. Box 532711
Los Angeles, CA 90053-2325

Dear Ms. Jones,

Regarding the Los Angeles River Ecosystem Restoration Project:

I grew up on the southwestern edge of Glendale, less than half a mile from the Los Angeles River. I can't imagine how much it would have enhanced my childhood to have had the LA River be not a dangerous, fenced-off barrier between us and Griffith Park, but instead somewhere we could have played and enjoyed a bit of nature.

This is especially true in that area (and most of the residential areas near the LA River) where sometimes the only greenery is whatever manages to grow between the cracks in the pavement. Restoring some of the natural ecosystem to what is often a blighted urban landscape would be an incredible blessing for this area and Los Angeles as a whole.

For these and other reasons, **I fully support Alternative 20**. I believe it would restore the maximum amount of ecosystem and bring the greatest benefit to the Los Angeles River.

Thank you for your consideration.

Eric Rapp

Eric Rapp
333 N. Windsor Blvd.
Los Angeles, CA 90004
Eric_rapp@hotmail.com

Raquedan

From: Inah Raquedan
To: SPL Comments LA River Study
Subject: [EXTERNAL]
Date: Monday, November 18, 2013 2:00:58 PM

To Whom It May Concern :
Please choose Alternative 20 because as a resident of Los Angeles County I care about my environment . Rather than fixing a part of it might as well fix the whole system .

Renaker

Josephine R. Axt, Ph.D.; Chief, Planning Division
P.O. Box 532711
ATTN: Ms. Erin Jones, CESPL-PD-RN
Los Angeles, CA 90053-2325
Cc/comments.lariverstudy@usace.army.mil

11/16/2013

Dear Dr. Axt:

My name is Mary Renaker and I have been an urban creeks and riparian parkways supporter since 1989. I co-founded the Cottonwood Creek Conservancy in Encinitas, CA, and along with the City of Encinitas, County of San Diego and State of California, successfully restored an historic creek, permanently removed 130,000 stalks of invasive Arundo donax in the riparian zone, established the creek as a CA State Point of Historical Interest on Pacific Coast Hwy., and with San Diego People For Trees, established a wildlife corridor between Batiquitos Lagoon and Cottonwood Creek along Historic Hwy. 101 in Encinitas.

I have been a supporter of Friends of the Los Angeles River since that time, and identify with the organization's mission to create a better balance of our environment and urban community along our remaining riparian corridors in Southern California.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report.

I have reviewed the report and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative lacks key areas essential for adequate ecosystem restoration of the Los Angeles River.

My major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot, including mountain lions, mule deer, coyotes and bobcats
- The rarity of the region's Mediterranean climate
- The intense destruction of natural areas and overdevelopment in the 2nd largest U.S. City

Renaker

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly

The Regional Economic Development analysis shows Alternative 20:

- Provides 7015 more jobs and $386 million more in wages during construction
- Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
- Creates 1094 more new permanent jobs valued at $62 million more
- The Other Social Effects analysis shows Alternative 20 with its larger scope will:
  - Produce a greater connectivity with the people and communities
  - Reach more of the census tracts with high poverty and high minority populations
  - Provide more green areas to encourage physical activity
  - Provide more green areas to reduce air quality effects

Renaker

Restoration of the Los Angeles River is crucial for buffering the effects of climate change and for the health of future generations!

The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. I urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Thank You Sincerely,

Mary Renaker
1237 ¼ - 18th St.
Santa Monica, CA 90404
(310) 264-9179

Rene-Weissman-1

From: Elaine Rene-Weissman
To: SPL Comments LA River Study
Cc: contact@folar.org; melissa.guerrero@mrca.ca.gov
Subject: [EXTERNAL] ARBOR Reach proposals
Date: Sunday, September 29, 2013 11:43:51 AM

As an architect practicing in the Los Angeles area for twenty years, I have seen the evolving recognition of the Los Angeles River as an powerful 'green and blue' resource.
I support Alternative 20. It will revitalize the de-stimulated neighborhoods adjacent to the waterway. It will improve the ecological conditions of a great river, and it is the right expenditure of government resources.

I am concerned that there has been insufficient recognition of the historically significant bridges and viaducts serving the LA River. I believe they constitute a historic district, and any new bridge construction should, at the very least, aspire to be as elegant and noteworthy as the ones already built.

Thank you,

Elaine René-Weissman, Architect + LEED AP
ERW DESIGN
6624 Dume Drive
Malibu, CA 90265
310 457 1809 t
www.erwdesign.com

Rene-Weissman-2

From: Elaine
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Friday, November 15, 2013 8:49:15 PM

LA is one of the most important - and largest- American cities. It deserves full federal support to revitalize the LA River.

Sustainable strategies are needed.

Don't hold back. Spend the money. We will all be rewarded.

Elaine
ERW DESIGN
310 457 1809

Revkin

From: Cheryl Revkin
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please consider Alternative 20 for our river
Date: Saturday, November 16, 2013 8:43:35 AM

To Whom it May Concern

After reading the various proposed improvements to our Los Angeles River, I hope you will consider Alternative 20 which takes into account a long range plan to restore the river and it's surrounding environment. Clearly this would benefit out city as a whole and the various communities along the river as well as the natural flora and fauna.

Our river is the genesis of our great city and it's life force. In every part of our country we can see how the gift of nature and our respect for maintaining it is what makes our country thrive and prosper. We cannot do this 1/2 way in Los Angeles with Alt 13.

Thank you for your serious consideration.

Dr. Cheryl Revkin

Sent from my iPad

Reyes

From: christine.reyes.madiz
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, November 18, 2013 2:04:13 PM

To whom it may concern,

As a resident of Los Angeles County and a student of an Advance Placement Environmental Science class, I greatly suggest choosing Alternative 20 for the Los Angeles River Ecosytem Restoration.

Thank you,
Christine Reyes

Sent from my T-Mobile 4G LTE Device

Risemberg

From: Richard Risemberg
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Alternatives
Date: Saturday, November 02, 2013 7:46:40 AM

I certainly think the most extensive alternative, Alternative 20, should be the one the Corps implements, While it is more expensive, it will result in the most long-term results, from economic development following the redevelopment of the river and form the growth of social capital, ie lowered crime and the growth of social connectivity as more people "gather at the river."

In addition, a more widely-greend river will recharge local aquifers better, and 20% of LA's water is still local; this would benefit communities statewide as the city could eventually reduce its dependence on water imported from other, of ten unwilling "partners."

Further, having recreational and social opportunities along the riverbanks would lessen transportation burdens on streets and freeways as millions of often low-income residents would now not feel the need to travel long distances for a walk or a picnic. More attractive riverside bikeways would also entice more people to try bicycle commuting, again reducing traffic (and boosting public health).

We cannot look only at immediate costs without balancing them against future benefits with their own monetary and civic value. The broadest possible remake of the river will bring the broadest range of benefits in the near and far futures.

Thank you,

Richard Risemberg
648 1/2 S. Burnside Ave.
Los Angeles CA 90036
323-428-4669
--
Richard Risemberg
http://www.bicyclefixation.com
http://www.SustainableCityNews.com
http://gridlogisticsinc.com
http://www.rickrise.com

Rivas

From: Armando Rivas
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Ecosystem Restoration Feasibility
Date: Monday, November 18, 2013 1:02:46 PM

Dear Dr. Axt,

My Name is Armando Rivas. I have been a resident of Cypress Park/Mt. Washington areas (an area I like to tell my friends is the LA River District) for four years. I chose to invest in the area because of the close proximity to the LA River, Downtown Los Angeles, and the various public parks, particularly Elyria Canyon Park, Rio De Los Angeles Park as well as the close proximity to Debs Park and Griffith Park. I have lived in various parts of Los Angeles since I was eight years old. In that time, I have been fortunate enough to have resided in communities that neighbored the LA River: From South Gate/Downey, in the South East side, Montebello to the far East (which makes for a great bike ride to Long Beach and back!) to Downtown Los Angeles, until finally settling where I reside today.

Besides running a business, I am an avid runner, cyclist and hiker and I have always tried to make use of the Los Angeles River. I believe that our city has great potential. I have traveled to other countries where the thriving hubs (natural and commercial) are all immediately next to their rivers and have always dreamed that the same would happen to our beautiful baby metropolis that is Los Angeles. I have been keeping track of the progress and commend you and the Corps on your efforts to secure funding for our river. However, of the measures considered, choosing Alternative 13 came as a bit of a disappointment for me and my community.

We hoped that the measure selected would be Alternative 20, which overall provides superior funding and studies that would make the river a real natural habitat that all Angelinos would enjoy and care for. We urge you to reconsider and choose Alternative 20 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added

Rivas

connectivity

- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to rednce air quality effects

Thank you for your time and I would like to stress how important restoration of the river is to the communities North of Downtown Los Angeles and urge to you consider Alternative 20 because it is the best restoration and sustainability feature out of the proposed alternatives. Our city needs this, and the city's residents want their city to grow and thrive all while respecting natural habitats that help individuals focus on living healthy lifestyles.

Best regards,

Armando Rivas
Vice President
UIP United Insurance Partners
Specialists in Sponsored Insurance Programs
Tel 800.707.2360
Fax 866.846.1026

This e-mail message, including any attachments, is for the sole use of the intended recipient, and may contain material that is privileged or confidential and legally protected from disclosure. If you are not the intended recipient or have received this message in error, you are not authorized to copy, distribute, or otherwise use this message or its attachments. Please notify the sender immediately by return e-mail and permanently delete this message and any attachments.

Rizzo

From: nickilambert@aol.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, November 18, 2013 3:50:44 PM

Dear Dr. Axt,

I am writing to give my support for the US Army Corps of Engineers to choose Alternative 20, the most comprehensive plan to restore the Los Angeles River.
Only Alternative 20 includes restoration of the area where the Verdugo Wash and Los Angeles River meet, and this would positively affect thousands more residents of the greater Los Angeles area.
Thank you for considering the restoration of the Los Angeles River an important project, and I sincerely hope that you choose Alternative 20.

Christina Rizzo
Glendale, California

Roberts

From: Buddy
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River, Alternative 20
Date: Saturday, November 16, 2013 2:28:49 PM

Hi Folks,

As an occasional thorn in the side, and an occasional supporter of the Corps, please allow me a moment.

I urge you to adopt the Alternative 20 proposal for the restoration of the LA River. I have lived in Atwater Village for many years, and I can speak with some certainty about how the community has prospered because of its association with the River, even when such was quasi legal. I see people all the time who speak of the benefits of living in my community, and the River is almost always brought up quickly in conversation.

These things cannot be quantified, precisely. That's your job and I appreciate that. But, there is a holistic, to use the overused term, thing going on. People feel happier with the River here and blessed with the resource. People regularly tell me the River is a blessing. The Army isn't really about that, but you guys are human beings, after all, and not the enemy. The channel was built as a defense, a means of ensuring happiness and prosperity. Now comes a time.

My feeling is that the new defense is against something different. The enemy, in those terms, is environmental destruction, and about community enhancement. When the community thrives with a sense of common place, crime goes down, neighborhoods bond, and a general peace advances. Isn't that what the Army is about, really? Not advancing conflict, but preventing it through assured strength?

In the end, the Army Corps' mission is to protect and serve. I believe Alternative 20 is the smartest way to do so. From a humane perspective, it suits your honorable mission...and I do mean honorable, because you saved LA once already. But with your new technology and expertise, it's time to move ahead to a 21st Century decency.

And, as a man who is way prudent, it makes more sense to just get the larger job done fast. The River will be restored. That is a done deal. You know that doing it piecemeal is more costly. You have to keep reassembling the team and the resources to do what you could have done from scratch, first time, straight up, done right.

You're Army. You know how to get things done. Put people to work, now, do the big thing so you don't have to go back and do it all over again. One time, done right. I know you can do this. And I realize bureaucracy is the enemy of action. Move. I think, a long time ago, that was part of an Army ad. Pretty smart one. Go Army.

Go for the great, my friends. Action pays off better and quicker than hesitation.

Your friend,
Buddy Roberts

Robin

From: Lauren Robin
To: SPL Comments LA River Study
Date: Thursday, November 14, 2013 12:33:36 PM

I love the la river. I want alternative 20!!!

Robinson

From: Robin Robinson
To: SPL Comments LA River Study
Subject: [EXTERNAL] SELECT ALTERNATIVE #20
Date: Monday, November 18, 2013 8:29:57 AM

As a third generation Angelino, who has memories of what the River has been and can be again, I urge you to select Alternative #20 for the River. Do the right thing!

Kathleen Robin Robinson
5235 Hermosa Avenue
Eagle Rock, CA 90041

Robledo

From: Damian Robledo
To: SPL Comments LA River Study
Subject: [EXTERNAL] RE: Draft Integrated Feasibility Report, which includes a Draft Feasibility Study and Environmental Impact Statement/Environmental Impact Report for the Los Angeles River Ecosystem Restoration Study
Date: Monday, November 18, 2013 4:11:45 PM

Dr. Axt & Ms. Jones,

I have been to 4 town hall meetings, 2 neighborhood council meetings, and 1 River Rally to voice my support for Alternative 20 as illustrated by your Feasibility Study. I would like to urge you to re-consider Alternative 20 instead of Alternative 13 as a viable option for ecosystem Restoration in the Los Angeles River.

I live and work directly adjacent to the LA River, in Atwater Village for six years and Elysian Valley for three years, and I am the perfect 'user' of the LA River. I bike to work, kayak during the pilot seasons, and walk with my family and dogs in North Atwater. My two children have discovered the natural environment in the oasis of the River's urban setting. They study the River, the concrete, the fauna, the wildlife all on their own, making observations and collecting bits of flotsam for art pieces. 1

The River is a huge part of my life and will affect my descendants in a profound way. I want to see the Alternative 20 plan adopted now. In 10 years, we will all look back and see that $1 billion price tag was cheap as it has grown our residents' ability to experience an amazing ecosystem. The return on doubling this investment is logarithmic in benefits beyond the slides and presentations I've seen at all those meetings in the last 45 days. To integrate historic, cultural, artistic and recreational uses and at the same time meeting the USACE goals for riparian , hydraulic and habitat restoration seems like a win-win for all.

Please also consider these comments I have on the study: 2

1. Rectify the USACE Study with the draft RIO PLAN overlay as proposed by LA City.
2. Revise and re-engineer and study the fences, borders or jurisdiction and the design of those fences so that people may access the River channel without obstruction. 3
3. Rectify the USACE study's estimates for remediation and mitigation of soil contamenents on the Piggyback, G2 and other parcels to reflect DTSC and EPA discoveries. The acknowledgement of these 'brown fields' in the Study seem less attentive than other parts of the robust draft report. 4
4. Handicap accessibility for ramps, access to river bed and to water seems like it could use much more study and design. 5

Thank you very much for the time and effort. Please take it to the next level and adopt Alternative 20 without hesitation. Add humanity to the equation of Alt 13 and you get Alternative 20. With out the human element, to what end does restoration of the River end. Expand your look beyond the CHAP criteria and please think with other metrics. 1

I hope you get to the same conclusion I have made. Choose Alternative 20 and be my family's hero for generations to come.

Respectfully yours,

Damian Robledo
4044 Brunswick Avenue
Los Angeles, CA 90039

damian.g.robledo@gmail.com
c | 323.363.1663

www.racdb.com
www.studiocortez.com

c | 323.363.1663
f | 323.663.9899
www.racdb.com
www.studiocortez.com
www.vimeo.com/racdb

Rock

From: Dave Rock
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support for Alternative 20
Date: Tuesday, November 05, 2013 6:04:28 PM

I would like to express my support for Alternative 20 for the LA River Restoration contained in the US Army Corps of Engineers LA River Ecosystem Study.

My family and I spend a great deal of time walking, bicycling and exploring the LA River and have taken advantage of the recent changes in law allowing us to kayak down the river.

I think the more the better when it comes to the development plan, and that the continuity allowed by Alternative 20 will increase the access for more Angelenos. Forward thinking, ambitious planning now will lead to a more verdant, vital and peaceful Los Angeles for our children's future.

Thanks,

Dave Rock
Los Angeles, CA

Rose

From: Sara Rose
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River - Alternative 2O YES!
Date: Saturday, November 16, 2013 8:20:01 AM

Attn: Josephine R. Axt, Ph.D.; Chief, Planning Division

The change in attitude that the communities surrounding the Los Angeles River have made over the last 25 years is phenomenal. Most Angelenos did not know that there was a river, and if they did, it was not something to celebrate. Now, a conversation about the river draws immediate comments about what a great resource it is.

I have long enjoyed walks along the river, and whenever I have taken someone there and introduced them to the parks and paths along the river, they have been equally revived. I think that the master plan Alternative 2O will make the river more accessible and give many generations of our hard working citizens a place to walk or sit and reflect.

When you think of the many many years of use and enjoyment that so many people will get out of this project, the cost seems like a very small price tag. It also seems that a project that ups the happiness factor cannot help but improve the economy and people's prospects in life, and pay for itself over time.

Thanks for taking the time to read this,

Sara Rose

Rossman

From: George R. Rossman
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support for Alternative 20
Date: Thursday, October 17, 2013 2:27:29 PM

I am in favor of the maximum reasonable restoration of our LA river systems to provide wildlife habitat, esthetic values, and recreational opportunities.

As a child, I grew up in the upper Midwest where rivers where river systems were a major source of wildlife habitat and provided esthetic and recreational opportunities. I have also traveled to other cities where rivers were confined for flood protection, but still developed with ecosystem and environmental values in mind and served a variety of recreational uses for the local population. The particular example of Austin, Texas, comes to mind with the pleasing environment of the shores of the Colorado River near the Congress Avenue Bridge where the urban bat colony has become a major attraction.

In short, I have seen how flood considerations and environment can co-exist, and how much Los Angeles could benefit if we would do the same.

Two of my recreational interests are birding and hiking, both of which could benefit by thoughtful restoration of the environment of the river systems of Los Angeles and surrounding communities. Both for my personal desires, and for a vision of how restoration of the river environment will help current and future generations, I voice my support for Alternative 20 for the LA River.

George Rossman
Pasadena, CA

Rouge

From: robertarouge@juno.com
To: MHigby@Primenet.com
Cc: SPL Comments LA River Study
Subject: [EXTERNAL] Re: Los Angeles River Ecosystem Study
Date: Tuesday, September 24, 2013 4:53:53 PM

The Corps Study Promises to Revitalize the LA River

http://www.lariverrally.org/corpsstudy.htm

For those who live or have lived in Los Angeles, know that the L A river has been primarily configured to act as the city's main **Flood Control Channel (51 miles long)**

During the rainy seasons (before the droughts), severe erosion occured of it's banks
That is the reason the U S Army Core of Engineers had most of it lined with concrete many years ago.
All of the many other channels better known as "XXXX Wash" that connect to the L A River were also lined with concrete many years ago

In the interest of public safety, the entire flood channel system was banned entry into it's banks and of course the rivers/channels themselves, except for fenced off Bicycle, Equestrian and Pedrestrian pathways.

So, now they want to "Revitalize" it at taxpayer expense of "Estimated Cost: $375 million"; "Estimated Cost: $453 million"; "Estimated Cost: $804 million"; "Estimated Cost: $1.08 billion"; depending on which plan is selected?
http://www.lariverrally.org/corpsstudy.htm

Yes, it creates jobs...And it creates costs to maintain it...Will it attract crime and vagrancy?

You decide home and sales taxpayer... Our sales tax in L A county is already 9%...Want more?

BlackBerry® Q10
See the evolution of the classic BlackBerry® Keyboard. Available now
BlackBerry.com

Saccacio

From: Anthony Saccacio
To: SPL Comments LA River Study
Subject: [EXTERNAL] Subject: Comments on Los Angeles River Ecosystem Restoration Draft Integrated Feasibility Report
Date: Saturday, October 12, 2013 6:51:30 PM

We get one chance at it for the future. Let\'s go all the way.

Sandoval

From: sandovalbarbara@netzero.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] comments in support of Alternative 20 for the L.A. River
Date: Thursday, October 17, 2013 6:42:39 AM

Under Alternative 20, the ties between the river and Los Angeles State Historic Park would be enhanced through the creation of wetlands and a marsh. It is the only choice that connects the river to the park.

While the revitalization of the LA River is a very important environmental, quality of life, and economic development initiative, it also honors the historical aspects of Los Angeles State Historic Park and the families that continue to have ties to the land.

My niece, Carolina Lugo, is a descendent in the long linage of one of the California Land Grant Families. Don Antonio Maria Lugo received a land grant from the King of Spain in 1781 and many generations of Lugos have lived, or are currently living in the Los Angeles area.

Restoring this area of the River and Los Angeles State Historic Park may give my niece, and countless others, the opportunity of a lifetime to see, feel, and experience what the land, river, and area was like when Don Antonio's son Vincente Lugo built his abobe house. As such, I support Alternative 20 as the most comprehensive plan to revitalize this area of Los Angeles.

(1905)* - Exterior front view of the two-story Vicente Lugo adobe house, seen with hipped roof and dormer windows. The home is located at 518-520 North Los Angeles Street and Sunset Boulevard, and faces the Plaza. When this photograph was taken, the adobe was home to the Pekin Curio Store with brick buildings flanking it on either side; and the road was still unpaved.

Historical Notes
La Casa de Don Vicente Lugo located on the east side of the El Pueblo Plaza at North Los Angeles Street and Sunset Boulevard. Built in 1839 by Vicente Lugo, it was one of the few two-story homes in Los Angeles at the time. It was donated in 1867 to St. Vincent's College (which later became Loyola University), the first college in Southern California; but later became known as the Washington Hotel, and later, the Pekin Curio Store. Unfortunately, the structure was so altered, that it does not resemble an adobe.

Sandoval

The Lugo family was one of the founding families and first settlers of Los Angeles in 1781.
The site of the Vicente Lugo adobe house was designated California State Historic Landmark No. 301 Click HERE to see the California Historical Landmarks in LA Listing.

(1869) - The Plaza and 'Old Plaza Church (Mission Nuestra Senora Reina de Los Angeles). The square main brick reservoir in the middle of the Plaza at the right was the terminus of the town's historic lifeline: The Zanja Madre (Click HERE to read more on the Zanja Madre). The building in the top right background was the Lugo House: first home to St. Vincent's College (now Loyola Marymount University). Click HERE to see more Early Views of the Los Angeles Plaza. Location: 535 N Main St near Macy St, Los Angeles.**
Source: http://waterandpower.org/museum/Early_Plaza_of_LA_(Page_2).html

Gaviscon® Official Site
Can't Find Your Usual Antacid? Try Gaviscon® for Fast Relief!
gaviscon.com

Savage

From: Kathryn Savage
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support Alternative20 - L.A. River Restoration
Date: Thursday, November 07, 2013 9:10:43 PM

Please support Alternative 20 as the plan to restore the L.A. River.

Thank you,
Kathryn Savage
12354 Sarah Street
Studio City, CA 91604

Scarcelli

From: Ernest Scarcelli
To: SPL Comments LA River Study
Cc: Eric Garcetti; councilmember.krekorian@lacity.org; Dianne Feinstein
Subject: [EXTERNAL] L.A. River Plan
Date: Friday, November 08, 2013 10:25:14 PM

I am a native-born Angelino and find it hard to believe that with all the other problems in our city, special interest persons are driving valuable time and resources to this project. I could see some value in this project but currently, there are so many other needs which I do not need to list here.

Stop the madness, and if federal funds are available, begin to improve the infrastructure of the city. Locally, the mayor and council need to stop allocating city funds to this project.

Ernest Scarcelli
Van Nuys

Schmitt

From: Marilyn Schmitt
To: SPL Comments LA River Study
Subject: [EXTERNAL] Plan for the Los Angeles River
Date: Monday, November 18, 2013 4:59:03 PM

To the U.S. Army Corps of Engineers:

I reject your choice of Alternative 13 as your Tentatively Selected Plan for the Los Angeles River. It fails to consider key factors of our unique environment and falls far short of achieving meaningful transformation in our degraded urban watershed.

PLEASE CHANGE YOUR CHOICE TO ALTERNATIVE 20. It will connect important corridors and conserve more open space for the health of the wildlife and people of Los Angeles.

YOU HAVE SCREWED UP ENOUGH, here and elsewhere!! Do the right thing and make this a SUCCESSFUL project.

Marilyn Schmitt
Los Angeles
mschmitt4@aol.com

Shabanian

From: Victoria Shabanian
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support Alternative 20 Los Angeles River
Date: Tuesday, October 15, 2013 7:35:53 PM

I am a 33-year resident of Glendale, California and support alternative 20 for restoring the Los Angeles River. Anything less will be forfeiting a historic opportunity to turn what remains mostly an eyesore back into the flourishing ecosystem it was meant to be. Half-measures will be of muted impact along this lengthy concrete spine of the sprawling city of L.A. The Army corps ravaged the river's ecosystem to meet the need for flood control in a by-gone era. Now is the time to restore to Los Angeles its rightful legacy in the form of alternative 20.

Victoria Shabanian
1319 Opechee Way
Glendale CA 91208

Shipman

From: Margaret Shipman
To: SPL Comments LA River Study
Subject: [EXTERNAL] choice of proposal
Date: Saturday, November 16, 2013 8:26:10 AM

Dear People,

We have SO little water in Los Angeles that I was once asked "There is an LA River?"
We need to live and share every drop of water to its fullest and I urge you to reconsider ALTERNATIVE 20 as the best way to do this.
Thank you for your consideration, Margaret Shipman

Shorr

From: Gil Shorr
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Restoration
Date: Monday, November 18, 2013 11:33:21 AM

Josephine R. Axt, Ph.D.; Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325
ATTN: Ms Erin Jones, CESPL-PD-RN
comments.lariverstudy@usace.army.mil

Dear Dr. Axt:

We have lived in the San Fernando Valley for over thirty years, so the choice of plan for the LA River is of great importance to us. We join with Mayor Garcetti, FoLAR, Senator Boxer and so many others in urging you to adopt **Alternative 20**, whose comprehensive nature will do so much for the balance of sustainability, urban living and the enhanced reputation of Los Angeles as a dynamic, forward-looking city that values its natural resources as highly as the other aspects of its footprint. Selecting any of the alternatives could so easily lead to many years of unresolved issues and the real possibility of a higher price tag in the end; it's our opinion that we should put our shoulders to this excellent plan now, find the funding for **Alternative 20** and start to enjoy the recuperative properties of our Los Angeles River.

Thank you.
Sincerely,

Gil and Herschel Shorr
5430 Gentry Avenue
Valley Village, CA 91607
gil.shorr281@gmail.com

Sinclair

From: Duncan Sinclair
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Ecosystem Restoration
Date: Thursday, October 17, 2013 10:19:46 AM

Dear Dr Axt,

Regarding the alternatives for restoring the Los Angeles River, I fervently hope that the Army Corp of Engineers will select Alternative 20.

Los Angeles needs all the native habitat restoration it can get. It would be a great asset to the city.

Thank you.

Duncan Sinclair
812 E Mountain St
Pasadena CA 91104

Siskind

From: Nicole Siskind
To: SPL Comments LA River Study
Subject: [EXTERNAL] Support Alternative 20
Date: Thursday, October 17, 2013 10:35:22 AM

I support the L.A River and Mayor Garcetti's choice of Alternative 20 for our own L.A. River.

I went on a L.A. River Expeditions this summer and discovered our beautiful River for the first time. All our citizens deserve to experience our river, a natural asset right in the middle of our town. I love the bike lane also.

Thank you,

Nicole Siskind
836 Wonder View Drive
Calabasas, CA 91302

Smith

From: Jerry Smith
To: SPL Comments LA River Study
Subject: [EXTERNAL] The Los Angeles "River" project
Date: Wednesday, October 09, 2013 3:03:22 PM

Digging out the flood control system and replacing it with more natural sides sounds good. Aided by the proponents drawings of what they imagine it could be, one can fall in to that trap. Changing it is a bad idea for these reasons:

1. The water flow is either a trickle or a roaring cataract. In either case, it's not good for public use.

2. The proposed landscaping around the trickle is an attractive nuisance for children and would no doubt attract homeless and perverts as well When I went to a meeting selling it, no one had any idea of how to fish the dead children out.

3. The ever present behind the scenes land developers (Eli Broad, et al), wish to build more expensive condos with a view after ripping out the dingbat apartments presently next to the flood channels and displacing the low rent tenants.

4. The expense would be enormous for no worthy return.

Wouldn't it make much more sense to take the money (if you must spend it), and dam some canyons for water catch basins?

I know this is already a done deal like Jerry Brown's trolley to San Francisco, but I had to put my 2 cents in.

JS

Squires

From: Kathy Squires
To: SPL Comments LA River Study
Subject: [EXTERNAL] Keep the river open for public use.
Date: Thursday, October 17, 2013 6:09:16 AM

I am a natve Angeleno. I look forward to visiting the space during this school year.
Please support them as I do.
Kathy Squires
Granada Hills

Stemwedel

From: Peter Stemwedel
To: SPL Comments LA River Study
Subject: [EXTERNAL] Please consider alternative 20
Date: Monday, November 18, 2013 12:30:48 PM

To Whom It May Concern:

Please count me and my family in favor of the more comprehensive restoration plan for the Los Angeles River.

I bike, walk and picnic along the banks of the river with my friends and family. We live just a couple miles away. The area has so much potential. Please give the river the chance is deserves to serve the people of Los Angeles. This is money well-spent to provide recreational opportunities in an underserved area.

Thank you for your consideration.

Sincerely,

Peter Stemwedel

1575 Hazelwood Ave
Los Angeles CA 90041

Stephenson

From: Rody Stephenson
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comments on LA River plan
Date: Thursday, October 17, 2013 2:34:09 PM

I think we should do it right and go with option 20.

I have discovered the LA River this last year, and have walked both sides from Griffith Park to the Pasadena Freeway. It is wonderful.

Let's make it nice and accessible from Griffith Park (Glendale Narrows) to at least Union Station.

Wider, less concrete, more wetlands for the birds.

Rhoads

R. Rhoads (Rody) Stephenson
4455 Rockland Place, Unit 10
La Canada, CA 91011
rodys@earthlink.net
(818) 248-7472

Stilwell

From: Carl Stilwell
To: SPL Comments LA River Study
Subject: [EXTERNAL] In support of Alternative 20
Date: Saturday, November 16, 2013 9:48:13 AM

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. However I agree with FOLAR that Alternative 13 falls far short of achieving meaningful transformation in our degraded urban watershed. To remove more concrete, create more habitat, connect important corridors, and conserve more open space for the health of the wildlife and people of Los Angeles, I strongly urge you to select the more comprehensive ALTERNATIVE 20 instead.

Sincerely Carl Stilwell
Pasadena, CA

Stowell

From: Dan Stowell
To: SPL Comments LA River Study
Subject: [EXTERNAL] In support of Alterative 20
Date: Friday, October 18, 2013 3:22:38 PM

To whom it may concern,

Writing to voice my strong support for Alternative 20 and encourage the Corps to proceed with this truly transformative public plan.

Thank you!

--
Dan Stowell
646-528-1616

Strick

From: Nancy Strick
To: SPL Comments LA River Study
Subject: [EXTERNAL] kayaking the LA river has been a wonderful experience. I hope everything is done to get the river open and healthy. it is truly a treasure and it is wonderful to be able to spend time on the river. It is was of our city"s assets.
Date: Thursday, October 17, 2013 11:11:26 PM

--
Please note my new email address: nkstrick@gmail.com

Sullivan

From: sulli@ucla.edu
To: SPL Comments LA River Study
Subject: [EXTERNAL] L.A. River
Date: Saturday, November 16, 2013 6:46:42 AM

Hello -- I urge you to choose Alternative 20 as the plan for the Los Angeles River. I am a lecturer in geography at UCLA and have been writing about the region for many years. Please listen to us.

Thank you, Dr. Robert E. Sullivan.

Suntree

From: suntree susan
To: SPL Comments LA River Study
Subject: [EXTERNAL] The Los Angeles River Study
Date: Sunday, November 17, 2013 9:54:43 PM

Josephine R. Axt, Ph.D.; Chief, Planning Division

U.S. Army Corps of Engineers, Los Angeles District

P.O. Box 532711

ATTN: Ms Erin Jones, CESPL-PD-RN

Los Angeles, CA 90053-2325

Dear Dr. Axt:

For twenty-five years I have studied, written about, created performances at and about, and walked along the Los Angeles River. My recent award winning book, Sacred Sites: The Secret History Of Southern California (University of Nebraska Press 2010) about the origins of our region's landscape and indigenous cultural heritage, prominently features the Los Angeles River. At East Los Angeles College, The American Jewish University, or Pomona College, when I teach courses based on this book or mythology or local cultural history, I feature the Los Angeles River because it represents the circle of life in Los Angeles. it is the connecting waters, the center pole of the region.

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat

Suntree

Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river connections, rather than just culverts or pipes
- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
    - Provides 7015 more jobs and $386 million more in wages during construction
    - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
    - Creates 1094 more new permanent jobs valued at $62 million more
    - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
        - Produce a greater connectivity with the people and communities
        - Reach more of the census tracts with high poverty and high minority populations
        - Provide more green areas to encourage physical activity
        - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely, Susan Suntree

Suri

From: Chris J. Suri
To: SPL Comments LA River Study
Subject: [EXTERNAL] Statement about the L.A. River recent developments and plans (including Alt. 20)
Date: Sunday, November 17, 2013 8:46:33 PM

Thank you for providing a platform for Los Angeles County citizens to participate in the L.A. River future projects planning process. I support Alternative 20. The ideas put forth by innovative groups and individuals have shown that the L.A. River has great potential for connecting further the communities it passes through as well as cities and communities that are in Southern California overall. One aspect of the potential L.A. River improvements towards a more green L.A. that I am excited about is bicycle infrastructure, cyclists, and environmental trends that may come about as a result of building and improving bike paths and overall accessibility and connectivity for cyclists along the L.A. River. Thank you once again for everything you are working towards to make L.A. a greener place.

Sincerely,
Chris J. Suri

Szuhay

From: Daniel Szuhay
To: SPL Comments LA River Study
Cc: George Wolfe
Subject: [EXTERNAL] LA River
Date: Sunday, November 17, 2013 10:07:13 PM

Hi,

My name is Dan Szuhay. I had the distinct honor and privilege to work with George Wolfe and LA River Expeditions this summer for a couple months. What an amazing experience!

A little about me. I am originally from Pittsburgh PA where there are 3 amazing rivers. I went out and did crew on the Allegheny river many years ago. I have watched those 3 rivers become more and more vibrant and alive over the years with the decline of the steel mills. It's unfortunate that an entire business had to close to save those rivers.....but they are now green and a major draw for new development and recreation for the entire city.

I came to LA in 1997 and was immediately drawn to the LA River. I have rollerbladed on the bike path along the 5 freeway for many years now. I have also helped clean up the river with FOLAR. The LA river and all the birds that visit the river are very important to me. So when
I had an opportunity to help people kayak the LA River this summer I jumped at the opportunity. And I am not a spring chicken (I am 48). I don't jump as easily as I once did.....

The LA River is an incredible resource that most people here don't even know exist. I have to believe that the more investment that is made in the river will only come back in even greater dividends to the city and all the people who call LA home and who visit this wonderful city.

I strongly urge those with the decision making powers to make the most robust and generous investment in revitalizing the LA River.

Now is the time! It's worth it! A billion dollar investment will payoff handsomely in many, many different, unimaginable, wonderful ways. I do believe this to be true.

I am working towards becoming a licensed psychologist. I have joined a private practice downtown in the Fine Arts Building (another LA treasure) as a psych assistant under the supervision of a psychologist. I am pretty sure one of the reasons I got this position was because I was helping put people in kayaks this summer. My supervisor was SO excited about my working for a kayak firm that he told his father about what I was doing and his father flew to LA from Long Island, NY to kayak the LA River. I was thrilled that my new boss, his wife, and his father were able to kayak the LA River this year. They had a blast.

No joke....someone flew from Long Island NY to LA this summer to kayak the LA River.....the possibilities are endless.....this is real.

Please make that big investment now.....it will pay off!

Dan

Daniel S. Szuhay, MA
Doctoral Candidate, Pacifica Graduate Inst.
1129 N Hoover St
Apt 207
Los Angeles, CA 90029
dszuhay@sbcglobal.net
323-304-1280

Taylor-1

From: Tony Taylor
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comments on the USACE Los Angeles River study
Date: Tuesday, October 01, 2013 9:42:25 PM

I am writing to express opposition to ALL the proposals put forth in the $10 million dollar study on the LA River done by the Army Corps. All these plans are way to expensive and really do nothing to restore the river. Instead of these flights of fancy the real restoration of the LA River can accomplished easily and at a modest cost by simply cleaning up the water and improving its quality and removing all the accumulated trash in the trees, rocks and water and keeping it removed. Spending huge sums of money on flights of fancy that may or may not work and that most definitely will not be maintained is a waste of good taxpayer monies.

Tony Taylor
6737 Denny Avenue, #50
North Hollywood, CA 91606
(213) 925-1989

Taylor-2

From: Tony Taylor
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River Study comment
Date: Tuesday, October 01, 2013 9:50:14 PM

I am writing to express my opposition to all the proposed plans for the so called "restoration" of the Los Angeles River. None of these plans will accomplish real restoration of the river and would only put a tremendous burden on already overtaxed taxpayers for something of questionable value and that most likely would not work. Real restoration of the Los Angeles River can be accomplished very easily and at modest cost by improving water quality and removing and keeping gone accumulations of trash in vegetation on the sand bars (islands), rocks and in the water.

Tony Taylor
6737 Denny Avenue, #50
North Hollywood, CA 91606
(213 925-1989

Teutsch

From: Carol Teutsch
To: SPL Comments LA River Study
Subject: [EXTERNAL] Comments in support of alternative 20
Date: Sunday, November 17, 2013 4:36:56 PM

Dear Corps of Engineers,
Thank you for your thoughtful evaluation of the river and its potential. I felt your presentation to the public a few weeks ago was very helpful. As a physician, I am increasingly impressed that human health is tied to the health of our ecosystems and climate. The LA River restoration can be a critical investment in both. Having moved here just 5 years ago and thinking LA had no river and wondering why we had so many bridges. I did some reading and learned about the extraordinary history of water and the river here. I discovered the river by accident and came to appreciate the great bird ecosystem and the power of nature to restore itself. I felt in love with the river and joined FOLAR. I learned about how park poor LA is and how important this could be in restoring active mobility for many citizens and for helping to conserve water in this water poor city. I am struck by the contrasting fights in transportation where Metro and Cal Trans want to shove a very disruptive poorly thought out 13 billion dollar tunnel on the citizens of LA that we don't want and the hesitancy to build a one billion dollar restoration project that we do want that will benefit so many in all walks of life and all socioeconomic strata.
I urge you to select alternative 20 which will allow us to more fully invigorate our city and our treasured ecosystems.
LA will come together on this project and can lead other cities forward boldly on this path with your help.
Thank you.
Carol Teutsch, M.D.
841 Moon Ave
Los Angeles, CA 90065

Thomas

From: Aaron Thomas
To: SPL Comments LA River Study
Subject: [EXTERNAL] l.a. river comments
Date: Monday, November 18, 2013 3:09:23 PM

To whom it may concern,

As a resident who has lived within one mile of the Los Angeles River for many years, I am deeply interested in the latest studies by the Army Corps of Engineers for possible improvements of the river. In addition to living adjacent to the river, I have also spent nearly 20 years working for a non-profit that has planted thousands of trees and built multiple parks along the banks of the river. Needless to say, I am biased in my opinion of what could be done there. That being said, I would like to go down on record as strongly supporting the 1 billion dollar, Alternative 20 option. Because I have lived so close to the river and dedicated so much of my life to its rehabilitation, I can describe first hand the importance of such and endeavour. The work that my organization has done on the river has literally changed lives for the better. Whether those be the lives of local "at risk youth" who we hired to help us plant and learn about nature or the animals who rely on the river for sustenance, or the lives of the native trees and plants that have been reintroduced, our small efforts have helped make our world a better place. Perhaps most importantly, we have used our trailblazing projects to demonstrate the possibilities of what could be done. Now our government is in a position to take the next step and create large scale, long term change and improve millions of lives, both human and non-human. On behalf of what is good and right in life, I ask that you help us make as many improvements to our river and our city as possible. As an investment, it will definitely pay off.

Aaron Thomas
Urban Forestry Manager
North East Trees
213.798.9190 (cell)

Thompson E.

From: Eddie Thompson
To: SPL Comments LA River Study
Cc: contact@folar.org
Subject: [EXTERNAL] Support Alternative 20
Date: Saturday, November 16, 2013 8:32:01 AM

Greetings:

I am writing today in support of alternative 20. I am Eddie Thompson from Burbank CA and have been riding my bike on the 8 mile stretch bike path ever since I moved here seven years ago.

Seven years ago my opinion of the river was much different than it is to day. I became involved with FoLAR and volunteer to pick up trash. I have personally witness the hard work which has increased the growth of wild life and natural habitat. The work on Sunny Nook park has increased visitors with cameras. And today I see Kyakes too. It's hard to describe the awesomeness of nature and how beautiful it can be.

Now I'm involved in a support group who shares their experiences which help them to recover. My share will usually have something to do with my experience on the bike path. Help me prove to my group that when I say I saw a Blue Heron catch a fish.....I don't get laughed at and told "Eddie that was a Seagull with a beer can in it's mouth"

Thank you all your help on behave of all my wild life on the river.

Eddie Thompson
1315 N. Brighton St.
Burbank CA. 91506
818 260 0449

Thompson K.

From: Kalee Thompson
To: SPL Comments LA River Study
Subject: [EXTERNAL] I support option 20!
Date: Thursday, October 17, 2013 7:35:00 PM

My family supports option 20 for restoring the LA river. We use the river for biking, walking, and bird-watching. We want to see restored habitat and healthy ecosystems that include extensive recreation along the river. The effort is worth it—let's think about the plan that will be best for LA 10, 20, and 50 years into the future. Option 20!

Thanks,

Kalee

Kalee Thompson
718.930.9891
Twitter: Kaleewrites
Read My Book!
WWW.DEADLIESTSEA.COM

Thorne

From: David Thorne
To: SPL Comments LA River Study
Subject: [EXTERNAL] alternative 20
Date: Saturday, November 16, 2013 1:10:55 PM

---

why not go all out?
I support alternative 20
for river restoration.
sincerely,
David Thorne
business owner in elysian valley

sent from earth

Thraves

From: Jill Katharine Thraves
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Wednesday, October 09, 2013 10:28:05 AM

Hello,

I want to voice my support for Alternative 20 in the plan to revitalize the LA River. If we are going to do this after all this time, let's do it properly.
There has been so much degradation of the natural environment in and around Los Angeles over recent years that we should take full advantage of this opportunity to correct some of the wrongs. How lovely it would be to enjoy the LA River as a real river with walks and native plantings and wildlife. And Alternative 20 takes a broader view which means lots of jobs are created into the future.

Most large cities are built around large beautiful rivers which the citizens and visitors can enjoy. All we have is drainage channel and it is not even graced with a name!

Please let's choose Alternative 20 and do it properly.

Thank you,
Jill Thraves,
Studio City

Thronson

From: Frances
To: SPL Comments LA River Study
Cc: Frances Thronson
Subject: [EXTERNAL] LA river plan
Date: Saturday, September 14, 2013 9:51:52 PM

So if there are no cost overruns -- none -- (in what universe?) this will cost $41 million per mile....

In plain English, can someone explain the point of this enormous expenditure?

Respectfully submitted,
Frances Thronson

Sent from my iPad

Tokash

From: Jennifer Tokash
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River
Date: Sunday, November 17, 2013 3:12:29 PM

Hello,

My name is Jennifer, I was born in CA, but just moved to Los Angeles in 2012. I'd never seen a concrete river without water until I moved to LA. I'm looking forward to making the river a river again!

I appreciate the time and efforts the Corps and City have expended to work with the community and prepare the Los Angeles River Ecosystem Restoration Feasibility Study and Environmental Impact Statement/Environmental Impact Report, Draft Integrated Feasibility Report. I am thrilled that the Corps and City have worked with us to be on the same side of the Los Angeles River Ecosystem Restoration! I have reviewed the report in detail and I am providing comments in support of Alternative 20 presented in the document. While Alternative 13 has been identified in your study as the Tentatively Selected Plan, I found this alternative to lack the comprehension in key areas essential for adequate ecosystem restoration of the Los Angeles River.

Major concerns are that the following were not adequately recognized in the selection:

- Compatibility with the National initiatives and programs, particularly the President's American Great Outdoors Initiative and the Urban Waters Public Partnership, that recognize the importance of the LA River to habitats, species, and people
- The richness of this biodiversity hotspot
- The rarity of the region's Mediterranean climate
- The intense destruction and overdevelopment in the 2nd largest U.S. City

Alternative 20 is far superior to Alternative 13 for the following reasons:

- CHAP is only one tool that should have been used to value the habitat
- Connectivity for wildlife migration, seed dispersal, and hydrology (205% greater than 13)
- Verdugo Wash is critical to providing this connectivity from the LA River to the Verdugo Mountains, Los Feliz Golf Course, and San Gabriel Mountains
- Piggyback Yard includes real restoration with concrete wall removal, creation of wetlands and elevation of the railroad segment to increase hydrologic and wildlife connections
- Cornfields includes real restoration with higher value habitats by terracing the bank and creating freshwater marsh
- Cornfields provides connection to the Elysian Park
- Reduction of distances between the habitat nodes greatly enhances the value
- It is more similar to the ecosystem that historically existed prior to the channel
- The length of area restored is 2 times greater (6.4 miles vs. 3.2)
- More than 3 times the concrete is removed (117,918 cubic yards vs. 36,891)
- Creates 131 more acres of restored habitat (719 vs. 588)
- The habitat restored creates a higher quality of ecosystem because it restores more natural river

Tokash

connections, rather than just culverts or pipes

- More likely to be sustainable and resilient over the life of the project because of the size and added connectivity
- Measures the highest of all alternatives against the 19 performance targets established under the 2 objectives
- Meets the 4 evaluation criteria (effectiveness, completeness, efficiency, acceptability) the most robustly
- The Regional Economic Development analysis shows Alternative 20:
  - Provides 7015 more jobs and $386 million more in wages during construction
  - Creates 3700 more new jobs and $251 million more in wages for redevelopment over the long term
  - Creates 1094 more new permanent jobs valued at $62 million more
  - The Other Social Effects analysis shows Alternative 20 with its larger scope will:
    - Produce a greater connectivity with the people and communities
    - Reach more of the census tracts with high poverty and high minority populations
    - Provide more green areas to encourage physical activity
    - Provide more green areas to reduce air quality effects

Restoration of the Los Angeles River is crucial to us and our City! The project is worth the added costs because of the added values stated above that were not sufficiently counted in the report comparisons. We urge the Corps and City to select Alternative 20 because it provides the best restoration and the best sustainability for the future.

Sincerely,

Jennifer S. Tokash

Tornborg

From: Flora L.Thorton
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, November 18, 2013 10:57:01 AM

There is no point in considering a "cheaper" alternative, which will only rob Los Angeles of a fulfilling and useable project that will serve us for decades.
Kay Tornborg, Homeowner, Hollywood, CA

Trisolini

From: Katherine Trisolini
To: SPL Comments LA River Study
Subject: [EXTERNAL] Integrated Feasibility Report
Date: Monday, November 18, 2013 5:04:31 PM

November 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District;
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, California 90053-2325

VIA EMAIL: comments.lariverstudy@usace.army.mil

RE: Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Dear Ms. Axt and Colleagues,

As a practitioner and now professor of environmental law in California, I have submitted comments on numerous environmental impact documents since I graduated from Stanford Law School in 1999. I have taught courses in environmental law at UCLA and Loyola Law School, Los Angeles. I am currently an Associate Professor of Law at Loyola Law School. In addition to extensive litigation and administrative proceeding experience in environmental law, I have taught, lectured, and written about the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and climate change. I write in my capacity as an individual with expertise in environmental law, not as a representative of any of the abovementioned institutions.

I am writing to urge the Corps to adopt Alternative 20. While the Corps' efforts to restore the LA River and address ecosystem degradation are admirable, the Report significantly understates the benefits of Alternative 20. Anticipated impacts from climate change render aggressive river restoration absolutely critical. Calculating plan benefits under current climate conditions fails to adequately represent how River restoration will be essential to offset climate change stressors in the future. The projects long time frame, 50 years (App B p. 1) necessitates consideration of climate change adaptation benefits into that cost-benefit analysis.

Trisolini

To compare the costs and benefits of this project with regards to habitat, the Report employs the CHAP Evaluation method – which improves on prior methods by evaluating habitat at the ecosystem level. The Report then projects 50 years into the future to compare a baseline without the project versus a future with project alternative. Given this timeframe, climate change can be expected to degrade baseline conditions. This does not appear to be fully captured in the model. Species will face increased temperatures, increased fire risk, and increased pollutant loads due to climate impacts. Both water supply and water quality will suffer as temperatures in California and the LA basin rise, impacting residents and endangered species, and other environmental resources in the area. Changes in supply and water quality will adversely affect habitat as well. Researchers have emphasized the need to minimize other environmental stressors to aid endangered species' ability to adapt to climate change. Moreover, climate change renders more urgent Los Angeles' efforts to significantly shift its water planning from channelizing storm runoff in concrete towards a system that naturally filters and replenishes groundwater.

Finally, benefits not incorporated include increased habitat connectivity. Researchers have repeatedly stressed the need for improved connectivity to allow species adaption.

I urge the Corps to adopt Alternative 20.

Best regards,

Katherine Trisolini

Katherine Trisolini
Associate Professor of Law
Loyola Law School
919 Albany Street
Los Angeles, CA 90015
Ph: 2130736-8368

Umbdenstock

From: Linda Umbdenstock
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20 Preferred
Date: Sunday, October 27, 2013 4:18:09 PM

I agree with the LA Times: is the the one opportunity to get it right and that means Alternative 20. As a local, I see what the neighborhood kids can get excited about in their community with their own efforts to clean up the river. It changes whole, lower income communities for the better.The river is also part of our historical heritage as one of the great cities, not only in the US, but as a Pacific gateway as well. This is investment in the future: by infrastructure, *community* development, environment, education, recreation.

Linda U
Los Angeles, Ca 90065

Unwin

From: Steve Unwin
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River study
Date: Saturday, September 28, 2013 3:12:02 PM

Dear Dr. Axt,

Just a quick note to express my support for Option 20.

I've been exploring LA by bike. From Pasadena to downtown, and up to Griffith Park. And down to Whittier Narrows and even sometimes to Long Beach.

LA is friendlier to bikes than most people imagine. But expanded reacreation opportunities would be wonderful. It's a way of linking neighborhoods in a way that freeways never can.

I hope we can make this happen. It's a project worthy of a great city!

Thanks,
Dr. Stephen Unwin

Uribe

From: santuri123
To: SPL Comments LA River Study
Subject: [EXTERNAL] Revival of los angeles river
Date: Wednesday, October 23, 2013 8:19:03 AM

To whom it may concern,

I am 46 years old and I was born and raised in los angeles. I have been following closely and monitoring the developments concerning the los angeles river for many years now. After having read all the options that have been presented to us my family and I support Alternative 20 100%. For all the obvious reasons.....

Thank you,
Oscar Uribe

Sent from my Samsung Galaxy Note® II

Valencia

From: Nestor E. Valencia
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River
Date: Wednesday, October 16, 2013 8:37:36 AM

When will the "greening" of the river get to the southeast?

Sent from my Verizon Wireless 4G LTE Smartphone

Van Hook

From: Chris Van Hook
To: SPL Comments LA River Study
Subject: [EXTERNAL] L.A. River project
Date: Thursday, October 17, 2013 10:13:39 AM

Please support Alternative 20. It is the best plan for the Los Angeles river. Los Angeles needs this river to be viable for everyone to enjoy as a natural resource! Los Angeles does not have enough open spaces for people to enjoy. This river should be a jewel in Los Angeles. It needs maximum attention. Please choose this Plan! I am sorry I cannot attend the meeting, but I am there in spirit. Thank You Chris Van Hook.

Villasenor

From: Villasenor, Vernon
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River ARBOR Study
Date: Monday, October 14, 2013 9:08:10 AM

Josephine R. Axt,
I am writing to you to reconsider the selection of Alternative 13 in favor of Alternative 20. Alternative 20 is much more holistic, providing broad benefits and positive impact, ultimately getting done what needs to be done. The Ecosystem Restoration of the Los Angeles River requires a bold move and alternative 20 is that move. Let's capitalize on the tremendous efforts taken to date to implement the best, most impactful plan for the long run.

Thank you for your time and consideration

Sincerely,

Vernon Villasenor

Desk | (949) 286-7534 | Wireless | (714) 743-5111 |
vernon.villasenor@verizonwireless.com

Walker

From: Alissa Walker
To: SPL Comments LA River Study
Subject: [EXTERNAL] public comment for LA River
Date: Sunday, November 17, 2013 7:55:51 AM

This article was originally published at A Walker in LA on May 28, 2013. You can see more photos and the entire story posted here:
http://www.awalkerinla.com/2013/05/28/kayaking-in-my-neighborhood/

Please restore the LA River so I will be able to show my children the joys of kayaking in their neighborhood, too.

Thank you,

Alissa Walker
***

Kayaking in my neighborhood

Under Fletcher

Walker

I'm having a lot of "I'd never thought I'd see the day" days lately in LA. Like the day I rode my bike on 15 car-free miles of Venice Boulevard to the ocean, for example. Or the day when I saw the Expo Line bridges going up in West LA.

And then there was yesterday, when I went kayaking in my neighborhood.

For the first time in 80 years, the Glendale Narrows section of the Los Angeles River isopened to recreation as part of a pilot program. Meaning you'll see people boating down this 2.5 mile soft-bottom stretch of the river—which is also officially open for fishing, hiking, and bird-watching—until September 2.

You'll remember last year I kayaked another section of the LA River, way up in the Valley, above the Sepulveda Dam. That section could only support a few trips a week, meaning that every tour was guided and sold out almost instantly. Here, many outfitters will run trips, but you don't have to wait for a tour. If you have a watercraft you can steer—we saw people on inflatable kayaks, canoes, paddleboards—you can ride. No tubing, which was a disappointment to this Missouri native.

I was surprised how many people, including people biking and walking along the river path, had no idea this was happening. Which is why this is really important (besides being REALLY FUN). Touring the Sepulveda Basin was fantastic but kind of a hidden secret, tucked away in a big park in a far-off corner of the city. This part of the river is so visible that you can see it from the Fletcher Bridge as well as a few different freeways. With the bike path so heavily used, plus so many people who actually live along the way, this is going to be the place that's going to truly transform the way Angelenos see their river.

Although we were certainly not the first people ever to kayak this section—see the documentary film *Rock the Boat*, where a group kayaked the entire length of the LA River to prove it was navigable—we were definitely enough of a novelty to create a verifiable media blitz at Marsh Park, about a mile from our put-in. Our group was even featured live on ABC7 news.

When I headed down to the press conference yesterday morning I was dismayed that none of the outfitters were renting boats on-site. The rangers let us paddle around in one of their kayaks for a few minutes, which was very nice of them (and why you'll see us in multiple kayaks in the photos), but I really wanted to do the entire 2.5-mile stretch. As luck would have it, I happened to meet a few folks from LA River Kayak Safari, run bytwo Elysian Valley residents, who were heading out on a friends and family preview trip that very afternoon. $65 later, I was up by Fletcher Drive, strapping on a helmet and life vest and climbing into a hard-shell, sit-on-top kayak. I especially loved their tour because after we kayaked to the end, they met us with beach cruisers (ahem, river cruisers) and we rode the bike path back to the put-in. Brilliant. **Update**: LA River Expeditions has also added tours.

Now, wait, I know what you're thinking. Isn't the beauty of this new section opening that you *don't* need a guide, and you can just order up a kayak from Sport Chalet and be on your way? Well, yes, and no. Unlike the narrow, mellow, lazy river-esque Sepulveda Dam section, this part of the LA River is

wide, rocky and a bit gnarly. Along most of the route the water is only calf-deep, but the river is fast and deep in a few spots and I'd say half of our group took unexpected swims. I felt totally comfortable the entire time but I was still happy to be following someone the first time who knew the way (even though we did end up taking a wrong turn once—not a huge deal for me but a little harrowing for some, who ended up pickiug up their kayaks and walking back upriver to the correct route). If you do go on your own, be sure to download the map and guide that shows you how to use the numbers painted along the bank to navigate. I would definitely wear a helmet due to the slippery rocks and shallow water. And unless they've got experience, kids should probably stick to one of the pools, like the one we're paddling in on the news.

You may have wandered down to the river before, but being ON the river here is such a completely different experience. The water is cool and clear and fun to walk around in. This area is much cleaner than the Sepulveda Basin—maybe thanks to the awesome LA River cleanup day last weekend—and once you're down there it feels much more nntouched by humans, despite being in a more urbanized area. For the most part it's just gravel and rocks and trees. And birds. So many birds! I saw a snowy egret snatch a giant fish from behind a rock, and watched a blue heron as it flew right over my head, with a wingspan that was easily as wide as the length of my kayak.

It's not a perfect riparian adventure. Since we ended up scooting over *lots* of rocks, the river could really use a bit more water (Army Corps of Engineers, is that something you can regulate?). In some places the concrete walls coming down into the water created a hleak artificiality, kind of like the manufactured landscape of a theme park ride. A few times, the roar of the 5 was a little overbearing (the Metrolink flying by was another story; I loved that sound). And there's not nearly enough infrastructure: a better beach for launching would be mnch appreciated, and the walls are kind of steep and treacherous to carry your boat up and down. In fact, some services overall would be nice; there are port-a-potties in Marsh Park but I'm not sure if they're permanent. Someone could make bank selling water, sunblock and snacks at the put-in. There also needs to be a beer garden at the end. Or a Garlic Mike's. I'm going to work on that one.

But these are small complaints about a huge step in the right direction. As one of our enthusiasticfellow kayakers put it, "We're pioneers." And that's exactly how I felt, often all by myself, with no one else in sight, carving my way through a yet-again totally different city.

Ward

From: Kartichoke@aol.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] From Kay Ward and Friends
Date: Sunday, October 13, 2013 5:46:16 PM

We support the proposal of Friends of the Los Angeles River. Please support them too.

Kay Ward
Ronald Hummel
and Friends

Warner

From: Tim Warner
To: SPL Comments LA River Study
Subject: [EXTERNAL] I support alternative 20!
Date: Tuesday, November 05, 2013 1:23:59 PM

Hello,

I am a Los Angeles resident that lives near the river. I along with my wife and kids walk and bike along the river quite a bit. I fully support alternative 20 and hope the Army Corps. of Engineers opts to pursue that option.

Thanks,

Tim Warner

Watts

From: chris watts
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Thursday, October 17, 2013 6:40:39 PM

I know it ain't cheap, but I gotta go with ALternative 20 for the LA river restoration!

Thanks for listening,

CSW

Chris Watts

1858 North Avenue 53
Los Angeles, CA 90042
main 323-333-5000
fax 206-350-0064
skype cswatts
aim cwfx1
yahoo cwiphone
dot•mac csw
http://imdb.com/name/nm0915121/
www.bake.org

Weisman

From: Weisman William
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20 is the best option
Date: Sunday, November 17, 2013 11:57:01 AM

My husband and I urge you to choose Alternative 20. Of all the options in the US Army Corps of Engineers Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Alternative 20 is the most comprehensive. We believe it is important to include the Verdugo Wash in the project to provide as much restored riparian habitat for wildlife regeneration as possible.

With ever increasing human population pressures on the environment, it is vital to preserve, create, and maintain as much open space as possible to improve the urban quality of life.

Thank you for your consideration of our opinions,

Sharon and Bill Weisman
5001 Carolyn Way
Glendale, CA

West-1

From: Carolyn West
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Monday, September 30, 2013 2:50:14 PM

My family supports Alternative 20 for LA River.
This adds Verdugo Wash area.

Signed: Carolyn West and
David Petzold

1621 Rancho Ave., Glendale, CA 91201 (818) 500-8208

West-2

From: Field, Thomas J (Jay) SPL on behalf of SPL, PublicAffairs SPL
To: Skopeck, Kristen SPL
Subject: FW: [EXTERNAL] Los Angeles District Contact Form: LA River Ecosystem Restoration Issue (UNCLASSIFIED)
Date: Monday, October 21, 2013 10:12:30 AM

-----Original Message-----
From: noreply@dma.mil [mailto:noreply@dma.mil]
Sent: Friday, October 18, 2013 4:47 PM
To: SPL, PublicAffairs SPL
Subject: [EXTERNAL] Los Angeles District Contact Form: LA River Ecosystem Restoration Issue

This message was sent from the Los Angeles District website.

Message From: Carolyn West
Email: mjpcomacho@yahoo.com
Response requested: No

Message:

I am trying to understand the proposals for areas adjacent to my residence (on Rancho Ave., just north of River between Western Ave & east end of Rancho Ave.)

1. You refer to "Right Side" of River in a description. What is right side? It would make alot more sense to call it north or south. Please let me know as it is hard to follow anything when I don't even know which side of the River to look at.

2. Where is the widening that is planned under Alt. 20 for my area?

3. LA Rec & Parks just spent about a million dollars on Bette Davis Park (west end). They killed the grass and put in mulch along the south side of the park here. You have a diagram that looks like you want to tear out the mulch and put in shrubs? Please advise.

4. How to the horse trails in this area fit into the plan? There are horse trails running along the north side of the river and along the south side of 134 in this general area. Do you have anything right now that I can review related to the horse trails?

West-3

From: Carolyn West
To: SPL Comments LA River Study
Date: Monday, November 18, 2013 3:02:36 PM

Earlier, after the River Meeting I attended last month, I sent in a couple of requests for data from Army Corps, at the email address that they provided for that purpose. No attempt was ever made to contact me or provide the data requested. How am I supposed to clearly see a plan that is so tiny and looks little better with a magnifier. The information given to work with is not complete, unclear, etc. Descriptions are abreviated and not complete. 1

A huge problem is that all this planning has been done without any involvement or consultation with the neighbors who happen to live next to the river. I live as close as anyone. It is just a short walk out my door, across a narrow strip of grass and horse trail, and I am at the river. I live on Rancho Avenue (91201). This is complete disregard. It means that your whole planning process has to be rated "F". 2

It is very hard to make out the plans and diagrams, having never been sent the enlargement with details covering the area near my house. But it appears that there is an area near the Riverside Drive Bridge where they plan to tear out the angled concrete wall and put in a vertical (cliff) concrete wall where the south river bank is now. . They even plan to hang vines off it. Now I can walk right down to the edge of the river to sit and view birds. A cliff will require some massive barricade to keep people from falling down. The vegetation in the river will prevent this steep wall from being seen from the north river bank. It appears that widening the river foot print a bit might only be to allow boats? That will bother the birds, no matter what time of year. Birders are out here all year long. This stretch of the River with natural bottom (both sides of Riverside Dr. Bridge west to where the concrete bottom starts) needs to be left natural for the birds and wildlife. 3 4

I like the idea of enhancing the Verdugo Wash area, but know nothing of the design specifics. 5

I want to know how the river plan is going to mesh / dovetail with the work that is already scheduled on the Riverside Drive Bridge and the new Bike Path from Riverside Drive Bridge west to Universal City???? (NBC Universal is financing the bike path work, to the best of my knowledge.) 6

It looks like you plan to do a bunch of landscaping in the Bette Davis Park area to the west / northwest of the Riverside Drive Bridge. How does this mesh / dovetail with the 2 years of work in the same location that was just recently completed by LA Rec & Parks???? Also, how does the horse trail fit into this? I am in favor of some more landscaping along the sides of the horse trail because it has become a major dust problem in our area. There used to be more native plants along the side of it and in the middle of it, But,several years ago it was all bulldozed by Rec & Parks just prior to a big horse show (in Sept) when a couple dozen horse trailers were parked on the horse trail. The dust and dirt becomes airborne and ends up in our yards. It also causes breathing problems for those of us that are dust sensitive. 7

Our area is posted for West Nile Virus and has been on an on-going basis. Vector control finds infected mosquitos here. We also have a MAJOR PROBLEM here with rodents, specifically rats and ground squirrels. I object to putting in any hanging vines - this will just be a rat nest and rat breeding haven and mosquitos will thrive. Those of us living around here see that mosquitos hang around in vines, damp vines, etc. The fact that there are alot of horses around here contributes to the rat problem. Also the fact that we are in Griffith Park wildlands. 8

West-3

I REQUEST THAT ANOTHER MEETING BE HELD FOR CONCERNED PARTIES AFTER THE ABOVE QUESTIONS ARE ANSWERED AND MATERIAL PROVIDED TO ME. 1

When I asked for info, in included my phone numbers. I go no emails, no phone calls, nothing.

I am out at the river on a daily basis and nothing can be done there without having an effect on my daily life and quality of life. I would like to have improvement, not permanent set backs. How can you call a massive concrete cliff "user friendly." 3

You have not provided anything that allows true understanding of the plans - especially the option 20 that everyone seems to want. 1

You need to consider the residents that live a short ways from the river and what their opinions are.

The preceding opinions are intended for the person to whom addressed only.

This email is not for resending, duplication, printing, or related.

Sent by: Carolyn West, Member Glendale Rancho Neighborhood Association

West-4

From: Carolyn West
To: SPL Comments LA River Study
Subject: [EXTERNAL] RIVER COMMENTS
Date: Monday, November 18, 2013 3:38:39 PM

You need to consult with LA Rec & Parks maintenance manager for Griffith Park (Michael J. Watkins) prior to doing landscaping, etc. that will impact the area that he is maintaining.

Weston

From: lacyadjuster@yahoo.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] I support Alternative 20 for the LA River
Date: Tuesday, October 29, 2013 2:11:59 PM

Thank you,

Janis L Weston

Sent from Windows Mail

Wexman

From: todd wexman
To: SPL_Comments_LA_River_Study
Subject: [EXTERNAL] LA River
Date: Saturday, November 16, 2013 12:10:40 PM

I am writing to express my support of Option 20 for the revitalization of th LA River. This effort will benefit huge areas of the Los Angeles for generations to come in a City which has few parks and minimal access to natural habitat. Given the huge impact, it is essential we make the most improvements possible.

Thanks,

Todd

Todd Wexman
926 Tularosa Drive
Los Angeles, CA 90026
310/770-6211
twexman@gmail.com

White

From: Liza White
To: SPL Comments LA River Study; councilmember.ofarrell@lacity.org
Subject: [EXTERNAL] USCE LA River Feasibility Study
Date: Monday, September 30, 2013 11:59:53 AM
Attachments: PastedGraphic-1.tiff

I have lived in Los Angeles all my life and followed the long history of our river's environmental decline and possible revitalization. I have read the Executive Summary of the
Feasibility Study. Although it recommends plan 13 (ACE) I would suggest that Plan 20 (RIVER) be the plan chosen. This is Los Angeles' once in an era chance to integrate environmental benefits to the most communities within the ARBOR area while achieving significantly more redevelopment, long term benefits.

I hope those who make this decision recognize that we won't be revisiting these possibilities again. We need to make bold decisions in a timely way.

Liza White

Liza White
908 Malcolm Ave. LA, CA 90024
310 441-4461 h
310 709-2101 c

Wilhelm

From: wilhelmnick@aol.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] ALTERNATIVE 20
Date: Sunday, November 17, 2013 2:31:10 PM

Dear JOSEPHINE AXT, Chief,Planning Div.

I support Alternative 20 because it most completely insures natural habitat restoration. A richer human community experience will develop with the more comprehensive and connected plan.

Natural habitats will gain from the greater spacial and structural plans involved in alternative 20. The extra financial output will deliver exponential value to the urban community by providing expanded and healthful interactions amongst humans and other natural communities.

The L.A. River long been seen myopically as a flood control drain. It is time to fully expand vision and provide human and natural communities the fullest healthful options. The extra expenses will offer compounded natural and human social returns.

We need the urban experience to be softened by nature and an expanded conceptual leadership.

Respectfully yours,

Nicholas J. Wilhelm
500 Cornell Drive
Burbank, Ca. 915004

Wilson

From: Ed Wilson
To: SPL Comments LA River Study
Subject: [EXTERNAL] Los Angeles River Ecosystem Restoration Feasibility Study - In support of Alternative #20
Date: Wednesday, October 16, 2013 9:18:06 AM

I am a resident of Pasadena, California. I am also a Board Certified Environmental Scientist. I have reviewed the USACE Draft document and would like to submit my support in favor of Alternative #20.

Please do not hesitate to contact me with questions or for more information.

Ed Wilson
818 585-0700

Wolfe

From: LA River Annex
To: SPL Comments LA River Study
Subject: [EXTERNAL] Question about LA River Study
Date: Wednesday, October 02, 2013 12:31:11 PM

Hello,
I listened to the KCRW interview where Josephine Axt was a speaker. She did a very good job with the short time she had explaining Alt 13 of the LA River Study.

I have a quick question regarding future generations use of the River Study before I submit a formal comment and post on my blog to get others to comment too.

Let's say Alt 13 is chosen and Congress oks it and Alt 13 is put into process and completed, and say in 30 years a new generation wants to restore parts of the LA River that were not in Alt 13 but were covered in the Study, say for instance covered in Alt 16 or Alt 20, Can that generation just refer to this LA River Study and restore the river covered in Alt 20 or do they have to spend millions more dollars and tens more years in doing a new study and a new approval process?

Thank you for your time it is greatly appreciated.

Sincerely,
Kim Wolfe
lariverannex.com

Wolff

From: partwolff@yahoo.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] LA River restoration
Date: Tuesday, September 17, 2013 7:32:35 PM

Alternative 20 sounds like the preferable restoration plan. It includes more areas, and the terracing of the river's banks sounds much more natural.

Pat Wolff
1020 El Sur.Ave
Arcadia, CA 91006
partwolff@yahoo.com

- "The best whisper is a click." (google it!)

Wright

From: Anja Stadelmann
To: SPL Comments LA River Study
Subject: [EXTERNAL] Alternative 20
Date: Thursday, October 17, 2013 5:41:35 PM

Please consider Alternative 20 as an option for the Los Angeles River. Los Angeles is such a sprawling cement desert that we desperately need a large, green recreational space. This would be a bold, forward looking move and not just a little fix.

Thank you,

Anja Stadelmann Wright
LA, CA 90068

Yonai

John N. Yonai
2616 East 3rd Street
Los Angles, California 90033
626-665-1224

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
P.O. Box 532711
Attn L Ms. Erin Jones, CESPL-PD-RN
Los Angeles California 90053-2325
E-mail: comments.lariverstudy@usace.army.mil

Re: Support Letter for ARBOR Study Alternative 20

Dear Dr. Josephine Axt:

As a resident of the City of Los Angeles Basin I urge the United States Army Corps of Engineers to select Alternative 20, which would best restore the natural ecosystem habitat of the river area that directly impacts the quality of life of the Northeast Los Angeles riverfront communities of Atwater Village, Cypress Park, Elysian Valley, Glassell Park, and Lincoln Heights.

The proposed expansive ecosystem restoration described in Alternative 20 is essential to Los Angeles and provides:

- the best case scenario for a riverfront ecosystem habitat that benefits the green space for the poor communities of NELA;
- provides four (4) times more jobs than the other proposed alternatives within the ARBOR study to assist in addressing many of the local concerns;
- the greatest value to the immediate NELA region of over 330,000 residents that not only includes the riverfront communities but spans other L.A. neighborhoods and neighboring cities in the region such as Glendale, Burbank, and Pasadena;
- greater river access to the entire Los Angeles County region of 10 million residents who will have access to a valuable regional resource;
- an extremely cost effective investment relative to the impact to the region and population base as compared to other Army Corp projects.

I would like to encourage the ARBOR study document to insert language about the investment that the Federal government and City of Los Angeles is making in the ARBOR Study Area that is directly situated in Northeast Los Angeles. One of the goals for the future Northeast Los Angeles Riverfront District is to maintain and sustain the last 15 years of Los Angeles River revitalization efforts and ensure that the adjacent riverfront neighborhoods co-benefit alongside the revitalization of the L.A. River.

The Arbor study demonstrates the Army Corps commitment that the Corps and the Federal government have to Los Angeles's urban waterways and watershed. I recommend that that the most expansive option, Alternative 20, be adopted. Alternative 20 will provide the most sustainable pathway that will ensure environmental, social, economic, and cultural benefits to the Northeast L.A. Riverfront communities and the entire L.A. City and County region.

John N. Yonai
2616 East 3rd Street
Los Angles, California 90033
626-665-1224

Yonai

I look forward, in the near future, to speaking with you personally and other representatives as to the significant benefits that Alternative 20 brings to the future of Southern California, Los Angels Basin, City of Los Angeles and the future NorthEast Los Angeles RiverFront District.

Sincerely,

John Yonai

Young

From: Jennifer Young
To: SPL Comments LA River Study
Cc: mayor.garcetti@lacity.org
Subject: [EXTERNAL] LA River comment & question
Date: Sunday, November 17, 2013 8:16:45 PM

Dear Sir or Madam,

I fully support alternative 20. Alternative 20 will make the city of Los Angeles a more valuable city, greatly increase it's beauty, make it a healthier city, and increase recreation and wildlife habitat. Alternative 20 has the furthest reach and will make the biggest difference of all of the alternatives. Alternative 20 the only alternative that makes sense to me.

However, I do have one question that I'm curious about in regards to all of the alternatives. As you know, when it rains there is a tremendous amount of water that gets dumped into the Pacific ocean. Since Los Angeles is a city that is very much dependent on water from outside sources, such as the Owens river, it seems like it would make sense to do everything we possibly can to be able to reclaim as much of the water as possible instead of dumping it into the ocean. Especially since Los Angeles will only grow larger and it's need for water will increase. I don't see any plan for water reclamation in any of the alternatives. Did I miss something? Is there any plan in any of the alternatives to reclaim this water?

Your reply is very much appreciated.

Respectfully,

Jennifer Young
m: 323.646.7002

Zaide

From: karen Zaide
To: SPL Comments LA River Study
Date: Monday, November 18, 2013 4:31:59 PM

To whom it may concern,
Please choose alternative 20 because as a resident of Los Angeles county I believe that the environment is very important for our community.

Sent from Yahoo Mail for iPhone

Zell

From: jennifer@zolaland.com
To: SPL Comments LA River Study
Subject: [EXTERNAL] support of alt 20.
Date: Monday, November 18, 2013 3:41:15 PM

Dear Ms. Axt,

Please support Alternative 20 of the LA River Ecosystem Restoration Feasibility Study. Restoring the natural hydrologic functions and habitat connections in the Arroyo Seco, the Verdugo Wash, and the main stem of the River from Piggyback Yard through the Glendale Narrows will be a commendable step toward achieving the Corp's primary mission for the Civil Works Program. Thank you for your leadership and vision in working toward positive change in Southern California.

Best regards,

Jennifer Zell, ASLA
Principal

ZoLA
ZELL OFFICE OF LANDSCAPE ARCHITECTURE
[P] 562.668.0251
[E] JENNIFER@ZOLALAND.com
[w] www.ZOLALAND.com

BEFORE THE

U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT

AND

CITY OF LOS ANGELES

Public Hearing in the Matter of:)
)
LOS ANGELES RIVER ECOSYSTEM)
RESTORATION FEASIBILITY STUDY)
_____)

TRANSCRIPT OF PROCEEDINGS

Los Angeles, California

Thursday, October 17, 2013

Reported by:

MARCENA M. MUNGUIA,
CSR No. 10420

Job No.:
CC635ROB

BEFORE THE

U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT

AND

CITY OF LOS ANGELES

Public Hearing in the Matter of:)
)
LOS ANGELES RIVER ECOSYSTEM)
RESTORATION FEASIBILITY STUDY)
)

TRANSCRIPT OF PROCEEDINGS, taken at L.A. River Center and Gardens Atrium, 570 West Avenue 26, Los Angeles, California, commencing at 5:35 p.m. on Thursday, October 17, 2013, heard before the U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT, AND CITY OF LOS ANGELES, reported by MARCENA M. MUNGUIA, CSR No. 10420, a Certified Shorthand Reporter in and for the State of California.

APPEARANCES:

Project Team:	COLONEL KIMBERLY COLLOTON District Commander USACE Los Angeles District
	JOSEPHINE AXT Chief, Planning Division USACE Los Angeles District
	DEBORAH WEINTRAUB Deputy City Engineer City of Los Angeles
	CAROL ARMSTRONG Director, LA River Project Office City of Los Angeles Bureau of Engineering
Facilitator:	KRISTEN SKOPECK USACE Los Angeles District

I N D E X

OPENING SPEAKERS:	PAGE
Councilman Cedillo	11
Mayor Garcetti	16
Councilman O'Farrell	22
Martin Schlager (for Councilman Huizar)	25
PRESENTATION OF PROJECT:	26
PUBLIC SPEAKERS:	
Marian Dodge	51
Humberto Lopez	53
Laura Friedman	54
Kathleen Smith	56
Richard Schneider	57
Joe Linton	57
Tom Williams	58
Karen Morgetti	58
Deborah Murphy	60
Arthur Golding	61
Andrew Jones	63
Lila Higgins	65
Steven Appleton	67
David Cortes	69
Jorge Madrid	70
Geza "Blue" Gedeon	71
Russell Brown	73

I N D E X (Continued)

PUBLIC SPEAKERS:	PAGE
Lane Barden	75
Edward Murphy	76
Giulia Good Stefani	78
Jill Sourial	80
Keenan Sheedy	81
Susan Jones	82
Omar Brownson	83
Gerry Hans	85
Carolyn West	86
Colleen Oinuma (For Congressman Schiff)	88
Sergio Lombardi	90
Mohammed Khan	90
Brenda Vargas (For Congressman Becerra)	91
Charles DeRosa	92
Kim Tachiki-Chin (For Congresswoman Roybal-Allard and Pauline Louie)	93
Lucia Maulano	94
Joanne Hedge	95
Ed Reyes	97
Lewis MacAdams	100
Irma Beserra Nunez	101
Ely Lester	103
Jack Moreau	104

I N D E X (Continued)

PUBLIC SPEAKERS:	PAGE
Michael Drennan	105
Dana E. Bleitz-Sanburg	108
Denita Huerta	110
Frank O'Brien	111
Mary Benson	115
Alison Schlick	116
Craig Collins	118
William Rodriguez	120
Karen Barnett	122
Stephanie Landregan	123

Los Angeles, California, Thursday, October 17, 2013
5:35 p.m.

COL. COLLOTON: Unless there are any objections, I think we're going to get ready to start. Time is precious and I know we said we're going to start at 5:30 and it's 5:35 or 1735 military time, so we're going to try and keep to the agenda. We have a lot of people here today that I know we all collectively appreciate you taking the time out to be here to be a participant in this public meeting process.

So a couple of things: One, welcome tonight, ladies and gentlemen. I appreciate your time. I'm Kimberly Colloton, the Commander of the Los Angeles District for the Army Corps of Engineers and as I said, you know, we collectively thank all of you for coming out tonight.

I just want to let you know that we have representatives tonight here from Congressman Becerra's office, Congressman Schiff's office, Congresswoman Roybal-Allard's office. We have Councilman O'Farrell, Councilman Cedillo, former Councilman Reyes, and we have Councilman Huizar represented by one of his staff members here as well.

The Mayor is on his way. He's running a few minutes late. We're going to be flexible and accommodate him into the introductions when he arrives.

But before I continue, before we kind of start with the official part of tonight's presentation, I just want to make a few logistical announcements.

One, if you are near anyone that can only speak Spanish, if you can raise your hand, let them know we do have translation devices. We have a few of them that will give live translation. So if there's anybody in the back or anyone anywhere that you know that would like a translation device, if that would be easier, we have that available. Raise your hand. There's a few people that will take notice and make sure that you guys have that available to you. Don't hesitate. We definitely have the capability.

Second, I just want to let you know for -- the room is crowded, which is great. Emergency exits are in the back and off to my right, your left. So directly in the back and off to my right, your left. If you go through the kitchen, there's only one door, but there is an exit through the kitchen as well.

Bathrooms are to the rear and to my left, your right. This may go on for a little while. Please feel free to go up and use the restroom if you need to. Don't

get uncomfortable. We want everybody to be comfortable and we want everybody to patiently wait as we give everyone that would like an opportunity or a chance to speak tonight.

You, the public, have a very important role in the National Environmental Policy, the NEPA process, the NEPA Act process. The purpose of tonight's meeting is to enable the exchange of information in two ways. One is for us to deliver information to you on the Los Angeles River Ecosystem Restoration Feasibility Study and, two, the second purpose, is for us to actively -- and I stress actively -- listen to anyone wishing to make a comment on this study.

And for your knowledge, we are videotaping tonight's public hearing and we also are LiveStreaming this meeting to those members of the public that couldn't be here in person.

We will not be able to answer all of your questions tonight, but I want to ensure you that we understand it's our responsibility to take into consideration all comments that we receive from this public meeting and during the entire public comment period, which extends until November 18th, and ensure that all of those questions and comments are addressed in the final report.

This meeting tonight, it's not a rally and it's not a competition and so I ask you to please be respectful of everyone that comes up here to the podium tonight, to the microphone to speak. Everyone's comment is important and we would like everyone to have a chance to be heard.

Again, tonight's purpose is to gather those public comments, your comments about all the alternatives, and enable us to make an informed final recommendation to Congress.

Developing a project like this that combines existing flood risk, management infrastructure that increases habitat restoration and enhances recreation benefits in a highly urbanized 11-mile stretch of the Los Angeles River is complex and requires innovative and thoughtful solutions, and I think we've done that and I think you'll see that.

Tonight's presentation will discuss how the Study's Draft Report details four alternatives named 10, 13, 16 and 20 in addition to a No-Action Alternative. We'll also explain rationale for selecting a Tentatively Selected Plan.

In addition to providing verbal comments tonight, you also can comment via regular mail or e-mail. There are a number of comment cards in the back. Most of

you have already received those. If you'd like to make a comment and if you haven't, we still have more comment cards in the back. You can grab one. They're numbered and you will be called up to make your comment.

As our nonFederal co-sponsor of this study, I'd also like to warmly welcome the City of Los Angeles. As I mentioned, Mayor Garcetti is due to arrive, but we have Councilmembers O'Farrell and Cedillo here tonight and all of them, all of the City and the Councilmembers will make a few -- or the Mayor and the Councilmembers are going to make a few comments before we begin.

The Corps of Engineers, we're very proud of our partnership that we have formed with the City of Los Angeles and the entire room that's filled with involved and engaged stakeholders on this Study.

And so without further ado, I'd like Councilman O'Farrell -- would you like to get up and speak or Councilman Cedillo?

COUNCILMAN CEDILLO: Let me thank everybody and welcome you to the First District, through your Councilmember.

I am very excited to see you here this afternoon. This is an incredible opportunity for us as a community to come together to support this project. Let me say first I want to thank the Colonel and I want to

thank the Army Corps of Engineers. This is a critical project and I want to thank all of you who are here tonight because what I see here is what I will conclude with, but I want to say what I see here right now.

I see something that is very rare in politics. I see a consensus. I see a group of people who have come together around our hopes and aspirations to restore and revitalize the River, and that cannot be overstated. There is nothing more important for us economically and for the acquisition and expansion of green space than to do this project and to do it right.

We appreciate the proposals that have been brought forth. We appreciate your consideration, but I have to say to you that for us and for you on behalf of me and my colleague, we are enthusiastic; and he is really enthusiastic about Option 20. We will be very clear about that. We are not shy or modest to put forth where our position is.

And we believe that as we saw earlier, this type of governing coalition that has emerged with this type of popular support can help us resolve any of the other issues that exist. We just believe that. Our life experiences tell us that.

Now, I have been involved in some issues that seemed insurmountable in the past. Some said it was not

realistic to try to save the health care system in 1995. They said, "Gil Cedillo, you're just a union leader. How do you think you're going to save the hospital system?" But we did it. People thought, Well, you know, this Dream Act, you're going to give scholarships to young people who aren't here legally? But we did it.

Now we just saw the other day, after 20 years, we reversed wrong-thought policy. We reversed a change in our environment with better policy, a more thoughtful policy, when we voted a decision to give licenses to immigrants. People said it couldn't be done, yet we did it and I thank you and I say to you -- and I mention those three things because there is a common theme in each instance. Some people thought it wasn't realistic. Some people thought it wasn't viable. Some people thought we couldn't afford it. Some people thought it was bad policy; but ultimately, and even in the case of the driver's license where there was so much opposition, so much opposition, we came to a point -- we came to that tipping point where we developed a consensus.

So I say here to you tonight that we are at that point, that tipping point, with my colleague, with the colleagues who were here earlier, but with you here sitting in this audience, we have this incredible opportunity to express to the Corps of -- the Army Corps

of Engineers that we are at that tipping point, that we have come to that consensus that we have the body of governments, that we have the popular support, the science and technology exists, the vision of Lewis MacAdams. We are at that point where we can go from vision, right, to from what's desirable to this moment of what is doable and this vision now can become a reality. And so we are at that point tonight and so I want to thank you for being here.

I will say to you, as we know, this is a great source of new green space and it flows through the nation's largest urban region. We know that. The River is home to more than a million people. A quarter of the city's population have proximate access to the River. 390,000 units of housing, 480,000 workers and 35 businesses are all proximate to the River. There is hardly anything more urgent nor anything more timely.

This is what they would say an idea whose time has come. All right. No force of nature nor army can stop an idea whose time has come and so that's where we are at tonight. I applaud you because this is where we are at tonight.

I don't want to talk about the alternatives, and I'll tell you why. 16 years in the Legislature and six years as a CEO, I always tell my staff, "Focus on where

we want to go." Let others talk about, Well, you know, maybe there's 13. Cedillo, what do you think? I'm not a negotiator. I promise you that. Even though I've negotiated many big deals, I always focus on where we want to go because if we stay focused, Lewis, as you've taught us, on where we want to go, then we're going to get there. We're going to get there closer and closer and closer.

We'll start with what's doable. Always focus on what's desirable, but when we come to this point tonight where we're so united, where we have this incredible consensus, there is no really, as I would say, no force of nature or army that can stop us from realizing this idea whose time has come.

I want to thank you for being here tonight. I'm going to stop now and I'm going to just say to you thank you. I know my staff works so hard giving me talking points and they think I don't use them. I read them earlier. I'm not going to read them, but I'm just going to say seldom in my political experience, and it's been a very rich one, have I been in a room where people are so committed to this idea, an idea of a visionary, an idea that can bring people together, an idea that can move us forward. Rarely do we have those opportunities in life.

At this moment, this time I say to you is that

time, the time for an idea whose time has come. I thank you and I look forward to joining you on Alternative 20.

Thank you so much. God bless you.

COL. COLLOTON: I'm happy to announce I'd like to turn it over to our sponsor, the head, the City, the Mayor, Mayor Garcetti.

MAYOR GARCETTI: Thank you, Colonel. Thank you.

First of all, let me thank Councilmember O'Farrell for letting me go next. I appreciate it.

Thank you, Councilman Cedillo, for your words.

It's the difference between getting home and getting to see a 2-year-old before she goes to bed, and I used to walk along the L.A. River with my father and it's certainly an experience I look forward to having with my daughter, if we do this right.

And I am so overwhelmed with emotion to be here with all of you who -- what a journey that has been for so long for so many of us. In this space, a creative writing teacher in high school that I had named Lewis MacAdams who helped unleash the poetry of this place for me, the history that swirls around us because Los Angeleans were not meeting talking about what to do with the coastline.

Los Angeles was founded here because of two rivers that intersected just down the street from us, a

place where native Gabrielenos came for years, the Tongva who were here, and then when Father Juan Crespi came in 1769 and wrote in his journal about the two earthquakes that visited him the day that he took communion in the River at the intersection of the Arroyo Seco and the Los Angeles River, they christened the name of this place because of the water around us. It was a "Rio de Nuestra Senora la Reina de los Angeles de la Porciuncula" because of the day of St. Francis of Assisi, the Franciscans, the beauty reminded him of that small piece of land next to the church in Assisi where St. Francis went to when he needed to find peace and solace and to recharge.

Well, that is our River today, just as it has been our River yesterday and it will be our River tomorrow. But I want to thank the Army Corps of Engineers, first of all, for letting a Navy guy speak and hopefully listening to me with no prejudice despite our many victories in our Navy games over the last decade. But more importantly, this Army Corps of Engineers has always answered this city's call.

The call has changed over time, but when we rejected a parks plan ourselves because everybody had a backyard and we didn't feel a need to build great public parks and then we had a flood that killed our people in this city, we went to the Army Corps and we asked for

their help and they were there. And now three-quarters of a century later, we come back to that same great institution, the Army Corps of Engineers, to thank them for joining us at this time, for the culture shift that was a part of us getting there, for Councilmembers Cedillo and O'Farrell, for all of us who have worked on it from the community, who have realized that this is an opportunity of a lifetime, one shot to do this and to do it right.

And we now have over 4,500 people in Los Angeles who have signed a petition. I can't remember the last time 4,500 people in Los Angeles agreed on anything but who have said that we want to make sure Option 20 is the one that we enact on the banks of our founding River.

In 2006 when we approached the Army Corps of Engineers, it was an exciting moment. We had done our work in the City through so many community meetings to put a Master Plan together; and plans are great, but we were determined not to have it be the newest Olmstead plan that goes on a shelf never to be opened or enacted. We wanted this to be a living, breathing blueprint; and after seven years of study and community engagement, the Corps released the four proposals that we know for the River last month.

As Mayor, I have made it clear from the

beginning and to Washington that 20 is what this Mayor will lead and propose and support; and hopefully this entire City through our strength will show unified, exhaustive, detailed work that has taken us to this point; that we as a donor state who give a dollar and get back only about 70-something cents from Washington are asking to cash that check and to say that those deposits that we have made for decades, that it's time for us to do something that is going to be great not just for our city but for our nation.

So let us not be pennywise and pound foolish. Let us not enact something that makes us feel that we have done something but we've lost the ability to do everything. And we know, by the way, this is -- you know, when you have four options and it probably comes as no surprise, "Well, folks, you just want the most expensive." It's not. We would actually like something more expansive than even 20, but 20 is the best option in the report that we have and it's a start. And we know, too, that we don't come hat in hand to Washington. We have said that we will step up and we will find the resources to be a partner, a majority stakeholder in this.

You know, we've done that in transportation when we've taxed ourselves to build out rail lines now. We've

done that in water when we taxed ourselves with Prop O. We have realized that our destiny has to be controlled by us, but we also look forward to an amazing partnership that we can have with the Federal government with Alternative 20. It's the only alternative that equitably shares costs. It will generate up to four times more jobs, and jobs is my number priority as your Mayor. Alternative 20 will also bring the most open space for park-poor communities, and this has to be about environmental justice as well as reclaiming a river.

So I know that our friends at the Army Corps were as frustrated as us the last couple of weeks when little was going on in Washington. I was to meet with the head of the Army Corps of Engineers and he could not travel because of the dysfunction that we see at the national level among politicians; but at the local level, there is no dysfunction. We're unified. There's one team here and we are united and vocal in pushing for Alternative 20.

I want to thank two partners in Washington who have been extraordinary: Senator Barbara Boxer and Congress Member Roybal-Allard for their unwavering support for this.

And you can see from the list that's still scrolling I've been reaching out to Angelenos, too, so

that we can send a huge message to our Army Corps of Engineers because just like I am your Mayor and this is our city, they are our Army Corps of Engineers that we should be so proud of; that in this official comment period, there isn't division in the city of Los Angeles. This city of angels is united.

So I'm going to ask you to do something else right now. If you haven't signed the petition, pull out your phone. You can do it right now. And tell your contacts, even if you have signed -- text somebody right now to go to "lamayor.org/restore_the_la_river." There are spaces in between, underscore.

But just as the L.A. River is part of a larger watershed, restoring the River is a critical part of moving our city forward. New life on the River will be new life to our city, to the neighborhoods and the businesses around, and you've heard me talk about my back-to-basics agenda. There is nothing more basic than that river that has borne us, the Los Angeles River.

So thank you all. Let us win this. I promise you that this discussion and this battle will go on not just from Los Angeles but hopefully from a unified voice. I plan to travel to Washington, D.C.

I was just sharing with the Colonel that I haven't called in any favors really from our incredible

President, but many of you know I was one of the first or second people in the state to back him. I was very proud to travel to 13 or 14 states to campaign for him, but you can bet I'm going to call this one in and I'm going to go straight to, because we can approve this. But to be clear, the Army Corps of Engineers can sign off on 20, which I hope and pray that they do. It will be a legacy to remember for them to take their children along the banks of this revitalized river, but that doesn't get us there because then we need funds and it happens in two ways: from Congress, and we'll keep up that Congressional pressure, and from the OMB, which is on the Executive Branch.

So we're going to be taking this message to them, making sure that Los Angeles gets its dessert, and that this country will see a truly great river reborne again.

Thank you all for coming.

COL. COLLOTON: Thank you, Mr. Mayor.

And Councilman O'Farrell, if you could please come up.

COUNCILMAN O'FARRELL: So I'm supposed to wax poetic after that? Not going to happen.

No. I want to welcome Colonel Kim Colloton. She is relatively new to the scene, yes, not unlike my

Colleague Gil Cedillo and myself on the City Council and the Mayor.

Folks, we have a new team of enthusiasts at the River. We've gone from the abstract in the last 20 years or so into the very real, the very present effort, the unified effort to demand nothing less than the alternative that has been the result of so much diligence, so much professionalism, so much investment over the last several years.

One of the giants in the room is Lewis MacAdams. He's been mentioned, yes, Lewis MacAdams.

I am such a blessed man. I have the mentorship from being on staff of the man you just heard, and that is Mayor Eric Garcetti, who was Councilmember back in 2002, when he took a chance and hired me and I was at the very first meeting of the Ad Hoc River Committee chaired by Councilman Ed Reyes, who is sitting here tonight.

We had mentoring while on staff from the masters, Eric Garcetti, Ed Reyes, Tom Labonge, and now my friend and colleague Gil Cedillo, who has done so much work at the State level. We're in such good hands and I'm going to be brief because you all need to speak and we'll hear your points and it will be part of the public comment and in this hearing.

But earlier, we held a press conference and

there were nine elected officials representing City, State, and Federal level and this region is speaking in one voice. Alternative 20 is the way to go. We all know that. And as the Colonel said, this isn't a rally. You all will make quality statements that will justify further beyond what has already been said, but this is just one step in the process. We're in this for the long haul. We're all determined.

We are uniform in our intent to see this full vision realized. It's 11 miles, 11 miles of the Los Angeles River that will bring quality-of-life enhancements to a great plurality of Angelenos living and working in their neighborhoods, but it will create more of a destination place so that people across the city, across the region, can enjoy the restored ecosystems and riparian habitat that the founders of our city enjoyed.

We can do this right. We will do this the right way. This will be a watershed moment -- and you know there are going to be metaphors tonight I'm sure, intentional or otherwise -- and this is going to be another improvement, yet another improvement that will bring Los Angeles into the world-class status that we are deserving.

So thank you all for being here tonight and it's a real pleasure to serve you on the City Council. Thank

you.

COL. COLLOTON: Last, from Councilman Huizar's staff, Martin would like to get up and make a quick statement.

MR. SCHLAGER: Thank you very much. Martin Schlager representing Councilman Jose Huizar.

I appreciate everyone who's here, but thank you so much to the Army Corps and Colonel for being here to hear these comments.

I'm really representing the unity of the city. The city is unified in support for Alternative 20. The Councilman's district, which covers most of the downtown area of the River, wants really to highlight here for the Army Corps today that if we're not able to move beyond Alternative 13, we're losing an opportunity to connect the east side of our River to nature and that underscores part of the value of the Ecosystem Restoration Study as a whole, and that is to bring the connection of nature back to a very urban area, an urban area where the environment has been so fractured over time that we need to reconnect so we're reconnecting the communities in the densely urban area but also the ecosystem and that's another area in which we must move to Alternative 20, to maximize the productivity of these ecosystem areas, to truly have restoration along the L.A. River for a sustainable habitat restoration plan.

And we want to thank you for how far you've come in the past few years in working through this study. It is a turning point here. The opportunity now is to make sure that we embrace the most visionary plan so that this long-term project -- none of this is going to be done overnight -- this long term project has the agreement of the State and the County and the Federal government along with the City to be able to achieve long-term plans. And it's under Alternative 20 that we allow ourselves the most options for future restoration and the most benefit to the most people from restoration of the L.A. River.

Thank you so much.

COL. COLLOTON: Thank you. And now we're going to start the official presentation where we're going to deliver the information. It's about a 20-minute presentation. It's Going to be delivered to you by Drs. Axt and Armstrong. Dr. Axt is from the Corps of Engineers and Dr. Armstrong is from the City of Los Angeles and jointly they're going to present to you everything we talked about, everything you heard about, maybe you've read about it, and then after that we'll start the public comment period.

DR. AXT: Good evening, everybody. It's a pleasure for me to be here. My role tonight is to quickly give you an overview of how we got to where we are, the

framework that we had to work within, and the differences among the alternatives. I'm afraid I am going to have to speak to alternatives other than just 20. I'm going to go through all of them.

Any Corps study starts off with establishing planning objectives and in this case we had three primary ones: To restore habitat, to increase connectivity, and to provide passive recreation.

So in terms of the first objective, Restore Valley Foothill Riparian and Freshwater Marsh Habitat, what you're seeing in the upper right of the slide is our 11-mile study area and that's from about the Equestrian Center north of Griffith Park to downtown. And on the left here, this is what -- how the habitats were mapped in 1896, and I won't go through all the different colors. Basically, it represents the diversity of natural habitat types that used to exist along the River.

What you see here (indicating) is that same area in the present day with the red representing urbanized, developed land.

So basically, the point is we've lost the habitat and our first primary objective was to restore some of that diversity of habitat that used to exist along the L.A. River. When you lose habitat, you also

lose biodiversity and ecological processes that go along with them.

And our second objective, Increase Habitat Connectivity, has got two aspects to it. There's the regional aspect, and this graphic on the lower left shows you our 11-mile study area in the context of some nationally significant ecological areas, San Gabriel Mountains, Santa Susana Mountains, Santa Monica Mountains, and the point here is that the 11-mile stretch really serves as a bridge, as a backbone, regionally to connect those areas. And also, there's the aspect of connection that relates to how within a river, the river itself connects to its floodplains. So the river's then channelized and we know it provides flood protection, but what we lost was that natural hydrology and when you lose the connection of the river to its floodplains, you lose out on processes like nutrient cycling and sediment transports. So those aspects are also encompassed in the second objective.

Now, our third objective is Passive Recreation and the important thing to remember there is this is recreation that's compatible with a restored environment and "passive" simply means nonmotorized, low-impact type, hiking, biking, bird watching. And that objective we really independently justified and analyzed after we

selected the Tentatively Selected Plans. So I'll go into that more later.

Briefly, Corps usually doesn't get going on a Study until it has authorization. So in this case, we had committee language in '69 that allowed us to partner with the City and start the reconnaissance phase in 2003.

We then began a feasibility phase in 2006. That's what we're trying to wrap up right now. Of particular note in terms of study authorization is the idea that in 2007, the Water Resources Development Act specifically had language in it directed at the ongoing study which said, you know, Be consistent with the goals of the Los Angeles River Revitalization Master Plan effort.

And the Mayor and others mentioned this. Many of you are probably aware it was an extensive outreach effort led by the City, lots of public meetings trying to get the citizens' vision for what they wanted the River to look like. So the Corps was directed to make use of that.

One brief additional thing on study area: We often get the question, "Why are you looking at just that 11-mile stretch?" So originally there's 32 miles of the River that flow through the city of L.A. We chose this 11-mile stretch, which, again, as the squiggles in the

previous slide here, we have the Equestrian Center, Griffith Park, and going down to downtown. This 11-mile stretch not only had that regional context that I mentioned, but also has -- approximately half of the channel is still soft bottom. It's not encased in concrete, so there's existing habitat patches that we can connect and then again, you know, the floodplain connection as well. But that was the reason that we chose this 11-mile stretch, and that consensus really emerged in about 2008 to focus on this area.

Okay. I think we know what the problems are real quickly. You know, loss of aquatic habitat, lack of river processes, lack of connectivity. It's hard to see that the River is even in this picture (indicating) because of everything else going on. We've got highly altered flows, high-velocity flows. So you have channels that look like this, a tributary that maybe used to be meandering. Now the water's going straight and fast.

The middle photo is illustrating lack of substrate and natural sedimentation, although as I was saying, there are some soft-bottom areas along the River and there is habitat there that's widely used, but in a lot of instances native plants have been displaced by nonnative species.

And then in terms of impervious surface and

urban runoff and pollution, you know, we have a rain event and whatever is on the streets or in the gutters ends up in the River so you get trash as well.

And the last thing, again, recreation, we have -- and the photo on the left shows you areas where people can go along the River channel, but there's not as much access to the River, and that's what we are hearing loud and clear, that people would like that.

So briefly, in terms of -- you know, the flip side of problems is opportunities, so our major objective is to restore habitat types that used to exist along the River that maybe used to look like that (indicating). And the bullets you're seeing here are some of the key characteristics of the habitat type we're trying to restore. It's linear, it's running along the River, it's flow-dependent. We're in an area where you've got kind of a rainy season and a dry season and the vegetation has adapted to those conditions, those variable conditions.

The sharp contrast bullet here is just emphasizing you could have a very arid upland, very close to that ribbon of green that's where the water is. The diverse structure is given that you ecologically want to have diversity of niches for wildlife to use. So if you have shrubs and trees and grasses, then that's more positive than a monotypic situation. And because it's

linear, you connect habitat areas and that serves as wildlife corridors and that's what's illustrated here (indicating). And this is straight out of the Revitalization Master Plan where it was looking at, again, some of those significant areas for wildlife and how we could try to connect those nodes. And the blue area, again, is our study area.

Really quickly, we worked within a framework of constraints and considerations. So two important constraints I need to mention is that where practicable, we wanted to avoid areas along the River that were contaminated; and because many of the parcels along the L.A. River and the stretch known as the ARBOR -- Alternative with Restoration Benefits and Opportunities for Revitalization -- that ARBOR really is an acronym for that. Many of those parcels had industrial uses in their past and there's either some contamination there or a perception of contamination.

So in our case, we really couldn't avoid areas that were contaminated and the note here is just under Corps Restoration Policy, we're not allowed to cost share the remediation or cleanup of parcels. The City provides -- or the sponsor, the City -- provides the lands necessary for the project and they need to be provided in a state so that they're ready to be restored.

The other constraint I wanted to emphasize was our baseline conditions we took to be the existing flood risk management benefits that are provided by the channels, so I think everybody's aware of why they were built and the importance of them. When we put together our restoration measures and brainstormed and came up with alternatives that I'll get to in a second, we were always working within the context that anything we're proposing couldn't increase flood risk for the citizens next to the River using the existing flood risk protection as our baselines.

Other considerations quickly were just there's not a lot of water there. We don't want to be proposing habitat or vegetation that needs more water than what's going to be in the River, which is largely from the water -- Tillman Treatment Plant. The photo illustrates what a lot of us know. There's infrastructure all over the place, so we had to be cognizant of that.

Limited availability of land and limited recreation gets that the recreation that we're proposing needs to be on study land. And the study land, you know, we had to be -- we were targeting public-owned parcels in terms of acquiring land for the project. There was a limit of that. And we wanted to be cognizant of cultural and historic sites when we're planning as well.

So one last restoration challenge before we get into the alternatives. I just wanted to make the point when I first started more than five years ago at L.A. District and I would say "L.A. River Restoration," people were like, "Great, all the concrete's going to be gone" and that's not possible. We need that concrete and it's providing some good flood-risk benefits and I just wanted to illustrate this graphic on the top left.

So the channel is on average about 300 feet wide. If you wanted to take away all the concrete and maintain your flood protection, your channel would need to be like 900 feet wide if you just had grasses in it. If you wanted the same level of protection but you wanted to allow some trees and shrubs in there, you need to have it five times as wide as it is now.

So early on in the planning phase, you know, this black line here around the L.A. River in the study area, that band is basically showing you a 1500-foot-wide swath of area that we would have to remove the businesses and roads and houses that were there if we really wanted to remove all the concrete. So that's why we were not able to do that. The real estate alone was over 7 billion dollars if you wanted to pursue that.

Another idea that we had, we are the Corps of Engineers after all, and we thought wouldn't it be great

to have some big tunnels going under the city and we could take the high flows off the River.

We're limited in what we can do in the channel because we have to be cognizant that we do get big storms and the water can come through very quickly, very fast, and it can rip out what we're putting in. So in addition to the flood risk, we have to be cognizant of what we're putting in. We don't want high O and M costs or to have it all be destroyed, but if we took those high flows off, if you have a big event and you had a big tunnel and you could literally have the water move off the River, then you could do whatever you wanted in the River because there would be no safety risks or flooding risks. But again, doing that had a lot of technical constraints and was more than 3 billion dollars for just the tunnels. So that again was an alternative that we had to discard.

So I want to go over this figure (indicating) and try to explain it to people because it is a key piece of how we evaluate plans. So if you will all bear with me, I'm going to describe to you -- you're looking at two figures -- oops, no, you're not -- and on the X axis, we have Average Annual Habitat Units.

So a habitat doesn't have a dollar value. You have to assign. You have to use a metric to evaluate the habitat and our Habitat Units look at the size and the

quality and the functioning of what we're putting in and we get a Habitat Unit for that, and that's our restoration output, if you will. And on the left axis, the Incremental Cost per Unit. So how much does it cost to get that unit of output? And in this case, we're looking at the incremental costs from one unit to the other.

And so this bar basically -- this is Alternative 10 -- well, let me step back. The inset figure is set up the exact same way with outputs on the bottom and costs on the left and these are our 21 Best Buy Plans. So we did a lot of environmental work, engineering. We had planning charrettes, and I'm going to show you some of what we came up with when we get to the alternatives. We mixed and matched them and we had a graph here that shows you how they compare to one another in terms of their output and cost. So people may have wondered, Why is it 10, 13, 16 and 20? And that's because they came from our initial 21 Best Buy Plans and in Corps lingo, "Best Buy" means cost-effective, incrementally justified, and here you see the yellow ones are where the -- the yellow are the four that we pulled out of that initial graph and put in our final array, because they occurred at natural break points in terms of cost and output.

And down here (indicating) so here are our four alternatives. In Alternative 10, basically the wider width shows that you're getting a lot of output and it's a short bar graph. So that means you're getting all that output for not very much increase in cost, and then red shows you're getting incrementally some more output for a certain incremental cost; and as you go up, your incremental costs get higher.

One analogy we thought of was if you were going to the 100th floor of a building to look out and see the view, maybe the first 80 floors you could get to those 80 floors for $40. You know, buy your ticket. So every floor would cost you fifty cents. But once you're to the 80th floor, they're like, "Hey, you've got to pay 20 more dollars." So all of a sudden you're paying $1 per floor to get to the top. I don't know if that analogy is helpful, but we thought it was when we were internally talking.

So that's kind of illustrating like to get to 20, we're getting more outputs, but we're having to pay more incrementally to get them. So I will move on.

So now I want to describe briefly the key features of the four alternatives. So we couldn't show you everything we're doing in these alternatives on one graph. It's just too messy. You've got the detailed

report. But before I start showing you some of those bigger parcels, each of the alternatives does have a riparian corridor in all of the areas that you could really put one on the overbank parts of the different reaches.

And I should have mentioned earlier for planning purposes, we divided the 11-mile stretch into these eight reaches. So those are the different colors and that was based on the size and configuration of the channel and the land use around it and so we have -- what's not shown on this figure is a riparian corridor that's in all of the alternatives and the daylighted tributaries that's in the report. Those are sprinkled throughout the reaches.

But what we have in Alternative 10 is we have riparian habitat on the overbank in Pollywog Park and Bette Davis Park and those are colored in blue. So that's -- we're not changing the shape or size of the channel. This is restoration on the overbank, you know, not in the channel.

At the Griffith Park Golf Course and the Los Feliz Golf Course, that's where we have a side channel. We pull water out of the River, we take it into the overbank, we create habitat, and then we put it back in the River. Again, we're not removing concrete, per se, or changing the channel.

Taylor Yard in this alternative moves -- and that's where many of you know it's soft bottom already, and it moves the channel bank back 80 feet and increases the natural streambed area.

And in Piggyback Yard, our largest parcel, we don't change the configuration of the channel or the walls, but we restore an historic wash and we have a large area for wetland and freshwater marsh habitat. And in that case, the water would flow from the historic wash and flow into the River through pipes that would go through the existing fill material and the culverts, and the walls.

So here are some pictures real quick from the report. This shows incorporation of passive restoration or passive recreation into habitat, structurally diverse habitat in Pollywog Park. A side channel at Griffith Park might look something like that (indicating) where you've got a shaded, meandering small stream. Riparian corridors that I was saying are in all of the alternatives, there would be nice green vegetation, different structure again. And this last photo shows the golf course side channel at Los Feliz. So you can't see it in this photo, the water would be taken off the channel, go through Los Feliz, and then go back into the channel.

Okay. Alternative 13: The main thing to say here is that everything in Alternative 10 is also in Alternative 13, plus we have side channels at Ferraro Fields and that's again where you take water off the River, bring it through the area, create some habitat -- there's a wetland at the end -- and then put the water back in.

We have Taylor Yard. And what's different about this Taylor Yard is that instead of going back 80 feet, the banks are pulled back 300 feet, so you have increased amount of habitat that's created. And then Arroyo Seco is added in Alternative 13 and this is where we do have concrete removed from the channel bed and from the channel walls.

And so here's pictures of some of this. It's probably important to note the side channel at Ferraro Fields does not interfere with soccer. It goes along here and underneath (indicating) and then there's the wetland right there.

The L.A. River at Taylor Yard, that's the iconic photo that's on the cover of the report and so you see all of this space is just considered by many to be a gem along the River because it's such a big parcel and would allow such a nice interaction of the floodplain with the River.

And then the Arroyo Seco Confluence, here you've got that removal of concrete I was mentioning. You've got a type of terracing going on and diverse little stream running into the L.A. River. The position of the pictures, you're looking downstream towards the L.A. River.

And I know I'm talking fast. I'm trying to get through all of this so we can get your comments.

Alternative 16 has everything in Alternative 10 and Alternative 13 as well as -- oh, I'm supposed to turn it over. I was on a roll.

Okay. There you go.

DR. ARMSTRONG: Thank you. Really, let's hear it for the Army Corps of Engineers. This is big stuff.

I'm Carol. I'm with the City of Los Angeles and we're honored to have been the local sponsor of this study that has now been going on for seven years. I want to thank all of you and congratulate all of you who are in the room and watching streaming. I know the study manager's at home in Phoenix watching us.

Hi, Kathy Bergmann. You're a champ.

Congratulations to the Corps for getting us to this point.

And we have -- we still have a long way to go, but, man, do we have a great blueprint moving forward and

I'm going to talk about that.

So here's Alternative 16. Alternative 16 builds on Alternative 13 and it does that by doing terracing in Reach 5. That's roughly from Los Feliz to Fletcher. This is a concept that was developed in the City's Master Plan; therefore, it's very consistent.

What it does is it allows access for humans and wildlife and creates that habitat connectivity upstream to downstream and it helps us get closer to achieving objective one in the study for riparian and marsh habitat, and particularly I want to mention down here Piggyback Yard, the 125-acre rail yard. We would acquire that. But in Alternative 16, it would be the first one where you would connect it to the River, and that's exciting. That would look like this (indicating).

Okay. So the terracing: Again, this is an image from the Master Plan. You still have concrete in the channel, but you're allowing access for wildlife and people, those upstream-to-downstream connections, and here at Piggyback Yard, you would have soft bottom almost a mile long. It's about three-quarters of a mile soft-bottom stretch of the River in downtown Los Angeles. Ready? I'm going to say it again. You would have three-quarters of a mile of soft bottom in the River in downtown Los Angeles.

Okay. Now I want to talk to you about a little alternative called 20. Yeah.

Okay. Alternative 20 is the most expansive in the study and the most expensive, but, wow, is it the most exciting. I want everybody to understand that when this project is authorized, we're not going to ask for 500 million dollars in one day. It's going to be appropriated in phases over time as the City's local sponsor is able to work with its partners to acquire lands and clean them up and deliver them to the project.

So what you see is that Alternative 20 is the only one that's going to directly benefit the other cities, the cities of Burbank and Glendale. It's going to restore the confluence of the Verdugo Wash. That is vague. The Verdugo Wash is an important confluence that connects up to the Verdugo Hills. It also provides important future connections between Griffith Park and the Verdugo Hills so that P-22, the mountain lion here, can actually start to date. So that's where the Verdugo Wash confluence is. It also importantly is the first one that would connect the L.A. State Historic Park, the former cornfield site, to the River.

As you know, there's a long history with the L.A. State Historic Park and the cornfields. That was supposed to be industrial warehouses and the community

fought long and hard for that to be a park. It was then acquired by public agencies and now it's a State park. So this Federal investment would leverage that State investment in creating a western connection, a riparian hydrological connection to the Elysian Hills.

That only happens in Alternative 20 and this is what it would look like (indicating). This is the terracing concept again that comes from the City's Master Plan. This is what the Verdugo Wash confluence restoration would look like and that's what the cornfields connection would look like.

Now I want to point out that the City's Master Plan had five primary opportunity areas. Alternative 20 would restore three of those five. So that is a high level of consistency with the City's Master Plan as well.

Yay. Go team. I'm going to turn it back to my river sister Josephine. Thank you.

DR. AXT: Carol offered me an Alternative 20 button, but I had to decline.

Okay. So now we're going to look at a quick comparison of the final array of alternatives. So I won't go through the key features added. We just did that.

Here it gives you a sense of the cost, so Alternative 10 at 375 million going up to Alternative 20

at a little over one billion. This column shows you the Federal versus nonFederal sponsor cost-share percentages, and I need to let everybody know that usually the Corps Ecosystem Restoration Authority is 65 percent Federal cost sharing and 35 percent nonFederal; and in this case, the lands are so expensive in urban Los Angeles and nonFederal sponsors are per Corps authority and mission -- sorry -- guidance, they're responsible for providing the lands. So that's why we have a skewed cost share, because the lands are such a big part of the total project cost and the Corps itself doesn't provide the lands.

So as the construction costs become higher in Alternatives 16 and 20, then the ratio there becomes closer to 50-50 and you can see it's lowest in 10 and is about 30 versus 70 percent in Alternative 13.

This column shows you restored acreage. You can get a sense of the magnitude of acres we're talking about and here are those Habitat Units. Again, you can get a sense of how many we have and then as costs go up, how many more are added.

I'm going to briefly speak about some key points of the alternatives in the context of the Corps's framework for decision making.

So we have Federal criteria, completeness,

acceptability, efficiency, effectiveness. We have to look at the significance of the outputs. Are they very scarce? Are there endangered species involved? There's no right answer, per se, so obviously tonight the Corps as you all know is selecting Alternative 13 as the Tentatively Selected Plan and that's why we're here tonight, to get some public input on that acceptability piece and hear what you all want and think. But it's important to note that there's not not a right answer, per se. We don't use benefit-cost ratios.

So for Alternative 10 -- sorry -- it's the most efficient plan, going back to that figure. It minimally meets objectives. It was the first plan -- it became the first plan in our final array from the previous nine when I was showing you all 21 because it was the first plan that included the features in all reaches and that type of connectivity was an important objective of the study.

Alternative 13 regionally meets the objectives and it had the greatest increase in net benefits with the least increase in cost between the different alternatives, and reasonableness of cost is also part of that framework of decision making.

Alternative 16 meets our planning objectives and it provided contiguous restoration within and across reaches. So that's important in terms of the

connectivity objective and also it had additional regional connections. Alternative 20 maximizes our planning objectives and it was the only alternative, as Carol was just saying, with meaningful habitat links to Verdugo Hills and to Elysian Hills.

So in the context of all the different criteria I just mentioned and the significance of the outputs, the Corps came to the conclusion that Alternative 13 is what we call the National Ecosystem Restoration Plan, as it reasonably maximizes net benefits and so it's our Tentatively Selected Plan and that's why we're here tonight getting your input.

Briefly, before I turn the floor over, I'm going to go do a little bit more on cost and mention the Recreation Plan. As I said at the very first slide, that was independently formulated after the Tentatively Selected Plan was identified and we're looking at nonmotorized, low-impactful activities. So we're talking about multiuse trails, maybe bridges or crossings going over tributaries, maybe a pedestrian tunnel in Taylor Yard. So we want people to be able to get into the restored areas and enjoy it without disturbing what's been restored.

In terms of the total cost for again Alternative 13, our Tentatively Selected Plan,

453 million dollars, the Federal cost here, the 31 percent, as I was saying before, are all construction because so much of the cost are a function of the real estate and land and utility relocations, et cetera, that is the responsibility of the nonFederal sponsor.

Recreation cost, that's separate from the 453 million. I just want to emphasize the 453- is for the Restoration Project, so plus 6 million for the recreation, and that's cost shared 50-50 between the Federal and nonFederal sponsor. Benefit-cost ratio can be done in this case with recreation and we had a nice high one based on our estimate of recreation benefits.

In terms of next steps, we have a quality assurance process in the Corps of Engineers where we have nationally recognized experts come in and review what we've done. They're going to wrap up their report in the beginning of 2014. We're going to take all the comments we've already received and will receive from stakeholders and the public and we're going to get comments back from our higher headquarters and we're going to spend the next few months responding to those comments and relooking at the report and revising as appropriate so that our Final Integrated Feasibility Report is targeted for the spring.

We have an important milestone conference in D.C. called the Civil Works Review Board and that's where

the Corps as an agency makes its kind of formal decision, Yes, this is the plan that we want to recommend and get authorized, send to Congress.

After that milestone, we have State and Agency Review, what we call. Basically with the Final EIS and Integrated Report will go back on the street and you'll all be able to see the changes that have been made to the report. We'll then summarize that in what's called the Chief of Engineers' Report and that's what goes to Congress to get authorization, and then I just put, "Are we going to have a Water Resources Development Act in 2014?"

So here's some information on making comments and I think at this point I'm all done and I turn it over to Chris.

MS. SKOPECK: Thanks, Josephine.

Jay, do you want to come up here for a second to help me? Good evening, everyone. I'm just going to go over some ground rules for the public comments portion of the meeting.

My name is Kristen Skopeck. I'm from the U.S. Army Corps of Engineers. I'll be facilitating the public comment portion. I'd like to review the ground rules for tonight's meeting, which are necessary in the interest of time.

Comment cards are available on the table and were offered to you as you came in. The cards with numbers on them are for people who wish to make a public comment. Those that are not numbered are for people who want to submit a written comment but do not wish to speak. Please note that there is an e-mail address on the cards so comments can be sent in electronically as well.

To keep things running smoothly, please line up for verbal comments at the microphone located in the middle of the aisle in consecutive order based on the number of the comment card. For example, numbers one through five should get in line and then subsequent numbers will keep the line formed.

Tonight's proceedings are being recorded, so all comments automatically become part of the public record. Individuals will limit comments to three minutes.

Please observe the lighted timer at the top of the podium -- actually, Jay's trying to figure that out right now -- which will display green for two minutes and 45 seconds, then amber for 15 seconds, and turn red for five seconds to indicate your time is up.

Individuals who are speaking for an agency or organization will have six minutes. Please indicate that you fall into this category before you begin. Each

person should take just one turn at the microphone until everyone has had a chance to comment. If you do not use all of the time allotted during your turn, the remainder of the time can't be yielded to another person.

Those who wish to make a verbal comment will be asked to state their name for the public record. All comments should focus on the restoration feasibility study. Please note that the project team will not take time away from the comment section to answer questions, as responses to the comments will be part of the final report. However, if there's time at the end of the meeting, they're going to respond to comments that have been asked or questions that have been asked repeatedly.

If you require help or special accommodation, please see one of the Corps personnel located around the room. We all have name tags.

Okay. So let's start with the first comment.

Can number one please come forward and two and three and so on.

All righty. We're getting ready to start the timer, ma'am. Number one, please go.

MS. DODGE: My name is Marian Dodge.

Friends of Griffith Park supports Alternative 20 because it is the most complete and most efficient of the alternatives. 1

Alternative 20 is the only one to restore the wetlands and connectivity at the Verdugo Walsh. This is particularly important because of the discovery of mountain lion P-22 in Griffith Park. He needs the increased connectivity to cross the River and get into the national forest to find a mate or, as Carol put more succinctly, he needs to start dating.

Alternative 20 complements perfectly the National Park Services proposed Rim of the Valley Project, which actually was showed in one of your very first slides, sponsored by Congressman Adam Schiff. Rim of the Valley would link vast open spaces around Los Angeles, including Griffith Park and the Los Angeles River. 1

Friends of Griffith Park has also been working with the National Park Service to identify and enhance the historic 1775 Juan Bautista de Anza trail where it goes through Griffith Park. We have trouble convincing people that there really is a river there that the expedition followed in 1775. They don't get it. And having the restored wetlands at the Verdugo Wash with planted terraces along the river would greatly enhance the experience of hikers along the historic trail.

So with the combined connectivity for wildlife and your Federal agency working with the Federal agency

can combine Rim of the Valley and work with the Anza Historic Trail, Alternative 20, that's the win-win-win. 1

Thank you.

MS. SKOPECK: Right. If those farther down in the line don't want to stand the whole time, I understand. You know, if you just want to have five people or so, it's up to you.

Okay. It's not the easiest timer. Okay.

Go ahead, sir.

MR. LOPEZ: Good evening, everybody. My name is Humberto Lopez. I represent Los Angeles County offices of Education and pretty much I'm currently on their Policy Council and I'm their treasurer.

The reason why I came tonight was to thank the Mayor really personally because I believe it's a very important thing to fix that River.

For the most part, I just wanted to tell you a little bit about what I've been doing for the past two years. I've been advocating for early childhood education and for the most part, I got very involved with this sequestering and I was able to do a lot of things for the children and that's really why I'm here. It's about the children for me. It's the importance. 2

Everything that I have read is wonderful, but just to imagine that I'll be able to take so many Head

Start children out there for field trips and have festivals, just events throughout the year, it's almost like an outside convention. That's what I'm seeing and for the most part, I'd like to thank the Army Corps. Thank you so much. And for it really means a lot to me because this is my backyard and for the most part I'd like to thank all the men and women who are in public service. 2

So I just want to let you all know that I'm for Alternative 20. Thank you very much.

MS. SKOPECK: Thank you.

Person three, please.

MS. FRIEDMAN: I'm Laura Friedman and I'm a current councilmember and former Mayor of the City of Glendale.

I'm here tonight to speak on behalf of the 200-plus residents -- 200-plus thousand residents of the city of Glendale to say that I believe that Alternative 20 is the only acceptable alternative to my city. 3

Now, we're going to be voting on a resolution for this in two weeks and I hope that all of the Glendale people who are here come to Council to advocate for that, but as far as I'm concerned, Alternative 20 with the restoration of the Verdugo Wash really helps to complete the L.A. River by linking it to its natural habitat to

the mountains to the east and to make it something that's not a piecemeal but a complete project.

The "Los Angeles" in "Los Angeles River" does not just refer to the city of Los Angeles. Los Angeles is a region and it's a county and this project is exciting and important to all of the people of the Los Angeles region and I know that many people that are here tonight are not just from the city of Los Angeles. We have people from Pasadena. We have people from Glendale. I hope we have people from Burbank. This touches all of us.

So the alternative that really reaches out to all of those residents and enfranchises them and brings them into this project is the appropriate alternative, so Alternative 20 because of its ecological impact, because of its reach to cities outside of just the city of Los Angeles, because I think that economically it gives you the most bang for your buck in terms of job creation, habitat restoration and just long-term planning is really the correct alternative. 3

I'm very much in support of that alternative. I think this is the most exciting project that I have seen since I've lived in Los Angeles County. It is -- the photos you were showing is an incredible vision and it's an incredible vision that can be a reality. I've been to

Korea and have seen what they did to their river in Seoul which had been buried by a highway and now it is the jewel and the centerpiece of that nation.

We have the opportunity to do the same thing here to make a statement about nature, about ecology, and about how we value our city and our region and our county. Let's do it together as a region. Let's make it something that's inclusive. Let's do it right. 3

Thank you very much.

MS. SKOPECK: Thank you. Number four.

MS. SMITH: Yes. My name is Kathleen Smith. I'm here tonight representing the Angeles Chapter of the Sierra Club, the Water Committee. I'm also a public health nurse and this is definitely a public health issue.

We support Alternative 20 as the best option to at least partially restore this degraded River. 4 Alternative 20 supports the fullest possible beneficial use of the current river flows and will definitely help with the filtration of stormwater and treatment plant discharges. I affirm and offer emphatic support for Alternative 20 from the Sierra Club.

Thank you.

MS. SKOPECK: Thank you.

We just would like to request those people in

the back to please keep the chatter down because it's difficult for us to hear so well. So thanks for that.

Number five?

DR. SCHNEIDER: Thank you. Good evening, officers and public. My name is Dr. Richard Schneider. I am the Mayor of the city of South Pasadena.

Now, my city sits along the Arroyo Seco, which is a tributary to the Los Angeles River, and we are very much in favor of and support and encourage Alternative 20 because it is a step in the right direction for restoring the whole river system of this County. So thank you. 5

I won't repeat what other people said, but I certainly agree with them. Thank you very much.

MS. SKOPECK: Thanks.

MR. LINTON: Hello. My name is Joe Linton. I'm the author of the guidebook to the L.A. River called Down by the Los Angeles River and I am looking forward to you making my book completely obsolete with all kinds of new features along the River.

It's exciting to hear the Army Corps talking about daylighted tributaries. It warms my heart. And I want to echo what Mayor Garcetti was saying that I think that, you know, a billion dollars sounds like a lot of money here, but the Army Corps spent more than 5 billion of today -- in today's dollars solving the flood control 6

problem on the River but also really disconnecting the River from the communities that surround it and so I think this is really -- I want to appeal to the Army Corps, I want to guilt the Army Corps to say, This is your chance to revisit what was a really important project that you were very invested in and to do it right this time around. I want to say, Go big, go 20. 6

MS. SKOPECK: Thank you. Are we at number seven?

DR. WILLIAMS: Dr. Tom Williams, L.A. 32 Neighborhood Council, Sierra Club Water Committee. 20.

Do we need anything more? Yes. Actually, we'll be submitting comments to the River Study for the environmental process and the Feasibility Study.

There are some problems. I worked on the Redline Phase I and when you open the channel south of the Arroyo Seco, you're going to have real problems with the groundwater. There's also a matter that you should be aware, that there is a groundwater recharge project from the Department of Water and Power which will raise the base flow for all groundwater downstream. So we have some problems with it, but, hey, 20. 7

MS. SKOPECK: Thank you.

MR. MORGETTI: I'm a little tall for this mic.

MS. SKOPECK: Remind me what number we are, just so I can keep track.

MR. MORGETTI: I'm number eight and my name is Karen Morgetti (phonetic). I'm just a resident. I just moved to Glassell Park and fell in love with the neighborhood, and I bike and walk along the L.A. River. I live right by Taylor Yard so I was very excited to see that potential new park I guess.

So I just have two small comments. One is that I heard a small mention about access bridges crossing the railroad tracks, crossing the River. I just want to make sure that that is like a big part of the plan, that Griffith Park is easily reached by foot from the River and that the Rio Rancho Park, which is right by me, is also easily reached by foot. Right now it's very circuitous. Like to get there, you have to follow these secret paths, which is cool for me because I know about them, but most people don't. 8

Then my second point is just I'm from the East Coast. My parents live in New York City and for the people that doubt this sort of cost-benefit analysis, just look at the Highline and the Hudson River Park and just see how much -- you know, they spent millions and millions of dollars on both of those and that whole west side of Manhattan has been hugely -- just it's booming. The real estate has gone up and the commerce has benefited from that. So I think it's worth the

billion-dollar price tag. Thanks.

MS. SKOPECK: Thank you. Could you please hand your card to the gentleman in the white shirt.

We're going to -- thank you. We need to try to get those from the folks that have already spoke. Thank you.

Ma'am, number nine?

MS. MURPHY: Yes. I'm Deborah Murphy. I'm the Founder and Executive Director of Los Angeles Walks. We're a pedestrian advocacy organization.

As my scarf shows, the Los Angeles River is the life blood of Los Angeles and it has been so throughout its history. It is the opportunity through Alternative 20 to be the lifeblood of all the communities along the River that it runs through and hundreds of thousands of people live close enough to the River to walk to it, to walk along it, and it to be a part of the daily lives that they lead. 9

We need a more walkable Los Angeles and a more walkable Los Angeles River. Alternative 20 can help us get there.

I was in this room over 20 years ago with Lewis MacAdams, Arthur Golding, Ed Reyes, and others to look at opportunities and dreams for the Taylor Yard. We want to see that some of those dreams come true, that all

of the communities along the River have the opportunity to have great recreational opportunities and restore our habitat and make connections in our neighborhoods. We've come a long way and Alternative 20 will help us realize many of those dreams. Thank you so much. 9

MS. SKOPECK: Thank you. Ma'am, can you give us your card, please. Could we grab your card. Thank you.

Hi, sir. Number ten?

MR. GOLDING: I'm Arthur Golding. I'm a board member of the Council for Watershed Health. The Council has unanimously endorsed Alternative 20.

I'd like to speak briefly to two points. The first is habitat connectivity, which has been mentioned many times this evening. I'll draw your attention back to common ground from the mountains to the sea. The 2001 report that looked at the double watershed of the L.A. and San Gabriel Rivers. It identified wildlife corridors as an important priority and the River corridors as the most important priority. While continuous habitat's the most effective, discontinuous patches of habitat also work very well for many species. So in that context, it's extremely important that the confluences of the tributaries with the main Los Angeles River be naturalized, be restored as habitat, because those are going to play key roles in the habitat connectivity. 10

I think it's also important to emphasize that as big as 11 miles is and as big as a billion dollars is, this is actually a very small proposal. It's only a first step. If we look at what habitat restoration means in this region, there are many, many opportunities upstream on all the tributaries, upstream and downstream on the main step. So while some are concerned with what they see as a large price tag, I think it's important to recognize that it's actually a pretty small one.

My second point might be a little unexpected. It's about climate change. And while habitat restoration 10 is the main focus of this study, flood protection is of course a core mission of the Corps and it's also a core function of the river system and one of the things that's very interesting about the existing river system is that it's extremely inflexible. Those concrete channels are whatever size they are. If we begin to reconceive it and rebuild it with green infrastructure, we actually have the opportunity to increase our flood protection rather than simply maintain it; and in a year where climate change is upon us, where severe weather events are happening frequently and unpredictably, that kind of resiliency is something that people all over the country are looking for and something that we can build into our River by choosing the alternative that will begin to

maximize the open green spaces that will respond resiliently to climate events. Thank you.

MS. SKOPECK: Thank you, sir. May we have your card, please? Also, is anyone standing by the light switch? We'd like to turn the light switch on to see the panel members. No? Just thought I would ask.

Sir, number -- you're number 11; correct?

MR. JONES: Yeah, I am. I'm Andrew Jones.

My comment is basically a methodological point about the study. I think the best way to approach this is to -- kind of a theme that's been talked about again and again by different speakers are connections and the connections that are being made.

When you make connections between things that are not previously connected, you start to change the quality of the thing that you were looking at. 11

So let me just give an example comparing different cities. So you think about what makes a city kind of organically whole and distinctive. We can compare San Francisco to Los Angeles. San Francisco has Golden Gate Park. I'm a sociologist. My conference wants to go there, San Francisco, because it goes to three regions of the country. It wants to go to San Francisco. When it goes to the West Coast, it wants to go to San Francisco every time. Occasionally it will

go to L.A. but nobody likes it; and the question is there's a lot of value and virtue in L.A., but there's not enough connections in L.A. to kind of have it reach a critical mass, a tipping point. That's what Gil Cedillo was sort of mentioning. And that's the point that Malcolm Gladwell talks about in terms of tipping points; but when you reach a certain point, you reach a tipping point.

Now, directly to the methodology of the study, it's saying it's incremental cost per unit. So each unit is treated the same as every other unit. So if we have 588 acres in Plan 13, then each additional acre is treated as the previous acre, but we know that things don't really work that way. When we get up to -- and I don't know what the break-off point is and I don't know if anybody does, but when we get up to 671 acres, perhaps we reach a tipping point where there's now wildlife corridors. So the additional unit that was calculated with this linear model, the additional unit, it depends on which additional unit it is. If it's the right additional unit, it reaches a tipping point. 11

I also want to say that the comparison of cities, if we're going to compare San Francisco to Los Angeles or New York to Los Angeles, the reason why people want to go to San Francisco is it's reached a kind

of aesthetic tipping point where people want to go to San Francisco because it is an integrated whole. Somehow the incremental changes have gotten to a point where there's been a tipping point. 11

L.A. has a potential to do that. This is a great city. It has a lot of -- it has great ecological values, but we need to draw those values out. And I know my time is up.

MS. SKOPECK: Thank you, sir. Number 12?

MR. CORTES: 16.

MS. SKOPECK: Oh, 16? Did I miss all those numbers? Is there anybody between 11 and 16? Okay.

MS. HIGGINS: Hi. Lila Higgins. I want to talk about two unrepresented audiences. I want to talk about insects and children. I'm an entomologist and an environment educator.

I grew up in England and I played along the River. It was my river, the River Severn, and then when I moved to Los Angeles, I quickly came to find the L.A. River and adopted it. It's very different than the river I grew up at though. 12

As an entomologist, I want to talk about my support of Alternative 20. Insects and other invertebrates are often overlooked for other more charismatic meiofauna; however, they are a crucial

backbone of a healthy ecosystem. By adopting Alternative 20, we can create more habitat for insects and, therefore, create a more healthy ecosystem that will support habitat for birds, fish, frogs, and many more creatures.

Scientists here in Los Angeles at the Natural History Museum have just begun studying the insects in Los Angeles through their bioscan projects and they're finding things that we never knew existed. We really don't have an idea of what insects live here in Los Angeles.

12

Dr. Brian Brown, an entomologist at the museum, is a world expert on phorid flies. In a backyard in Los Angeles, he found brand-new species of a phorid fly that never before had been discovered and there's more out there waiting.

Imagine how many species are out there for scientists to find and what if it was in one of the new parcels of land that we create habitat for insects? Imagine if we don't take that chance and we miss that opportunity.

As I mentioned before, I'm also an environmental educator. Here in Los Angeles, we don't have a lot of safe spaces for children to play and experience nature like I did when I was a kid growing up along the river,

especially not in riparian areas. Therefore, I'm fully in support of Alternative 20 which will create more park space for children to experience nature and for them to have amazing River experiences. Imagine what it will be like when children are able to play along the River, hear a frog call, chase a dragonfly, and splash in clean water. And indeed, if we don't provide those opportunities, where will our city be in 2050? 2100? And if we don't help the children get those experiences, they're not going to be able to take care of our city in the future. 12

MS. SKOPECK: Thank you. 14?

MR. APPLETON: I'm Steven Appleton. I'm a resident of Elysian Valley and I also led kayak tours down the L.A. River this summer, which was an amazing experience, and I'm also an artist who's been long inspired by the Los Angeles River.

I want to just talk very briefly about the community relationship to the River. So in Elysian Valley, which is my community, I met a gentleman this summer who as a young boy created a kayak out of plywood, he told me. He is now 84 and kayaked down the L.A. River. And there are many stories like that if you dig into that community. 13

So I want to emphasize the importance of the

ongoing community relationships in river-side communities. And, for instance, in Elysian Valley, as I look at the various alternatives, from 13 on, it's the same plan for that particular area and I would say that in some way, the actual access to the River might not actually be greater in any of the plans than it has existed already. So I think it's very important to pay attention to that.

The other thing I want to point out is that in terms of the analysis, the output analysis, which I appreciate this kind of analysis, but I want to point out 13
that historically Elysian Valley connected to the Elysian Hills and Griffith Park connected to the River. So both of those areas were historical connections to the L.A. River.

It also should be pointed out that, for instance, our community historically connected, long history, to the cornfields and the State Historic Park.

So when we look at the output analysis, there's an analysis on the Army Corps's side that is emphasizing a scientific analysis of this kind of return and this kind of output. We also have to consider, though, that the fact of human habitat being able to turn the corner into downtown L.A. or those habitat corridors at the parks to be able to reach down to the River are extremely

important.

I'd make a mixed analogy and say it's sort of like when you go to the Empire State Building and you're going up that thing and you stop three floors short. There is a huge unaccounted-for benefit of, as everybody's been saying, making these connections and this is not only on a habitat level. It's on a cultural level that returns certain routes not only for plants and animals but also for humans, and there are obviously economic benefits. 13

We also all have to recognize that there is a dichotomy between the Army Corps analysis and scope and the City and the boosterism of elected officials about this process, but we have to see that this is a human habitat and an ecological habitat. So I encourage you to look beyond that output analysis into these things.

Thank you very much.

MS. SKOPECK: Thank you, sir.

Number 16. Please give your card up if you wouldn't mind as well. Thank you.

MR. CORTES: Good evening. My name is David Cortes and I'm here to support Alternative 20 because not only will it allow an increase in numbers for Habitat Units and for the environment and the ecosystems, but it will also create access and development of green space for the 14

low-income communities that are adjacent to the L.A. River, which is an important factor to consider when being that these communities lack access to green space as it is, and the incorporation of this Alternative 20 into the revitalization of the River will allow these families, these low-income communities specifically, to have access to green space, which will not only enable them to be more physically active, but it will also enable them to live healthier lifestyles, promote a healthier lifestyle here in L.A., which we're always so consumed with our urban lifestyles; and having this River revitalized, it will increase people's attention for the River and care for environment. 14

And on top of that, it will also serve as an incentive for other areas, other regions in the country, to follow our lead in this new innovative idea that we're planning on having in this city of L.A. And that is why it's time to make the popular investment in Alternative 20 in order to ensure a brighter and healthier Los Angeles for everybody here in L.A.

Thank you.

MS. SKOPECK: Thank you. Are we at number 17?

MR. MADRID: Good evening, everyone. My name is Jorge Madrid. I work for the Environmental Defense Fund, but I'm delivering comments here as a private citizen, as 15

a resident of City Council District 1, a bike enthusiast and an urban planner.

I support Alternative 20 for all the reasons already mentioned of course, the enhancement of green space and recreation, the expansion of economic activity and the growth of jobs, the natural services that the River provides, and I'm also very happy that climate change was mentioned because that's something that I'm focusing a lot of my work and research on here in Los Angeles.

Specifically, we know the bad stuff about climate change, but we also know how we can make 15
ourselves less vulnerable. We all know how we can improve adaptation. The Department of Defense and the Pentagon calls climate change an accelerant of risk and we know that we can decrease our risk by having a robust green space, a robust river that can deliver a lot of services. In addition to flood protection, it also reduces the urban heat island effect and other effects that we know are coming with climate change.

And, you know, this is exciting. This is L.A. Let's do this right. Let's not do this on the cheap. I want to see a better L.A. and I think everybody here does as well. Thank you.

MS. SKOPECK: Thank you. Number 18?

MR. GEDEON: 18, yeah. Hi. My name is Geza. Most people call me Blue. And I represent the Joint River Oversight Committee, which answers directly to the Boyle Heights Neighborhood Council and the Downtown L.A. Neighborhood Council. I'm here to introduce myself.

I'm going to come up there in a moment and ask for your business cards because I would like to contact you in the future. I've long dreamt of having a meeting like this where the various stakeholders get a chance to all chime in at once, but the Army beat me to it. I think it's a great thing that we're doing this. 16

Just briefly about the various proposals, one reason I support Proposal 20 is -- no one's mentioned it before. There's been a lot of great comments about sensitive issues, but I want to talk about generating actual cash money and talk about tourism.

The Northern Arts District in Downtown L.A. has turned into pretty much a hub of the media and entertainment industry. They shoot films there all the time and it's expanding. They're going to need support services in the Southern area, which is the industrialized area of L.A. That's my Alameda East District so of course I'm interested in it. We're right by the River.

I was on the Boyle Heights Neighborhood Council

last year and the Downtown L.A. Neighborhood Council this year and I realized that there's very few places in the world that have that many bridges on, you know, both sides of the bridge -- both sides of the River. So this is a tourist destination in the making that's ready to happen and bringing the entertainment industry there and supporting that and having more opportunities for tourism and filming in the north end and south parts of the River will bring families, will bring all sorts of different things, and it will bring money and bring tourism from around the world. 16

Thank you very much.

MS. SKOPECK: Thank you. Thanks so much.

Number 18, please.

MR. BROWN: He was 18. I'm 19.

MS. SKOPECK: Sorry thank you.

MR. BROWN: Good evening. My name is Russell Brown. I'm a downtown resident. I've been down here for 11 years.

We've talked about the tipping point. I think we've obviously reached a tipping point here, the awareness of the River. I remember when Lewis was talking about this 10 years ago, when Ed Reyes and everybody sort of looked like, Those people are a little bit crazy; but, you know, if they want that dream, we'll 17

sort of support it, but it's not really going to happen.

I also remember not that long ago, five or eight years ago, people were saying the same thing about gay marriage so -- and black presidents, so lots of things can change.

I've been in L.A. for 35 years. You can hear my southern accent, and Memphis is built on the banks of the Mississippi River and you would look at the water coming through all the tributaries and the animals and every couple of years the river would flood and you look across Arkansas and that becomes the fertile delta of the river sort of regenerating the land. It becomes the farmland. 17
It becomes the ecosystem.

New Orleans is sort of my second home and if you see where the Army Corps of Engineers -- but more importantly the ecological damage where the everglades and the marshlands were taken out, and when Katrina hit, all that water had no place to go.

Alternative 20 actually gives us a space that it has that relief valve. It has all the open space. It has the maximum amount of space, so when you look at the economic benefit, when you look at the community development potential, when you look at the connections that can be made, really Alternative 20 becomes the best option. So Alternative 20 in 2020. Thanks.

MS. SKOPECK: Thank you.

Number 20.

MR. BARDEN: Number 20. My name is Lane Barden and I'm a photographer and artist who has been doing projects on the River for a long time, I think since 1996, and when I got here, Lewis had already been talking about the River for at least ten years, so it's like 25 years.

And so what -- I just want to go on record as saying that we waited a long time and a lot of work has been done that will never, ever be spoken in this meeting that will never be told, the story. I don't think the entire story will ever be told and I feel like Los Angeles has waited longer for a transformation of its River than any other city and so I just don't want that point to be missed. 18

I mean, to some people it may seem like this is something that just recently happened, but this is the result of years of struggle and fun and effort and projects that are unnamed so far.

And the second thing I wanted to say is that I don't think we have a formula for calculating the returns on this. You know, I mean, when this is done -- I remember in the '90s we were talking about transforming the downtown. Everybody was talking about that. Nothing happened and then SiHart moved downtown and suddenly the

entire thing changed and now we have multimillion-dollar properties. The real estate value has gone up. There's a community Downtown. If a billion dollars sounds like a lot, it doesn't sound like a lot to me. It sounds about the same as a half-billion dollars, you know.

If it sounds like a lot now, when this is done, there's no way to calculate the number of jobs, the -- if you think the real estate is expensive now, wait until you do this, and then the taxes and output from this project will more than pay for it. 18

So I'm asking you -- I'm glad you say you're tentative about 13, because you should be. You should be on board for 20, please. I'm asking you.

MS. SKOPECK: Thank you, sir. Can we have your card, please. Thanks so much.

Number 21.

MR. MURPHY: Hey, how's it going? Good evening, officials. Good evening, Corps. It's nice to see you. My name is Edward Murphy. I'm an educator with Heal the Bay and I'm here to echo some of the same sentiments that have been said before. 19

Alternative 20 is quite the number. It's a beautiful plan; but as an educator, I do want to speak in metaphor. It helps to teach; right?

The heart of the River, the heart of

Los Angeles, is the River. It has been since day one and it's great that so much attention is being given to taking care of our heart. I will offer the note that don't forget where all the blood comes from for that heart.

So there is some concern about some of the water quality elements that maybe should be considered more. It's great to spend so much time fixing that heart; but if the blood is still bad, what's going to happen?

The second concern I have is where that reservoir -- maybe where that reservoir isn't being filled. In Los Angeles, we do have a water crisis. We import most of our water from other places and there is of course a great opportunity to reclaim some of that waiter, so some considerations for resource reclamation should be added as well, but that wasn't your charge. Your charge was habitat and you've done quite nicely. 19

So I know there are a lot of other efforts going on along the River that will take into consideration those other things and we should advocate for them as well, stronger stormwater measures as well as water resource considerations all throughout, but I applaud your efforts and I thank you for spending time and taking care of our heart. Thank you.

MS. SKOPECK: Thank you.

Number 22.

MS. STEFANI: Hi. Good evening. My name is Giulia Good Stefani and I'm an attorney with the National Resources Defense Council and I'm speaking on behalf of the organization, myself, and our 1.4 million members and activists, 250,000 of whom live here in California.

I'm very happy that the Corps and the City have worked with us and so many others on the same side of the Los Angeles River ecosystem restoration.

Decades ago, the L.A. River was mismanaged by short-term thinking and an overly zealous past Army Corps of Engineers. Today, it and the plans that have sprung up to restore it have become a symbol of hope in this modern age, hope for America's second-largest city that suffers daily through all the consequences of past mistakes and incredible concentration of industry and activity can make an environmental wrong into a right. This is a message that will reverberate across the country and that is deserving of Federal funds. 20

Alternative 13 just won't do. It won't fully restore the riparian zone or marsh habitat, bring back ecological processes and increase biological diversity. Alternative 13 will not adequately increase habitat connectivity, as many people have talked to that theme tonight.

Only Alternative 20 will connect wildlife from the Verdugo Hills to the River and finally to the sea. The Army Corps model fails to adequately consider the enormous benefit of connecting major tributary and mountainous areas to the River. The connectivity of the Verdugo Wash to the mountains is a critical component of any ecosystem plan and must be included in the Federal project and only Alternative 20 will fully realize the River's potential to be a green space, to bring green space to park-poor, underserved neighborhoods.

Only alternative 20 will provide a hydrological link to the L.A. Historic Park, the cornfields park, the park that serves downtown and Chinatown area that the NRDC has a long commitment to supporting. 20

The inclusion of the Verdugo Wash and Piggyback Yard coupled with the other elements of Alternative 20 provide double the length of channel restoration as Alternative 13. Increased restoration of a part of an ecosystem benefits the sustainability of an entire ecosystem. You don't just gain the benefit of Verdugo Wash. You benefit all 11 miles.

For these reasons -- and I thank you for your patience -- we stand with our other River advocates and allies and the City of Los Angeles in our firm support of Alternative 20. Alternative 20 is a visionary and

far-reaching plan that would do the River and the movement that has sprung up around it full justice. 20

Thank you.

MS. SKOPECK: Thank you. 23?

MS. SOURIAL: Yes, 23. Good evening. My name is Jill Sourial. I'm here this evening as an individual.

I was very happy to see my Congressmember, Congressmember Becerra, here earlier supporting Alternative 20.

In my former life for the past eight and a half years, I was working on staff to former Councilmember Ed Reyes, as we were working to build consensus and community support around both the L.A. River Revitalization Master Plan and the Ecosystem Restoration 21 Study, and that consensus that you see here today is for Alternative 20.

I really think that we've worked not only with River-adjacent communities but the entire region, with public agencies. Alternative 20 is the only one that incorporates the large investments that have been made at L.A. State Historic Park and so I see this alternative as already sort of a compromise from where we started.

We were originally looking with the Army Corps at the full length of the River within the city of Los Angeles and we narrowed it down to the 11 miles so

that we could focus that habitat restoration. So I'm hoping that our representatives in Washington, D.C. can really understand the significance of the L.A. region, the number of people it serves, the environmental justice issues, the value of the habitat in such an urban area.

When we first started developing the Master Plan, we actually toured other cities around the country that the Army Corps has been working on and we took some best practices, but we also recognized that Los Angeles was unique, our southwest River is unique, and we really hope that our representatives in D.C. can see that as well. 21

So I'm here to support Alternative 20. Thank you very much.

MS. SKOPECK: Thank you. Sir, number 24?

MR. SHEEDY: Thank you. My name is Keenan Sheedy. I'm a resident of Mount Washington and I work in the L.A. County health care system. I've biked and walked many times along the L.A. River where you're able to do it. I support the Alternative 20 very strongly, and I'm not going to repeat what other speakers have said, but we're talking about quality of life here. We're talking about the impact on people. We have an opportunity to really bring the whole L.A. region together. 22

As others have mentioned, the River affects

people of all classes and demographic roots across our county and there is more and more evidence that exercise, being able to have access to parks, has a direct impact on our health, a direct impact on our health and the health of our children.

I work in the County health care system and we see the impact every day of people not being able to exercise, not being able to exercise safely where they feel secure, where they want to take their families, and I'm very concerned with what's going to be happening with the connection with the cornfields. I take the bus and the train every day downtown. This is going to have a critical impact. 22

Alternative 20 is critical for us and a lot of people are talking about health care costs and complaining about health care costs. Well, I think it's time to stop complaining about the costs and looking at how to keep people well so we don't generate those costs to begin with. Thank you.

MS. SKOPECK: Thank you, sir. Number 25? Skipping 25.

MS. JONES: Hi. My name is Susan Jones and I want to say first thank you very much to the Army Corps of Engineers. I think you did a great job with the presentation and thank you for being here. 23

I'm an L.A. native. I'm here to lend my voice in support of our L.A. River revitalization. I was considering moving to Tampa, Florida specifically because I love being near the water and in Florida they have water riddled all throughout the city. I was also considering moving to Chicago specifically because of the river running through Chicago through the high-rises.

I care about the local ecosystem and currently we have to drive five hours to get to the Colorado River or three hours to get to the Kern River when we have this potentially awesome river right here. I'd like to say to whoever's listening, Please help us turn this dream into a reality, to allow beauty and nature to run through an otherwise concrete jungle, and to help us see the full potential of our city. Thank you. 23

MS. SKOPECK: Thank you. Number 26.

MR. BROWNSON: 27.

MS. SKOPECK: 27.

MR. BROWNSON: My name is Omar Brownson. I'm the Executive Director of the Los Angeles River Revitalization Corporation. We were created by the City of Los Angeles to realize this vision of a revitalized Los Angeles River. 24

This is a River Restoration Study and Alternative 13 restores half of what's possible of

Alternative 20 and I think one of the important things about that is cost. We already own the River and so if we are to invest in it, we should invest in what we already own. If we own the River, that's where we should place our investment. It's already been designated as a priority by President Obama through the Urban Waters Federal Partnership. We were only one of seven cities in the country with that designation to coordinate 13 Federal agencies to work better together.

We were only one of two places in California selected for the President's America's Great Outdoors Initiative. That's his 21st Century recreation and conservation agenda. 24

We were only one of 11 cities selected by the EPA for its green infrastructure program. The Federal government clearly cares and so it should show that caring with Alternative 20.

I want to just read some names really quickly. This comes from a letter that was written almost two years ago to the day to Assistant Secretary of the Army of Civil Works, Jo-Ellen Darcy, October 14th, 2011.

It was signed because the River Study was on the ropes. It didn't have Federal funding through Congress and so nine organizations came together -- Tim Brick with the Arroyo Seco Foundation; Nancy Steele with the Council

for Watershed Health; Lewis MacAdams from Friends of the Los Angeles River; Bruce Saito, L.A. Conservation Corps; The River Corporation; Melanie Winter from The River Project; Carolyn Ramsay, then Director for the Trust for Public Land; Andy Lipkis from Tree People; Meredith Mckenzie from the Urban Rivers Institute -- because even then two years ago when we were on the ropes, we came together. And when we came together, we got funding in the President's project for the first time ever. This is a national priority. Let's make it so. Thank you. 24

MS. SKOPECK: Thank you. Sir, what number are you?

MR. HANS: 28.

MS. SKOPECK: Okay. Thank you.

MR. HANS: Hello. I'm Gerry Hans. I'm president of Friends of Griffith Park, a nonprofit.

We have a formal letter forthcoming with detailed justifications, but we are in strong support of Alternative 20 which will enhance connectivity and further promote diodiversity (phonetic) and diodiversity of the area. 25

Let me remind everyone that a good portion of the River is actually within the borders of Griffith Park. Friends of Griffith Park is reaching out to our scientific community, in particular those that have participated in over six years of work in

Griffith Park completing about nine different biological surveys. Those are known collectively as Griffith Park Natural History Surveys. They range from large mammals, bat surveys, birds, herps, and even michological. The scientists that I've spoken with all have the same opinion: Better connectivity between the Santa Monica Mountains and the Verdugos and the Angeles National is extremely beneficial. The big stepping stone is of course of the Verdugo Wash opportunity. 25

Biologically speaking, let's remember that urbanization is an extremely recent phenomenon. The detrimental effects of lack of genetic variabilities for wildlife and plants is something that may not be felt for decades or centuries; but right now in the present day, we can help guard against that problem.

Now is the only time for Alternative 20.

MS. SKOPECK: Great. Thank you.

It's getting kind of loud again in the back. If those of you who can hear me in the back, if you could please be a little bit quieter, thanks.

Ma'am, number 29.

MS. WEST: Hi. My name is Carolyn West and I'm speaking on behalf of the Bette Davis Park Rancho Avenue Section Neighborhood Watch Group and we're also part of the Glendale Rancho Neighborhood Association. 26

I want to support Alternative 20 very much and I'm a lifelong naturalist, a 42-year member of Sierra Club, amateur entomologist. You name it. I'm out there watching the birds every day.

I am concerned about no adequate explanation of what Reach 2 widening of the L.A. River is. I live a short distance separated by a narrow stretch of horse trail and Bette Davis Park from the River, right at the confluence with the Burbank western channel.

The land flooded before it was channelized. The section of the park there is silt. It's all silt that 26
was deposited by this River flooding and I don't really understand how this is going to work. I just want to make sure we have -- okay. We have some people on the Neighborhood -- a couple people carry flood insurance now. The area is designated as a dam inundation area.

I also want to point out that we've been posted as a West Nile virus area now. In fact, new signs were just put up about a week ago when the vector control was out.

Our street doesn't have any storm drains. It's designed for the water to run easterly on Rancho and then somehow make its way into Bette Davis Park and there it stays. There's no way for it to travel from Bette Davis Park into the River. There is a basin that can catch

water, but it cannot be drained when the River is flooding.

So these are my basic concerns, and I'd like to support the 20. It sounds -- everything about it sounds really good, but I don't understand just what's going to happen in my own backyard and I have seen since I've lived there in years of heavy rain how the water pounds down that channel and waves are leaping virtually at the top of the concrete and, I mean, this is really dramatic. You know, if you don't live next to the River, if you're not standing there right at the peak of flooding and -- you know, the safety and flooding is something that I'd like to have addressed. Thank you. 26

MS. SKOPECK: Thank you very much.

Are you number 30?

MS. OINUMA: Yes. Hello. My name is Colleen Oinuma. I'm here on behalf of Congressman Adam Schiff and I'm going to read a short statement from him. I had to pare it down to fit into the three minutes.

I join my fellow nature lovers and River advocates in voicing my support for Alternative 20, a comprehensive restoration of the L.A. River. This option is the most aggressive restoration plan, as it includes all elements of Alternatives 10, 13, and 16 and also includes naturalization and ecological restoration in all 27

reaches of the River and inclusion of two major confluences.

Specifically, Alternative 20 includes the restoration and beautification of the Verdugo Wash bordering the city of Glendale and the connection of the L.A. River to the Los Angeles State Historic Park. The residents of my Congressional District, which includes the cities of Burbank, Glendale, and many Los Angeles city neighborhoods adjacent to the River, will have greater access to the River for recreation and an improved quality of life.

I recently had the pleasure of taking my son on a kayaking adventure down the Los Angeles River and witnessed a true revival of this wonderful habitat. We saw abundant plant life, navigated rapids, almost fell over several times, and marveled at the resiliency of the nature around us. I've gone running and biking along the River, attended community events and cleanups along its banks, and have seen firsthand how a River that once divided communities is now bringing them back together. 27

It's my hope that the Army Corps of Engineers will continue to work with the City and nature lovers to embrace the public/private partnership and complete restoration of the L.A. River so that the ecosystem remains strong for future generations.

Thanks.

MS. SKOPECK: Thank you.

31.

MR. LOMBARDI: 31. Good evening. My name Sergio Lombardi and I'd like to say that Alternative 13 is fine, but this is not fine L.A. This is Greater L.A. We need to have Alternative 20 because it is just that. It is greater.

This alternative will be able to produce a lot of economic opportunities for us. This is the time that we need to go ahead and do the right thing, the hard thing. We don't do things that are easy. We do things that are hard. Since when have we shied away from doing something that is hard and right?

We need to go ahead and approve Alternative 20 because it is the right thing to do. Thank you. 28

MS. SKOPECK: Thank you.

Sir, 32?

MR. KHAN: Yeah. Hello. Mohammed Khan. My organization is SOPP, Society to Offer Prosperity and Peace.

I support Alternative 20 for three reasons. First of all, I grew up around the Sacramento River, so I'd like to have other children, other families, to enjoy a River. 29

I'll give you an analogy. When you do surgery, you don't do a piecemeal surgery. We're talking about environmental surgery, so this amount of money for Alternative 20 to me is a crumb. We definitely need to do it and do it right.

The three reasons is: Number one, balance between urban life and river life. We want to bring river life to communities that may be underserved and that's going to affect the sociology of those communities which has short-term and long-term effects. Reason two is water resources is very precious and very crucial and any strategy to preserve it is worth its weight in gold. Number three is -- and I don't know about your report, if you covered it -- is the revenue side. There are revenue models around ecotourism, et cetera, et cetera. 29

As far as -- you know, I thank the Army Corps of Engineers. They're very dedicated professionals that want to serve the society and community in the best way they can. I want to thank Senator Boxer, Congressman Becerra, but I want to tell the Mayor when you go to Washington and they talk about money, tell them stop war one day and we will take care of this.

MS. SKOPECK: Thank you.

Ma'am, what number are you?

MS. VARGAS: 33.

MS. SKOPECK: Okay.

MS. VARGAS: Hello. I'm Brenda Vargas. I'm a Field Deputy for Congressman Xavier Becerra and I'm here to read a statement on his behalf.

We've reached the fork in the history of the Los Angeles River. The U.S. Army Corps of Engineers, working with the City of Los Angeles, has released an extensive and long-awaited study that can help chart a new course for the River's ecosystem and its surroundings. Angelenos now have the chance to weigh in on the River's future as they review the different restoration alternatives. 30

I support the Study's Alternative 20 Restoration Plan that is an inclusive ecosystem restoration, increases green space, and truly reconnects people and the River. Let's grasp this opportunity to reimagine a once blighted and neglected waterway into a foundation for a more sustainable and liveable communities.

Thank you.

MS. SKOPECK: Thank you.

34, sir?

MR. SCOTT: 35.

MS. SKOPECK: 35.

MR. DE ROSA: My name is Charles DeRosa. I'm representing the Los Angeles Kayaking Club, and it seems 31

to me L.A.'s been given a wonderful opportunity in all of this that has taken a long time to come around and I can't speak to the complicated matrix and calculus that the Corps has to go through because I'm not a scientist and I haven't read the 500-page document, but I did -- Dr. Axt, I did understand your analogy, the metaphor about why 13 was chosen. I'm going to sound like a politician here when I say that I don't understand the calculus of it, but at some point somebody has to make sort of a decision that it can't simply be mathematics. 31

And I was thinking about President Kennedy and thinking, well, you know, we can orbit the earth and get to here, you know, but it's going to cost a lot more for us to land on the moon. And so I encourage you in this, you know, 10, 30, 40 years of work here that we need to go all the way on Alternative 20.

MS. SKOPECK: Thank you.

36?

MS. TACHIKI-CHIN: I'm 37.

MS. SKOPECK: 37. Okay. Go ahead.

MS. TACHIKI-CHIN: Good evening. My name is Kim Tachiki-Chin. I'm speaking on behalf of Congresswoman Lucille Roybal-Allard and I know during the press conference I said I wasn't going to speak, but I just wanted to thank the Corps for holding this public session 32

hearing for the community and to thank all of our River sisters and brothers for making their -- Dr. Keel Armstrong -- riverly supportive comments for Alternative 20 and just to remind everybody that the Congresswoman is in support of Alternative 20 and I have her statement that I will submit with my card. 32

And I want to yield myself a few seconds on behalf of Pauline Louie from the Urban Waters Partnership who said that Alternative 20 is the only one that really achieves a level of connection between communities, habitats and recreation areas and revitalization opportunity sites. 33

So that's on behalf of Pauline and I have her card here as well.

MS. SKOPECK: Okay. 38?

MS. MAULANO: Yes. Hi. I'm Lucia Maulano. I'm a stakeholder and business owner in CD 13, specifically in Silver Lake, and I want to say that I am in full support of 20, but my comment really is more to bring a greater vision to the L.A. River; and that is, I respect the work of the Army Corps of Engineers. I mean, it's incredible work, but I just want to talk about what people are referring to, sustainability and resilience. 34

Sustainability doesn't refer to linear, mechanistic visions. It refers to a holistic. So while

I do support Alternative 20, I support even a greater vision of revitalizing the entire River. Imagine that. Even ten years ago we didn't even think of 11 miles, but the reason why I say that is because the floodplain threat was created because of density issues, the way we developed around the River.

People do historically go to the River. They go to it to sustain themselves, but the way the human species did it was to completely command it and overrun it so that we couldn't share in all of its beauty. 34

So while I do fully support Alternative 20, I support a greater sustainable vision, a holistic vision, because sustainability, ladies and gentlemen, is a three-legged stool. It's social, economic, and environmental justice. You can't have a one-legged stool and sit sustainably. You need all three dimensions.

So my public comment is Thank you, Army Corps of Engineers, for your work, but I'd like to push it further. I'd like to really push for a sustainable holistic vision. Thank you.

MS. SKOPECK: Great. Thank you.

39?

MS. HEDGE: My name is Joanne Hedge and I'm here as a 17-year resident of the Glendale Rancho equestrian neighborhood where I'm president of the Glendale Rancho 35

Public Meeting
96

Neighborhood Association.

We live immediately adjacent to Bette Davis Park and very close to -- I'm a block and a half from the L.A. River and very close to the Verdugo Wash, but I am most proud to be associated with a dream that took more than ten years and working with a terrific Parks Unit at the City of Glendale on a project, in fact, that was managed by this gentleman right here, John Pearson, the ever-tireless project manager, and we rallied residents to help create what is now an area that was blighted and is now beautiful, and it is first phase of the Glendale Narrows River Walk Park, which is for the public and has a couple of horse facilities and pedestrian and cyclists amenities and all native plantings and so on. 35

It's only been only open not even a year and the second and third phases are on-line and by the time it's finished, Glendale will be the first city, I believe, on the entire Los Angeles River to be able to say that its borders with that river are all completely park land.

So this project resonates very deeply with me and at the age of 70, I know I'll be around to see it when it's finally realized. I don't know how far I'll be able to cycle or walk, but I'm planning on it. But I do support personally, and I know on behalf of many residents in Glendale Rancho as well, the Alternative 20.

I think it's the only way to go on something like this in a city of this sort.

I believe it represents a new age of enlightenment in Los Angeles which isn't just simply cultural but also is in tune with the habitat and environmental and social needs here. And as they say, there will be some bumps in the road. I'm sure there will be community outreach regarding concerns some of us might have who live so close to the River and Bette Davis Park and whatnot, but I am in complete support of it and also as a member of Sierra Club and a huge longtime supporter of Friends of the L.A. River, Lewis MacAdams -- bless his heart for starting all this -- and thank you to the Army Corps for giving us this. 35

MS. SKOPECK: Thanks.

Sir, are you 41?

MR. REYES: 40.

MS. SKOPECK: 40.

MR. REYES: First of all, I want to say thank you so much. I'm former Councilman Ed Reyes and I wanted to first say thank you to the Colonel and to the staff.

Josephine, you've been tremendous. 36

The whole team has been amazing. Carol Armstrong, Deborah Weintraub, the City family, we've all gathered here.

Gosh, that was almost 12 years ago when we first started going to Washington, D.C. and I'm going to say, Colonel, it was four colonels ago. I think it's every three years where there's a change of guard.

But also meeting all these different generals and going to MOB, going to the Congressmembers and going to the senators year after year, having L.A. River Day in Washington, D.C. where Congressman Becerra and Allard would be the host and invite all the other Congressmembers from throughout the Southern California region to speak to the aquifer, to speak to the regional issue on how the River's but one step of a greater issue, 36 which is how will we protect our water base, how we will recycle it, how we will rejuvenate that which is essentially neglected for so many years.

Today we have an opportunity to break out of our silo to look at HUD, to look at the Department of Interior, to look at all the other departments within the Federal branch. As a former executive of the National League of Cities to Resolutions, we've been asking the Federal government to look at the inner cities, especially Los Angeles, the second-largest city in the country, with the largest number of ethnicities that represents the world economy to provide us the type of coordination where HUD, Department of Interior,

Department of Transportation, all the departments can be part of the Army Corps, where the Army Corps doesn't have to feel that it's carrying this alone. You're not alone. We've been making sure that it won't be and that discussion evolves in that direction.

So we do see the numbers as they've been represented and why they're not choosing Alternative 20. I wonder are we doing our best to understand the natural strengths of what our tax dollars can do? What's happening to this city today should be happening especially in this part of town along this beautiful River. We have that opportunity to create that change and we spent ten years trying to do that for all of us. 36

I dedicated as Chief of Planning and Land Use Committee for the City of L.A. the time because I grew up next to the River, my parents still live a block and a half away. We have 49 percent dropout rates in our high schools right now. 40 percent of the communities in this area are at or below poverty. We've got Chinatown around the bend. You've got Koreatown just a mile away. You've got a whole range of ethnic groups together with the folks who live on the hillsides, who live on the flatlands, the Italians, the Jewish communities of decades past who are still here who are fighting for all the same in terms of wanting to see this change.

So when the question is asked, Where will our water come from, we can store it in this amazing corridor. We can recycle it. We can create economic development strategies so we can enhance natural habitats. But more importantly, we can create jobs that this great city needs and it's all in your hands. You have that ability and I know the regional directors of this region have been supportive. 36

The question is, Can you show us how to get to the next level within this structure to advocate and allow us to fight for what we think is best for this great country?

So, again, thank you so much for your time. Thank you for all of your hard work. It's endless nights and long weekends making reports happen and making sure that we got to a place that we deserve. Thank you.

MS. SKOPECK: Thank you, sir.

41? 42?

MR. MAC ADAMS: Hi. My name is Lewis MacAdams. I'm the president of Friends of the Los Angeles River and I think that there's an unsung hero tonight. Well, there's several, including Merrill Butler, whose grandfather 37 designed and built most of the great Downtown L.A. bridges, but I'd also like to note that a lot of us are here because Karen Flores and Friends of the Los Angeles

River's audience reached out and basically built this audience one by one tonight. She's the real unsung hero.

And there's nothing I can add really to what was said before except that we know that there's a strong support for Alternative 20 within the L.A. District of the Corps of Engineers, but really we are talking to -- tonight everything that everybody has said is being said to the National Headquarters of the Corps in Washington and I'd like to sort of put that into the reality that we're trying to leap across time and space to touch the hearts of the Corps of Washington, and I know a lot of people have already left and there's a lot of empty chairs, but I would like just everybody to just make a little noise of 30 seconds of applause and hooting and how much we want this Alternative 20 and how much we're willing to say. 37

So let's put your hands together, yell and scream and scream and stand and scream and put your hands together to say Hello, Washington, here we come.

MS. SKOPECK: Thank you.

42?

MS. NUNEZ: 42. My name is Irma Beserra Nunez. I'm an instructor with Los Angeles Unified School District, Division of Adult and Career Education Programs for Older Adults. I have over 200 active older adult students who 38

are the mentors and caregivers for their grandchildren, who care for the elderly, and who make it possible for their adult children to work and go to school and develop new careers. One of my students is here today.

And my ancestors have lived in California for over 300 years. I live currently in the San Fernando Valley in Encino, right next to the Sepulveda Basin Recreation Center where there are numerous lakes, archery fields, soccer fields, where there are walking trails; and when it rains, it has everything set up where the streets are closed off and then when it's done, we have this beautiful area. 38

My family has lived in Boyle Heights East L.A. for over a hundred years and sadly we saw how the freeways cut through our beautiful parks and the River, and the freeways cut through our beautiful communities, and so we are strong, passionate supporters of Alternative 20, because Alternative 20 is the only option that is really going to create equitable accessibility to the environment, to recreational resources for all communities in the city of Los Angeles.

My students and I have been very fortunate and privileged to have worked for the past seven years with our Mayor, Eric Garcetti, Counselmembers Ed Reyes, Gil Cedillo, Jose Huizar, with Xavier Becerra, and we

know that this plan is really the best plan for all communities, for all cities.

And also, I currently teach in Glassell Park, Highland Park, Eagle Rock, and the San Fernando Valley, so not only active senior citizens need to have access to these facilities, but every generation and their family needs to have these facilities.

This is a once-in-a-lifetime opportunity. This is not going to happen again. We cannot play with our river piecemeal. It is critical that we go all the way and, as others have said, including our Mayor Eric Garcetti, this is really not all the way. Alternative 20 is the best option that is presented to us today, but that we know that there is more that can be done and so the people of the city of Los Angeles has proven that we will step up to the plate. We will raise the taxpayer dollars that are needed to complement the work of the Federal government and the Army Corps of Engineers. 38

And so we thank you so much for this opportunity and we strongly support Alternative 20 as the only plan.

Thank you.

MS. SKOPECK: Thank you, ma'am. I appreciate it.

Number 43?

MR. LESTER: Yes. Hi. My name is Ely Lester. I'm a resident of Glendale. I live there with my wife and 39

infant son.

I just wanted to thank you for surprising me with the scope and ambition of what these studies came up with. I just can't think of anything else that will make a larger impact on this region over time than starting with the geographical feature that caused the location of Los Angeles here and, you know, Alternative 20 affects Glendale where I live and it affects Burbank where I work. It's the only one that makes significant effects to those places. 39

The other thing I'd like to say is just for younger people who decide to live in L.A., there's always been a -- at least from my perception, a sense of the potential, unrealized potential, and so you're sort of thinking about a potential that could come true and that's sort of what you live for and hope for in the future. I think this plan is the best thing I've heard of to help make that happen.

MS. SKOPECK: Thank you.

Number 44?

MR. MOREAU: Hi. My name is Jack Moreau. I'm here as a resident of Highland Park. I've been living here for about four or five years. I graduated from Occidental recently. 40

I, too, am in support of Alternative 20.

There's one thing, though, aside from all the great comments I heard tonight, that I would like to make in addition to what I heard, and it's the topic of gender equity when looking at parks. So through my research, I came across the book that Planning Los Angeles released a couple years ago, edited by David C. Sloan, and there's a great chapter in it. Now, I forget the exact author of that chapter, but she noted how girls are underrepresented in parks versus the number of boys and I would like to see this change as we move forward. 40

Now, I think in planning L.A. River, we're clearly very well represented by women. I'm proud to see such an awesome source of knowledge for the L.A. River.

And so I think the L.A. River offers that opportunity because it's a unique park. It's completely different than anything the city has seen and so I think with that in mind plus the possibility of different programming in conjunction to the River, we can actually see some of the statistics change to equally represent all populations. Thank you.

MS. SKOPECK: Okay. Thank you.

45? 46? Sir, what number are you?

MR. DRENNAN: I'm 49.

MS. SKOPECK: Let's do it.

MR. DRENNAN: Hi. My name is Michael Drennan. I'm

the Watershed Management Practice Leader for an engineering company Black and Veatch, but I'm here as the vice president for the Council for Watershed Health which was started about 20- -- well, in 1996, and I moved here about 20 years ago and met Dorothy Green and fell in love with the River and this opportunity that we have here is a culmination of, as many people have said, a lot of people that aren't even here anymore, but I do feel Dorothy smiling down on us, looking at a parking lot that's overflowing at a center that was going to be torn down and is now the L.A. River Center.

41

So we proved that there's progress that we can make and I want to acknowledge the Corps of Engineers for the incredible Alternatives Analysis and the information that you guys have put together and your leadership.

I want to acknowledge the City of Los Angeles for their leadership and Carol for just your passion and acknowledge Ed Reyes, and there's just so many people that have come to this moment and I've been trying to think here, you know, it's like we all support Alternative 20. It's like, Well, so what?

What is it that we have to do to compel our leadership within the Federal government to make that choice? And I think frankly none of us really know, but one thought that does occur to me is we're sitting in the

most populous county in the U.S. of A. So there's got to be some residents that says this project in the same way that the Florida Everglades is recognized as an important project for the United States of America, this project is important not just for Los Angeles. It's important as a symbol, as an opportunity to demonstrate what's possible in an urban area where we're trying to create a healthy, restored ecosystem. And I thought it was fascinating that we're willing to talk about trying to get one mountain lion hooked up, you know, and we've got 11 million people in this county that all they want to do is touch the water. 41

You know, I have a couple of young kids and I talked to them about If you were from another planet and you came here and wanted to show somebody something that they had never seen, if they had never seen water before, you can stick your finger through it, you can look through it, you can pour it. It's like liquid diamonds. It's something to be revered.

We pay a million dollars an acre-foot to drink it out of a bottle that comes from, you know, France and we're willing to tax ourselves to actually take care of the water that we have here locally, and we appreciate anything that we can do to compel our leadership in Congress, in the Federal government to support

Alternative 20. So thank you.

MS. SKOPECK: Thank you.

Ma'am, did we skip you? Sorry. Are you -- what number, please?

MS. BLEITZ-SANBURG: I'm 46.

MS. SKOPECK: Sorry.

MS. BLEITZ-SANBURG: Well, I wish I was.

My name is Dana Bleitz-Sanburg and I wear many hats. I'm an archeologist, a beekeeper, I work up at the Stough Canyon Nature Center in Burbank, and I'm also a member of Southwestern Herpetologist Society, which is study of reptiles and amphibians.

So I'm here to just support, intensely support, Plan or Alternative 20 since we didn't get 21.

42

And as I work with families, people come up to our nature center. They've never seen a lizard in the wild and that's just so tragic. I was lucky. I grew up in the San Fernando Valley. My dad was born in Hollywood. My grandfather came from Illinois to Hollywood. He had his bees along the River. My dad fished out of the River. My parents took us bicycling along Bette Davis Park before it was Bette Davis Park and fishing and playing with the frogs, spotting turtles in the water. It was wonderful. I saw it as a concrete-lined river, but when it didn't flood, we got to

see habitat grow.

As one of my research areas as an archeologist of paleoclimate, the Alternative 20 allows for natural cyclic wet and dry events from El Nino/La Nina that the others don't allow for and still have something left after you might have a little bit of rise in water. You need wider channels, maybe a few zigzags to slow the River down a little bit, but it's a comprehensive plan that really allows the River to thrive and produce; and the habitats and the wildlife that it's capable of. 42

And for people who are worried about the insect problem, when you have healthy insect populations, you have your dragonflies who are eating mosquitoes. The insects support your reptiles and amphibians. The frogs eat the mosquitoes and so do the tadpoles. You also then have your healthy birds and bats which are eating your insects and mosquitoes. So I think a healthy Alternative 20, you don't have that issue of stillwater in the negative way. Thank you very much.

MS. SKOPECK: Thank you.

Who's next? Do we have anyone else who wants to speak?

MR. O'BRIEN: Yes. I'm making quite a jump in numbers. It's 56.

MS. SKOPECK: Anyone before 56? Okay.

And what number are you, just so I can try to keep --

MR. SCOTT: 51.

MS. SKOPECK: Okay.

MS. HUERTA: Good evening, everyone. My name is Denita Huerta and thank you so, so very much for putting this project for all of us to take part in.

I think what is so special for me about this is I became a part of the green world when I couldn't pronounce the verbiage on green and we had to come into cost, building the first apartment building in Santa Monica at 501 Colorado, having to do something that was a little difficult, but as in today again, we all got to eat. We need jobs. We need this government not to hear us but to write a check and we need it. 43

We need this project to start, because you've spent so much time and research outlining this. It's perfect. Every single one of these areas' categories are perfect, but the one we need is 20. We need that today, just like they shut us down.

We're not taking it anymore. All area codes need to eat. You're the Army, we've got the Federal government, we've got the police force, and we've got Congress and the Senate. Who writes the check?

All of -- anything else I can say would be our

climate. What is going to happen to our climate? Did you see the pictures from NASA? We're all Twitter and Facebook. Do you see what's going on, 'cause somebody isn't explaining it to them.

I'm a mom. I think all of us are mothers, fathers, grandfathers, people of the community who want to see this end. 43

I've represented Eric Garcetti from the Palisades to Watts, to Glendale to many people I haven't seen for a long time here tonight. However, we've got to stand together to get this done, let's do this.

20 is what we need. How do we get there?

Denita Huerta is here. Thank you.

MS. SKOPECK: Thank you. 53?

MR. O'BRIEN: I'm 56.

MS. SKOPECK: Okay.

MR. O'BRIEN: Yeah. Thank you. My name is Frank O'Brien. I'm here representing an organization, the Watts Watershed Association, from the southern part of the River and I was glad Drennan mentioned Dorothy Green. She's certainly one of the prime sources for the River. 44 As I was driving here, I thought I heard Huell Howser's voice telling me what I should be saying. I won't try to imitate his accent, however.

My comments focus on the Alternatives Analysis

and I have a couple of points. The first is the analysis really needs to consider the watershed as an interconnected total system. In the document, the Compton Creek isn't even indicated as a tributary of the L.A. River, if you look at Figure 3.1 and the narrative at page 61.

Also, the Historical Dominguez riparian area, the maps are not correct and that's because the document relied on secondary sources rather than going to the primary sources, so I urge you guys to look at that.

Why is that important? Well, what happens upriver affects what happens downriver and in your Analysis of Alternatives, you should include not just the footprint benefits at the sites but the total system benefits. 44

So, for example, measures upstream can affect positively the natural resources in the tidal prism and in the San Pedro Bay, for example, directly and also indirectly in places like Watts where there is a section of the Compton Creek. The creek is a main part of revitalization efforts that the City of L.A. is trying to do. Compton Creek also has a natural section, as we know.

So in calculating the total benefits, don't just look at the footprint. Look at the totality.

Also, I note on your distribution of your document, the down-range Congresspeople are not included, whether it's Congressman Lowenthal, Congressman Hahn, who in the past have strongly supported the River.

In terms -- I'm going to focus and just say a few words about your CE-ICA, which is your cost-benefit formula. The alternatives are not policy neutral. In other words, you want to make sure that we capture all the benefits. And as was indicated earlier with the notion of the wildlife corridor, the incremental marginal focus sometimes misses additional benefits that spending up to X doesn't achieve. 44

And as an example for that, I'll use the Greenline Metro which did not go to LAX. The incremental miles because they were probably so expensive defeated the notion of getting people to use public transportation to get to the airport, so a total benefit was lost under calculations that just looked at the incremental.

Some people say that 20 -- I think I have a little more time, actually, as an organization, very quickly.

Some people that say 20 that is too ambitious. I actually think that it's too modest. I was looking for a plan to restore Chavez Ravine to its original condition. I didn't see that, unfortunately.

What I did do as a rough back-of-the-envelope calculation using your Table 4.10 and I didn't change any of the costs. I just made a rough assessment of your benefits, and it changed your net average AHO from 20 -- for 20 from 6,782 to 8,225 and it changed the Incremental Unit Cost for 20 to less than 13. So it was 7,750 versus 7,900. So by capturing these benefits, you can actually change the real numbers that you're forced to make the decision on so consequently the preferred choice is not the Locally Preferred Alternative, but it's the -- there's a term that you guys used for it here. Forgive me. It's the -- it's the -- yeah, the NER. Yes.

44

Thank you very much. It's the NER plan.

MS. SKOPECK: Sir, do you want to wait until everybody else has had a chance so it's fair?

MR. O'BRIEN: I'm happy to give up the microphone. I think I've made my comments. Thank you very much.

MS. SKOPECK: Oh, you're an organization. I'm sorry.

If you're representing an organization, it's double the time. So I want everybody else to know what's happening.

MR. O'BRIEN: May I make three brief comments?

MS. SKOPECK: Sure.

MR. O'BRIEN: These are my summary of recommendations. I really appreciate the audience

hanging in for such a long period of time.

Use the original sources, not the secondary sources, for the information.

Do a comprehensive analysis to include the total watershed benefits within the net average AHO and to the degree permissible -- we don't want to change the rules; we don't want special rules, right? We just want to use them expansively -- within the CE-ICA model, include all the benefits, including the public policy and aesthetic benefits that are real, although very difficult to quantify. Okay? 44

Thank you.

MS. SKOPECK: Thank you very much.

MR. SCOTT: Good evening, everyone. I want to thank the Army Corps for sitting through all of our public comments.

MS. BENSON: My name is Mary Benson. I'm here representing the Los Angeles Equine Advisory Committee and while there aren't a lot of horses in many of the areas of this proposed restoration, those natural surface trails for walking and as wildlife corridors serve many purposes. That's why we're here supporting Alternative 20. 45

Something during the presentation that struck me was you were talking about that incremental cost for the

elevator to go all the way to the top. I'd like to extend that comparison and say the penthouse is the top floor. It commands a top price. We're not visitors taking an elevator on a trip. We are its residents and we want the penthouse to be included in that series of alternatives.

When you take a look at the number of people divided by that billion dollars, I would like you to take that as an -- as that cost on Alternative 20 and compare it to other Army Corps projects in areas along the Mississippi or other areas back east where that serves infinitesimally smaller populations. We need this because of the population, and we continue to grow. We need open spaces and we need Alternative 20. 45

Thank you very much.

MS. SKOPECK: Thank you.

MS. SCHLICK: Hello. I'm speaker number 59, for everybody behind. My name is Alison Schlick. I grew up in L.A. and Orange County and I now live in San Diego and some of my family does still live in the L.A. River watershed. I'm interested in this whole project. It was -- it's very exciting to me. I'm a law student. I'm studying it, but I also wanted to share my opinion and just from coming here and reviewing everything tonight, it seems clear everyone wants Alternative 20. And as 46

someone that doesn't live in L.A. currently, I wanted to offer my perspective on someone that would be coming through or visiting family in the area as a tourist bringing tourist dollars, and having a fun place to stop on the 5 would be great for the region in L.A. other than having to, you know, stop at a gas station.

So it would be really great to be able to stop at some of these enticing areas that look kind of nice right now but need to be made accessible, and the only concern I would have, and so I want to echo what some of the previous speakers have talked about, is Alternative 20 appears to be the most inclusive project to make this as sustainable, liveable for the communities and turn blighted areas into a vibrant, connected system. I think that was an excellent point someone made about San Francisco appears to be a very excellent connected system and L.A. is lacking that, and this could be that tipping point, that connected. So not only for the environmental aspects and the habitat restoration for the animals which is good for all of us, but also for the human access this does, and it requires investment. 46

It seems like the paperwork did say to fully take out all of the concrete and put it back in its natural state, not even including property acquisition costs, would be over 7 billion. So the 1 billion does,

yes, seem kind of -- it seems like the highest of these options, but it's also the lowest of options that hadn't even been considered.

So the only question I have, which I don't think was adequately explained, although I could look more into the materials -- maybe it is in the materials -- why only 11 miles are selected for revitalization? I was really surprised that not more maybe of the southern part is going to be revitalized. And could more miles be revitalized maybe down the road or could that just be put into the record to maybe -- someone -- a couple of people have brought up tonight that doing even more for the River would be great. Thank you. 46

MS. SKOPECK: Thank you.

Sir, what number are you?

MR. COLLINS: I am 63 and I think I'm about the caboose here. I am Craig Collins. I'm the president of the Silver Lake Reservoirs Conservancy and I want to thank the Corps, Colonel, Dr. Axt, Dr. Armstrong, and by the smiles I'm seeing after this very long hearing, I know that you're really appreciating the extraordinary quality of the comments we've been getting tonight. I hope the folks in Washington, D.C. are listening to that as well and I also really want to thank the tremendous work done by your consultant Tetra Tech. In record time 47

that team did an incredible job. I haven't heard them mentioned tonight. They really did a great job.

So Silver Lake people ask me why Silver Lake relates to the L.A. River. I say, Ask the great blue herons who feed in the L.A. River and nest at Silver Lake. That is really the core of the connection that's there.

Anyway, Silver Lake is about to go off-line and no longer part of the DWP system. We have a tremendous opportunity for Silver Lake to become part of the River's stormwater management, riparian viability, and ability to access recycled water of reduction of needs for a very expensive and vital commodity. 47

Moreover, I think it's important to step back and take a look at what happens when we revitalize a river and reconnect people with their waters. This is the experience that has been seen in places from Portland where I lived in the '70s and they tore down a freeway that separated downtown from the river and that began the transformation from a sawdust-and-rust town to Portland, and now we have seen that kind of experience in places from Seoul, Cleveland, Shanghai, Madrid, places that have found what the real power of a river is when you connect people to it. That is what we're talking about here: Economic resurgence, the quality of life, the

transformation in people's lives.

It is time for L.A. to discover that experience and to see what's going to be happening in this century. Thank you all very much. We're going to make this thing happen. 47

MS. SKOPECK: Thank you.

Okay, sir.

MR. MORRISON: Thank you. I'm number 65. I'm actually with the California GOP so that gives me more time. I think I'm going to remove this microphone. I don't like the way it's sitting.

Actually, I'm William Rodriguez Morrison with the California GOP representing the 24th Senate District.

Now, I followed this River plan for the last 12 years when I ran for City Council. Now I'm glad the Army Corps of Engineers is here to make sure this job is done correctly. 48 I know we had a couple former City Council members that spoke. When I ran for City Council, I also got the tour of the western region which included Lake Havasu with Senator John McCain at the time.

Now, this project, I'm just hoping -- City of L.A. already pays enough taxes to the Federal government. We have the highest sales taxes. I'm hoping the Army Corps of Engineers takes this into consideration in using the region, western region, funds from San Antonio,

Lake Havasu, to build this project in the city of L.A., one of the largest cities, but we build other projects in other cities. I know it's going to take away from Arizona. It's going to take away also from San Antonio, but this city is a fighting city in its creation of the L.A. River and I'm hoping our tax dollars don't go up, because nobody's mentioning the tax dollars here and that's one major important thing.

This City's already suffering with businesses that I represent, that I speak to, business owners, and nobody's talking about it. I'm a property owner. I pay enough taxes and they're not going to the right funds.

This project when it first started, all the 48
funding and all the hype from all these City officials didn't go to where it was supposed to go. It really upset me for the last 12 years. I just lost the City Council race against Gil Cedillo, but I'm running for Senator and next year I will win the Senate seat with the people in this room that believe in me and this community that has believed in me for 51 years in living in this community and being the block captain for Neighborhood Watch for 31 years.

I stand for my community strong and I'm going to be direct and I'm asking not to charge the City any more taxes for this project. It was well deserved a long time

ago and we don't need no more funding of higher taxes. We have the funding that you can take from other states. I'm saying use the western region funds to complete this project. Thank you. 48

MS. SKOPECK: Thank you.

Ma'am?

MS. BARNETT: Hi. My name is Karen Barnett and I'm a resident of Atwater Village and I'm just conflicted about all this because I feel like a lot of details aren't on the community level so we don't know what it's going to do to our flood insurance, what it's going to do traffic wise with people coming into our neighborhood. 49A

Who are we going to call to get things fixed, because there is no centralized point, so we have to either speak to the County, the City or the Flood Control. 49B

And then just for the health of everybody and Los Angeles in general, it seems kind of silly to let all that water flow into the ocean if we have an opportunity to refill our water tables or the aquifers. It seems like a pretty smart thing to do. 49C

Then going back to the community, it becomes troubling when we ask questions about who is going to maintain and pay for all this and who is going to do the security, who is going to patrol it, 'cause currently 49B

there's not much. That's it. Thank you.

MS. SKOPECK: Thank you.

MS. LANDREGAN: Hello.

MS. SKOPECK: Good evening.

MS. LANDREGAN: I'm number 69. I may be your last speaker. My name is Stephanie Landregan. I'm a landscape architect. I've been very fortunate to do very many projects along the L.A. River and its tributaries. I also am a Planning Commissioner for the City of Glendale. But more importantly, I live in a watershed and this is why I'm here talking for Alternative 20 because it is the most watershed-responsive alternative.

We spent over a billion dollars to add more parking spaces to the 405. Now, frankly, we have realigned our priorities in the city of L.A. and the other adjacent cities, Glendale, and we believe that we need to put as much money into our natural processes as to our unnatural processes. I am here to encourage the Corps to take this message back to Washington. I will call my friends in other states and have them talk to their Senators, to talk to their Representatives, because this is nationally important.

50

We need to do the very best we can in bringing this River back to the people and to nature and part of a natural system.

Thank you very much. I really appreciate all you've done and I loved the animal cookies. That's why I'm still here. Thank you so much. 50

MS. SKOPECK: Thank you.

Is that the last person? Okay.

COL. COLLOTON: So for everyone who's left and for those that may hear this on the taped videostream that we conducted, we want to thank the Mountains Recreation and Conservation Authority for allowing the public meeting to be held here tonight free of charge, so no taxes were increased for the use of this facility tonight and it was very generous for them allowing us to have this location, very accessible, and keep it open so we could continue the meeting until we were able to hear everyone that wanted to speak.

Again, thank you. I want to thank everyone that stayed, everyone that spoke, everyone that made a comment; and, you know, our collective teams, the City of Los Angeles, the Corps of Engineers, and many others out here have spent many, many years -- Lewis, many, many, many years. You're probably one of the ones people referred to a lot, but many people have been working on this for a long time, this study today, being able to present it to you. I think everybody is really proud of that and appreciated the feedback.

So thank you very much and if you have more to say, please go to our website. There's still opportunities to comment. Until the 18th of November, we're taking public comments and we are welcoming every one of those. So thank you very much.

(Proceedings concluded at 8:25 p.m.)

Comment Cards

Los Angeles River Ecosystem Restoration Integrated Feasibility Study
Public Meeting – October 17, 2013
Comment Card Summary

Michael Banner, Los Angeles LDC, Inc.
Approve Alternative 20

Lynn Brown, L.A. Equine Advisory Committee – V.P.
We support the LA River Revitalization plans. We urge this committee to include dirt trails for horses along the river. Much planning has been done for rec/bike paths, but equestrians have largely been ignored. We are a large group who wish to be included in future planning. Thank you.

Tsilah Burman
We want a world-class river with most habitat and access. Rather than do something minor to appease, we should be investing for the future and create the most benefits for all, consistency with City's Master Plan and well worth the cost which will not only have tremendous environmental benefit but will spur greater tourism and economic development. Please, please, please choose Alternative 20! Reasonable is not good enough for the City of Los Angeles. Right the wrong by choosing Alternative 20!!!

Suellen Cheng, Chinese American Citizens Alliance
1. I support the full implementation of Alternative 20. 2. The Alternative 20 would include the most historic section of the City. It is within close proximity to the site of the ancient Tongva Native American village. They are the 1st people who access the LA River. The full implementation of Alternative 20 would bring back that significant historic root of Los Angeles to people who would benefit from this project. 3. I totally agree with the City leaders, "Let's not go halfway on this very heart and soul of our City." This is our only chance to make a right decision for this wonderful and long overdue project. Thank you for allowing us to voice our concerns and please support the alternative 20 idea and its implementation.

Mike Hernandez, former City Councilman CD1
Support of Alternative 20

Alan Kumamoto, resident/HCNC
I support option 20 that Councilmember Gil Cedillo favors.

Joanne Kumamoto, Little Tokyo
I support the alternative supported by Gil Cedillo #20.

Ally Lambarri
Hasn't anyone asked the point of view of the youth? We are affected as well. Everything seems like the "adult world" but it's not; kids matter too. Can't anyone ask a child their thoughts? I'm 14 years old.

I've seen this neighborhood change before my very eyes. I'll admit; I do approve. I would like to see the children of Atwater or District 13 speak rather than the adults for once.

Mike Lowry, Cypress Park
My question deals with the Corps' methodology in creating the units of value assigned to each study alternative. Specifically, the inclusion of neighboring communities of Glendale and Burbank as beneficiaries of Alt. 20 in my mind creates additional value in each unit, providing a greater benefit that your methodology may not recognize. I'd like to better understand your construction of these units and exactly what contributed to their value. Thanks.

J. McQuiston
This is an affront to good ecology. LA has to recycle its water, not provide a means to waste resource and pollute the ocean as well. If the water was from natural source it would have silt and clog the dam or river. $1 Billion = 100 parks with athletic fields where LA desperately needs them. For health and safety, think about what you're proposing!

David Rankell
Do not alter the bottom or sides of the LA River. Do not let people play or recreate near the river. The river is "designed" to rapidly and safely evacuate water out of the S.F. Valley and Los Angeles! It's a danger to the public when it's running full. People have died in and along the river (Floods of 1938) before it was a concrete channel. Leave it alone. It works and foolish under educated people want it changed and have no idea what it is capable of with a 100 year flood!!!

Rourk Reagan
For #20. 1. More permeable surface area allows more water recharge to our groundwater (aquifers). 2. We have worked for decades to revitalize our River. 3. Living in a concrete jungle with one of the largest cities in the world; we deserve more. 4. Just the environmental benefits, connecting the Elysian, the River & Griffith Park would be amazing. 5. With all of the new density building along the corridor, we could use the Quimby Pools to help and the residents will have a beautiful recreation area.

Delmer E. Sanburg, Jr.
The LA River ecosystem is priceless and should be preserved/restored as completely as possible. Alternative 20 is closest to this. Include both natural aspects as well as cultural and historical assets in the restoration and preservation of this unique area that compliments the hillsides in Griffith Park.

Thomas Edward Sebahar, Activist
The fact that this meeting took place is exciting. But concerns: 1) Pollution of local aquifers, 2) Potential West Nile problem and c'mon the cost. Mayor Garcetti needs to initiate a volunteer "City Corp" program. I'll help!

Cheri Shankar
Yes on Alternative 20!

Rhoads Stephenson
Go with Option 20!

Ric Taylor
Please consider Alternative 20! If we're going to do this, let's do it right the first time. Thanks for considering.

Alexia Teran
The acoustics need to be working. There should have been loud speakers along the walls. There were about 1000 people and most of us couldn't hear anything. The public was very disruptive, talking loudly. Improve the sound systems at the River Center. Speakers need to speak louder, please. Will this improvement bring higher taxes to property owners? In what other ways will this impact the area? I am for bettering the area and river; I always believe in educating the public about keeping the river clean.

Ann Walnum, Friends of the Southwest Museum Coalition
Alternative 20 would provide the best opportunities for Los Angeles and its residents. Let's do the plan right. Many meetings, studies, and hopes have gone before. It's TIME!

Wendy Wendlandt, Environment California
I support Alternative 20. Make LA Beautiful.

Nicholas J. Wilhelm
I am for the expanded proposal (20). It would serve the public with more access and more environmental protection. Recreation would also be incorporated into a more holistic service to the public. This River has been abused and ignored too long. It is time to return it to a viable river ecosystem and great public interface with nature!

Erik Yesayan, Walk Bike Glendale
As a long time Glendale resident and frequent user of the LA River bike path, I wholeheartedly support alternative 20. This alternative will allow the 200,000 Glendale residents access to a restored wildlife ecosystem that we otherwise lack in incredible ways. Most of southern Glendale is extremely delinquent in park space. Kids grow up instead exposing themselves to the dangers of playing on the street. Alt. 20 will be an outstanding benefit for Glendale residents.

Rubi Zuniga
Please identify the state and local funding opportunities and how Alternative 20 will affect local cost to residents of Los Angeles. In addition, please identify where the sources of income/resources will come from and if it will affect (specifically cut) current programs in order to allocate resources to carry on Alt 20. If so, please list the programs tentatively being affected as a result of Alt 20.

2. Responses to Comments on the Draft Integrated Feasibility Report

Introduction

This document, Appendix L, Part 2, constitutes the second part of a two part document which includes: Part 1 - Comments on the Draft Los Angeles River Ecosystem Restoration Integrated Feasibility Report (Feasibility Study and Environment Impact Statement/ Environmental Impact Report) (Draft IFR); and Part 2 - Responses to Comments on the Draft IFR. This appendix is part of the Final Los Angeles River Ecosystem Restoration Integrated Feasibility Report (Feasibility Study and Environment Impact Statement/ Environmental Impact Report) (Final IFR).

Part 2, Responses to Comments on the Draft IFR, presents the Corps' and City's responses to the comments received on the Draft IFR during the public review period which ended on November 18, 2013. The Corps and the City of Los Angeles made the Draft IFR document publicly available on the Corps' website on Friday, September 13, 2013, opening the 45-day public review period. The Notice of Availability was published in Federal Register on October 4, 2013 which extended the public comment period an additional 2 weeks to Monday, November 18, 2013. In addition, comments were received at the Public Meeting held on October 17, 2013 at the L.A. River Center and Gardens Atrium.

Responses are provided for each comment letter received, in the same order as presented in Part 1, by groups: federal, state, county, city, and local representatives and agencies, and governmental entities, then organizations and businesses, followed by individuals in alphabetical order by the last name of the first signature. Each numbered response corresponds to the assigned comment number provided in Part 1. Some comments have been assigned a letter code, which corresponds to a specific topic. For each of these topics, a General Response has been prepared and is listed below. A specific response has been provided for all other comments.

The definition of acronyms that may appear in the response to comments may be found immediately following the Table of Contents in the main report of the Final IFR.

The responses are presented in the following order:

Table of Contents

General Responses 6

Specific Response 12

Federal Agencies and Representatives 12

Members of U.S. Congress, Bass, Becerra, Roybal-Allard 21

Congresswoman Lucille Roybal-Allard 26

Congressman Adam B. Schiff 26

U.S. Department of the Interior 26

U.S. DOI Fish and Wildlife Service 27
U.S. Environmental Protection Agency 27
State Agencies and Representatives 30
Members of Assembly California Legislature, Gatto and Gomez 30
CA State Senator Fran Pavley 41
CA Dept of Fish and Wildlife, Scott P. Harris 52
CA Dept of Parks and Recreation 52
CA State Clearinghouse 53
South Coast Air Quality Management District 54
County Agencies 55
County of LA Dept of Parks and Recreation 55
County of LA Dept of Public Works 55
County of LA Dept of Regional Planning 55
City of LA Councilmember Tom LaBonge 56
City of LA Councilmember Mitch O'Farrell 61
City of LA Bicycle Advisory Committee 66
City of LA Bureau of Sanitation 66
City of LA Dept of City Planning 66
City of LA Dept of Recreation and Parks 66
City of LA Economic and Workforce Development Dept 66
Los Angeles Dept of Water and Power 66
Los Angeles Unified School District, Bennett Kayser, Board Member 66
Los Angeles Unified School District, Office of Environmental Health and Safety 67
Other Cities 67
City of Burbank Community Development Dept 67
City of Glendale 68
City of Lakewood 68
Organizations & Businesses 68
AIA Los Angeles 68
Alliance of River Communities 68
Alternative Apparel 69
Arid Lands Institute 69

Arroyo Seco Foundation 69
Arthur Golding & Associates 69
Arup 69
Audubon Center at Debs Park 69
Big Brand Water Filter, Inc 70
CA Native Plant Society, Los Angeles/Santa Monica Mountains Chapter 70
Chatten-Brown & Carstens 70
Chinese American Citizens Alliance, Los Angeles Lodge 70
Community Conservation Solutions 71
Council for Watershed Health 71
Downtown Los Angeles Neighborhood Council 72
EcoTone Studios 74
Elysian Valley Arts Collective 74
Enterprise Community Partners, Inc 74
Environment Now 74
Film LA, Inc 74
Friends of the Los Angeles River 74
FoLAR -- Press Articles submission 81
Glassell Park Improvement Association 81
Glendale Rancho Neighborhood Association 81
Great Ecology 81
Heal the Bay 82
Historic Highland Park Neighborhood Council 83
i2 Capital Group, Inc 83
Kaiser Permanente 83
Los Angeles County Bicycle Coalition 83
Los Angeles Kayaking Club 83
Los Angeles River Artists and Business Association 83
LA River Expeditions 83
LA River Revitalization Corporation 83
Los Angeles Waterkeeper 83
Los Angeles World Airports 84

Los Encinos School 84
Los Feliz Improvement Association 84
Main Street Capital BIDCO 84
Mas 84
Metabolic Studio 84
Mia Lehrer + Associates 84
Montrose/Verdugo City/Sparr Heights Neighborhood Association 84
Mountains Recreation & Conservation Authority 84
Mt. Washington Association 86
National Wildlife Federation 86
Northeast Los Angeles Arts Organization 86
Oaks Homeowners Association 86
Oakwood School, Fourth Graders 86
Pasadena Audubon Society 86
Santa Monica Bay Restoration Commission 86
Santa Monica Mountains Conservancy 86
Save LA River Open Space 90
Sherman Oaks Neighborhood Council 90
Sierra Club Angeles Chapter Crescenta Valley 90
Sierra Club Angeles Chapter Water Committee 90
Silver Lake Reservoirs Conservancy 104
Studio City Neighborhood Council 104
Studio City Residents Association 104
The City Project 104
The Nature Conservancy 105
The River Project 108
The Trust for Public Land 109
Theodore Payne Foundation 109
TreePeople 109
UC Berkeley, Dept of Landscape Architecture and Environmental Planning 109
UC San Diego 111
Union Pacific Railroad 111

Union Pacific Railroad 2nd Letter 116
Urban Rivers Institute 117
Urban Waters Federal Partnership 117
USC School of Architecture, Landscape Architecture 118
USC School of Architecture, Landscape Morphologies Lab 118
Valley Industry & Commerce Association 119
Walk Bike Glendale 119
Wild Heritage Planners 120
Petitions 120
Restore the LA River Petition 120
LA River Revitalization Corporation Petition 120
St. Sebastian Catholic Church Petition 120
Individuals 120
Public Meeting Comments 154
Public Meeting Comment Cards 160

General Responses

Responses to issues and concerns raised by multiple comments are addressed in a set of General Responses (GR-A and GR-B) as described below. All other responses are presented individually by comment letter.

GR-A Support for Alternative 20

Thank you for your comments on the Draft Integrated Feasibility Report (IFR) prepared by the U.S. Army Corps of Engineers (Corps) and City of Los Angeles ("City" or "non-Federal sponsor") for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the final alternatives carried forward for further analysis and consideration, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes regional terrestrial and aquatic habitat connections. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and will be the plan recommended for authorization.

Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, as the largest of the final array plans, it will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, these benefits are generated at a very high cost, especially for the cost compared to the NER Plan. From a Federal interest perspective, the primary focus of the project is ecosystem restoration, not regional economic output. In an ecosystem restoration feasibility study the NER Plan must be identified. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non-monetary costs. This plan occurs where the incremental beneficial effects are worth the incremental costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan. In this case, the NER Plan was identified in the Draft IFR as Alternative 13, and was named the ARBOR Corridor Extension (ACE) plan. It was selected as the Tentatively Selected Plan (TSP) based on evaluation criteria established in the feasibility study and mandated by governing federal water resources policy.

The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by those two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

During the public comment period for the Draft IFR, which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership.

Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

The Final IFR's Comments Appendix Lincludes all public comments along with Lead Agencies' responses that address pertinent issues identified in the comments.

In general, while agency and stakeholder comments provided a large amount of technical input and analysis regarding the regional importance of Alternative 20, much of this information had already been taken into account in identifying Alternative 13 as the NER plan in the Draft IFR. However, as a result of these comments and input from reviews, the Corps used a framework suggested by an Independent External Peer Review (IEPR) panel to better quantify the beneficial outputs of connectivity. By evaluating hydrologic, local, and regional connectivity and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array (See response GR-B for more detail). Although quantifying connectivity showed more restoration output for each of the alternatives as well as for differing combinations of key features, the increase in cost between Alternative 13 and the next best buy plan was over $100 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits (after quantifying connectivity functions), there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, further detailed cost analysis was performed, which identified a more cost effective variation on Alternative 13 (referred to in the Final IFR as "Alternative 13v" for "variation"). Alternative 13v is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20, which provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park, daylighting three streams, and restoration of the confluence of Arroyo Seco. The Reach 7 plan from Alternative 20 provides greater benefits at a lower cost than the Reach 7 plan included in Alternative 13. Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, there is no other plan of similar cost that produces more restoration output. Furthermore, compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for cost effectiveness, efficiency, acceptability, and completeness. Accordingly, Alternative 13v is identified as the NER Plan in the Final IFR.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and the Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exemption and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report.

The LPP, Alternative 20, would include additional restoration benefits beyond those identified for the NER plan, with widening and terracing in Reach 5 in the Glendale Narrows, restoration at Verdugo Wash, and expansion of restoration at and adjacent to the Los Angeles Trailer and Container Intermodal Facility (LATC) site. These additional restoration benefits include restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and opportunity for a direct connection to the significant ecological area of the Verdugo Mountains. The LPP is most consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles because it includes three of its five opportunity areas (versus Alternative 13v's inclusion of two). Implementation of the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

The following table provides a comparison of the NER Plan and the LPP. It includes a comparison of the acres restored and average annual habitat unit outputs (AAHUs), describes major restoration features in each of the 8 reaches, and summarizes connectivity benefits. The cost associated with the 121 additional acres in Alternative 20 is relatively high, because the acres are restored through modifications to the river channel by removing concrete or reconfiguring channel walls, and by widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 restores about 20% more overall acreage and twice the acreage of local and hydrologic connectivity as Alternative 13v, and is the only alternative that provides a connection to the significant ecological area of the Verdugo Mountains.

Table 1 – NER and LPP Comparison

Criteria	NER Plan (Alternative 13v)	LPP (Alternative 20)	Incremental Difference
Acres	598	719	121
AAHU's	5,989	6,782	793
First Cost	$694 Million	$1.339 Billion	$645 Million
	Comparison of Restoration Features		
Reach 1	Habitat corridor/riparian planting	Same as NER Plan	-
Reach 2	Habitat corridor/riparian planting	+ Channel widening right bank	20 acres 55 AAHU
Reach 3	Side channel/daylighted streams/habitat corridor	+ Verdugo Wash confluence restoration	30 acres 130 AAHU
Reach 4	Daylighted streams/side channel/habitat corridor	Same as NER Plan	-

Reach 5	Habitat corridor/daylighted stream	+ Widening channel/terracing banks	27 acres 265 AAHU
Reach 6	Habitat corridor/widening river	Same as NER Plan	-
Reach 7	Daylighted streams + Arroyo Seco restored + Connection to Los Angeles River State Historic Park with 10 acres of wetlands/habitat corridor	Same as NER Plan	
Reach 8	Riparian overbank/restored wash/habitat corridor	+ Concrete removal, off channel wetlands, hydrologic connection	44 acres 342 AAHU
Connectivity Benefits			
Local (acres)	142	298	156
Regional (acres)	780,000	797,000	17,000
Hydrologic (acres)	133	280	147
Hydrologic (count)	2	4	2

GR-B Connectivity

Many public comments received, as well as a comment from the project's Independent External Peer Review (IEPR) Panel, suggested that an additional analysis of connectivity benefits would assist with alternative comparison and selection. The Corps used a framework suggested by the project's IEPR panel to better quantify the beneficial outputs of connectivity. Four different metrics were developed to further quantify different connectivity outputs. By evaluating two hydrologic, one local, and one regional connectivity metrics, and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array.

Local connectivity was evaluated based on the potential for wildlife to physically move between the river and areas restored by the project. The metric is based on the acreage of the restored sites and the ability of wildlife to access them. For the purpose of this evaluation, it was assumed that all types of wildlife must have access in order to be considered in the metric (i.e. mammals, reptiles, and amphibians, in addition to birds whose movements are not limited by barriers between the channel bottom and restored areas).

Regional connectivity was evaluated based on the restored opportunities for wildlife to move out of the restored project area into adjacent, more distant significant ecological areas (now or in the future, after additional restoration occurs along river tributaries). This metric is based on the acreage of habitat area to which a given alternative connects. Areas considered include the Santa Monica Mountains (via Griffith Park) and Elysian Park, which constitute terrestrial connections, and potential future opportunities via tributaries to the San Gabriel Mountains (via Arroyo Seco) and the Verdugo Mountains (via Verdugo Wash), which constitute aquatic connections.

Hydrologic connectivity was evaluated based on the restored areas/floodplain that would be reconnected to the river via natural hydrology. The total acreage of the sites with a natural hydrologic connection and the number of sites with a natural hydrologic connection were evaluated (two separate metrics). Parcels were considered hydrologically connected if the river is widened into a floodplain area, where the river can more naturally flood, meander, change shape, and interact with adjacent sites. The floodplain is considered to be the area where floodwaters would be allowed to inundate.

For each metric, the values for each site (i.e. acres or count) were calculated and then summed across each alternative. In order to calculate the metric value, a Relative Value Index (RVI) was used, whereby the total for a given alternative was divided by the maximum possible value. In this way, the metric value is a simple proportion of the total possible, on a scale of 0 to 1 (1 being the maximum).

To obtain an overall connectivity metric, the metric values for each connectivity component were then summed, and an RVI calculated to determine a single, combined connectivity metric (see Table 1). These combined metric values were then input into the economic analysis (CE/ICA) and weighted at varying levels using the Combined Habitat Assessment Protocol (CHAP) outputs. The original analysis only considered the CHAP analysis in the quantitative comparison and resulted in all four Final Array Plans included in the Draft Integrated Feasibility Report (IFR) (10, 13, 16, and 20) being Best Buy Plans. In the revised analysis, two additional scenarios were evaluated that based the CE/ICA analysis on a Total Weighted Output Metric that included CHAP and connectivity benefits. The first weighted the CHAP and Combined Connectivity equally, and the second weighted the CHAP at 75% and Combined Connectivity at 25%. These results were consistent in showing Alternative 13 as the first Best Buy Plan.

Although quantifying connectivity showed more restoration output for each of the alternatives, the increase in cost between Alternative 13 and Alternative 16 is over $350 million, and the increase in cost between Alternative 13 and Alternative 20 is over $627 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits, there was not sufficient justification to select a larger scale plan as the NER Plan.

Table 1 – Connectivity Metrics

	RVI - Connectivity Metrics					Connec-tivity Metric Value	First Cost $M*	Incremental Cost $M*
	Local Connec-tivity	Regional Connec-tivity	Hydrologic Connec-tivity - acres	Hydrologic Connec-tivity - count	Total			
Alt 10	0.30	0.22	0.29	0.25	1.06	0.26	$ 375	
Alt 13	0.48	0.98	0.48	0.50	2.43	0.61	$ 453	$ 78
Alt 16	0.86	0.98	0.88	0.75	3.46	0.87	$ 804	$ 351
Alt 20	1.00	1.00	1.00	1.00	4.00	1.00	$ 1,081	$ 277

* First costs and incremental costs shown are from the September 2013 Draft IFR. Costs were updated in the Final IFR.

Following public review, further detailed cost analysis was performed, which identified a more cost effective variation on Alternative 13 (referred to in the Final IFR as "Alternative 13v" for variation). Alternative 13v is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. This variation is identified as the NER plan in the Final IFR. With respect to connectivity, Alternative 13v provides similar benefits to Alternative 13, with a slight increase in local and regional connectivity with the restoration at the Los Angeles State Historic Park in Reach 7.

The Corps recognizes that Alternative 20 has the most benefits, across many benefit categories, among the final array plans. Accordingly, the non-Federal sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) (ASA (CW)) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA (CW) granted the requested LPP exception, and permitted the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report.

Specific Response

Federal Agencies and Representatives

U.S. Senate Committee on Environmental and Public Works, Senator Barbara Boxer

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

The Honorable Barbara Boxer
Chairman of Committee on Environment and Public Works
Washington, D.C. 20510-6175

Dear Senator Boxer:

Thank you for your comments on the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the final alternatives carried forward for further analysis and consideration, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes additional connections to regional habitat areas in important areas. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and is the Recommended Plan in the Final Integrated Feasibility Report (IFR) and in the Chief of Engineers Report.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the recommended plan at a cost-share scenario different from traditional U.S. Army Corps of Engineers (Corps) policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and the Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception, and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report.

After detailed cost analysis, the Corps also refined the NER plan. That refined plan, Alternative 13v, provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost for Alternative 13v of $694 million, there is no other plan of similar cost that produces more restoration output. Accordingly, Alternative 13v is identified as the NER plan in the Final IFR. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Alternative 20 has been identified as the LPP and Recommended Plan for the reasons previously stated.

As part of her permission to the Corps to consider Alternative 20 as the LPP, the ASA(CW) permitted the Corps to consider alternative cost sharing.

If you have any further questions, please contact the Los Angeles District Commander, Colonel Kimberly M. Colloton, at (213) 452-3961, or your staff may contact the Deputy District Engineer for Project Management, Mr. David M. Van Dorpe, at (213) 452-3971.

Sincerely,

Steven Stockton
Director of Civil Works

Attachment 1

The following information provides a more detailed explanation for the selection of the National Ecosystem Restoration (NER) Plan and the Locally Preferred Plan for the proposed Los Angeles River Ecosystem Restoration Project.

Acceptability and Public Support

During the public comment period for the Draft Integrated Feasibility Report (IFR), which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership. Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

Alternative 13, the NER plan identified in the Draft IFR, met required criteria for completeness, effectiveness, efficiency, and acceptability. This alternative is complete in that it provides for all features necessary to realize the planned effects, is effective in that it meets study objectives to alleviate problems and realize opportunities while being efficient, as described above. This alternative was evaluated for acceptability from the perspective of the Nation's general public, and is consistent with Federal law, authority and public policy. In general, in terms of scope and completeness of the recommended plan, agency and stakeholder input did not provide any new information to the Corps that had not been previously considered in reaching its selection of Alternative 13 as the NER Plan.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on Alternative 13 (referred to in the Final IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in

Alternative 13, at a lower cost. This variation on Alternative 13 has been identified as the NER plan in the Final IFR on the basis of the analysis referenced above.

In a letter dated April 10, 2014, the City of Los Angeles requested that Alternative 20 be the Recommended Plan. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memorandum dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report. The rationale for granting that request is described below.

The LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, and at the Los Angeles Trailer and Container Intermodal Facility (LATC) site, as well as river widening in additional reaches. These additional restoration benefits include direct restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant ecological area of the Verdugo Mountains. Nearly unanimous support for Alternative 20 was expressed by the public through review of the Draft IFR and public meetings. Alternative 20 is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. Implementation of Alternative 20 as the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding, and channelization, including the Corps construction of the Los Angeles County Drainage Area (LACDA) flood risk management project that modified most of the Los Angeles River with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Acts of the 1930s and 1940s directed the Corps to construct the LACDA project, which ultimately involved construction of 5 dams and approximately 500 miles of channels to protect communities from significant and recurring flood damages. Restoration of 11 miles of the Los Angeles River, that is the focus of the present Study, is within the footprint of the existing flood risk management project. The ecosystem project would, in part, reverse a portion of the degradation associated with the existing LACDA project, and would advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters Federal Partnership. The Corps has factored in climate variability and future uncertainties, and with a more naturally functioning channel, there may be associated incidental benefits with respect to drought, such as increased percolation area and increased detention and retention characteristics. The America's Great Outdoors initiative would be advanced through provision of increased access to restored lands and urban waters. Lastly, the Los Angeles River is one of 7 original pilot locations for the Urban Waters Federal Partnership, and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for the 11 miles of 51 miles of the Los Angeles River that are the focus of the partnership work.

Quantification of the connections among restored areas demonstrate the significant benefits to be realized through implementation of the LPP in lieu of the NER plan. Restoration of such

connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls, and by widening the channel to restore hydrologic connectivity and additional wetland habitat. The LPP would also provide significantly greater regional economic benefits, including over 11,000 more jobs and over $3.8 billion in labor income, as well as substantive opportunities for redevelopment in the Verdugo Wash area. Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing LACDA flood risk management project, through provision of new public access to restored natural areas with associated recreational amenities.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite provided by interaction with nature.

Significance of Ecosystem Outputs

Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, Alternative 20, as the largest of the final array plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, from a Federal interest perspective, the primary focus of the project is ecosystem restoration and the NER Plan must be identified in a restoration feasibility study as a primary basis for decision making. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non monetary costs. This plan occurs where the incremental beneficial effects just equal or exceed incremental costs, or where any extra environmental value is just worth the costs.

Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness.The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan. In this case, the NER Plan in the Draft IFR was identified as Alternative 13, named the ARBOR Corridor Extension (ACE). It was selected based on the required criteria used to assess and establish selection of the NER Plan. The increased benefits for habitat value, local/nodal and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion

in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

Regarding comments relating to connectivity, these outputs were considered in the evaluation and comparison of alternatives. Further, in response to Independent External Peer Review comments, connectivity benefits were quantified in greater detail, combined with habitat outputs from the CHAP model and subject to additional cost effectiveness and incremental analyses. Such analysis substantiated that the incremental costs per output are significantly higher for Alternative 20, and therefore, when considering the criterion of reasonableness of cost, Alternative 13v is affirmed to be the NER Plan in the Final IFR.

The following table provides a comparison of the NER Plan and the LPP. It includes a comparison of the acres benefiting from the restoration and average annual habitat unit outputs (AAHUs), describes major restoration features in each of the 8 reaches, and summarizes connectivity benefits. The cost associated with the 121 additional acres in Alternative 20 is relatively high, because the acres are restored through modifications to the river channel by removing concrete or reconfiguring channel walls, and by widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 restores 22% more overall acreage and twice the acreage of local and hydrologic connectivity as Alternative 13v, and is the only alternative that provides a connection to the significant ecological area in the Verdugo Mountains

Table 1 – NER and LPP Comparison

Criteria	NER Plan (Alternative 13v)	LPP (Alternative 20)	Incremental Difference
Acres	598	719	121
AAHU's	5,989	6,782	793
First Cost*	$694 Million	$1.339 Billion	$645 Million
	Comparison of Restoration Features		
Reach 1	Habitat corridor/riparian planting	Same as NER Plan	-
Reach 2	Habitat corridor/riparian planting	+ Channel widening right bank	20 acres 55 AAHU
Reach 3	Side channel/daylighted streams/habitat corridor	+ Verdugo Wash confluence restoration	30 acres 130 AAHU
Reach 4	Daylighted streams/side channel/habitat corridor	Same as NER Plan	-
Reach 5	Habitat corridor/daylighted stream	+ Widening channel/terracing banks	27 acres 265 AAHU
Reach 6	Habitat corridor/widening river	Same as NER Plan	-
Reach 7	Daylighted streams + Arroyo Seco restored + Connection to Los Angeles	Same as NER Plan	-

	River State Historic Park/habitat corridor		
Reach 8	Riparian overbank/restored wash/habitat corridor	+ Concrete removal, off channel wetlands, hydrologic connection	44 acres 342 AAHU
Connectivity Benefits			
Local (acres)	151	298	147
Regional (acres)	780,000	797,000	17,000
Hydrologic (acres)	133	280	147
Hydrologic (count)	2	4	2

* First costs shown are from the September 2013 Draft IFR and are subject to change.

Environmental Justice

Although environmental justice was not a key criterion in the plan selection process, the Final IFR includes a more robust analysis of environmental justice issues in Section 3.13.3 and 5.13. Many other project outputs were identified for consideration by the public (such as water quality, groundwater recharge, recreation, and regional revitalization), which under Corps policy were not primary criteria for identifying the NER plan. The rationale for the LPP as the Recommended Plan is provided above.

Cost

When selecting a plan to propose for authorization, the Corps must consider not only NER benefits, but also the reasonableness of costs necessary to achieve those benefits in comparing alternatives. Plan selection on this basis is required by Corps regulations and policy in Engineering Regulation 1105-2-100. The $694 million cost of Alternative 13v is significant when compared to the Federal investment in other ecosystem restoration plans by the Corps in the Southwest, especially when calculated as cost per acre restored. The added areas of restoration in Alternative 20 did not increase benefits sufficiently to justify the added and almost doubled cost of $645 million. Although quantifying connectivity showed more restoration output for each of the alternatives, there was not sufficient justification to select a larger scale plan as the NER Plan.

As you noted in your letter, because of the high lands, easements, rights of way, relocations, and disposal sites (LERRD) costs associated with the alternative plans, and the Corps' policy that plans have a target LERRD percentage of no more than 25 percent of total ecosystem restoration costs, the City of Los Angeles has offered to voluntarily waive reimbursement of all LERRD costs exceeding its statutory share of total ecosystem restoration costs. The ASA(CW) granted a policy waiver to allow the Corps to consider plans with higher LERRD costs and to allow the City to waive reimbursement of LERRD. As part of its request for Alternative 20, the City

confirmed its waiver of reimbursement and offered alternative cost sharing for the LPP. As part of her permission to the Corps to consider Alternative 20 as the LPP, the ASA(CW) permitted the Corps to consider alternative cost sharing, subject to sponsor waiver of reimbursement and credit for LERRD above 35 percent of total ecosystem restoration cost. The Chief of Engineers will make a decision on the cost sharing that will be recommended to Congress prior to submittal of the Chief's Report to Congress.

Accordingly, Alternative 13v is identified as the NER plan in the Final IFR. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan described above. However, Alternative 20 has been identified as the LPP and Recommended Plan for the reasons previously stated.

Members of U.S. Congress, Bass, Becerra, Roybal-Allard

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

The Honorable Karen Bass
The Honorable Xavier Becerra
The Honorable Lucille Roybal-Allard
The Honorable Adam B. Schiff
Members of Congress
4929 Wilshire Blvd, Suite 650
Los Angeles, CA 90010

Dear Members of Congress:

Thank you for your comments on the Draft Integrated Feasibility Report (IFR) prepared by the U.S. Army Corps of Engineers (Corps) and City of Los Angeles ("City" or "non-Federal sponsor") for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the alternatives carried forward for further analysis and consideration, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes additional connections to regional habitat areas in important areas. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and will be the Recommended Plan.

We recognize that Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, it is recognized that Alternative 20, as the largest of the final array plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, from a Federal interest perspective, the primary focus of the project is ecosystem restoration, and the NER Plan must be identified in a restoration feasibility study. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non-monetary costs. This plan occurs where the incremental beneficial effects equal the incremental costs, or where the extra environmental value is just worth the costs.

Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness.The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan. In this case, the NER Plan identified in the Draft IFR was Alternative 13, named the ARBOR Corridor Extension (ACE). It was selected based on the required criteria used to assess and establish the selection of the NER Plan. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives, provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

During the public comment period for the Draft IFR, which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership. Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

The Final IFR's Comments Appendix includes all public comments along with Lead Agencies' responses that address pertinent issues identified in the comments.

In general, in terms of scope and completeness of the recommended plan, while agency and stakeholder comments provided a large amount of technical input and analysis regarding the importance of Alternative 20, the Corps considers this input to be similar to what had previously been considered in reaching the agency's identification of Alternative 13 as the Tentatively Selected Plan (TSP).

In terms of connectivity benefits and the model used to calculate benefits, the Corps used a framework suggested by an Independent External Peer Review (IEPR) panel to better quantify the beneficial outputs of connectivity noted as being not fully captured in the public comments. By evaluating hydrologic, local, and regional connectivity and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array.

Although quantifying connectivity showed more restoration output for each of the alternatives as well as for differing combinations of key features, the increase in cost between Alternative 13 and the next bigger best buy plan was over $100 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits (after quantifying connectivity functions), there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, further analysis was performed that included a more detailed cost analysis. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7,

where it includes the Reach 7 features from Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost for Alternative 13v of $694 million, there is no other plan of similar cost that produces more restoration output. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan. Accordingly, Alternative 13v has been identified as the NER plan.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report. The rationale for granting that request is described below.

The LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, widening of the natural riverbed in 1.5 miles of the Glendale Narrows (Reach 5), and expansion of restoration at and adjacent to the Los Angeles Trailer and Container lntermodal Facility (LATC) site. These additional restoration benefits include direct restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant ecological area of the Verdugo Mountains. Nearly unanimous support for Alternative 20 was expressed by the public through review of the Draft IFR and public meetings. The LPP is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. Implementation of the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding, and channelization, including the Corps' construction of the Los Angeles County Drainage Area flood risk management project that modified most of the Los Angeles River with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Acts of the 1930s and 1940s directed the Corps to construct the Los Angeles County Drainage Area project, which ultimately involved construction of 5 dams and approximately 500 miles of channels to protect communities from significant and recurring flood damages. Restoration of 11 miles of the Los Angeles River, that was the focus of this IFR, is within the footprint of the existing flood risk management project. The ecosystem project would, in part, reverse a portion of the degradation associated with the existing Los Angeles County Drainage Area project, and concurrently advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters Federal Partnership. The Corps has factored in climate variability and future uncertainties, and with a more naturally functioning channel, there may be associated incidental benefits with

respect to drought, such as increased percolation area and increased detention and retention characteristics. The America's Great Outdoors initiative would be advanced through provision of increased access to restored lands and urban waters. Lastly, the Los Angeles River is one of 7 original pilot locations for the Urban Waters Federal Partnership and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for 11 miles of 51 miles of the Los Angeles River.

Quantifications of the connections among restored areas demonstrate the significant benefits to be realized through implementation of Alternative 20 in lieu of the NER plan. Restoration of such connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls and widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 would also provide significantly greater regional economic benefits, including over 11,000 more jobs and over $3.8 billion in labor income, as well as substantive opportunities for redevelopment in both the Verdugo Wash confluence and Chinatown/Cornfields areas. Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing Los Angeles County Drainage Area flood risk management project through provision of new public access to restored natural areas with associated recreational amenities.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

If you have any further questions, please contact me at (213) 452-3783.

Sincerely,

Eduardo T. De Mesa
Acting Chief, Planning Division
USACE, Los Angeles District

Congresswoman Lucille Roybal-Allard

Thank you for your letter. Please reference the congressional letter addressed to you above.

Congressman Adam B. Schiff

Thank you for your letter. Please reference the congressional letter addressed to you above.

U.S. Department of the Interior

1. Thank you for your comments and additional information to be considered for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 is one of the action alternatives considered in detail in the IFR. The Corps typically recommends the plan that is the National Ecosystem Restoration (NER) Plan. In this case, the NER Plan in the Draft Integrated Feasibility Report (IFR) was identified as Alternative 13, named the ARBOR Corridor Extension (ACE) alternative, because it met study objectives while providing the greatest increase in net benefits with the least increase in cost among alternatives in the final array.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. This analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost. The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v is identified as the NER Plan in the Final IFR.

However, the non-Federal sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) (ASA (CW)) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA (CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan;

these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite. The importance of passive recreation, and in particular multi-use trails, is recognized. The recreation plan that was initially developed to be compatible with Alternative 13 was adjusted to be compatible with and take advantage of the ecosystem restoration features included in Alternative 20. The recreation plan includes passive recreation opportunities comprised of trail improvements, pedestrian bridges, trail access points and wildlife viewing points that are compatible with the restoration features.

We appreciate the information you provided on (1) the Santa Monica Mountains National Recreation Area (SMMNRA), (2) the Rivers, Trails, and Conservation Assistance (RTCA) Program's current and past projects along the Los Angeles River, (3) the proposed project's location within the planning corridor for the Juan Bautista de Anza National Historic Trail through the Los Angeles region, and (4) the Los Angeles River's location in the study area for the Rim of the Valley Special Resource Study. We have incorporated this information into the report, as appropriate, in the section of the Final IFR that addresses resource significance.

2. During the engineering and design phases of the project, careful consideration will be taken to account for and take advantage of existing and ongoing recreational programs, studies and plans in the study area. As required by Corps policy, the project's recreation plan was developed after restoration features were planned and must be compatible with restoration features. During the detailed design phase, the Corps will ensure that recreational use is compatible with the more in depth design of restoration features, particularly limiting recreation to passive activities in restored widened areas.
3. Your support for Alternative 20 is noted. All applicable studies and projects will be considered in the Final IFR.

U.S. DOI Fish and Wildlife Service

1. Thank you for your comments on the Los Angeles River Ecosystem Restoration Feasibility Study, identifying how it relates to important efforts of the Fish and Wildlife Service. We appreciate your commitment to working with Federal partners on river efforts.
2. Your support for Alternative 20 based on its relevance to your Connecting People with Nature initiative, outreach to underserved communities, and biodiversity is noted. The significance of the California Floristic Province is described in Section 2.1. See GR-A.

U.S. Environmental Protection Agency

Thank you for your comments on the Los Angeles River Ecosystem Restoration Study and its relationship to Urban Waters Federal Partnership goals.

Responses to detailed comments:
1. Water quality and conservation benefits were qualitatively described in Section 5.4 of the Draft IFR. Water quality benefits (for human consumption purposes) are considered as ancillary, incidental benefits. Because the Corps mission and project objectives focus on ecosystem restoration, the benefits of habitat restoration are primarily considered. Improving water quality can only be an objective to the extent it is necessary to achieve ecosystem benefits. In this case, the quality and amount of water available is not the primary limiting factor that is precluding establishment of native habitats. Once the proposed modifications to the channel and overbank structures and topography are implemented, planting/seeding is established and water is redirected into these areas, then successful restoration should be achieved. Additional improvements that result from habitat restoration (i.e., filtration, infiltration, and removal of suspended sediments or contaminants through natural processes) are expected to occur, but are not the driving factors.

The Corps has coordinated with the Environmental Protection Agency (EPA) throughout the study process, and that coordination will continue as needed through design and implementation. The 404(b)(1) Evaluation that will be the basis for the Corps' request to the Regional Water Quality Control Board (Los Angeles Region - RWQCB) for Section 401 Certification is included in the Final IFR and is found in Appendix F. The Corps will include EPA in the 401 Certification process by providing copies of correspondence between the Corps and the RWQCB, to include a copy of the application for 401 certification.
2. Benefits of groundwater recharge were qualitatively described in Section 5.4 of the Draft IFR. These benefits were considered as ancillary, incidental benefits. Because the Corps mission and project objectives focus on ecosystem restoration, the benefits of habitat restoration are considered primary.
3. See GR-B.
4. Policy requires that the Corps consider potential climate change impacts when undertaking long-term planning, setting priorities, and making decisions affectings its resources, programs, policies, and operations. Per this requirement, the IFR has incorporated climate change in the existing conditions chapter in Section 3.2, in the impacts chapter in Sections 5.2 and 5.4, and in the Hydrology and Hydraulics Appendix (E), Section 9. Because it is difficult to quantify resilience of restoration measures to climate change, the Corps intends to design all restoration features with climate change resiliency built in. Because all restoration measures are designed to consider climate change resiliency, and because the nuances between levels of restoration are difficult to quantify, including them in the CHAP would provide little meaningful cost-benefit analysis. However, as your recommendation suggested, the Corps has and will continue to coordinate with the Bureau of Reclamation and the Los Angeles County Department of Public Works on the Los Angeles Basin Stormwater Conservation Study. The Corps provided period of record flows and other technical input in anticipation of having quantitative results applicable for use in the next phase of this study.
5. The environmental justice analysis has been expanded in the Final IFR to further address effects, including positive effects as recommended in the comment. See Section 5.13. Table 5-46 summarizes some of the differences among alternatives relative to social and environmental justice issues. The Corps will award construction contracts in accordance with the FAR, and will utilize small business programs including HUBZ one set asides where appropriate and practicable.

6. The Corps will consider such materials for use in recreation structures during the detailed design phase.
7. The paragraph on point and non-point sources has been clarified/corrected in Section 3.4.3 in the Final IFR.
8. Details pertaining to the San Fernando Valley Superfund sites have been edited as recommended in Section 3.4.4.
9. The last paragraph has been edited to state that "most" stormwater is untreated.
10. While recreation is not a primary project purpose, it is still considered one of the primary planning objectives evaluated in the study. Typo 2 will be corrected to 3 on p 4-3.
11. The 2012 MS4 permit will be referenced in Section 5.4.2.
12. Text has been edited as suggested in the comment.
13. Text has been edited as suggested in the comment.
14. As stated in Section 5.7.3 in the IFR, passenger rail would remain in place and continue to operate.
15. Comment noted. The fourth sentence in pararaph 1 has been changed as follows: " For contaminated groundwater that cannot be addressed prior to construction activities, such as the ..."
16. We have added a sentence to Section 5.11.3, as follows: "These temporary operations should also be consistent with current management of contaminated groundwater at SFVSS and Pollock Well Field." We will continue to coordinate with the EPA as the project proceeds.
17. The word "applicable" has been deleted from this sentence.
18. References to dewatering activities in the IFR have been reviewed for consistency. The sections 5.11.3 and 6.2.3 in the Final IFR has been revised to state consistently that the non-Federal sponsor is responsible, at 100 percent non-project cost, for addressing any contaminated groundwater encountered during construction activities, including its handling, treatment and disposal during dewatering.
19. Appendix K has been updated to indicate that the Los Angeles Department of Water and Power (LADWP) operates the wellhead treatment facility at Pollock, and to include a statement that because of the existence of this facility and its ongoing operation, the EPA considers the Pollock Well Field as an adequate remedy for addressing the HTRW groundwater contamination in this area of the SFVSS site and has concluded that further remedy is unnecessary. Appendix K has been further modified to address the comment regarding disposal and discharge requirements, including a statement that requirements for disposal and discharge of HTRW contaminated groundwater will also have to be identified and complied with prior to determining the final treatment technology for the contaminated water. In response to the comment that contaminant concentrations may still exceed drinking water and disposal and discharge standards, it is understood that concentrations of VOCs and chromium in this portion of the project area could still exceed drinking water standards and disposal or discharge standards.

State Agencies and Representatives
Members of Assembly California Legislature, Gatto and Gomez

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

Assembly Member Mike Gatto
43rd District, California
300 East Magnolia Blvd., Suite 504
Burbank, CA 91502

cc: Assembly Member Jimmy Gomez
Assembly Member Richard Bloom
Assembly Member Raul Bocanegra
Assembly Member Ian Calderon
Assembly Member Ed Chau
Senator Lou Correa
Assembly Member Roger Hernandez
Assembly Member Chris Holden
Senator Ted Lieu
Senator Carol Liu
Assembly Member Adrin Nazarian

Dear Honorable Members of the Assembly and Senate:

Thank you for your comments on the Draft Integrated Feasibility Report (IFR) prepared by the U.S. Army Corps of Engineers (Corps) and City of Los Angeles ("City" or "non-Federal sponsor") for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the alternatives carried forward for further analysis and consideration, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes additional connections to regional habitat areas in important areas. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and will be the Recommended Plan.

We recognize that Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, it is recognized that Alternative 20, as the largest of the final array plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, from a Federal interest perspective, the primary focus of the project is ecosystem restoration, and the NER Plan must be identified in a restoration feasibility study. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non-monetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or where the extra environmental value is just worth the costs.

Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan.

In this case, the NER Plan was Alternative 13, named the ARBOR Corridor Extension (ACE), in the Draft IFR. It was selected based on the required criteria used to assess and establish the selection of the NER Plan. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

During the public comment period for the Draft IFR, which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership. Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

The Final IFR's Comments Appendix includes all public comments along with Lead Agencies' responses that address pertinent issues identified in the comments.

In general, in terms of scope and completeness of the recommended plan, while agency and stakeholder comments provided a large amount of technical input and analysis regarding the importance of Alternative 20, the Corps considers this input similar to what had previously been considered in reaching the agency's identification of Alternative 13 as the Tentatively Selected Plan (TSP).

In terms of connectivity benefits and the model used to calculate benefits, the Corps used a framework suggested by an Independent External Peer Review (IEPR) panel to better quantify the beneficial outputs of connectivity noted as being not fully captured in the public comments. By evaluating hydrologic, local, and regional connectivity and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array.

Although quantifying connectivity showed more restoration output for each of the alternatives as well as for differing combinations of key features, the increase in cost between Alternative 13

and the next bigger best buy plan was over $100 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits (after quantifying connectivity functions), there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost for Alternative 13v of $694 million, there is no other plan of similar cost that produces more restoration output. Accordingly, Alternative 13v has been identified as the NER plan. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report. The rationale for granting that request is described below.

The LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, widening of the natural riverbed for 1.5 miles in the Glendale Narrows (Reach 5),and expansion of restoration at and adjacent to the Los Angeles Trailer and Container Intermodal Facility (LATC) site. These additional restoration benefits include direct restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant ecological area of the Verdugo Mountains. Nearly unanimous support for Alternative 20 was expressed by the public through review of the Draft IFR and public meetings. The LPP is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. Implementation of the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding, and channelization, including the Corps' construction of the Los Angeles County Drainage Area flood risk management project that modified most of the Los Angeles River with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Acts of the 1930s and 1940s directed the Corps to construct the Los Angeles County Drainage Area project, which ultimately involved construction of 5 dams and approximately 500 miles of channels to protect communities from significant and recurring flood

damages. Restoration of 11 miles of the Los Angeles River, that was the focus of this IFR, is within the footprint of the existing flood risk management project. The ecosystem project would, in part, reverse a portion of the degradation associated with the existing Los Angeles County Drainage Area project, and concurrently advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters Federal Partnership. The Corps has factored in climate variability and future uncertainties, and with a more naturally functioning channel, there may be associated incidental benefits with respect to drought, such as increased percolation area and increased detention and retention characteristics. The America's Great Outdoors initiative would be advanced through provision of increased access to restored lands and urban waters. Lastly, the Los Angeles River is one of 7 original pilot locations for the Urban Waters Federal Partnership and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for 11 miles of 51 miles of the Los Angeles River.

Quantifications of the connections among restored areas demonstrate the significant benefits to be realized through implementation of Alternative 20 in lieu of the NER plan. Restoration of such connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls and widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 would also provide significantly greater regional economic benefits, including over 11,000 more jobs and over $3.8 billion in labor income, as well as substantive opportunities for redevelopment in both the Verdugo Wash confluence and Chinatown/Cornfields areas. Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing Los Angeles County Drainage Area flood risk management project through provision of new public access to restored natural areas with associated recreational amenities.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

If you have any further questions, please contact me at (213) 452-3783.

Sincerely,

Eduardo T. De Mesa
Acting Chief, Planning Division
USACE, Los Angeles District

CA State Senator Kevin de León

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

Kevin de León
State Senator
22nd District, California
State Capitol, Room 510B
Sacramento, CA 95814

Dear Senator de León:

Thank you for your comments on the Draft Integrated Feasibility Report (IFR) prepared by the U.S. Army Corps of Engineers (Corps) and City of Los Angeles ("City" or "non-Federal sponsor") for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the four final alternatives carried forward for further analysis and consideration, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes additional connections to regional habitat areas in important areas. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and will be the Recommended Plan.

We recognize that Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, it is recognized that Alternative 20, as the largest of the final array plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, from a Federal interest perspective, the primary focus of the project is ecosystem restoration, and the NER Plan must be identified in a restoration feasibility study. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non-monetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or where the extra environmental value is just worth the costs.

Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan. In this case, the NER Plan in the Draft IFR was Alternative 13, named the ARBOR Corridor Extension (ACE). It was selected based on the required criteria used to assess and establish the selection of the NER Plan. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives, provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

During the public comment period for the Draft IFR, which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership. Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

The Final IFR's Comments Appendix includes all public comments along with Lead Agencies' responses that address pertinent issues identified in the comments.

In general, in terms of scope and completeness of the recommended plan, while agency and stakeholder comments provided a large amount of technical input and analysis regarding the importance of Alternative 20, the Corps considers this input similar to what had previously been considered in reaching the agency's identification of Alternative 13 as the Tentatively Selected Plan (TSP).

In terms of connectivity benefits and the model used to calculate benefits, the Corps used a framework suggested by an Independent External Peer Review (IEPR) panel to better quantify the beneficial outputs of connectivity noted as being not fully captured in the public comments. By evaluating hydrologic, local, and regional connectivity and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array.

Although quantifying connectivity showed more restoration output for each of the alternatives as well as for differing combinations of key features, the increase in cost between Alternative 13 and the next bigger best buy plan was over $100 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits (after quantifying connectivity functions), there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on

Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost for Alternative 13v of $694 million, there is no other plan of similar cost that produces more restoration output. Accordingly, Alternative 13v has been identified as the NER plan. Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report. The rationale for granting that request is described below.

The LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, widening of the natural riverbed in 1.5 miles of the Glendale Narrows (Reach 5), and expansion of restoration at and adjacent to the Los Angeles Trailer and Container Intermodal Facility (LATC) site. These additional restoration benefits include direct restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant ecological area of the Verdugo Mountains. Nearly unanimous support for Alternative 20 was expressed by the public through review of the Draft IFR and public meetings. The LPP is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. Implementation of the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding, and channelization, including the Corps' construction of the Los Angeles County Drainage Area flood risk management project that modified most of the Los Angeles River with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Acts of the 1930s and 1940s directed the Corps to construct the Los Angeles County Drainage Area project, which ultimately involved construction of 5 dams and approximately 500 miles of channels to protect communities from significant and recurring flood damages. Restoration of 11 miles of the Los Angeles River, that was the focus of this IFR, is within the footprint of the existing flood risk management project. The ecosystem project would, in part, reverse a portion of the degradation associated with the existing Los Angeles County Drainage Area project, and concurrently advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters

Federal Partnership. The Corps has factored in climate variability and future uncertainties, and with a more naturally functioning channel, there may be associated incidental benefits with respect to drought, such as increased percolation area and increased detention and retention characteristics. The America's Great Outdoors initiative would be advanced through provision of increased access to restored lands and urban waters. Lastly, the Los Angeles River is one of 7 original pilot locations for the Urban Waters Federal Partnership and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for 11 miles of 51 miles of the Los Angeles River.

Quantifications of the connections among restored areas demonstrate the significant benefits to be realized through implementation of Alternative 20 in lieu of the NER plan. Restoration of such connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls and widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 would also provide significantly greater regional economic benefits, including over 11,000 more jobs and over $3.8 billion in labor income, as well as substantive opportunities for redevelopment in both the Verdugo Wash confluence and Chinatown/Cornfields areas. Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing Los Angeles County Drainage Area flood risk management project through provision of new public access to restored natural areas with associated recreational amenities.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

If you have any further questions, please contact me at (213) 452-3783.

Sincerely,

Eduardo T. De Mesa
Acting Chief, Planning Division
USACE, Los Angeles District

CA State Senator Fran Pavley

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

The Honorable Fran Pavley
State Senator
27th District, California
5016 North Parkway Calabasas, Suite 222
Calabasas, CA 91302

Dear Senator Pavley:

Thank you for your comments on the Draft Integrated Feasibility Report (IFR) prepared by the U.S. Army Corps of Engineers (Corps) and City of Los Angeles ("City" or "non-Federal sponsor") for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the four final alternatives carried forward for further analysis and consideration, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes additional connections to regional habitat areas in important areas. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and will be the Recommended Plan.

We recognize that Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, it is recognized that Alternative 20, as the largest of the final array plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, from a Federal interest perspective, the primary focus of the project is ecosystem restoration, and the NER Plan must be identified in a restoration feasibility study. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non-monetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or where the extra environmental value is just worth the costs.

Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan.. In this case, the NER Plan identified in the Draft IFR was Alternative 13, named the ARBOR Corridor Extension (ACE). It was selected based on the required criteria used to assess and establish the selection of the NER Plan. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

During the public comment period for the Draft IFR, which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership. Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

The Final IFR's Comments Appendix includes all public comments along with Lead Agencies' responses that address pertinent issues identified in the comments.

In general, in terms of scope and completeness of the recommended plan, while agency and stakeholder comments provided a large amount of technical input and analysis regarding the importance of Alternative 20, the Corps considers this input similar to what had previously been considered in reaching the agency's identification of Alternative 13 as the Tentatively Selected Plan (TSP).

In terms of connectivity benefits and the model used to calculate benefits, the Corps used a framework suggested by an Independent External Peer Review (IEPR) panel to better quantify the beneficial outputs of connectivity noted as being not fully captured in the public comments. By evaluating hydrologic, local, and regional connectivity and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array.

Although quantifying connectivity showed more restoration output for each of the alternatives as well as for differing combinations of key features, the increase in cost between Alternative 13 and the next bigger best buy plan was over $100 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits (after quantifying connectivity functions), there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the

Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost for Alternative 13v of $694 million, there is no other plan of similar cost that produces more restoration output. Accordingly, Alternative 13v has been identified as the NER plan. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report. The rationale for granting that request is described below.

The LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, widening for 1.5 miles of the natural riverbed in the Glendale Narrows (Reach 5), and at the Los Angeles Trailer and Container Intermodal Facility (LATC) site. These additional restoration benefits include direct restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant ecological area of the Verdugo Mountains. Nearly unanimous support for Alternative 20 was expressed by the public through review of the Draft IFR and public meetings. The LPP is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. Implementation of the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding, and channelization, including the Corps' construction of the Los Angeles County Drainage Area flood risk management project that modified most of the Los Angeles River with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Acts of the 1930s and 1940s directed the Corps to construct the Los Angeles County Drainage Area project, which ultimately involved construction of 5 dams and approximately 500 miles of channels to protect communities from significant and recurring flood damages. Restoration of 11 miles of the Los Angeles River, that was the focus of this IFR, is within the footprint of the existing flood risk management project. The ecosystem project would, in part, reverse a portion of the degradation associated with the existing Los Angeles County Drainage Area project, and concurrently advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters Federal Partnership. The Corps has factored in climate variability and future uncertainties, and with a more naturally functioning channel, there may be associated incidental benefits with respect to drought, such as increased percolation area and increased detention and retention characteristics. The America's Great Outdoors initiative would be advanced through provision

of increased access to restored lands and urban waters. Lastly, the Los Angeles River is one of 7 original pilot locations for the Urban Waters Federal Partnership and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for 11 miles of 51 miles of the Los Angeles River.

Quantifications of the connections among restored areas demonstrate the significant benefits to be realized through implementation of Alternative 20 in lieu of the NER plan. Restoration of such connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls and widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 would also provide significantly greater regional economic benefits, including over 11,000 more jobs and over $3.8 billion in labor income, as well as substantive opportunities for redevelopment in both the Verdugo Wash confluence and Chinatown/Cornfields areas. Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing Los Angeles County Drainage Area flood risk management project through provision of new public access to restored natural areas with associated recreational amenities.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

If you have any further questions, please contact me at (213) 452-3783.

Sincerely,

Eduardo T. De Mesa
Acting Chief, Planning Division
USACE, Los Angeles District

Assembly Member Richard Bloom

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

Richard Bloom
Assembly Member
50th District, California
2800 28th Street, Suite 150
Santa Monica, CA 90405

Dear Assemblyman Bloom:

Thank you for your comments on the Draft Integrated Feasibility Report (IFR) prepared by the U.S. Army Corps of Engineers (Corps) and City of Los Angeles ("City" or "non-Federal sponsor") for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the four final alternatives carried forward for further analysis and consideration, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes additional connections to regional habitat areas in important areas. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and will be the Recommended Plan.

1. We recognize that Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, it is recognized that Alternative 20, as the largest of the final array plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, from a Federal interest perspective, the primary focus of the project is ecosystem restoration, and the NER Plan must be identified in a restoration feasibility study. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non-monetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or where the extra environmental value is just worth the costs.

Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan. In this case, the NER Plan in the Draft IFR was Alternative 13, named the ARBOR Corridor Extension (ACE). It was selected based on the required criteria used to assess and establish the selection of the NER Plan. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

During the public comment period for the Draft IFR, which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership. Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

The Final IFR's Comments Appendix includes all public comments along with Lead Agencies' responses that address pertinent issues identified in the comments.

In general, in terms of scope and completeness of the recommended plan, while agency and stakeholder comments provided a large amount of technical input and analysis regarding the importance of Alternative 20, the Corps considers this input similar to what had previously been considered in reaching the agency's identification of Alternative 13 as the Tentatively Selected Plan (TSP).

In terms of connectivity benefits and the model used to calculate benefits, the Corps used a framework suggested by an Independent External Peer Review (IEPR) panel to better quantify the beneficial outputs of connectivity noted as being not fully captured in the public comments. By evaluating hydrologic, local, and regional connectivity and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array.

Although quantifying connectivity showed more restoration output for each of the alternatives as well as for differing combinations of key features, the increase in cost between Alternative 13 and the next bigger best buy plan was over $100 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits (after quantifying connectivity functions), there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to

Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost for Alternative 13v of $694 million, there is no other plan of similar cost that produces more restoration output. Accordingly, Alternative 13v has been identified as the NER plan. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report. The rationale for granting that request is described below.

The LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, widening of the natural riverbed for 1.5 miles in the Glendale Narrows (Reach 5), and at the Los Angeles Trailer and Container Intermodal Facility (LATC) site. These additional restoration benefits include direct restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant ecological area of the Verdugo Mountains. Nearly unanimous support for Alternative 20 was expressed by the public through review of the Draft IFR and public meetings. The LPP is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. Implementation of the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding, and channelization, including the Corps' construction of the Los Angeles County Drainage Area flood risk management project that modified most of the Los Angeles River with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Acts of the 1930s and 1940s directed the Corps to construct the Los Angeles County Drainage Area project, which ultimately involved construction of 5 dams and approximately 500 miles of channels to protect communities from significant and recurring flood damages. Restoration of 11 miles of the Los Angeles River, that was the focus of this IFR, is within the footprint of the existing flood risk management project. The ecosystem project would, in part, reverse a portion of the degradation associated with the existing Los Angeles County Drainage Area project, and concurrently advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters Federal Partnership. The Corps has factored in climate variability and future uncertainties, and with a more naturally functioning channel, there may be associated incidental benefits with

respect to drought, such as increased percolation area and increased detention and retention characteristics. The America's Great Outdoors initiative would be advanced through provision of increased access to restored lands and urban waters. Lastly, the Los Angeles River is one of 7 original pilot locations for the Urban Waters Federal Partnership and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for 11 miles of 51 miles of the Los Angeles River.

Quantifications of the connections among restored areas demonstrate the significant benefits to be realized through implementation of Alternative 20 in lieu of the NER plan. Restoration of such connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls and widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 would also provide significantly greater regional economic benefits, including over 11,000 more jobs and over $3.8 billion in labor income, as well as substantive opportunities for redevelopment in both the Verdugo Wash confluence and Chinatown/Cornfields areas. Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing Los Angeles County Drainage Area flood risk management project through provision of new public access to restored natural areas with associated recreational amenities.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

2. The IFR evaluates the other social effects (OSE), as you mentioned "recreational opportunity for everyone" or environmental justice associated with project alternatives. It is recognized that the study area includes lower income and minority populations, and the area has a strong need for additional parks and recreation opportunities, in particular neighborhood parks. The NER Plan (Alternative 13v) would provide significant benefits to the local population, as outlined in the OSE analysis. The OSE benefits are even more substantial for Alternative 20, the Recommended Plan, and would greatly benefit the local population. The project would include a recreation plan, which does not detract from ecosystem outputs while enhancing recreation opportunities in a restored ecosystem setting. This recreation plan would also provide significant benefits to the local population.

If you have any further questions, please contact me at (213) 452-3783.

Sincerely,

Eduardo T. De Mesa
Acting Chief, Planning Division
USACE, Los Angeles District

CA Dept of Fish and Wildlife, Scott P. Harris

1. The City of Los Angeles will coordinate with CDFW on a Streambed Alteration Agreement.
2. The IFR will be updated to include discussion of potential impacts to waters of the state and the difference between WOTS and WOUS.
3. The algae and herbaceous foraging habitat in the concrete lined bed may be disturbed during construction, depending on the location, but ultimately any concrete lined areas that are not restored to natural habitat would be maintained as they currently are. Sediment, algae, and herbaceous foraging habitat are expected to re-establish in these areas after construction is complete. It is expected that any concrete in the channel that is removed (as in Alternatives 16 and 20) would be replaced by natural geomorphology and riparian/wetland habitat that would be a habitat improvement over the current concrete lined bed, including for shorebirds.

CA Dept of Parks and Recreation

1. The Corps recognizes the many benefits that are associated with selection of Alternative 20. (See GR-A). The Corps also recognizes the statewide and national significance of the Los Angeles River as stated in your comment letter. The Corps further recognizes that the river corridor includes environmental justice communities. Thank you for the information on the National Park Service Rim of the Valley Corridor Special Resource Study. The study information was discussed in Section 2.1.2 The Corps appreciates the willingness of your agency to provide lands at the Bowtie and Cornfields sites for the restoration project. Since receiving your comments, we have engaged with you to further coordinate on the consistency of the plans for Cornfields and the Bowtie parcel, and to address the interests in land necessary for the restoration project. We will continue to coordinate with you on this effort.
2. We appreciate your comments on the biological resources found in the study area and the potential for restoration. Sensitive plant and wildlife species as well as their potential for occurrence in various habitat types within the Study Area are included in Appendix H. In compliance with CEQA, special status species were considered in the preparation of Appendix H in the following manner: In preparing the biological resources section of the EIS/EIR/IFR, we reviewed information from several sources, including the CNDDB for the USGS quads that cover the ARBOR Reach and tributaries, the USFWS and CDFW species list for the Los Angeles County area, and the California Native Plant Society list (focusing primarily on 1A and 1B plant species from the CNPS list). Once the list was narrowed to those species that could potentially be found in habitats that occur in riparian areas in southern CA waterways, the list was further refined based on habitats that were identified in the CHAP appendix. Sensitive species that were determined to be likely to occur in the study area were discussed in Sections 3.5.4 and 5.5.4 of the Draft (and Final) IFR. All other species with the potential to occur in historically-occurring habitats were listed in the tables in the Appendix H. The comment letter specifically mentioned A. pulchra pulchra. This species requires loose soils in chapparal or pine-oak woodlands, a habitat type that may well occur in the watershed but not in the study reach. This species was identified as being "Not Likely to Occur" and has been added to the appendix.

Impacts to vegetation and wildlife species during construction and operation and maintenance activities are generally described in Section 5.5.3. Minimization measures are included in Section 5.5.4. Impacts or benefits to each individual species with potential to occur are not specified, as impacts are considered to be similar across various groups of species that are found within riparian and/or wetland ecosystems as described in Section 5.5.3.

3. Concur. These BMPs are included in the Final IFR in Section 5.5.4.
4. See GR-B.
5. Thank you for your comment. The Corps appreciates and acknowledges the more historic references to the property. However, for practical purposes and due to its frequent use to this point, its reference as "Cornfields" in the report will remain the same, but the alternative names will be included in the report at first usage.
6. The Corps agrees that additional study is needed consistent with the NHPA Section 106 process. During subsequent planning stages for project construction, but prior to the issuance of a notice to proceed for construction, a records and literature search, and intensive field survey and inventory, will be conducted. In addition, a National Register of Historic Places (NRHP) evaluation will be conducted of all identified resources. The California State Parks would be invited to review and comment on all studies. If properties listed in, or eligible for listing in the NRHP, would be affected by the Recommended Plan, comments of the SHPO, Tribal organizations and individuals, California State Parks, the ACHP, and other interested parties shall be sought pursuant to NHPA Section 106 and its implementing regulations. Comments shall also be sought in the event that for the recommended plan, there will be "no effect" on historic properties. If the project will result in an adverse effect, the Corps shall ensure that a historic property treatment plan (HPTP) is prepared, executed and fieldwork completed prior to the initiation of any activites that have the potential to effect historic properties. The HPTP will be prepared in consultation and coordination with the consulting parties. The California State Parks has been invited to consult on the undertaking and on the Draft Programmatic Agreement (PA) for historic properties, has been afforded consulting party status pursuant to 36 CFR 800.3(f)(1), and has been invited to be a concurring party to the PA to address the remainder of the NHPA Section 106 process. The PA is located in Appendix O Cultural Resources.
7. Concur with this concern. These additional studies including geomorphic studies and analysis of ethnographic village locations and archaeological deposits for the project would be undertaken during the design phase of the project.
8. The Corps appreciates the opportunity to review and utilize this additional information in our identification efforts.
9. The Corps has invited the California State Parks to be a concurring party to the PA.

CA State Clearinghouse

Thank you for your letter. Your comments are noted.

CA Water Boards, LA Regional Water Quality Control Board

1. Thank you for your comments on the IFR. We appreciate your statement that the project alternatives are consistent with the Greater Los Angeles County Integrated Regional Water Management Plan and with those of the State's Recycled Water Policy. This project is proposed as part of the Corps' mission to restore habitat values in aquatic and riparian ecosystems. Storm water and water quality improvements are not objectives of the study as they are the responsibility of other parties; water quality improvements are incidental benefits.
2. Comment noted. However in this instance, the term stormwater runoff is not referring to the legal definition of stormwater discharges (outfalls). Under NPDES permitting, the term discharge is specifically referring to pollutants generated and discharged from watershed point sources: construction, municipal, and industrial. The intent of the text was to demonstrate the diffuse sources of pollutants that rainwater collects as it moves surficially through the watershed.

To prevent confusion, instances in the text where non-point sources and stormwater runoff are used in the same sentence will be re-written to clarify that stormwater discharges are point sources.
3. The IFR is updated in accordance with the factual information that was provided pertaining to the water quality section. Comments on water quality improvements are noted. Water quality benefits are incidental to the restoration.
4. See response 2 above, Section 3.12.4- Stormwater will be edited in the final IFR to incorporate clarification that addresses the comment.
5. Comment noted. The Final IFR will be updated with the new Order Number.
6. Concur. Language pertaining to the MS4 Permit will be added.
7. The edits recommended to the text on Page 5-48 will be incoprorated. Remediation of water quality and quantity issues is not an objective of the restoration study. However, water quality improvement may be an incidental benefit.
8. Comment noted. The Final IFR will include language to further clarify the SWPPP requirement and 401 certification consistent with the comment.
9. The BMPs included in the Draft IFR reflect protection of bird nesting activities (Section 5.5.4). Construction BMPs are established to protect water quality (5.4.4) and biological resources (5.5.4). All federal and state regulations regarding construction will be followed.
10. NPDES permit requirements are noted in Section 5.4 of the IFR, consistent with your comment.
11. This is an important issue throughout the Los Angeles Watershed; however, the issues of recycled water, increased capture, and use of stormwater are outside of the scope of Corps ecosystem restoration, except as they may affect the available water budget. The City is responsible for providing water necessary to support the restoration features. It is the City's desire to use recycled water, when feasible, for construction and maintenance of the completed project to support habitat. The recommended sentence will be added to Page 5-41, Line 31.
12. The IFR addresses potential improvements to water quality for communities in the study area. See section 5.13.3: "Any improvements in environmental quality (such as water quality) in the region as a result of a cleaner, active River system would benefit all populations in the study area" was included as an operational effect for Alternative 10 and referenced for the remaining alternatives.
13. The benefit of increased infiltration was not evaluated quantitatively at this level of design and study. The Final IFR includes recognition in Section 5.4.3 that there may be incidental water quality benefits from implementation.
14. References and citations will be revised consistent with the comment.

South Coast Air Quality Management District

1. The list of equipment presented in Appendix F has been updated. The equipment list corresponds with data entered into CalEEMod.
2. Comment noted. We are aware of Rule 403 requirements for large operations and will consult with SCAQMD staff regarding permits and forms.
3. Proposed BMP's will be incorporated in the Final IFR as appropriate, as addresed below.
4. Revised emissions estimates indicate that for all alternatives emissions would not exceed Regional Significance Thresholds. However, for Alternatives 10, 13, 16, and 20 there would be limited exceedances of Local Significance Thresholds. Tier 4 equipment would be utilized to the

extent practicable during construction years when emissions are expected to exceed Local Significance Thresholds.

5. Revised emissions estimates indicate that for all alternatives emissions would not exceed Regional Significance Thresholds. However, for Alternatives 10, 13, 16, and 20 there would be limited exceedances of Local Significance Thresholds. During construction years when emissions are expected to exceed Local Significance Thresholds, model year 2010 and newer diesel haul trucks would be utilized to the extent practicable.
6. Operating permits will be provided as required at the time of construction.
7. We can let contractors know about the availability of SCAQMD "SOON" program funds.
8. The air quality chapter has been updated to reflect the correct General Conformity Thresholds. In addition, the Corps coordinated with SCAQMD General Conformity compliance. Discussions of NEPA and General Conformity thresholds are discussed in the revised air quality chapter and the Record of Non-Applicability in Appendix F.
9. The availability of rail transport through Taylor Yard during construction is unknown since restoration activities would also extend into Taylor Yard. The recommendation would be further evaluated during the engineering and design phase subsequent to the completion of the draft EIR/EIS.

County Agencies

County of LA Dept of Parks and Recreation

Noted. Coordination with the department's trails section on the referenced trail will occur prior to development of detailed plans and specifications. The proposed trail should be consistent with our recreation plan.

County of LA Dept of Public Works

1. Thank you for your comments. The City of Los Angeles is in the process of requesting a LOMR (letter of map revision) to FEMA that would identify the flood risks and flood zones along the Los Angeles River. We are working with the City on that effort. That effort is anticipated to be complete before any construction begins on the ecosystem restoration project. This ecosystem restoration study does not preclude any future flood risk management studies.
2. One of the major constraints for the ecosystem restoration study is there would be no adverse impacts to the current flood risks along the river. To accomplish this, we have identified the design water surface and water velocity as the two factors for determining the impacts. An increase in water surface would be an unacceptable result for any of the project features. Thus the proposals result in no increase in water surface elevation and there would be no adverse impacts on the interior drainage system, see Appendix E for a discussion of water surface elevations.

County of LA Dept of Regional Planning

1. Thank you for your comments and the information provided on the County's Significant Ecological Area Program (SEA). SEA information will be added to section 3.5.6 as appropriate.
2. See GR-A.

City of LA Councilmember Tom LaBonge

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

The Honorable Tom LaBonge
Councilmember
District 4, City of Los Angeles
200 N. Spring St. Room 480
Los Angeles, CA 90012

Dear Councilmember LaBonge:

Thank you for your comments on the Draft Integrated Feasibility Report (IFR) prepared by the U.S. Army Corps of Engineers (Corps) and City of Los Angeles ("City" or "non-Federal sponsor") for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the four final alternatives carried forward for further analysis and consideration in the Draft IFR, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes additional connections to regional habitat areas in important areas. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and will be the Recommended Plan.

We recognize that Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, it is recognized that Alternative 20, as the largest of the final array plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, from a Federal interest perspective, the primary focus of the project is ecosystem restoration, and the NER Plan must be identified in a restoration feasibility study. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non-monetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or where the extra environmental value is just worth the costs.

Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan. In this case, the NER Plan identified in the Draft IFR was Alternative 13, named the ARBOR Corridor Extension (ACE). It was selected based on the required criteria used to assess and establish the selection of the NER Plan. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

During the public comment period for the Draft IFR, which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership. Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

The Final IFR's Comments Appendix includes all public comments along with Lead Agencies' responses that address pertinent issues identified in the comments.

In general, in terms of scope and completeness of the recommended plan, while agency and stakeholder comments provided a large amount of technical input and analysis regarding the importance of Alternative 20, the Corps considers this input similar to what had previously been considered in reaching the agency's identification of Alternative 13 as the Tentatively Selected Plan (TSP) in the Draft IFR.

In terms of connectivity benefits and the model used to calculate benefits, the Corps used a framework suggested by an Independent External Peer Review (IEPR) panel to better quantify the beneficial outputs of connectivity noted as being not fully captured in the public comments. By evaluating hydrologic, local, and regional connectivity and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array.

Although quantifying connectivity showed more restoration output for each of the alternatives as well as for differing combinations of key features, the increase in cost between Alternative 13 and the next bigger best buy plan was over $100 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits (after quantifying connectivity functions), there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in the IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the

Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost for Alternative 13v of $694 million, there is no other plan of similar cost that produces more restoration output. Accordingly, Alternative 13v has been identified as the NER plan. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report. The rationale for granting that request is described below.

The LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, widening of the natural riverbed for 1.5 miles in the Glendale Narrows (Reach 5), and restoration at the Los Angeles Trailer and Container Intermodal Facility (LATC) site. These additional restoration benefits include direct restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant ecological area of the Verdugo Mountains. Nearly unanimous support for Alternative 20 was expressed by the public through review of the Draft IFR and public meetings. The LPP is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. Implementation of the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding, and channelization, including the Corps' construction of the Los Angeles County Drainage Area flood risk management project that modified most of the Los Angeles River with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Acts of the 1930s and 1940s directed the Corps to construct the Los Angeles County Drainage Area project, which ultimately involved construction of 5 dams and over 240 miles of channels to protect communities from significant and recurring flood damages. Restoration of 11 miles of the Los Angeles River, that was the focus of this IFR, is within the footprint of the existing flood risk management project. The ecosystem project would, in part, reverse a portion of the degradation associated with the existing Los Angeles County Drainage Area project, and concurrently advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters Federal Partnership. The Corps has factored in climate variability and future uncertainties, and with a more naturally functioning channel, there may be associated incidental benefits with respect to drought, such as increased percolation area and increased detention and retention characteristics. The America's Great Outdoors initiative would be advanced through provision of increased

access to restored lands and urban waters. Lastly, the Los Angeles River is one of 7 original pilot locations for the Urban Waters Federal Partnership and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for 11 miles of 51 miles of the Los Angeles River.

Quantifications of the connections among restored areas demonstrate the significant benefits to be realized through implementation of Alternative 20 in lieu of the NER plan. Restoration of such connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls and widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 would also provide significantly greater regional economic benefits, including over 11,000 more jobs andover $3.8 billion in labor income, as well as substantive opportunities for redevelopment in both the Verdugo Wash confluence and LA State Historic Park (Chinatown/Cornfields areas). Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing Los Angeles County Drainage Area flood risk management project through provision of new public access to restored natural areas with associated recreational amenities.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

If you have any further questions, please contact me at (213) 452-3783.

Sincerely,

Eduardo T. De Mesa
Acting Chief, Planning Division
USACE, Los Angeles District

City of LA Councilmember Mitch O'Farrell

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

The Honorable Mitch O'Farrell
Councilmember
District 13, City of Los Angeles
200 N. Spring St. Room 450
Los Angeles, CA 90012

Dear Councilmember O'Farrell:

Thank you for your comments on the Draft Integrated Feasibility Report (IFR) prepared by the U.S. Army Corps of Engineers (Corps) and City of Los Angeles ("City" or "non-Federal sponsor") for the Los Angeles River Ecosystem Restoration Feasibility Study. Alternative 20 was one of the four final alternatives carried forward for further analysis and consideration, because it is an efficient plan which provides greater habitat restoration output than smaller scale plans and includes additional connections to regional habitat areas in important areas. Although this alternative was not identified as the National Ecosystem Restoration (NER) plan, this alternative has been identified as the Locally Preferred Plan (LPP) and will be the Recommended Plan.

1. We recognize that Alternative 20 provides the greatest habitat restoration output of the final array plans. Further, it is recognized that Alternative 20, as the largest of the final array plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. However, from a Federal interest perspective, the primary focus of the project is ecosystem restoration, and the NER Plan must be identified in a restoration feasibility study. Corps planning guidance describes the NER Plan as the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and non-monetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or where the extra environmental value is just worth the costs.

Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. The NER plan determines Federal interest and forms the basis of cost-sharing for the recommended plan. In the Draft IFR, Alternative 13 was identified as the NER plan. It was selected based on the required criteria used to assess and establish the selection of the NER Plan. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

During the public comment period for the Draft IFR, which closed on 18 November 2013, the Corps received and evaluated nearly 500 comments. Comments were received from Federal agencies including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Department of Interior (DOI), and the Urban Waters Federal Partnership. Comments were also received and evaluated from State and local agencies, Non-Governmental Organizations (NGOs), other interest groups, elected officials, and private citizens.

- The Corps reviewed all the feedback by subject area, and carefully designated key categories of input:
  - Scope of the recommended plan
  - Support for Administration's Urban Waters Federal Partnership initiative
  - Compliance with WRDA 2007 requirements to reflect the City's LA River Revitalization Master Plan
  - Acceptability to sponsor and stakeholders
  - Connectivity benefits associated with individual plans
  - Habitat Model used to calculate benefits (CHAP)
  - Environmental justice
  - Inclusion of Union Pacific Rail Road Yard (LATC) site
  - Global scarcity of subject habitat type(s)

The Final IFR's Comments Appendix includes all public comments along with Lead Agencies' responses that address pertinent issues identified in the comments.

In general, in terms of scope and completeness of the recommended plan, while agency and stakeholder comments provided a large amount of technical input and analysis regarding the importance of Alternative 20, the Corps considers this input similar to what had previously been considered in reaching the agency's identification of Alternative 13 as the Tentatively Selected Plan (TSP).

In terms of connectivity benefits and the model used to calculate benefits, the Corps used a framework suggested by an Independent External Peer Review (IEPR) panel to better quantify the beneficial outputs of connectivity noted as being not fully captured in the public comments. By evaluating hydrologic, local, and regional connectivity and combining the resultant output with the initial habitat model output, the Corps was able to more comprehensively compare the alternatives in the final array.

Although quantifying connectivity showed more restoration output for each of the alternatives as well as for differing combinations of key features, the increase in cost between Alternative 13 and the next bigger best buy plan was over $100 million. Given the magnitude of the incremental costs relative to the incremental increase in benefits (after quantifying connectivity functions), there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower

Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost for Alternative 13v of $694 million, there is no other plan of similar cost that produces more restoration output. Accordingly, Alternative 13v has been identified as the NER plan. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan.

In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report. The rationale for granting that request is described below.

The LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, widening of the natural riverbed for 1.5 miles in the Glendale Narrows (Reach 5), and restoration at the Los Angeles Trailer and Container Intermodal Facility (LATC) site. These additional restoration benefits include direct restoration of an additional 121 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant ecological area of the Verdugo Mountains. Nearly unanimous support for Alternative 20 was expressed by the public through review of the Draft IFR and public meetings. The LPP is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. Implementation of the LPP appears to best address the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, and restored community cohesion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding, and channelization, including the Corps' construction of the Los Angeles County Drainage Area flood risk management project that modified most of the Los Angeles River with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Acts of the 1930s and 1940s directed the Corps to construct the Los Angeles County Drainage Area project, which ultimately involved construction of 5 dams and over 240 miles of channels to protect communities from significant and recurring flood damages. Restoration of 11 miles of the Los Angeles River, that was the focus of this IFR, is within the footprint of the existing flood risk management project. The ecosystem project would, in part, reverse a portion of the degradation associated with the existing Los Angeles County Drainage Area project, and concurrently advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters Federal Partnership. The Corps has factored in climate variability and future uncertainties, and with a more naturally functioning channel, there may be associated incidental benefits with respect to drought, such as increased percolation area and increased detention and retention characteristics. The America's Great Outdoors initiative would be advanced through provision of increased access to restored lands and urban waters. Lastly, the Los Angeles River is one of 7 original

pilot locations for the Urban Waters Federal Partnership and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for 11 miles of 51 miles of the Los Angeles River.

Quantifications of the connections among restored areas demonstrate the significant benefits to be realized through implementation of Alternative 20 in lieu of the NER plan. Restoration of such connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls and widening the channel to restore hydrologic connectivity and additional wetland habitat. Alternative 20 would also provide significantly greater regional economic benefits, including over 11,000 more jobs and over $3.8 billion in labor income, as well as substantive opportunities for redevelopment in both the Verdugo Wash confluence and LA State Historic Park (Chinatown/Cornfields areas). Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing Los Angeles County Drainage Area flood risk management project through provision of new public access to restored natural areas with associated recreational amenities.

The Recommended Plan includes a recreation plan formulated to be consistent with the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

2. Your comments on lack of recreation and natural space for many neighborhoods in the project area are noted. Recreation and open space are discussed in Sections 3.9, 3.13.3, and 5.9 of the Final IFR.

If you have any further questions, please contact me at (213) 452-3783.

Sincerely,

Eduardo T. De Mesa
Acting Chief, Planning Division
USACE, Los Angeles District

City of LA Bicycle Advisory Committee

See GR-A.

City of LA Bureau of Sanitation

1. See GR-A.
2. It is noted that the LA Bureau of Sanitation supports Alternative 20 and that as part of a collaboration under Proposition O, LA Sanitation is committed to improving water quality.

City of LA Dept of City Planning

1. See GR-A.
2. The description of the Vision Plan and Economic Development Strategy for the Northeast Los Angeles River District has been added to Section 3.3.3. The RIO overlay was described in Section 3.3.3 of the IFR.

City of LA Dept of Recreation and Parks

1. Thank you for your comments. Recreation impacts have been addressed in Section 5.9 of the EIS. The Corps will continue to coordinate with the City's Recreation & Parks Dept. during the pre-construction engineering and design phase to address any potential issues such as those described in your comment.
2. The recommended edits to table references will be made.

City of LA Economic and Workforce Development Dept

1. See GR-A.
2. We have included information about the Partnership for Sustainable Communities program in Section 3.3.3 of the IFR.

Los Angeles Dept of Water and Power

1. See GR-A.
2. Recycled water and increasing constraints on its availability is a significant factor in the water budget. The non-Federal sponsor understands its responsibility for ensuring the necessary supply to support ecosystem restoration features. The goal is to utilize native plants that can persist without supplemental irrigation. The plant palette will adapt to the amount of water available.
3. As part of this study, we will produce an Adaptive Management Plan. This plan will include adjustments that may need to be made based on fluctuating water supplies to ensure success of the restoration proposals. Flow rates along the river will be reviewed and updated as needed. We welcome any support from and continued coordination with LADWP.
4. Noted. Some of the restoration alternatives will require relocation of water and/or power lines as part of the non-Federal sponsor's provision of all necessary lands, easements, rights of way, relocations and disposal sites. These impacts are discussed in Sections 5.12 and Chapter 7 of the IFR. We will work with all the proper agencies to ensure any effects on water and/or power infrastructure will be addressed appropriately.
5. Thank you for your comments.

Los Angeles Unified School District, Bennett Kayser, Board Member

1. See GR-A.

2. Comment noted. Educational value is a benefit that will result from any of the alternatives, including the NER plan and the Recommended Plan.

Los Angeles Unified School District, Office of Environmental Health and Safety

See GR-A.

Other Cities

City of Burbank Community Development Dept

1. The IFR has been updated to reflect the newly completed Burbank2035 General Plan. Existing conditions from attached sources will be reviewed and incorporated into the document as needed.

2. The existing Class II (bike lane) bikeway on Riverside Drive and the existing Class III (bike route) bikeway on Keystone Street are in relatively close proximity to the features in the recreation plan. While connection to the existing Burbank facilities is outside the scope of the LA River Ecosystem Restoration project, there may be opportunities for improvements which the City of Burbank and City of Los Angeles might investigate as feasible.

3. Regarding the project traffic analysis, the Lead Agencies have determined that the anticipated volume of project trips does not trigger the need to do a comprehensive traffic study. The project team reviewed the recreation study that was created as part of the Economics Appendix (Appendix B of the IFR) to identify any locations that may present a point-source draw for recreationalists. Recreation numbers were reviewed and compared to figures showing access points, point draws, and new or refurbished trails. None of the project features are within the city limits of Burbank, and the only part of the project area in proximity to Burbank that could reasonably contribute to traffic is Pollywog Park. Two access points would be available for users of the improved trail in Pollywog Park and existing trails on the north side of the river, near Griffith Park. Almost 0.5 mile of upgraded trail would occur in Pollywog Park, which is located outside of the Burbank city limits. Access points to the trails are located near the Burbank city limits, and while parking needs in their vicinity may increase, there is street parking located along the park perimeter in the following locations: at Pollywog Park along Reese Road and Valleyhart; at Buena Vista Park along Riverside Drive and Bob Hope Drive; and at the Betty Davis Picnic Area along Rancho Avenue and Riverside Drive and Riverside Drive and Western. It appears that local neighborhood residents currently utilize the unmaintained dirt trails throughout this area and presumably do so by foot rather than vehicle. Figure 7-8 of the IFR, and associated figures in Appendix B, Attachment I (Recreation Analysis) display the location of trails and access points. Trail usage data was not available, and therefore, projections were developed through the application of the "Recreation Park and Open Space Standards and Guidelines," by the National Recreation and Parks Association (NRPA 1983). It cites a standard for urban trail use at maximum of 90 users per day per mile of trail (weekends). Section 2.1 of the Recreation Analysis, which is part of Appendix B of the IFR, describes the methodology in more detail. At a maximum estimated amount of 65 users per mile on summer weekdays under proposed conditions, it is estimated that the upgraded trail would draw a maximum of 33 users per day, some of whom would access the trail from points upstream and downstream of Pollywog Park and would, therefore, not be parking at the access points. Even if all trail users drove to the access points within the Burbank city limits, the increase in traffic would still be far below the level for required traffic analysis or significant impacts specified by the City of

Burbank's CEQA traffic significance thresholds. Specifically, the significance threshold for local street impacts is 500 or more daily trips, and at most only 33 daily users are expected in this area. Daily usage numbers are derived from the methodology described above and in multiplying 0.5 miles of improved trail by a maximum of 65 users per mile on weekdays. Therefore, applying the City of Burbank's CEQA traffic thresholds does not alter the conclusion that impacts to traffic would be less than significant.
4. Concur. Language has been added in Section 5.8.3 to indicate that weekday construction will occur between 8:00AM – 6:00 PM, Saturdays from 8:00-5:00, and not at all on Sundays or holidays.
5. The potential staging areas identified in the IFR will be further coordinated during the Preconstruction, Engineering, and Design (PED) and Construction Phases of the project. These areas are proposed for restoration, some of the only open space in the area, and are in non-Federal sponsor ownership, and therefore, provide reasonable staging areas for the project. Additional coordination of staging will be conducted in PED.
6. Specific coordination will occur during PED and Construction. Necessary approvals will be obtained prior to construction. The Corps and the City of Los Angeles will closely coordinate implementation details with neighboring municipalities and community stakeholders.
7. While Alternative 13 was the tentatively selected plan in the Draft IFR and 13v is the NER plan, Alternative 20 is the Recommended Plan. Alternative 20 is one of the alternatives considered in the final array of alternatives in the Draft IFR and in this Final IFR. No recirculation or supplemental IFR is required, as Alternative 20 was addressed in the Draft IFR; however, there is an opportunity for additional agency and public comment on the Final IFR during its 30-day circulation period.

City of Glendale
See GR-A.

City of Lakewood
Thank you for your comment. One of the major constraints for this study was there would be no adverse impacts to the current flood risk management along the Los Angeles River. As such, any modifications to the channel will entail detailed engineering analyses to ensure the project will not adversely impact channel capacity or structural stability of the existing channel. The recommended plan will not increase flood risks or residual flood risks for all reaches of the Los Angeles River, including the Los Angeles River in the vicinity of Lakewood.

Organizations & Businesses

AIA Los Angeles
See GR-A.

Alliance of River Communities
See GR-A.

Alternative Apparel
See GR-A.

Arid Lands Institute
See GR-A.

Arroyo Seco Foundation
See GR-A and GR-B.

Arthur Golding & Associates
1. We agree incorporating flood risk management as an objective could be beneficial, but flood risk management is not within the scope of the current Ecosystem Restoration Feasibility Study as agreed upon with the non-Federal sponsor. The non-Federal sponsor does not have jurisdiction for flood risk management, which is performed by the Corps and the Los Angeles County Department of Public Works. The current study does not preclude additional flood risk management study in the future.
2. The Corps recognizes the flood risks along this portion of the Los Angeles River and we could partner with an appropriate agency to address flood protection measures in future studies. As we move into the detailed design phase of the current study, we will incorporate designs favorable to ecosystem restoration, which may also have an incidental flood risk benefit.
3. The Corps agrees that there are many opportunities for restoration and additional flood risk management, however, not all of these opportunities can be realized by the Corps alone. It is expected that many entities will collaborate to respond to restoration needs along the river.
4. See GR-B.
5. Comment noted. The proposed project is designed to be consistent with general plans for each city in the ARBOR reach, as well as the specific plans for each community that touches the study area. Not all of the recommendations in those plans can be completed through this project.
6. The Corps understands that local plans outline continuous greenways, however not all of these greenways can be realized by the Corps alone. It is expected that many entities will collaborate to respond to restoration needs along the river. The plant palettes will be coordinated further with local experts on LA River flora in the project area vicinity and may be updated as necessary to ensure the most appropriate mix of locally native species is used in each area.
7. See GR-A.

Arup
See GR-A.

Audubon Center at Debs Park
1. See GR-A.
2. We are aware of the IBA downstream of the study reach. Water flows would not be altered as a result of implementing restoration in the ARBOR reach. Therefore the proposed project should have no effect on the suitability of downstream areas to support shorebird use. However, it should be noted that water flows within the channel are not controlled by the restoration project.

Big Brand Water Filter, Inc

The primary purpose of the alternatives considered in the IFR is to restore approximately 11 miles of the Los Angeles River from Griffith Park to Downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the River to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo mountain ranges while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem. Water quality improvement is considered an ancillary problem/opportunity and is not an objective of the Study. It was considered as an objective initially, because of public concerns about the River's poor water quality, but was not carried forward for several reasons. While water quality improvement objectives would be focused on improvement for aquatic organisms and restoration purposes (not human use or consumption), the existing riparian and freshwater marsh habitats and the associated wildlife have been sustained and are viable under the current water quality conditions. Water inputs to the River from the upstream Tillman Water Reclamation Plant are regulated and monitored by State water agencies and storm water inputs to the river are being improved through local regulations. Furthermore, certain measures currently evaluated in the study will incidentaly improve water quality through natural processes such as 1) increased acreage of riparian and freshwater marsh, 2) daylighting storm drains and planting wetlands at their confluences, 3) creating side channels that remove water from the River, direct it through created wetland and riparian areas, and return this naturally treated water to the River. The LA River Ecosystem Restoration Study will not attempt to address State total maximum daily loads (TMDLs) standards, and assumes that those entities identified as responsible parties will comply with State requirements prior to construction of any proposed project. Despite the presence of contaminants and TSS, many fish and wildlife species have continued to persist and utilize the aquatic resources provided by the river. Incidental improvements to water quality through the restoration project, while not a stand-alone objective, will improve conditions for these species and others that will be attracted to the expanded habitat area. The proposed project will include direct removal of trash within the study area, as well as establishment of marsh and riparian vegetation that will promote natural processes of physical and biological remediation. With respect to soil and water contamination subject to CERCLA, the City of Los Angeles is responsible at 100% non-project cost for addressing lands contamination prior to project construction and responsible at 100% non-project cost for addressing groundwater contamination encountered during construction, including during dewatering activities.

CA Native Plant Society, Los Angeles/Santa Monica Mountains Chapter

See GR-A.

Central City Association

See GR-A.

Chatten-Brown & Carstens

See GR-A.

Chinese American Citizens Alliance, Los Angeles Lodge

See GR-A.

Community Conservation Solutions

See GR-A.

Council for Watershed Health

1. See GR-A.
2. Thank you for the information confirming the study's analysis with respect to river areas and confluences.
3. While we recognize that water quality improvements may occur as a result of ecosystem restoration, this is not a specific objective of the study and such benefits are considered incidental.
4. An Adaptive Habitat Management Plan has been developed for the Final IFR that outlines an invasives management program within the project area. The Corps will be responsible for invasives management until success criteria are met (typically within 5 years), and the City of Los Angeles as the non-Federal sponsor will be responsible thereafter for the life of the project. Management of invasives outside of the project area would be the responsibility of other entities interested in funding and maintaining such an effort in those areas.
5. The plant palettes will be coordinated further with local experts on LA River flora in the project area vicinity and may be updated as necessary to ensure the most appropriate mix of locally native species is used in each area.
6. The Corps has met with representatives from the Council for Watershed Health to discuss use of local seed sources for restoration. Since construction is not expected to begin for many years, the Corps will continue to collaborate to support use of local seed for propagation of restoration plant material wherever possible.
7. The Corps has participated in the Coalition to discuss the proposed plant palettes and use of local plant material. The Corps will continue to collaborate to improve restoration implementation and receive guidance from local experts.
8. It is recognized that Alternative 20, as the largest of the final array plans, would generate the greatest benefits to the regional economy (RED Account). However, the primary focus of the project is ecosystem restoration. The Corps typically recommends the plan that is the National Ecosystem Restoration (NER) Plan. Engineering Regulation 1105-2-100 specifies (p. E-7), that: "For ecosystem restoration projects, a plan that reasonably maximizes ecosystem restoration benefits compared to costs, consistent with the Federal objective, shall be selected. The selected plan must be shown to be cost effective and justified to achieve the desired level of output. This plan shall be identified as the National Ecosystem Restoration (NER) Plan."

In this case, the NER Plan in the Draft IFR was Alternative 13 because it was the alternative that met study objectives while providing the greatest increase in net benefits with the least increase in cost among alternatives in the final array. When selecting a plan to propose for authorization, the Corps must consider not only benefits but the reasonableness of costs to achieve those benefits in comparing alternatives (ER 1105-2-100, p. E-164). The cost of Alternative 20 is over $600 million greater than the cost for Alternative 13. Therefore, Alternative 13 was identified as the NER Plan.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on

Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost. This variation has been identified as the NER plan in the Final IFR on the basis of the analysis referenced above.

However, the non-Federal sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.
9. It is recognized that Alternative 20, as the largest of the final array plans, would generate the greatest benefits to the Other Social Effects (OSE) account. As noted in the comment, these benefits are more difficult to quantify than other categories of benefits, but the larger scale of Alternative 20 does afford the opportunity for greater OSE benefits as outlined in the IFR. As noted above, the Corps is recommending Alternative 20 as the Locally Preferred Plan, in recognition of the additional benefits provided by this plan (including RED and OSE).
10. It is true that Alternative 20 is both a cost effective and Best Buy plan, which is why it was one of the four plans carried forward in the Final Array. As the comment notes, while Alternative 20 is a Best Buy Plan, it does provide diminishing returns, i.e., the incremental costs per output for this plan are substantially higher than for Alternative 13v. Hence, this plan is less efficient than Alternative 13v and was a primary reason why Alternative 13v is confirmed as the NER Plan. However, for the reasons cited above, the Corps is recommending Alternative 20 as the Locally Preferred Plan.
11. While Turf Reinforcement Mats (TRMs) are currently considered for erosion control, design decisions will be made during the detailed design phase prior to construction. The Corps will continue to evaluate options for erosion control to minimize impacts to wildlife.

Downtown Los Angeles Neighborhood Council

1. The Draft IFR document and technical appendices were made available for public coordination per NEPA regulations, including proper public notification and the required 30 day review period. Additionally, the public review period was extended due to the temporary government shutdown.
2. Thank you for your close attention to the IFR and for your comments. The alternatives included in the IFR address the 11-mile study reach for the reasons described in sections 1.1.2 and 1.2.1 [Please note that Alternative 13 does include proposed restoration at the Los Angeles Trailer and Container (LATC) rail facility, also known as the "Piggyback Yard." This is a 100+ acre site on the east bank of the river in the community of Boyle Heights, adjacent to Lincoln Heights located just upstream of Cesar Chavez Avenue—the last major restoration area proposed in the study area, which ends just downstream near 1st Street.] You are correct that Alternative 20 would offer more restoration in the Downtown LA area than Alternative 13 would, because it would include a habitat connection between the LATC site and the river and upstream

connections to the LA State Historic Park site. The 6th Street Bridge is a separate –project being undertaken by the City of Los Angeles, which will have Corps review as part of the Section 408 permit process.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost. This variation has been identified as the NER plan in the Final IFR on the basis of the analysis referenced above.

3. The social benefits of a more comprehensive alternative plan are not captured in the ecological analyses but are addressed by other Corps analysis included in the report. They are considered in the analyses of regional economic development (RED) and Other Social Effects (OSE) section of the IFR, per the US Army Corps of Engineers planning guidelines.

It is recognized that Alternative 20, as the largest of the final array of plans, would generate the greatest benefits to the regional economy (RED Account). However, the primary focus of the project is ecosystem restoration. The Corps typically recommends the plan that is the National Ecosystem Restoration (NER) Plan. Engineering Regulation 1105-2-100 specifies (p. E-7), that: "For ecosystem restoration projects, a plan that reasonably maximizes ecosystem restoration benefits compared to costs, consistent with the Federal objective, shall be selected. The selected plan must be shown to be cost effective and justified to achieve the desired level of output. This plan shall be identified as the National Ecosystem Restoration (NER) Plan."

In this case, the NER Plan is Alternative 13v, because it is the alternative that meets study objectives while providing the greatest increase in net benefits with the least increase in cost among alternatives in the final array. When selecting a plan to propose for authorization, the Corps must consider not only benefits but the reasonableness of costs to achieve those benefits in comparing alternatives (ER 1105-2-100, p. E-164). The cost of Alternative 20 is $645 million greater than the cost for Alternative 13v. Therefore, Alternative 13v was identified as the NER Plan.

However, the non-Federal sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

Drennan Enterprises

1. See GR-A.

EcoTone Studios

1. Thank you for your comments. This study does not preclude any future land acquisitions by the City or other parties to expand the floodplain.
2. The City of Los Angeles is in the process of requesting a LOMR (letter of map revision) to FEMA that would identify the flood risks and flood zones along the Los Angeles River. That effort should be complete before any construction has begun for the current Ecosystem Restoration study. This ecosystem restoration study does not preclude any future flood risk management studies. Floodplain development is subject to local regulation.
3. The team concurs that water access is an important community desire. However, Corps guidance requires that the recreation plan be a separable component of the ecosystem restoration plan. As such, the recreation plan does not specify kayak launch sites or ramps specifically, as it is difficult to ensure compatibility with the ecosystem restoration features at this level of design. Instead, the team will incorporate water access for recreation as a complementary function of the safety/maintenance ramps that will be designed into the ecosystem restoration plan during the forthcoming Pre-construction Engineering and Design (PED) phase of the study. Further, current design for the ecosystem restoration plan includes vertical channel walls on only one side of the channel at a time, and thus access to the river at areas with vertical channel walls on one side does not preclude inclusion of water access in the more detailed design phase that occurs during PED.

Elysian Valley Arts Collective

See GR-A.

Enterprise Community Partners, Inc

See GR-A.

Environment Now

See GR-A.

Film LA, Inc

See GR-A.

Friends of the Los Angeles River

1. Thank you for your detailed comments on the IFR. We recognize FoLAR's long term efforts on restoration of the river. Responses to each of your detailed comments are provided below. Historic conditions were summarized in Sections 1.2.2 and 1.2.3. The historic information we reviewed did not have sufficient level of detail to identify presence or locations of specific marsh types within the study area (including vernal marshes or alkali meadows), although the Corps does recognize that those habitat types were present within the region. The proposed project does not include restoration of these specific marsh types. The Corps made determinations about the appropriate habitats to consider for restoration based on this information, as well as the feasibility of restoring self-sustaining habitats within the study area.

Corps policy guidance states that systems "should mimic, as closely as possible, conditions that would occur in the area in the absence of human changes." The level of restoration that the Corps

can achieve "as closely as possible" to historic conditions does not necessarily equate to the uppermost limit of what is possible, and must account for project constraints. Restoration alternatives are determined by the benefits generated from an alternative as compared to the costs, as well as the overall reasonableness of cost.

The Corps follows policy guidance to determine the benefits of a given study. Because the assessment of benefits cannot be subjective or arbitrary, the Combined Habitat Assessment Protocol (CHAP) method was used to assess potential ecosystem benefits that could be achieved as compared to existing conditions. While the Corps understands that maximizing benefits is a desirable approach in the highly degraded urban setting, costs must also be considered and compared to benefits to determine the alternative that supports the wisest federal investment.
2. The Corps must examine a full range of possibilities and evaluate both ecosystem outputs and costs. The range of values must include both those that minimally meet and more fully meet objectives. Numerical criteria were identified that in Corps' judgment were neither artifically low (restoring one acre of riparian habitat would not meet objectives), nor artifically high. Overly high numerical criteria can improperly limit the range of alternatives. Criteria were based on the assumed minimal increase in habitat necessary to support a meaningful opportunity for expanded wildlife usage and or population density. These assumptions were based on literature research and best professional judgment. Riparian habitat criteria, for instance, included the minimal acreage necessary to support nesting and foraging for the federally threatened least Bell's vireo, based on an approximate average of values found in literature. Where the performance criteria for an objective state that at least one of a given feature is required, it does not limit restoration to only one such feature. Furthermore, the study does not preclude other agencies from performing complementary restoration in neighboring areas along the river.
3. Refer to responses 1 and 2 and GR-B.
4. Reaches with existing vegetation in the channel (4-6) contain trees and will be restored by removing trash and non-native vegetation. In reaches 2 and 3, overbank areas would be restored with trees in addition to shrubs and herbaceous vegetation. In Reach 7, restoration at Arroyo Seco would include installation of riparian trees. In this way, Reaches 2-7 are restored with trees in addition to shrubs. Table 4-8 describes which of the alternatives met this objective, and each of the final array of alternatives met the objective as described.
5. The intent of the objective related to riparian (least Bell's vireo) habitat was to focus on the linear width of habitat patches restored, which could be supported by flows/channels either from within the site, or from the adjacent river channel. The focus of this objective was not on how the habitat is restored, but on its location and size (river adjacent parcels that based on a literature investigation were deemed large enough to attract and support nesting vireo pairs).
6. Refer to response 2.
7. While the language specifies "San Gabriel and Verdugo Mountains", the criteria identifies that at least one major tributary connection should be restored (i.e. San Gabriel and/or Verdugo Mountains). In this way, Alternative 13 satisfies this criteria through restoration of the Arroyo Seco confluence, with connectivity to the San Gabriel Mountains. The IFR has been revised in Section 4.2.2 Item 2a to clarify this point.
8. Refer to Response 2 and GR-B.
9. The verbatim language identifies that connections be made to nearby ecological zones "such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains." This does not specify that every ecological zone must be connected to the river in order to meet

objectives. Per the sub-objective, the requirement to meet the objective is that "at least one major tributary connection should be restored". Alternative 13 meets this criteria with restoration of the Arroyo Seco with connectivity to the San Gabriel Mountains. See response 2.
10. The Figures in Chapter 6 (Figure 6-5) are simplified connectivity maps that encompass the entire project area. To get an accurate view of the restoration measures proposed to be implemented, refer to Figures 4-5 to 4-20 (end of Chapter 4). These maps display measures such as overbank and channel wall plantings that are not explicitly shown in the connectivity maps. By referring to the Figures in Chapter 4, connectivity through all 8 reaches in Alternative 13 can be seen.
11. Refer to Response 2. Each alternative daylights many streams that are currently confined to culverts. Specific stream connections proposed with various alternatives were identified based on a series of charettes with numerous stakeholders early in the planning process.
12. The Corps acknowledges that there are many benefits provided by the proposed alternatives. However, there is no one model in existence that would capture all the benefits described - including habitat, connectivity, air quality, recreation, economic, and social benefits.
Since the Corps mission is ecosystem restoration, and since the Corps does not have mission areas for water quality, air quality, recreation, and aesthetics, these additional benefits are considered ancillary and incidental to restoration efforts. Other benefits are described qualitatively and considered after evaluation of restoration benefits. The model used to evaluate benefits for this restoration project (CHAP) focuses on the direct outputs of ecosystem restoration, per Corps mission and policy guidance.

While the CHAP methodology did not capture all benefits, it is based on more than just vegetation in terms of shrubs and trees. In addition to vegetation, the CHAP method considers wildlife species and the functions they provide in the ecosystem, as well as more specific habitat elements found in a particular vegetation community. The details of the CHAP method are described in Appendix G.
13. See GR-B.
14. Refer to Response 13. Evaluation of the study area as located in a biodiversity hotspot was completed at a qualitative level in Section 2.1 under Resource Significance. Descriptions of the rarity of the Mediterranean climate will be added. No known formal model is capable of capturing the quantitative value of all components.
15. Refer to Response 12.
16. Refer to Responses 12 and 13.
17. Refer to Response 13.
18. Refer to Response 13.
19. Refer to Responses 12 and 23. Water quality benefits were qualitatively described in Section 5.4.3 of the Draft IFR. Water quality benefits (for human consumption purposes) are considered as ancillary, incidental benefits. Because the Corps mission and project objectives focus on ecosystem restoration, the benefits of habitat restoration are primarily considered. Improving water quality can only be an objective to the extent it is necessary to achieve ecosystem benefits. In this case, the quality and amount of water available is not the primary limiting factor that is precluding establishment of native habitats. Once the proposed modifications to the channel and overbank structures and topography are implemented, planting/seeding is established and water is redirected into these areas, then successful restoration should be achieved. Additional improvements that result from habitat restoration (i.e., filtration, infiltration, and removal of

suspended sediments or contaminants through natural processes) are expected to occur, but are not the driving factors.
20. The reference to "small mammals" was made in error and the report will be revised accordingly. The species list was based on input from local resource agencies as to the potential for species to occur within the study area. Coyote and bobcat were included on the list. The appendix will be edited to read "mammals" and avoid misunderstanding of the types of mammals considered.

The potential for reintroduction of threatened and endangered species is considered as part of the national significance of the project, as discussed in the resource significance section of the IFR The reintroduction of listed species, however, is not a project objective. Rather, the goal is to create (restore) habitat conditions that would be conducive to use by multiple species that would occur in a urban/wildland interface, including federally listed species such as vireo.

The Corps recognizes that the narrative does not include an exhaustive list of species. Providing an inventory of all species occurring in the study area, or with potential to occur in the study area, is not the focus of the Report. Nor would providing such an inventory accomplish more in terms of identifying national significance or benefits. It would not affect the decision process, which is focused primarily on the extent and value of habitat restoration for the general types of species that utilize this area. The document describes species generally and provides sufficient information to evaluate impacts of the proposed project to various guilds. Section 5.5.3 provides a discussion of impacts to wildlife for each alternative as well as impacts to wildlife movement. The Corps determined that the major benefits of restoration are related more to the expansion of wildlife populations within and through the restored habitat areas, as opposed to dramatic increases in species diversity. A diversity of species already exists within the ARBOR area, particularly in the riparian vegetated Glendale Narrows.
21. Refer to Responses 12 and 23.
22. Refer to Responses 12 and 23.
23. Refer to Response 13, which discusses the Corps' supplemental analysis of connectivity benefits.

Identification of the NER Plan is based upon evaluating ecosystem restoration outputs relative to costs. Other incidental benefits (such as water quality, air quality, social effects and regional economic development benefits) may be realized but they are not the basis for NER Plan identification or Federal interest. Focusing on ecosystem outputs (including habitat and connectivity) relative to costs shows that there are substantial increases in incremental cost per output for Alternatives 16 and 20 relative to Alternative 13, which was identified as the NER Plan in the Draft IFR.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. This analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost. This variation on

Alternative 13 has been identified as the NER plan in the Final IFR on the basis of the analysis referenced above.

The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria.
When also factoring in the key consideration of reasonableness of cost, Alternative 13v is a more efficient alternative. However, the non-Federal sponsor requested that Alternative 20 be the Recommended Plan instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final Integrated Feasibility Report and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.
24. Thank you for your comment. The Corps has examined the referenced website and the Griffith Park Wildlife Management Plan. The Corps has revised the IFR to reference the Griffith Park Wildlife Management Plan and the on-going studies on wildlife movement of large mammals.
25. The Corps acknowledges the importance of Verdugo Wash, LATC site, and LA State Historic Park for connectivity, and that Alternative 20 provides the greatest connectivity of the final array plans.
Regarding the comments relating to connectivity, these outputs were considered in the evaluation and comparison of alternatives which led to the identification of Alternative 13 as the NER plan in the Draft IFR. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost as previously stated.
Further, in response to Independent External Peer Review comments, connectivity benefits were quantified in greater detail, combined with habitat outputs from the CHAP model and subject to additional cost effectiveness and incremental analyses. See response GR-B. Such analysis substantiated that the incremental costs per output are significantly higher for Alternative 20.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. This analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan. Accordingly, Alternative 13v has been identified as the NER plan. However, as noted above, the Corps is recommending Alternative 20 as the Locally Preferred Plan, in recognition of the additional benefits provided by this plan. See response to 23 above.
26. Arroyo Seco is also a node greater than 5 acres that is included beginning in Alternative 13. Regarding the Cornfields site, the Corps can only count benefits for restored areas within its study area. Since the remainder of the Cornfields site was not included in the study area due to its current use as a park, the remaining 41 acres cannot be included in the benefits analysis.
27. The major benefits of restoration are related more to the expansion of wildlife populations within and through the restored habitat areas, although we recognize and anticipate some increase in species diversity. A large diversity of species already exists within the ARBOR area, particularly in the riparian vegetated Glendale Narrows. See also Response 20.
28. Refer to Responses 2 and 13. While some projects may utilize indicator species to compare restoration alternatives a habitat model (CHAP) was used to measure benefits and compare alternatives. The Monitoring and Adaptive Management Plan will discuss success criteria.
29. Refer to Response 13.
30. The Corps recognizes that there are many studies available for reference. The Corps conducted sufficient research of applicable reports, and consulted with local resource agencies and other experts. The qualitative analysis considered species that do not currently occur within the study area that may move through the restored environment, and documents the detrimental effect of habitat loss and fragmentation.
31. It is recognized that Alternative 20, as the largest of the final array plans, would generate the greatest benefits to the regional economy (RED Account). Further, due to its larger scale, Alternative 20 would provide additional social effects (OSE) benefits (as analyzed and described in the IFR). However, the primary focus of the project is ecosystem restoration. The Corps recommends the plan that is the National Ecosystem Restoration (NER) Plan. In this case, the NER Plan was identified in the Draft IFR as Alternative 13, because it met study objectives while providing the greatest increase in net benefits with the least increase in cost among alternatives in the final array. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the

Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. After further analysis including cost updates, the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan. See response to 23 above.

However, the non-Federal sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA (CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

32. As noted in these comments, the IFR identified the substantial RED benefits that could be realized in the Chinatown-Cornfields area with the larger scale restoration features included under Alternative 20 relative to Alternative 13. However, these benefits are included with the Alternative 13 variation (Alternative 13v), which includes the LA State Historic Park (Chinatown-Cornfields) plan for Reach 7.

33. The IFR recognizes that the larger scale restoration features included under Alternative 20 relative to Alternative 13v would accommodate greater opportunities for recreation development and would also provide greater OSE benefits. These benefits were among those that led to the decision to support the recommendation of Alternative 20 as the Locally Preferred Plan.

34. Refer to Responses 2, 12, and 25.

35. Refer to Responses 2, 13, 23, and 25.

36. Refer to Responses 1, 2, and 25.

37. Refer to Response 25. When selecting the NER plan, the Corps must consider not only benefits but the reasonableness of costs to achieve those benefits in comparing alternatives (ER 1105-2-100, p. E-164).

38. The criteria referenced on page 6-42 include decision criteria from the Principles and Guidelines and include effectiveness, efficiency, completeness, and acceptability. Alternative 13v has been identified as the NER plan as it provides the greatest amount of ecosystem restoration output for the investment cost. However, Alternative 20 has been identified as a Locally Preferred Plan. In a letter dated April 10, 2014, the City of Los Angeles requested selection of Alternative 20 as the Recommended Plan at a cost-share scenario different from traditional Corps policy. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the

requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report.
39. Refer to responses 12, 23, and 25.

FoLAR -- Press Articles submission

Comment noted. Thank you for your input. These references will be included in the administrative record for this study.

Glassell Park Improvement Association

See GR-A.

Glendale Rancho Neighborhood Association

See GR-A.

Great Ecology

1. Comment noted. See GR-A.
2. Regarding the comments relating to connectivity, these outputs were considered in the evaluation and comparison of alternatives, which led to the identification of Alternative 13 as the NER and tentatively selected plan in the Draft IFR. Further, in response to Independent External Peer Review comments, connectivity benefits were quantified in greater detail using IEPR recommended metrics, combined with habitat outputs from the CHAP model and subject to additional cost effectiveness and incremental analyses. See GR-B. Such analysis substantiated that the incremental costs per output are significantly higher for Alternative 20.
Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan.

However, the non-Federal sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final Integrated Feasibility Report and in

the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

Heal the Bay

1. See GR-A.
2. This project is proposed as part of the Corps' mission to restore habitat values in aquatic and riparian ecosystems. Water quality improvements are considered ancillary to habitat restoration. Under Corps policy, the Corps does not propose, for Civil Works implementation, restoration projects or activities that would principally result in treating or otherwise abating pollution problems caused by other parties where they have, or are likely to have, a legal responsibility for remediation or other compliance responsibility.
3. Policy requires that the Corps consider potential climate change impacts when undertaking long-term planning, setting priorities, and making decisions affectings its resources, programs, policies, and operations. Per this requirement, the IFR has incorporated climate change in the existing conditions chapter in Section 3.2, in the impacts chapter in Sections 5.2 and 5.4, and in the Hydrology and Hydraulics Appendix (E), Section 9. Because it is difficult to quantify resilience of restoration measures to climate change, the Corps intends to design all restoration features with climate change resiliency built in. Because all restoration measures are designed to consider climate change resiliency, and because the nuances between levels of restoration are difficult to quantify, including them in the CHAP would provide little meaningful cost-benefit analysis.4. The project alternatives are formulated to address reduced habitat values for aquatic and riparian species. Peak flow reduction is not a goal or objective of this project or the Corps' ecosystem restoration program. Various restoration strategies were examined to address the project objectives, but measures and alternatives incorporating tunnels or other diversions were eliminated due to excessive cost with minimal benefit.
5. MS4 permit information has been updated.
6. There are opportunities for construction during the flood season where impacts to conveyance could be avoided. Water would only be diverted around work areas, and would then continue downstream, therefore flows will not decrease. Refer to section 5.4.3 of the IFR. Construction period diversions will not result in reduced flows, since flows will only be routed around the various work areas and will continue downstream.
7. Maintenance of the LACDA project consistent with the existing project authorization provides conveyance of flood flows. However, as part of the request for authorization of the project, the Corps would propose to modify the operations and maintenance of the LACDA project to accommodate and complement the ecosystem restoration features, while maintaining existing flood risk management levels. The restoration features would be maintained by the City while the Corps continues to maintain the channel for flood risk management. O&M of the ecosystem restoration features in perpetuity is a non-Federal sponsor requirement. Removal of invasive species is part of the proposed ecosystem restoration project, while flood risk management maintenance is funded from the Corps' Operations budget. O&M will be further detailed in the design and construction phases of the project.
8. Funding for operation and maintenance of the ecosystem restoration project is a non-Federal sponsor responsibility, as described in Section 7.5.3 of the IFR.
9. The proposed alternatives are not intended to directly address water quality or trash coming from storm drains emptying to the river, as these are local responsibilities. However, an

ancillary effect of ecosystem restoration will include water quality benefits, and the Non-Federal Sponsor will maintain the condition.
10. Minimum summer flows are comprised primarily of discharge from Tillman Water Reclamation Plant. If climate change or other conditions result in the need to capture more of this water, summer flows could be nonexistent under the No Action Alternative. The City's Bureau of Engineering has recently announced a proposal to recapture water and reduce discharges to the river. The IFR indicates that it is possible that 1) water flows cannot be assured into the future; a condition reflected by climate change adaptation policy, and 2) a reduction in water could impact restored wetlands and open waters. However, under the action alternatives, the sponsor would be required to ensure the provision of sufficient water sustain the ecosystem restoration features. A water budget for the project is included in the report as Section 4.14.7, and Appendix E.

Historic Highland Park Neighborhood Council

See GR-A.

i2 Capital Group, Inc

See GR-A.

Kaiser Permanente

Thank you for your comment regarding the use of your property. Currently, we have not identified your parcel as being a possible staging area. The map on page 450 of the Draft IFR contained an error and is not consistent with the real estate plan. Necessary corrections have been made in the Final IFR.

Los Angeles County Bicycle Coalition

See GR-A.

Los Angeles Kayaking Club

See GR-A.

Los Angeles River Artists and Business Association

See GR-A.

LA River Expeditions

See GR-A.

LA River Revitalization Corporation

1. See GR-A.
2. We appreciate your interest in seeing this study concluded and a project recommended for authorization in an expedited manner. However, it is not possible to expedite the report process further, as statutory and policy review timelines apply.

Los Angeles Waterkeeper

1. See GR-A.

2. Water quality improvements and pollution remediation are not part of the Corps' mission for ecosystem restoration. This project is proposed as part of the Corps' mission to restore habitat values in aquatic and riparian ecosystems. The Corps' mission does not include remediation of polluted waters or soils for which other parties have responsibility. Water quality improvements are incidental to the overall goals and objectives of this project.

Los Angeles World Airports

Thank you for your letter and review of the Draft Integrated Feasibility Report (IFR).

Los Encinos School

1. Thank you for the very creative and thoughtful ABC book. Thank you as well for caring and learning more about the river, and for helping to make it a better place for people and wildlife. We agree that planting native vegetation, removing trash and protecting our natural resources are all very worthwhile goals. The Corps' proposed ecosystem restoration plan will address all of those things, but its success will partly depend on you and other members of the public to keep it in good condition. We encourage you to keep up the good work!
2. See GR-A.

Los Feliz Improvement Association

See GR-A.

Main Street Capital BIDCO

See GR-A.

Mas

See GR-A.

Metabolic Studio

See GR-A.
Thank you for the information on your "Bending the River Back Into the City" proposal, which would utilize areas adjacent to, and potentially within, features of Alternative 20.

Mia Lehrer + Associates

See GR-A.

Montrose/Verdugo City/Sparr Heights Neighborhood Association

See GR-A.

Mountains Recreation & Conservation Authority

Thank you for your comments on the IFR. Alternative 20 is one of the final array alternatives carried forward for further analysis of its benefits. However, the Corps typically recommends the plan that is the National Ecosystem Restoration (NER) Plan. In this case, the NER Plan in the Draft IFR was Alternative 13, named the ARBOR Corridor Extension (ACE), because it is the

alternative that met study objectives while providing the greatest increase in net benefits with the least increase in cost among alternatives in the final array.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan.

However, the non-Federal Sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final Integrated Feasibility Report and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

The Recommended Plan includes a recreation plan with features that are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, interpretive signage and opportunity for environmental education, and improved public health by providing opportunities for exercise and psychological respite. The recreation plan that was initially developed to be compatible with Alternative 13 was modified to be compatible with and take advantage of the ecosystem restoration features included in Alternative 20. The features of the Alternative 20 recreation plan include additional trail improvements, pedestrian bridges, trail access points and wildlife viewing points.

Regarding a suggestion to include more recreation features and a more significant investment in recreation, please note that the recreation plans were developed in accordance with Corps regulations and policies. These policies specify the types of recreation features that are allowed at ecosystem restoration projects, as well as the intent of recreation at such projects. These regulations specify that recreation features at ecosystem restoration projects should be austere and should be developed to assure that the recreation features do not have any detrimental impacts to the primary purpose of ecosystem restoration. We expect there to be sufficient space around interpretive signage to accommodate group gathering.

Regarding the operation and maintenance costs for recreation features, these were estimated based on a percentage of the construction cost of the recreation features identified in the plan for ongoing annual maintenance. These O&M costs are not inclusive for all of the project, but are incremental above and beyond the restoration project. O&M costs for the restoration features are separately addressed.

See GR-A for a lengthier description of the plan evaluation and selection process.

Mt. Washington Association

See GR-A.

National Wildlife Federation

See GR-A and GR-B.

Northeast Los Angeles Arts Organization

See GR-A.

Oaks Homeowners Association

See GR-A.

Oakwood School, Fourth Graders

1. Thank you for your thoughtful comments. You will be pleased to know that the Corps is recommending Alternative 20 as a Locally Preferred Plan.
2. See GR-A.

Pasadena Audubon Society

See GR-A.

Santa Monica Bay Restoration Commission

See GR-A.

Santa Monica Mountains Conservancy

1. Your comments are noted; the Santa Monica Mountains Comprehensive Plan will be added to the list of institutional and technical recognition.
2. Comment noted.

3. See GR-B.
4. The Corps acknowledges that there are many benefits provided by the proposed alternatives. However, there is no one model in existence known to the Corps that would capture all the benefits described - including habitat, connectivity, rarity, air quality, recreation, economic, and social benefits. Since the Corps' primary mission in this case is ecosystem restoration, these additional benefits are considered ancillary and incidental to restoration efforts. Other benefits are described qualitatively and considered after evaluation of restoration benefits. Consideration was given to the importance of the study area as located in a biodiversity hotspot as documented in Section 2.1 under Resource Significance. Descriptions of the rarity of the Mediterranean climate will be added.
5. Refer to Response 3.
6. Refer to Responses 3 and 4. The Corps acknowledges the importance of Verdugo Wash, the LATC site, and LA State Historic Park for connectivity, and that Alternative 20 provides the greatest connectivity of the final array plans.

Alternative 13 was identified in the Draft IFR as the NER Plan, because it was the alternative that meets study objectives while providing the greatest increase in net benefits with the least increase in cost among alternatives in the final array. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan.

Regarding the comments relating to connectivity, these outputs were considered in the evaluation and comparison of alternatives, which led to the identification of Alternative 13 as the NER and tentatively selected plan in the Draft IFR. Further, in response to Independent External Peer Review comments, connectivity benefits were quantified in greater detail, combined with habitat

outputs from the CHAP model and subject to additional cost effectiveness and incremental analyses. Such analysis substantiated that the incremental costs per output are significantly higher for Alternative 20. See Response GR-B. Alternative 13v is affirmed to be the NER Plan.

However, the non-Federal Sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final Integrated Feasibility Report and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

7. The Corps recognizes that there are many studies available for reference, a number of which are listed in Section 1.4 and throughout the report. The Corps conducted substantial research of applicable reports, and consulted with local resource agencies and other experts. The qualitative analysis generally considered species that do not currently occur within the study area that may move through the restored environment and documents the detrimental effect of habitat loss and fragmentation.

8. Refer to Response 3.

9. Refer to Responses 3 and 4.

10. Thank you for your comment on Alternative 20 on the Los Angeles River. This alternative was one of the final array alternatives carried forward for further analysis of its benefits. As noted above, the Corps is recommending Alternative 20 as the Locally Preferred Plan, in recognition of the additional benefits provided by this plan.

The Recommended Plan includes a recreation plan that complements the recommended ecosystem restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

11. The Corps follows policy guidance to determine the benefits of a given study. The assessment of benefits cannot be subjective or arbitrary, therefore reviewed and approved methods are chosen to determine ecosystem benefits. While the Corps understands that maximizing benefits is a desirable approach in the highly degraded urban setting, costs must also be considered and compared to benefits to determine the alternative that supports the wisest federal investment.

Alternative 20 is both a cost effective and Best Buy plan, which is why it was one of the plans carried forward in the Final Array. As noted above, the Corps is recommending Alternative 20

as the Locally Preferred Plan, in recognition of the additional benefits provided by this plan. Also refer to Responses 3, 4, and 6.
12. The Corps must examine a full range of possibilities and evaluate both ecosystem outputs and costs. The range of values must include both those that minimally meet and more fully meet objectives. Numerical criteria were identified that in the Corps' judgment were neither artificially low (restoring one acre of riparian habitat would not meet objectives), nor artificially high. Overly high numerical criteria can improperly limit the range of alternatives. Criteria were based on the assumed minimal increase in habitat necessary to support a meaningful opportunity for expanded wildlife usage and/or population density. These assumptions were based on literature research and best professional judgment. Riparian habitat criteria, for instance, included the minimal acreage necessary to support nesting and foraging for the federally threatened least Bell's vireo, based on an approximate average of values found in literature. Where the performance criterion for an objective states that at least one of a given feature is required, it does not limit restoration to only one such feature. Furthermore, the study does not preclude other agencies from performing complementary restoration in neighboring areas along the river.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost. This variation has been identified as the NER plan on the basis of the analysis referenced above.

Alternative 13v meets all objectives. Furthermore, the study does not preclude other agencies from performing complementary restoration in neighboring areas along the river. Also refer to Responses 3, 4, 6, and 11.
13. The criteria referenced on page 6-42 include decision criteria from the Principles and Guidelines and include effectiveness, efficiency, completeness, and acceptability. Alternative 13v is identified as the NER plan as it provides the greatest amount of ecosystem restoration output for the investment cost. However, Alternative 20 has been identified as a Locally Preferred Plan. In a letter dated April 10, 2014, the City of Los Angeles requested a Locally Preferred Plan (LPP) of Alternative 20. Based on that letter the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memo dated May 27, 2014 the Assistant Secretary of the Army (Civil Works) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report.
14. It is recognized that Alternative 20, as the largest of the final array plans, would generate the greatest benefits to the regional economy (RED Account). As noted above, the Corps is recommending Alternative 20 as the Locally Preferred Plan, in recognition of the additional benefits provided by this plan (including RED, OSE and recreation).
15. See GR-A.

16. Comment noted. Habitat and trail improvements are planned in the Arroyo Seco vicinity, including a pedestrian bridge across the LA River.

Save LA River Open Space

See GR-A.

Sherman Oaks Neighborhood Council

See GR-A.

Sierra Club Angeles Chapter Crescenta Valley

See GR-A.

Sierra Club Angeles Chapter Water Committee

1. Water conservation was not an objective of this ecosystem restoration study. The Corps did consider modification to upstream facilities, but they were eliminated from further consideration due to the reasons described in the IFR. While the study does not quantify potential recharge amounts, achieving restoration goals would also provide incidental infiltration benefits. Infiltration would occur to some limited degree in all alternatives (see Section 3.4.4).
2. Regarding comments relating to the discounting of benefits and costs, all costs in the IFR are presented at constant fiscal year price levels. Interest during construction costs (IDC) are included in the investment cost estimates for alternatives presented in the report. IDC accounts for the opportunity cost of these plan expenditures during construction, prior to the completion of the project. Ecosystem restoration benefits are presented in terms of habitat units and are not monetized. Average annual habitat units were derived by taking a simple average of projected values over the 50 year period of analysis. This accounts for when benefits will be accrued as the habitat is established and matures.

Regarding comments relating to the high cost of Alternative 20, this was a key consideration in identifying the National Ecosystem Restoration Plan and Tentatively Selected Plan. Corps guidance specifies that efficiency and reasonableness of cost are key considerations in the identification of the NER Plan. Alternative 20 is substantially less efficient than Alternative 13, and the incremental cost between these alternatives is over $600 million. These were among the key reasons that Alternative 13 was determined to be the NER in the Draft IFR. The Corps typically recommends the plan that is the National Ecosystem Restoration (NER) Plan.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively

stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan in the Final IFR.

However, the non-Federal Sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

Regarding comments on construction phasing, the next phase of the project would be preconstruction engineering and design followed by project construction if a project is authorized. As noted, construction of a project would take a number of years, due to both project implementation realities and constraints, as well as available funding per congressional appropriations. Therefore, by necessity, the project would need to be constructed in phases. The Corps will work with the non-Federal sponsor to develop the most beneficial and logical sequence for construction of project features based on all the relevant factors. A discussion of construction sequencing is included in Section 7.5.7 in the Final IFR, in Appendix C Cost, and in Appendix F Air Quality.

3. The "Study" and the "ARBOR Study" are one and the same. Objectives for the study are outlined up front in the main document in the Executive Summary under ES.6 and in detail in the main document in Section 4.2.

4. The study took into account mammals both large and small. The reference to "small mammals" was made in error. The species list was based on input from local resource agencies as to the potential for species to occur within the study area. Coyote and bobcat were included on the list. The appendix will be edited to read "mammals" and avoid misunderstanding of the types of mammals considered. The Corps is aware of the presence of the mountain lion (P-22) in Griffith Park adjacent to the study area.

The Corps acknowledges that many stressors occur within such a highly urbanized area. Stressors were evaluated in collaboration with local resource agencies, and those listed in the report were determined to be the most impactful to vegetation/habitat elements, and have the greatest potential to affect presence or absence of wildlife within the study area. The type of trash and means of arrival in the study area were not distinguished, as all trash was considered a detriment. Regardless of size, homeless encampments were considered to have a detriment through trampling of vegetation and altering of habitat structure.

5. As indicated in the CHAP Appendix G on pages 16, 42, and 51, "Due to the large volume of data, maps, and spreadsheets, the complete set of files is available upon request from the Corps, Los Angeles District." Files were made available upon request by commenters to allow for further evaluation.

6. The comment references maps starting on pg 17 of Appendix G. These maps reference proposed features of the alternatives; they do not include existing habitat within the study area which is referenced in your comment.
7. The Corps is not aware of osprey nests currently existing within the Taylor Yard site. Any removal of osprey nests during initial clean up of the site was not a Corps activity.
8. The outflow from the treatment plants is covered in several sections in the report. For instance, on page 3-26, we state "Discharges from the Donald C. Tillman Water Reclamation Plant upstream of the study area, and the Los Angeles-Glendale and the Burbank Water Reclamation Plants are contributors to the River, contributing 20, 15.5, and 6.4 million gallons per day, respectively, or 31, 24, and 10 cfs, respectively (City of Burbank 2013)." And also on page 3-24, "The River is an effluent-dominated waterbody. Nearly 70 percent of the volume in the River 48 is from Water Reclamation Plant tertiary-treated effluent discharged outside of storm events (Ackerman 49 2003)." And on page 3-66, we state "Greywater from Tillman Treatment Plant and the Los Angeles/Glendale Water Reclamation Plant, and stormwater from surrounding cities are discharged into the River. During the summer months these inputs may be the only source of water in the River." The Corps is aware of proposals to reduce flows to the river due to recapture efforts. As part of its commitments for the restoration project, the City of Los Angeles is required to ensure the adequate provision of water to sustain the restoration features.
9. See Response 1.
10. The final array of alternatives considered restoration of the confluences of the Arroyo Seco (Alt 13, 13v, 16, and 20) and the Verdugo Wash (Alt 20). Due to the scope and scale of complete restoration of these tributaries, the study could not include restoration of their entire length in this one project. Other Corps studies as well as projects from other agencies may provide future opportunities for restoration along the whole of those tributaries, as well as connectivity to other regional areas.
11. The IFR addresses many of the challenges faced by fish and wildlife species under existing and "future without project" conditions.
12. "Functioning ecological zones" refers to regional areas that support functioning ecosystems, such as the San Gabriel Mountains and Santa Monica Mountains. It refers to improving "habitat connectivity" to these areas.
13. Although we are not certain of the particular report referenced by the comment, the Corps is aware of several existing or potential corridors documented in literature, and the IFR addresses several opportunities for improvement thoughout the document (Sections 3.5.7, 5.5).
14. Section 3.10 - Aesthetics of the report makes no such reference, and no such maps are depicted. The Glendale Narrows are encompassed in Reaches 4 to 6. In Reach 4, the river does run adjacent to Griffith Park to the west. However in Reaches 5 and 6, to the west of the river are residential and industrial uses. In describing the Aesthetics of Reaches 4 to 6, the report states in Section 3.10.1 on Page 3-68 "In some areas, the forested and scrub-shrub habitats of Griffith Park and Elysian Park can be seen rising in the west, though they are both separated from the River by roads and other development."

The IFR does not state or imply that Griffith Park has little or no habitat value. The land use section, 3.3, describes land uses in the area and clearly shows Griffith Park as Open Space/Recreation in Figures 3-5 and 3-6, which is defined in Table 3-5 as "Environmentally sensitive habitat, wildlife refuge/preserve, river, stream or floodplain, coastal bluff, vacant urban

land. State, county, city parks or beach, recreation facility, cultural center, golf course, campground." Mapping also clearly shows the Glendale Narrows as adjacent to residential and industrial uses in Reaches 5 and 6.
15. The Corps concurs that tourism is an important component of the local economy. The breakdown of employment by industry follows the standard categories per the US Census. Tourism related employment would be largely encompassed within the categories of retail trade and arts, entertainment, recreation, accommodation and food service. The purpose of this socioeconomic data is to present a broad perspective of the Study Area economy, rather than the specific businesses and employment within the immediate area adjacent to the river. Note that the report includes an evaluation of specific opportunity areas for redevelopment that could be realized adjacent to the river under project alternatives in the regional economic development analysis.

Regarding comments on environmental justice, the IFR and Economic Appendix specifically evaluate the other social effects (OSE) associated with project alternatives. The Final IFR contains a robust environmental justice analysis in Section 3.13 and in Section 5.13. It is recognized that the study area has large lower income and minority populations, and the area has a strong need for additional parks and recreation opportunities, in particular neighborhood parks. While many of the comments on environmental justice concerns are outside the scope of this study, all alternatives would provide significant benefits to the local population, as outlined in the OSE analysis. Alternative 20 has been selected as the Locally Preferred Plan and is the Recommended Plan.

A recreation plan was also developed which is compatible with the recommended plan and does not detract from ecosystem outputs while enhancing recreation opportunities in a restored ecosystem setting. This recreation plan will also provide significant benefits to the local population. Restoration at the Verdugo Wash confluence was evaluated in the array of alternatives and is included in Alternative 20.

16. The Corps recognizes the seasonal passive recreation activities allowed in and along the river from Fletcher Drive to just upstream of Riverside Drive. The Corps participated in the development of the Los Angeles River Recreation Zone, which includes walking, birdwatching, fishing (with a license), and non-motorized boating from Memorial Day to Labor Day. Signage addressing the Recreation Zone rules including fishing rules is provided along the subject reach.

With regard to swimming, swimming is not currently allowed in the river, including within the Recreation Zone, and would not be advisable for a variety of safety and health reasons.

Marsh Park is managed by the MRCA. The map of this area will be reviewed for accuracy. However, maps of such areas are not intended to be prepared to precise scale as this would not affect the impact assessment.

With respect to bicycle trails, existing authorized bicycle trails are shown on the mapping although we realize that other trails and maintenance roads are utilized throughout the study area.
17. The model utilized to evaluate the cost effectiveness and incremental costs of project alternatives is IWR Planning Suite. Information on this model, as well as a link to download the

software, is available at the following publicly accessible website - http://www.pmcl.com/iwrplan. Section 6.2 of the Economic Appendix (Appendix B) describes the model, the model purpose, inputs and outputs. Primary inputs and outputs to the model are the average annual costs and habitat units for each plan. Tables 6.2 and 6.3 of the Economic Appendix show the inputs for the analysis, while subsequent tables and graphs show the outputs.
18. Section 4 of the IFR outlines the Federal Objectives as well as specific planning objectives for this feasibility study.
19. The IFR including EIS/R is considered adequate for NEPA purposes. The Final IFR will be circulated to the public for comment, but no supplemental Draft IFR is needed.
20. A public involvement summary is included in chapter 8 of the IFR. The charette (scoping) report is available to the public upon request. The MMRP will be included in the Final IFR.
21. The surface inputs from the drainage area were assessed as part of this study, as were groundwater sources. Information in the report can be found at Section 3.4 and Appendix E. A water budget analysis was prepared that characterizes the current conditions along the ARBOR reach of the Los Angeles River and provides comparison to each of the four alternatives. The level of detail for the water budget is commensurate with that required to determine the feasibility of the proposed features. The analyses mentioned in the comment are outside the scope of work for this study.
22. As described in the IFR, once construction is complete, rail operations can return to a before-project state; thus, there would be no long-term operational impact on active rail lines. As stated in the IFR, the project would coordinate with railroad stakeholders to ensure continuous operation and appropriate safety measures. Project impacts on potential future rail projects such as line extensions would be addressed through these coordination efforts.
23. The assessment includes minimization and mitigation measures where necessary. The project description, setting and assessment are sufficient to support the feasibility phase.
24. Comment noted. Hazardous substance contamination of lands and groundwater within the study area is assessed in the report and appendices. The City will ensure that hazardous substance remediation on land needed for the project is completed prior to project construction. The sites identified as having known or likely hazardous substance contamination are not used for recreational purposes and are outside existing waters of the United States. Any remediation plan will be conducted in accordance with state regulatory agency approvals. The City will ensure proper handling, treatment and disposal of any contaminated groundwater encountered during construction.
25. The City, as part of its commitments for the project, will assess its financial capability for its share of total project costs. The proposed project would be implemented over several years. The City already owns some of the land to be utilized for the Recommended Plan.
26. This is a feasibility level planning and assessment document. Signed agreements prior to NEPA analysis are inappropriate.
27. The cumulative impacts of this project considered along with past, present and reasonably foreseeable future actions are included in the IFR in the cumulative impacts section. Some projects are too speculative to include. With respect to water availability and diversion, the City is responsible for ensuring the provision of adequate water to support the restoration features.
28. The IFR assesses current recreation opportunities within the study area and the recreation plans for the project. The IFR also assesses environmental justice impacts of the project alternatives. See sections 3.13 and 5.13. The project is not proposing any form of redevelopment which might have the potential for gentrification or low income dislocation. In the cases of

restoration of the Verdugo Wash confluence and the LATC site, businesses would be displaced, but the effects of doing so on EJ communities has been analyzed in the IFR.
29. The Corps does not agree that the document is inadequate, incomplete or based on unfounded conjectures. An EIS must be a technical, legal, scientific, and analytical document to provide for reasoned analysis among project alternatives. The differences among and the effects of the alternatives are given in sufficient detail in the IFR. The Draft IFR will not be recirculated; however, the Final IFR will be circulated for a 30-day state and agency review during which time the public may provide additional comment.
30. The comments provided in this format are difficult to follow and often include added emphasis and repeated information from the report that does not indicate what question is being asked or comment made. All reasonable efforts have been made to respond to the comments.
31. Both quantitative and qualitative assessments were conducted in the analysis. Where qualitative analyses were made or terms of art were used throughout the report they are defined within the document. References to the connectivity analysis are updated in the final IFR.

The connectivity analysis included in Chapter 6 of the report describes the percentages cited. Additional connectivity analysis was conducted and is included in the Final IFR.

Reference to costs and benefit analysis conducted as part of the study is appropriate to disclose and include in the IFR, both for Corps planning purposes under the Principles and Guidelines and under NEPA regulations. NEPA regulations at 40 CFR 1502.23 specifically state that where cost-benefit analysis is relevant to the choice among environmentally different alternatives, that analysis should be disclosed or incorporated into the document.

The report assesses environmental justice under NEPA and the Executive Order on environmental justice. The executive order directs federal agencies to identify disproportionately high and adverse impacts to environmental justice communities. The environmental justice analysis is in the IFR in sections 3.13 and 5.13.
32. The report discloses current levels of flood risk management throughout the study area. The proposed project alternatives provide ecosystem restoration. There is no planned associated flood risk management project at this time and no segmentation or piecemealing of connected actions. The project alternatives do not preclude future flood risk management studies and improvements. The Corps most recently studied flood risk management within the study area in its 1992 review report and no recommendations for increased levels of flood risk management were made for the study area, although a project was recommended for the downstream portion of the river.

With respect to water availability, a water budget for the project alternatives is included in the IFR. With respect to liquefaction, liquefaction requires soils susceptible to liquefaction, high groundwater, and seismic shaking/source. The IFR analysis concludes that neither the Recommended Plan nor any of the alternatives would induce a significant change in any of the above liquefaction required conditions. General objections to report content cannot be addressed by the Corps.
33. The groundwater figures presented in the geotechnical appendix to the IFR are based on water level data from the Geotracker database. It should be noted that this configuration is based on water levels taken at different times and is an approximation of local water levels without noting seasonal impacts. These data provide a general description of the configuration of the

groundwater conditions in the vicinity of the ARBOR. Based upon these data and visual observations of emergent seepage within the channel it is understood that groundwater is at or very near the elevation of the existing channel bottom. The groundwater conditions discussed in the IFR and its appendices are adequate with respect to the evaluation of their impact to and from the alternative plans. The analysis in the report quoted in the comment is not dependent on project specific modeling. We do not anticipate any significant changes in the groundwater regime based on the alternatives. Therefore, development of detailed groundwater modeling is not necessary for this study.
34. See response 33. The groundwater analysis is adequate for the evaluation of alternatives
35. The groundwater model provided in the report relies upon available groundwater data. The referenced studies address site and project specific issues that are not specifically related to the concerns of the ecosystem restoration study. However, the basic data (groundwater elevations) were used to assess the impacts of groundwater on all of the alternatives. It is our opinion that the model that has been provided is adequate for its intended use.
36. Wherever the existing channel bottom is open, groundwater is in close proximity to the invert elevation. Changes in the groundwater elevation are a function of the differences in inflow and outflow which are principally impacted by climatic and seasonal weather patterns as well as man-made discharges into the channel. These conditions have persisted throughout the recent past and are expected to continue into the future relatively unchanged. Visual evidence alone suggests that both surface and groundwater conditions are sufficient to support vegetation.
37. It is the Corps' opinion that surface and groundwater connections as discussed above, from a feasibility standpoint, are adequate to evaluate project alternatives. The alternatives will rely upon the available sources of water to support vegetation.
38. Your comment is acknowledged. It is the Corps' opinion that the groundwater conditions discussed in the IFR and its appendices are adequate with respect to the evaluation of the alternative plans. See response 33.
39. Your comment is acknowledged. It is the Corps' opinion that the overall hydrological and groundwater support of flows and support for floodplain and channel habitats throughout the Project area discussed in the IFR and its appendices are adequate with respect to the evaluation of the alternative plans. The Feasibility Study relies on existing information and institutional knowledge to support the conclusions reached for proposed habitats. Detailed surface to groundwater modeling is far beyond the scope for this study and is not needed to evaluate the alternative plans.
40. See response 33.
41. The figure is conceptual in nature and is in no way fully representative of the highly complex and interdependent surface and subsurface groundwater regimes. Nor was the figure intended to depict isolation of groundwater or surface water conditions. The double arrow was intended to imply interaction.
42. Groundwater regimes were discussed in the Geotechnical Appendix as well as in the H&H Appendix. See response 33.
43. "Blowouts" and "soil boils" can be generated anywhere where confining materials are insufficient to confine increased pore pressures that are generated by either cyclical induced stresses (in the case of seismic induced liquefaction) or sustained pressure head differential caused by flood loading. Both of these conditions are well researched and documented in the geotechnical engineering and engineering geology literature. In addition, numerous analysis procedures and design applications are available to mitigate adverse impacts from these

conditions. Seepage design of levees and flood control systems incorporate the increased flood induced pore pressure considerations and are outlined in engineering design manuals (EM 1110-2-1901 et al.). Separate from the flood induced issues, seismic induced liquefaction is routinely studied as part of typical geotechnical design in Southern California and would be studied during the design phase as required by the standard of practice and care and pertinent California State Laws. Furthermore, the levees within the project reach are of limited height and the flood loading durations are of a relatively short duration. Therefore, the potential for "blowouts" and "soil boils" is considered minimal.

44. It is acknowledged that some quantity of flow within the river is due to the emergence of groundwater. However, during storm events, groundwater emergence would be severely limited by the increased pressure head due to flows in the channel, and at some locations the pressure head may be significant enough to induce infiltration. A significant amount of this induced infiltration will likely re-emerge after the flood has subsided. Regardless of the quantity, groundwater conditions discussed in the IFR and its appendices are adequate with respect to the evaluation of the alternative plans.

45. The IFR recognizes the historical uses of both the Taylor Yard and LATC sites. Taylor Yard is recognized as having known contamination, with LATC indicated to have likely contamination based on past and current use. The IFR development involved consultation and review of many available sources. The level of detail included in the IFR is sufficient for project alternatives analysis. It is recognized that these sites would require remediation prior to project construction, at 100% non project cost. The City would ensure the remediation of land contamination is complete prior to project construction.

46. An assessment has been completed of the utilities affected by the project that would require protection in place or relocation. These utilities are listed in the Real Estate Plan.

47. The statements in the IFR are accurate with respect to flood risk management levels, not arbitrary or subjective. Specific levels were not provided in the IFR, because the conveyance capacity varies throughout the study area reaches, and flood maps were included in Appendix E of the IFR to show impacts of flooding during various events. The Hydrology and Hydraulics Appendix provides additional information and includes details from the Corps' 1992 LACDA Feasibility Study, which was specifically done to assess flood risks along the Los Angeles River and tributaries. Specific information on design level and approximate existing capacity level is available from the Corps and has been shared with the public on numerous occasions. The City is in the process of requesting a LOMR.

48. Comment noted. The final document will resolve such issues with cross references.

49. The report includes estimated costs for trestling of railroad tracks in Reaches 7 and 8 as part of the LERRD for the project. With respect to HTRW remediation and response, the report provides an order of magnitude estimate for the remediation, which the City would ensure is complete prior to project construction at 100% non project cost. These costs are considered when assessing feasibility but are not part of the total cost shared project costs. Remediation of all groundwater contamination within the study area and sites not affecting the project alternatives is outside the scope of remediation necessary for the project alternatives. The IFR has assessed the likelihood of contamination that would affect lands necessary for the project and assigned the costs associated with those lands' remediation.

50. The determination of whether to prepare an EIS or an EA is not based on the study or project stage. It is typical for the Corps to prepare an EIS for complex feasibility studies. The level of design does not render the IFR inadequate or incomplete. The level of design is appropriate for

impact assessment. If additional, previously unassessed impacts are identified during design, the Corps would prepare a supplemental EIS or EA as needed.
51. The language specifically states "Similar to Alternative 10, there would be six reaches with restored riparian corridors in overbank areas (1, 2, 4, 5, 6, and 8)". Reach 7 is dis-similar from Alternative 10 in that it performs restoration in Reach 7 in-channel at the Arroyo Seco tributary, which is why it is not encompassed in the statement on page 4-56 line 12-13. In Alternative 10, Reach 7 is restored only with daylighted streams currently encased in culverts.
52. The designs and cost estimates are prepared at a feasibility level of detail and are appropriate level of detail for an EIS/EIR. As is standard practice for a Corps of Engineers project, there is a design phase following feasibility when preconstruction engineering and design occurs. If approved, that phase will occur in the future. The documentation has been prepared with the information available at this time. If additional impacts are identified during more detailed design phases, or even during implementation, then the Corps and non-Federal sponsor will prepare and circulate a Supplemental EIS/EIR or Supplemental Environmental Assessment/Negative Declaration as appropriate.
53. LERRD costs in the Draft IFR were based on cost estimates. LERRD costs in the Final IFR are based on a gross appraisal and assessment of relocation costs. Formal relocation agreements are developed prior to project construction and after NEPA/CEQA analysis.
54. Terms of art and technical terminology, where used in the report, are explained where appropriate.
55. The preparers are aware of the locations of railroad tracks in the study area. This section was not intended to imply tracks would be relocated or closed for significant periods. Rerouting of mainline rail is not proposed. The Final IFR in Section 5.7.3 more appropriately conveys the fact that the intent is to minimize delays to rail transportation, although some delays may occur. The project proponents acknowledge that the rail lines that would be trestled to connect to lines running east along the north and south borders of the LATC site. As described in the Draft IFR, impacts from trestling a portion of the rail line, and, by extension, to rail routes using those tracks, would be short-term because the intent is to construct the trestle prior to removal of the existing rail line.

As stated in the IFR, the project would coordinate with railroad stakeholders to ensure continuous operation and appropriate safety measures.Trestling the rail lines would be part of the City of Los Angeles' provision of LERRD for the project and the City would negotiate appropriate relocation agreements. Formal relocation agreements are inappropriate prior to NEPA compliance. The IFR includes costs of the trestling in the total project cost.
56. The trestle proposed in association with Cornfields is depicted at the end of Chapter 4, Sheet 4: Reach 6-8. Engineering designs for the bank-side and trestle tracks have not yet been completed since the project is still in the NEPA/CEQA analysis, proposal, and planning stage. The designs will be prepared by engineers to ensure their technical feasibility and safety.
57. Comment noted.
58. Comment noted. This project is not for the purpose of increased flood risk management, although maintaining existing levels of protection is a main project constraint.
59. The basis for this comment is uncertain. No pollution release due to contaminated soils or groundwater would occur with the project alternatives. The existing SFVSS plume and potential for localized groundwater contamination are acknowledged and the IFR documents the approach for the City to address such contamination during project activities such as dewatering. Proper

treatment and disposal will be performed. With respect to contaminated lands, the project will not undertake construction until hazardous substances are remediated. Cost estimates for addressing contamination are included in the IFR appendix on HTRW.
60. The recommended assumption is unwarranted. The alternatives are not expected to have a significant impact on the existing groundwater conditions. See Appendix D, Geotechnical Section 5.1 and IFR 5.4.
61. The point of the referenced section is that restored river channel with additional natural wetland and riparian vegetation will improve water quality. More detailed discussion of environmental chemistry and bioremediation is not pertinent to the well-established fact that water quality is improved by wetlands.
62. The word "biologic" will be removed from before "organisms" in the identified location. This is an editorial change that does not affect the overall analysis. Related statements are not erroneous as stated by the commenter.
63. Assessment in the IFR is based on available information including a database search. Future investigation of potential groundwater and soil HTRW issues will be addressed during PED by the non-Federal sponsor. Per Corps policy, construction will not begin until a clean site acceptable to applicable regulatory agencies has been provided to the project. The City will ensure proper handling, treatment and disposal of any contaminated groundwater encountered during construction.
64. Per CEQA guidelines, CEQA significance criteria are outlined for each environmental resource (see "Significance Criteria" from Sections 5.1 to 5.13 (except Air Quality which is in Section 5.2.3)). Significance criteria define that a significant impact would occur if those criteria were met. Significance criteria provided in this IFR are based on the environmental checklist in the California 43 Environmental Quality Act (2005) and Los Angeles CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles (City of Los Angeles 2006) guidelines.
65. The IFR analysis is conducted at a feasibility level. Formal agreements with railroads prior to NEPA analysis are inappropriate. The Corps and City have discussed potential impacts with various rail entities. As indicated in the IFR, minimization of construction impacts on rail services is accounted for in the alternatives and would be further addressed during the design phase.
66. In this study, the hydrologic connection is considered "natural" in that water is able to flow freely between the river and the adjacent site without the use of artificial methods such as pumps, culverts, or gravity fed pipes.
67. Wildlife inhabiting the study area are expected to be accustomed to the existing urban noise levels. Furthermore, with removal of the rail operations at Piggyback Yard, noise levels may be expected to decrease in the area.
68. "Natural" is used here as a relative term based on the context of the surrounding, highly urbanized and highly degraded areas. In this study, the hydrologic connection is considered "natural" in that water is able to flow freely between the river and the adjacent site without the use of artificial methods such as pumps, culverts, gravity fed pipes, etc. Habitats generally refer to vegetation communities supporting populations of various wildlife species, again in the context of the highly urbanized setting.
69. The northwest portion of the Boyle Heights community is within Reach 8. The Northeast Los Angeles Community Plan covers portion of reaches 3-7. Information on this Plan has been added to the chapter. The USC-LA County Medical Center Master Plan area is east of Interstate

5 and east of Piggyback Yard and has no strong bearing on this project. Cumulative effects related to groundwater resources and contaminated materials are discussed in section 5.14.2. The sponsor will ensure appropriate handling, treatment and disposal of any contaminated groundwater encountered during construction in the project right-of-way; cumulative effects would only come into play where there was an immediately adjacent project and, in that case, the other project would also be expected to appropriately handle any contaminated groundwater or soils in their project footprint.
70. Approximately 1 1/2 miles of the LA River is within the Cornfield/Arroyo Seco community. A review of the CAS community plan does not uncover any substantial inconsistencies with the LAR project as the buffer area on the west side of the river is designated as a public facility.
71. Eight projects in the LA River watershed are being funded in whole or part by bonds resulting from the passage of Prop O. The projects are designed to improve water quality in the LA River watershed. New bridges proposed outside of the ones included in the project are discussed in 5.9.3. Several historic bridges in the project area are being proposed for possible replacement including the Sixth Street viaduct.
72. Comment noted.
73. The site on which on the LATC is currently located is included in all action alternatives. The provision of the LATC site would be part of the sponsor's LERRD responsibilities.
74. As described in the IFR, alternatives require the inclusion of the site where the LATC is currently located. The Corps of Engineers and City of Los Angeles are aware of the requirements involved with LERRDs and the LERRDs estimate includes those costs.
75. Your comment is acknowledged. The IFR evaluated available information. Future investigation of potential groundwater and soil HTRW issues will be addressed during PED in cooperation with the non-Federal sponsor. Per Corps policy, construction will not begin until a clean site acceptable all regulatory agencies has been provided to the project. With respect to groundwater contamination, the sponsor will be responsible for addressing groundwater contamination during construction, including appropriate treatment and disposal during dewatering activities.
76. The statements in the report are clear. Per Corps policy, construction will not begin until a clean site acceptable to regulatory agencies has been provided to the project. With respect to groundwater contamination, the sponsor will be responsible for addressing groundwater contamination during construction, including appropriate treatment and disposal during dewatering activities.
77. Your comments as to what should be considered "natural" are noted. The project proponents are aware that the channel is engineered for flood risk managment. This project is seeking to restore ecosystem function as much as possible within the recognized constraints. With those constraints an entirely natural channel is not possible, but what is possible is improvement of existing ecosystem conditions.
78. The "1 percent/100-year recurrence protection" is a concept used by FEMA to assess flood insurance. The Corps of Engineers used different methods to design the Los Angeles River channel in the 1930s and 1940s. The flood risks are documented in Section 2.3 of the IFR and details are provided in the H&H Appendix (Appendix E).
79. HTRW evaluation was based on available information. The non-Federal sponsor will perform, or ensure the performance of, investigations to characterize the existence and extent of hazardous substances during the Planning Engineering and Design phase of the project. Per Corps policy, construction will not begin until a clean site acceptable to regulatory agencies has

been provided to the Corps. Methane and hydrogen sulfide as related to worker safety would be a concern as related to underground construction or confined spaces. The proposed project does not include construction measures undertaken underground or in confined spaces and no methane or hydrogen sulfide safety issues are anticipated. Standard operating procedures in accordance with federal, state, and local occupational health standards will be followed.
80. The typographical error on the title to Figure 4.15 will be corrected.
81. Comment noted; left and right banks are standard terminology when referring to a river channel. Cardinal directions were added to the text as descriptors for the public.
82. Trestles, if necessary for the recommended alternative, would be designed during PED. The typical cross sections are merely intended to show the location of the trestles, not specify design details.
83. The LATC would no longer be located on the subject site; therefore, provisions for the infrastructure in the comment are unnecessary. Trestles are only shown where they would be necessary if those measures were to be included. Not all existing infrastructure is included on the typical cross sections.
84. There is no intent to elevate the entire LATC site onto trestles. The referenced sentence in Appendix A has been revised for clarity. As previously stated the LATC site would be utilized for the project, with rail yard use no longer on site, but the existing rail lines along the river would remain in place. The corrected sentence reads, "Existing main line railroad tracks adjacent to the LATC parcel would be rebuilt on trestles at existing elevation to allow flow through and connection of the riparian zone and marsh habitat to the main channel."
85. Comment noted. See response 84.
86. Trestling plans will be determined with the affected railroads under relocation agreements between the City and the railroad.
87. Freshwater marsh can also be supported by intermittent or ephemeral water sources. The assumption is that daylighted storm drains will support wetland habitat as depicted in Figure 3.1.
88. The section being referenced is Alternative 20 in Reach 7. As shown in attachment 3, a trestle is included with implementation of restoration at this location.
89. The term biota as used here was a general reference to living organisms; it will be replaced with "habitat."
90. Comment noted. See responses to 84 and 85.
91. In Alternative 13, marsh vegetation will be planted throughout the LATC site with minimal impacts to the active rail lines, since they will be left at grade. In Alternative 16 and 20, marsh vegetation will also be planted; however, the active rail lines which run parallel to the Los Angeles River will be trestled at grade.
92. As stated throughout the report, the action alternatives that require the LATC site and the rail yard would no longer use the site. This has been captured in the LERRD cost estimates.
93. Operation and maintenance of relocated facilities and utilities will be conducted by the facility/utility owner, not as part of the project.
94. It is recognized that there are uncertainties and risks inherent to costs developed for a feasibility study. The contingencies have attempted to capture these risks in applying cost contingencies. It is understood that relocations will require coordination with railroads.
95. Your comments regarding oil seeps, H2S migration, and methane migration from natural sources are acknowledged. These occurrences are not uncommon in Southern California and have been documented in the historic literature. However, the USGS and the California Division of Oil and Gas do not indicate the presence of oil or gas seeps along the length of the ARBOR

reach. The lack of definitive locations for oil and gas seeps does not preclude the potential that they will be discovered during future investigations or during construction.

Your comments regarding potential data sources for historical uses and potential contamination sources are acknowledged. The referenced maps, while historically significant, do not definitively define the extent and quantity of potential HTRW conditions for specific sites. These maps along with other available resources are considered tools for planning the comprehensive subsurface investigations for determining the nature and extent of HTRW impacted soil and groundwater. Future studies will need to further quantify the nature and extent of recognized potential HTRW sites.

HTRW assessment was based on available information. Prior to construction, the non-Federal sponsor will perform, or ensure the performance of, investigations to characterize the existence and extent of hazardous substances. Per Corps policy, construction will not begin until a clean site, acceptable to regulatory agencies, has been provided to the Corps by the non-Federal sponsor.

The potential presence of contamination in the vicinity related to railroad operations, lumber, and coal gasification facilities is recognized. The extent and degree to which previous industrial operations have impacted specific sites cannot be fully determined until detailed site investigations can be completed. These investigations will require access to property and authorization to conduct an unencumbered investigation. When access and authorization are granted, these investigations will be completed. Review of the Department of Oil and Gas documents did not reveal the presence of shallow oil wells in the area of Reaches 7 and 8. Productive formations, sedimentary rocks that produce oil and gas, exist throughout the Los Angeles Basin. The presence of methane and hydrogen sulfide in underground excavations is not uncommon in the Los Angeles Basin given the geologic conditions and the long history of oil production. These conditions are problematic in underground work, but have not been a significant issue in open excavations. The existing Los Angeles River is an open channel and the proposed modifications will remove portions of the existing concrete lining. Methane and hydrogen sulfide that is present within the underlying bedrock is expected to emanate slowly over broad areas and is further defused as it passes through the overlying alluvial sediments that occupy the river channel. Eventually these gasses are dissipated to the atmosphere. This process has occurred for millenia and is expected to continue in the future.
96. Review of aerial photographs, historic topographic maps, site visits, personnel interviews and other investigation procedures are tools utilized in the early stages of investigation to determine previous land use and the possible impact to the property. They also assist in planning of more focused and detailed investigations. In themselves they are not definitive. The history of railroad activities at Taylor yard and LATC was evaluated by the Corps, utilizing the conditions illustrated on historic USGS topographic maps that span the period of time from 1894 to the present. From 1894 to 1928 LATC grew from a single rail track to the Southern Pacific Rail Road Shops consisting of shop buildings, extensive sidings and a roundtable. During this same time period Taylor Yard had grown to become an extensive rail yard with numerous sidings and shop buildings. By 1953 both yards were nearly identical with shop buildings, rail sidings and roundtables, and both are described as Southern Pacific Rail Road Shops. The only noted difference was the presence of above ground oil tanks at Taylor.

97. The IFR indicates that HTRW contamination is likely. It does not conclude there is no contamination based on the records review.
98. See response 95.
99. The IFR indicates that HTRW contamination at LATC is likely. The order of magnitude cost estimate for remediation is provided in the IFR. Your estimate is noted.
100. The Draft IFR bases its rough cost estimate on likely contamination from historic uses and potential methods of remediation consistent with the use of the land for ecosystem restoration purposes. Prior to construction, the City would perform or ensure the performance of investigations to characterize the existence and extent of contamination at the site.
101. Your comment is acknowledged; however, no contradiction exists as the shallow and deep components are both in an unconfined condition and are consistent with the SFVSS model. The groundwater conditions discussed in the IFR and its appendices are adequate with respect to the evaluation of the alternative plans.
102. Your comment is acknowledged; however, the project does not require remediation of any and all groundwater contamination within the region; the groundwater contamination encountered during construction will require proper handling, treatment and disposal. Remediation of groundwater contamination unrelated to project implementation is beyond the scope of the project alternatives. It is the Corps' opinion that the groundwater conditions discussed in the IFR and its appendices are adequate with respect to the evaluation of the alternative plans.
103. The implied geochemical reactions of anhydrous calcium sulfate, H2S and water are not relevant to the section of this report. The intent of the discussion presented was to show the existing connection between surface waters and groundwater through the current engineered pressure relief system. This interchange existed prior to construction of the existing flood control channel and will occur if and when the concrete surface linings are removed.
104. Your comment is acknowledged. The groundwater conditions discussed in the IFR and its appendices are adequate with respect to the evaluation of their impact to and from the alternative plans. The analysis in the report quoted in the comment is not dependent on project specific modeling. We do not anticipate any significant changes in the groundwater regime based on the alternatives. Therefore, development of detailed groundwater modeling is not necessary for this study.
105. Your comment is acknowledged. The groundwater conditions discussed in the IFR and its appendices are adequate with respect to the evaluation of their impact to and from the alternative plans. The analysis in the report quoted in the comment is not dependent on project specific modeling. Detailed modeling is not required to recognize existing basic groundwater/ surface water interaction within the ARBOR reach.
106. Your comment is acknowledged. Known and suspected HTRW contamination within the study area is assessed at a feasibility level without bias for any action alternative, with order of magnitude cost estimates provided for the sites within the project alternative footprints. The City will further assess distribution and levels to develop fully detailed remediation plans. The non-Federal sponsor will ensure remediation of HTRW at 100% non-project cost.
107. Your comment is acknowledged. Known and suspected HTRW contamination within the study area is assessed at a feasibility level without bias for any action alternative, with order of magnitude cost estimates provided for the sites within the project alternative footprints. Prior to construction, the City will perform, or ensure the performance of, investigations to characterize the existence and extent of hazardous substances. The Draft IFR is clear in stating the requirements for remediation of contaminated lands prior to project construction and for

appropriate handling, treatment and disposal of contaminated groundwater encountered during construction at 100% non-project cost.

Silver Lake Reservoirs Conservancy
See GR-A.

Studio City Neighborhood Council
See GR-A.

Studio City Residents Association
See GR-A.

The City Project
1. See GR-A.
2. The primary purpose of the project is ecosystem restoration. While a secondary purpose of the project is to provide recreational opportunities consistent with the restored ecosystem, larger scale park and green space elements are beyond the project's scope.
3. Relevant information provided in your comments has been incorporated into the report. In some cases, similar references were already included in the socioeconomic sections (3.13 and 5.13) and a discussion of other social effects are found in Appendix B.
4. The Corps and the City of Los Angeles take compliance with all applicable federal, state, and local laws seriously. This includes the Executive Order concerning environmental justice.The environmental justice analysis has been updated to reflect the most current census information. The discussion of environmental justice has been expanded to more clearly address benefits to EJ communities. Also see Table 6-7 for comparison of social issues by alternative.
5. In reference to the listed steps: 1) The NER Plan and the Recommended Plan (the Locally Preferred Plan) are discussed in detail in Chapter 7. 2) An EJ analysis focuses on disproportionate adverse effects. However, additional text has been added showing the beneficial effects of the project alternatives as well in Table 5-46. 3) See Chapters 3 and 5 for analysis of alternatives. 4) Final decisions made by elected officials; opportunities to provide public comment throughout process - see Chapter 8 for details. 5) See response to point 2 above.
6. The Corps and the City of Los Angeles take protection and preservation of Native American cultural resources very seriously. As stated in the IFR, "The USACE contacted the California Native America Heritage Commission for a search of the Sacred Lands Inventory file to determine if there is any record of sensitive sites or traditional cultural properties that may be present and to obtain the most current list of Native American contacts for consultation. The Native America Heritage Commission responded that there were Native American cultural resources present and provided a list of tribal contacts for the USACE for consultation on these resources. The USACE contacted tribal representatives by letter in September of 2012. To date no responses have been received by the USACE. The USACE will continue efforts to inform and consult with tribal representatives regarding any cultural concerns that they might have. A copy of the draft EIS will be sent to the tribal contacts for their review and at each stage of the Section 106 process they will be invited to comment and participate." Furthermore, the IFR also states that "Focused, site-specific consultations would be conducted with Native American individuals and tribes and other ethnic communities to determine whether there are particular areas where there may be traditional cultural concerns."

7. A memorandum on health considerations has been added to section 5.11, Public Health and Safety, in the IFR.
8. Thank you for your suggestion to promote economic vitality through green jobs programs for diverse local youth and other residents, which will be considered by the City. It should be noted that the project's principal objective addresses habitat restoration, not job creation.
9. The primary purpose of the proposed project and alternatives considered in this Study is to restore approximately 11 miles of the Los Angeles River from Griffith Park to Downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the River to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo mountain ranges while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem. The analysis includes an examination of whether or not there are disproportional adverse effects of the alternatives; this is different than assuring equal benefits or access to new improvements.
10. Comment noted. Also see response to number 6 above.
11. A number of habitat and riverbank improvements have been examined – see Chapter 4 of the IFR.
12. Comment noted. The project purpose relates to restoring a portion of the Los Angeles River and, secondarily, providing recreational opportunities consistent with the restored ecosystem. New multi-use walking and biking paths would be constructed as part of the project. Providing transportation improvements for access is beyond the scope of the project and should be addressed in other planning venues.
13. The Corps and the City of Los Angeles have been and remain committed to extensive public outreach effort on this project. See Chapter 8 (Public Involvement) in the IFR, including efforts aimed at environmental justice communities. Continued opportunities for public input will be offered as the project moves forward.

The Nature Conservancy

1. Thank you for your comments. We have incorporated relevant information regarding the Mediterranean biome into the IFR in Section 2.1.1 under Technical Recognition. Please see GR-A for a detailed overview of the evaluation and selection of the recommended plan.
2. The Corps agrees that other areas in the watershed play a role in the ecological function of the LA River system. It is true that these areas would require separate studies, which could build upon restoration activities in the LA River Ecosystem Restoration project to design a more comprehensive system.
3. Benefits are discussed in detail in the CHAP Appendix G. Because this is an ecosystem restoration project, the focus is on benefits afforded by restoration, including restoration of habitat. The benefits are based on habitat and potential for supporting species, not specifically on occupation. In this case native fish species may need to be reintroduced by other agencies/entities. Benefits are quantified via the CHAP analysis, as described in Appendix G. Other benefits, including those to recreation and economic development are also discussed in Section 6.5 - and are considered in decision making. The benefits of restored connectivity are also discussed in Section 6.3.1 as well as Section 5.5. Ultimately, the benefits to habitat vs. the costs of the project are the driving factor in the final decision.

This report is drafted at a feasibility level. Any design details that would be required to facilitate restoration of fish populations would be specified and incorporated during the detailed design phase of the project.
4. Alternatives are not formulated for particular species. Per Corps guidance, alternative formulation for restoration is based on the historic habitats that occurred in the area prior to human intervention. Based on an assessment of historic conditions, riparian and marsh communities were known to be present along the river within the study area. Therefore, these habitats are the focus for restoration. The CHAP habitat evaluation team determined what habitat conditions and habitat elements might exist both with and without project 50 years into the future, and identified the types of species that could use those habitats.

Species that may inhabit these vegetation communities, including those that may already exist on the river, are expected to use the restored communities as well. Threatened and endangered species known to occur in the vicinity would also have the potential to occur in restored areas.

The document describes species generally and provides sufficient information to evaluate impacts of the proposed project to various guilds. Section 5.5.3 provides a discussion of impacts to wildlife for each alternative as well as impacts to wildlife movement. Biodiversity is discussed in several locations in the report, including in the habitat evaluation model (CHAP) included in Section 4.9.1.
5. The value of regional habitat areas was considered in that the Corps qualitatively addressed the value of connectivity to these areas and the importance of this connectivity. The focus of the study is not to determine the specific value of lands outside of the project limits or evaluate their specific resources, but to identify how and where the project would improve the ability for wildlife to move to and from those areas. The purpose of the report is to evaluate the impacts of the proposed project, which is provided in Section 5, and sufficient information is present to determine impacts to regional connectivity. Per public comments, the Corps also quantitatively valued connectivity, as described below. The Corps recognizes the value of these regional areas, which is why connecting to them is a primary objective of the study. Also refer to Response 4. See GR-B.
6. The interpretation that "the channel construction, according to the Report, was based on originally defective design criteria" is incorrect. The H&H Appendix instead states the criteria used for the original design is different than what we use today. It is true that one of the major constraints for the ecosystem restoration study is that the proposed features will not reduce the flood risk management levels afforded by the existing channel. The Corps plans to adopt a course of action that allows for ecosystem restoration while not reducing the current conveyance of the Los Angeles River. You are correct that additional engineering features may need to be included at critical locations if concrete is removed from the channel. These will be designed during the detailed design phase of the study. Vegetation could elevate flood risks if allowed to grow unchecked. Therefore, the study will also include an Adaptive Management Plan, a Monitoring Plan, and an O&M Plan to address these issues. The project will be designed to avoid impacts to flood risk management. This is true for any other modifications in the future downstream of the proposed LA River project.
7. The descriptions will be revised to reflect these corrections.
8. The description will be revised to reflect these corrections.

9. These categories are based on habitat types generated by the Northwest Habitat Institute for the CHAP analysis, which are cross-walked with other more local vegetation community naming conventions. The habitat type is categorized broadly and it is recognized that there is more diversity within each category.
10. Refer to Response 9. The difference in categories was based on the plant species and habitat elements that were observed in each area. The section of the report is a summary of the cover type mapping more completely described in Appendix G. "Pasture agricultural" refers to areas considered pasture and mainly covered with Bermuda grass and utilized as pastures while low density urban includes a mix of uses and cover as described in the report.
11. While authorization allows the Corps to remove vegetation to maintain flood capacity, in practice vegetation management in the channel has been subject to both funding constraints and a minimization of impacts to native species that have come to inhabit the vegetation when that limited funding is available. Recent practices have been limited to removal of non-native invasives in select areas, as determined by funding availability. This allows the Corps to provide flood capacity while minimizing impact to native habitat and species. The referenced text will be revised to reflect this more specific response. The Corps will conduct more detailed H&H analysis and determine the level of vegetation that can be maintained within the river. Vegetation maintenance by both the Corps and the City may be required to maintain the LACDA (by the Corps) or to comply with ecosystem restoration project constraints (City).
12. Cover type mapping and descriptions are included in Appendix G, which includes more details pertaining to existing habiat. The Corps recognizes that the discussions in Section 3.5.4 and 5.5.4 do not include an exhaustive list and inventory of species. The document describes species generally and provides sufficient information to evaluate impacts of the proposed project to various habitat types. Section 5.5.3 provides a discussion of impacts to vegetation and wildlife for each alternative.

In compliance with CEQA, special status species were considered in the preparation of Appendix H in the following manner: In preparing the biological resources section of the EIS/EIR/IFR, we reviewed information from several sources, including the CNDDB for the USGS quads that cover the ARBOR Reach and tributaries, the USFWS and CDFW species list for the Los Angeles County area, and the California Native Plant Society list (focusing primarily on 1A and 1B plant species from the CNPS list). Once the list was narrowed to those species that could potentially be found in habitats that occur in riparian areas in southern CA waterways, the list was further refined based on habitats that were identified in the CHAP appendix. Sensitive species that were determined to be likely to occur in the study area were discussed in Sections 3.5.4 and 5.5.4 of the Draft IFR. All other species with the potential to occur in historically-occurring habitats were listed in the tables in the Appendix H. The comment letter specifically mentioned A. pulchra pulchra. This species requires loose soils in chapparal or pine-oak woodlands, a habitat type that may well occur in the watershed but not in the study reach. This species was identified as being "Not Likely to Occur" and has been added to the appendix.
13. Refer to Response 12 and 17.
14. The list of 28 species included in the main body of the report includes those species that have been identified in the region and which may be found in riparian, wetland, aquatic, grassland, or urban areas during any part of their lifecycle. Other sensitive species were listed in Appendix H.

15. The text has been revised to accurately identify the presence or absence of sensitive bird species.
16. The references were examined and text revised as appropriate.
17. The text has been revised to clarify that wildlife movement is being studied by other entities (not part of this feasibility study), and that while the movement of specific species is not yet well known, it is generally diminished due to installation of urban infrastructure.
18. The Corps recognizes that the narrative does not include an exhaustive list of species. Providing an inventory of all species occurring in the study area, or with potential to occur in the study area, is not the focus of the Report. The document describes species generally and provides sufficient information to evaluate impacts of the proposed project to various guilds. Section 5.5.3 provides a discussion of impacts to wildlife for each alternative as well as impacts to wildlife movement.

Plant species were accounted for in the CHAP via the inventory of habitat types and habitat elements. Despite the exclusion of invertebrates, CHAP was independently peer reviewed and found by the Corps Ecosystem Center for Expertise to be sufficient for capturing habitat benefits at the level needed in order to compare the final array of alternatives. It is expected the restored habitats in the final array of alternatives would provide for a similar diversity of invertebrates, and would therefore not influence the decision on the recommended plan.

The River Project

1. Policy requires that the Corps consider potential climate change impacts when undertaking long-term planning, setting priorities, and making decisions affectings its resources, programs, policies, and operations. Per this requirement, the IFR has incorporated climate change in the existing conditions chapter in Section 3.2, in the impacts chapter in Sections 5.2 and 5.4, and in the Hydrology and Hydraulics Appendix (E), Section 9. Because it is difficult to quantify resilience of restoration measures to climate change, the Corps intends to design all restoration features with climate change resiliency built in.
2. The Corps addressed flood risk management in several areas of the IFR and appendices. Maintaining flood risk mangement is the major constraint of the study. All existing and future engineering for the IFR-EIS is predicated on the requirement that no changes will be made to flood conveyance capacity. Flood risk management was not included as an objective of the study, but future studies for flood risk management are not precluded by the action alternatives.
3. Changes to upstream watershed conditions will likely continue to occur over time. However, quanitfying those changes poses difficulty when trying to make meaningful predictions. Further, the scope of the IFR is determined by Corps ecosystem restoration goals.
4. Local and regional water resources are considered in our water budget for the ecoystem restoration. Water conservation, recharge and similar efforts are beyond the scope of this study.
5. The study scope did not affect consideration of widening the river. As discussed in the IFR, widening throughout the study reach was considered conceptually, but dismissed due to extremely high costs (over $7 Billion in real estate costs alone, without construction costs), substantial displacement of residents, and major impacts to critical infrastructure. The study team examined lands throughout the study corridor for their inclusion in project alternatives and identified locations where widening could occur.
6. Following construction, operation will be guided by a Monitoring and Adaptive Management Plan and Operation and Maintenance Plan to ensure that proper operation, maintenance, and

adaptive management are implemented. Concerns regarding proper implementation are noted. It is inaccurate to refer to the restoration features as landscaping or an economic development plan. The study alternatives provide restoration features that reestablish lost and degraded river functions and habitat within the challenging constraints presented.
7. Comment noted. The LACDA project continues to provide flood risk management to the Los Angeles region. No requests for deauthorization have been made by the sponsor. The proposed restoration project and the LACDA within the study area would be designed to have complementary O&M plans.

The Trust for Public Land

See GR-A. Thank you for the information provided; it will be reviewed and incorporated as applicable. The public comments influenced the Sponsor request for the LPP and the Corps approval of the LPP as the Recommended Plan, which includes more restoration and a larger recreation plan that takes advantage of the additional features of the larger plan.

Theodore Payne Foundation

See GR-A.

TreePeople

See GR-A.

UC Berkeley, Dept of Landscape Architecture and Environmental Planning

1. Noted. See GR-A regarding costs.
2. Regarding the comments relating to connectivity, these outputs were considered in the evaluation and comparison of alternatives which led to the identification of Alternative 13 as the NER and tentatively selected plan. Further, in response to Independent External Peer Review comments, connectivity benefits were quantified in greater detail, combined with habitat outputs from the CHAP model and subject to additional cost effectiveness and incremental analyses. See Response GR-B. Such analysis substantiated that the incremental costs per output are significantly higher for Alternative 20, and therefore, when also factoring in the key consideration of reasonableness of cost, there was not sufficient justification to select a larger scale plan as the NER Plan.

Following public review, a detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan

requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan.

However, as noted above, the Corps is recommending Alternative 20 as the Locally Preferred Plan, in recognition of the additional benefits provided by this plan. See GR-B. It should also be noted that the habitat units generated by CHAP did not capture all benefits associated with ecosystem restoration. No one model captures every element for consideration. The CHAP assessment was used to identify the final array of alternatives. Additional comparisons were made to assess restoration of hydrologic and hydraulic function and nodal (local) and regional habitat connectivity.

3. Alternative 20 is both a cost effective and Best Buy plan, which is why it was one of the four plans carried forward in the Final Array. While Alternative 20 is a Best Buy Plan, it provides diminishing returns, i.e., the incremental costs per output for this plan are substantially higher than for Alternative 13. Hence, this plan is significantly less efficient than Alternative 13. Alternative 13 was identified as the NER Plan in the Draft IFR, because it was the alternative that meets study objectives while providing the greatest increase in net benefits with the least increase in cost among alternatives in the final array.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets the criteria for selection of the NER plan. Accordingly, Alternative 13v has been identified as the NER plan.

However, the non-Federal Sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final Integrated Feasibility Report and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

4. The alternatives that required tunneling were evaluated in an early iteration of the CE/ICA analysis. This analysis showed that the incremental output associated with including plans that added tunneling was minimal, while the costs were very high (over $2 Billion for the smallest tunneling plan). Accordingly, it was apparent that there was no justification for carrying forward the plans requiring tunneling for further consideration. While the incremental costs for

Alternatives 16 and 20 relative to Alternative 13 are lower than the incremental cost of plans that includes tunneling relative to Alternative 20, this does not change the key conclusions of the analysis. Specifically, Alternative 13 was identified in the Draft IFR as a more efficient plan that Alternative 20, based upon incremental costs per output, and the differential in costs between Alternative 13 and 20 is very large. Therefore, the fact that the tunneling plans were not carried forward throughout the CEICA analysis did not impact NER plan identification.

See responses 2 and 3 above for a discussion of the identification of Alternative 13v as the NER Plan and the identification of Alternative 20 as the Recommended Plan.
5. Recreation is an essential part of a healthy and vibrant community, particularly where urban conditions prevail. However, the project is primarily one for ecosystem restoration. Under Corps policy, Recreation included as part of ecosystem restoration projects must be compatible with the ecosystem restoration purpose of the project and appropriate in scope and scale to the opportunity provided by ecosystem restoration projects. Recreation development should not require additional lands, and should be ancillary to restoration benefits. As such, recreational value did not factor into the CE/ICA.
6. Comment noted.
7. As stated in the IFR, there is no sponsor available to study flood risk management at this time. The lack of an available sponsor is unrelated to the Corps' current operation and maintenance responsibility for the channel in the restoration study area. As described in the H&H Appendix, the flood risks vary along the project reach. This is due to several factors including: vegetation in the channel, the original design was based on a smaller design event than would be used today, the amount of urbanization was not anticipated to be so vast, and updated hydrologic and hydraulic criteria. It should be noted that the Corps studied flood risk management along the Los Angeles River recently in the 1990s as part of a review of the LACDA. That study resulted in channel improvements, consisting primarily of floodwalls along the lower Los Angeles River and the Rio Hondo Diversion Channel. Although the 1992 report identified the potential flood conditions along the upper Los Angeles River, no improvements to the upper Los Angeles River, including the ARBOR reach, were economically justified at that time.

Although the current study does not have flood risk management as one of its objectives, one of the major constraints for this study was there would be no adverse impacts to the current flood risk management along the Los Angeles River. As such, any modifications to the channel will entail detailed engineering analyses to ensure the project will not adversely impact channel capacity or structural stability of the existing channel. The Recommended Plan will not increase flood risks nor residual flood risks for all reaches of the Los Angeles River.

UC San Diego

See GR-A.

Union Pacific Rail Road

1. Thank you for your comments on the Los Angeles River Ecosystem Restoration Feasibility Study. We will change the reference to the subject facility to the "Los Angeles Trailer and Container Intermodal Facility" or LATC throughout the Final IFR in accordance with your comment.

2. Union Pacific's opposition to action alternatives 10, 13, 16 and 20 because they would require the conversion of the LATC property from its current use to riparian/wetland is noted. We are also in receipt of your letter of March 28, 2014, which indicates that it is possible that Union Pacific could reach a sale or exchange agreement with the City of Los Angeles. The Corps does not agree that the NEPA/CEQA analysis in the IFR is flawed, that the Draft IFR includes inappropriate assumptions about the feasibility of relocating the LATC, or that the Draft IFR fails to evaluate relevant factors. Each of Union Pacific's detailed comments are addressed in the applicable impacts sections of Chapter 5.
3. We appreciate the information on the LATC's current operations and improvements.
4. Comment noted. We are aware of the Surface Transportation Board's role in rail regulation.
5. The Corps disagrees that the Draft IFR identifies all impacts listed in the comment as significant and adverse. Each of these resource impacts is addressed below in responses 6 and 7.
6. Effects on rail operations other than LATC: Under all action alternatives, the LATC yard would be required for project features. The alternatives differ regarding the types of site modifications that would occur. As described in the IFR, existing rail lines along the river channel would be trestled at grade in Reach 8 under Alternative 16 and in Reaches 7 and 8 under Alternative 20, with excavation below existing grade to reconnect the river to its historic floodplain in Reach 8 and provide a terraced connection in Reach 7. Every effort would be made to construct the trestles with a minimum of disturbance to rail operations, with only short term impacts. The Draft IFR discussion of trestling was not intended to imply tracks would be relocated or closed for significant periods. Rerouting of mainline rail is not proposed. The Final IFR has been revised to more appropriately convey the fact that the intent is to minimize delays to rail transportation, although some delays may occur. Impacts to rail lines that would be trestled are not anticipated to be significant and adverse. References in the Draft IFR table cited and elsewhere in the IFR have been revised to clarify the impacts to rail lines during trestling. As stated in the IFR, the project would coordinate with railroad stakeholders to ensure continuous operation and appropriate safety measures. Trestling the rail lines would be part of the City of Los Angeles' provision of LERRD for the project and the City would negotiate appropriate relocation agreements. With respect to spur lines and rail capacity, the only permanent impacts would be to the LATC site. As discussed in the Final IFR, following public review, further detailed cost analysis was performed, which identified a more cost effective variation on Alternative 13 (referred to in the IFR as "Alternative 13v" for "variation"). Alternative 13v is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco; this variation is within the spectrum of alternatives evaluated in the Draft IFR. This variation would require trestling along the right bank of the channel in Reach 7 but not the left bank in Reach 8. This variation is identified as the NER plan in the Final IFR. However, Alternative 20 is the Locally Preferred Plan and the Recommended Plan in the Final IFR. Alternative 20 requires trestling on both sides of the river.

7. With respect to socioeconomic and environmental justice impacts, some portions of the comment are in error. The Draft IFR did not conclude that all jobs at the LATC site would be permanently eliminated or that the impacts to environmental justice communities within the study area would be disproportionately significant and adverse. Rather, the Draft IFR indicated that if all or most LATC jobs were held by members of environmental justice communities in the

census tracts around the LATC, and if all or most employees could not retain their positions at a replacement facility within the region, there was potential for disproportionate impact to environmental justice communities. However, analysis has not shown that all jobs would be eliminated from the region or that all jobs are held by members of environmental justice communities around the LATC. As emphasized by Union Pacific, the LATC functions are a critical component of Union Pacific's domestic intermodal traffic network. Based on the assumption that these functions are critical as represented, it is anticipated that these functions would be relocated elsewhere. Extensive comments from City residents, stakeholders, and other agencies received during the comment period have emphasized the significant positive impacts for environmental justice communities from the implementation of the project alternatives, in particular Alternative 20, the Recommended Plan. Comments pointed to increased public health benefits, job creation (both directly from construction and indirectly from redevelopment), increased community cohesion and other factors. Elaboration on the potential impacts, both positive and negative, to environmental justice communities is included in the Final IFR. While the Draft IFR acknowledges the conflict with the Industrial land use designation caused by the inclusion of the LATC site in project alternatives, the IFR adequately discloses these impacts, and alternatives that met the purpose and need while avoiding the LATC site were not identified. Additional discussion is provided in Response 8, below.

Air Quality: The construction schedule for all alternatives has been revised to further reduce effects on air quality. Air quality impacts during peak construction periods for all alternatives would have less than significant impacts for NEPA but all alternatives except for Alternative 13v would exceed applicable state localized significance thresholds under CEQA. Air quality parameters are expected to return to pre-project levels upon completion of construction. Various comments from agencies and the public also noted the potential for beneficial impacts to air quality from the constructed project. In addition, the Corps is coordinating with the South Coast Air Quality Management District, which recommended consideration of additional measures to further attenuate air emissions during the construction phase.

The comment correctly notes that the Corps identified Alternative 13 as the TSP in the Draft IFR and that the City Council voted to support Alternative 20. In a letter dated April 10, 2014, the City of Los Angeles requested that Alternative 20 be the Recommended Plan. Based on that letter, the Corps requested a policy waiver for the consideration of that alternative as the LPP and Recommended Plan in the Final IFR. By memorandum dated May 27, 2014, the Assistant Secretary of the Army (Civil Works) (ASA(CW)) granted the requested LPP exception and authorized the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report.

8. The Corps disagrees that the study fails to consider feasible, reasonable alternatives. The study undertook a sequenced search for feasible alternatives. Through the formulation and comparison process, alternatives were eliminated for failure to meet the purpose and need and objectives, excessive and unreasonable cost, inconsistency with key project constraints, and similarity to other alternatives included in the reasonable range of alternatives evaluated in detail in the IFR. The Draft IFR includes an extensive discussion of the alternative formulation and comparison process in Chapter 4, in addition to the brief discussion in the Executive Summary cited in your comments. As explained in the IFR, the Corps and City followed a robust process. The Corps, City, other agencies, and stakeholders originally assembled various ecosystem

restoration management measures, the "building blocks" of alternatives, to create 19 alternatives, which were then divided into geomorphic reaches and reassembled to develop 152 different combination plans. As further described in the IFR, most of the initial and many of the recombination plans were infeasible due to their reliance on technically challenging, extensive and expensive engineering interventions, such as the creation of underground detention/retention basins or very large bypass culverts or tunnels. The cost of tunnel construction was estimated to exceed $1.5 Billion. The plan formulation effort also examined deepening of the entire channel, found to be inconsistent with restoration and to substantially impact utilities and bridges throughout the corridor; and modifications to upstream dams, determined to be too far upstream to significantly affect flow reduction. Without removing high velocity peak flows from the river channel, channel widening is necessary to meet the restoration purpose without violating the major project constraint of maintaining existing levels of flood risk management. The study team considered a conceptual alternative limited to the existing LACDA right of way and found it would not meet the restoration purpose, as high velocity flows would not be reduced sufficient to sustain habitat during high flow events and it would violate the constraint of maintaining existing flood risk management levels. The study also considered the conceptual alternative of channel widening throughout the study area and eliminated it for excessive cost of over $7.6 Billion for land alone. The combination alternatives were assessed for ecological outputs using the CHAP model and their costs were analyzed as disclosed in the IFR. The Corps uses IWR Plan to assess cost effectiveness and conduct incremental cost analysis. The IWR Plan results included the LATC site starting with Best-Buy Alternative 9 as described further in Chapter 4 of the IFR. Best Buy Alternatives smaller than Alternative 10 were eliminated for failure to meet the purpose and need and objectives, as they did not include restoration in all reaches and failed to restore habitat connectivity throughout the study area and to regionally significant ecological areas. Real estate considerations, including impacts to commercial facilities, businesses, and residences, were a major area of investigation for the study. Private lands were included only if restoration benefits in that reach could not be accomplished any other way. Opportunities for restoration of a southwestern riparian ecosystem (as opposed to restoration of only riparian plant communities and habitat) are exceedingly rare in the Los Angeles watershed, but are present within the study area at critical opportunity areas at Taylor Yard and LATC.

Although initial plans were developed that excluded the Taylor and LATC parcels, they did not meet the restoration objectives for restored habitat and habitat connectivity. The inclusion of the Taylor Yard and LATC properties provided the only opportunities in the study area to substantially widen the channel and increase habitat to meet project objectives. Corps planners and reviewers searched extensively for sites that would meet the project needs to ensure the "hard look" required by NEPA. The river banks are flanked by freeways, major utility corridors, and rail lines in most portions of the study area. In addition, residential communities occupy other parcels close to the river's banks. As the comment letter notes, the LATC is the largest single-owner property adjacent to the Los Angeles River. Even if technically feasible, to obtain land similar in size to the LATC along the river would require uprooting entire neighborhoods.

Therefore, no alternatives excluding LATC were identified that meet the purpose and need and project objectives, as discussed in the Draft IFR. Alternatives must meet the needs the federal action is intended to serve. Environmental Defense Fund v. U.S. Army Corps of Engineers, 492 F.2d 1123 (5th Cir. 1974); see also City of Angoon v. Hodel, 803 F.2d 1016, 1021 (9th Cir.

1976) ("When the purpose [of a project] is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved.") The alternatives presented for detailed consideration constitute a reasonable range of alternatives as required by NEPA. Union Pacific does not identify any reasonable, feasible alternatives meeting the purpose and need that the Corps failed to consider. As noted above, following public review, further detailed cost analysis was performed, which identified a more cost effective variation on Alternative 13. Alternative 13v is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. This variation is identified as the NER plan in the Final IFR. This variation is within the spectrum of alternatives analyzed in the Draft IFR, as discussed in Section 4 of this Final IFR.

9. Unrealistic assumptions: Union Pacific's position of the inclusion of the LATC site in a proposed project is noted. However, we disagree that the existing rail yard location is the only possible site in the greater Los Angeles region where such a rail yard is feasible. The Corps further disagrees that the mere assertion that no suitable site is available is substantial evidence of its accuracy. The analysis in the IFR is based on available information, and Union Pacific has not provided factual information to contradict the analysis.

We agree that NEPA requires a "full and fair discussion of significant environmental impacts" as part of an EIS, including direct and indirect impacts. The impacts of including the LATC site in the project alternatives are analyzed in sufficient detail in the IFR. The impact analysis considers direct, indirect, and cumulative impacts. The provision of LERRD, including the LATC site, is a sponsor responsibility. The ecosystem restoration project would not prescribe a specific location for the LATC functions. The analysis does conclude that the impacts from conversion of industrial land at LATC would be significant and adverse with respect to land use. The Corps acknowledges and describes this impact in the report. The Corps believes that the assumption that LATC functions can be transferred to another location within the Los Angeles region is supported. The Los Angeles region is large. The analysis assumes that the LATC function would still be needed within the greater Los Angeles region, whether established at a new site or co-located at an expanded alternative facility. The Basin has several rail yards, and new or expanded rail yards have been proposed in the last decade. The City is experienced with complex real estate transactions and facility siting considerations. The analysis in the IFR assumes that the LATC functions would be reestablished in an industrial zone, of which Los Angeles County alone has 17,922 acres of such zoning. The IFR will clarify the indirect impacts associated with relocating the LATC's industrial use within an industrial zone within the Greater Los Angeles region; additional CEQA analysis would analyze site-specific impacts associated with a specific relocation scenario at the appropriate time.

10. In fact, Union Pacific's comment letter acknowledges that an alternative site could be identified and expresses concern over a permitting and construction time frame. The Corps recognizes that Union Pacific's relocation to a new site could take time. The Corps and City of Los Angeles will develop a construction sequencing schedule that takes into account the logistical issues identified.

11. See Response 7 above.

12. Site screening: We appreciate your concerns regarding site screening. The discussion included in Appendix H briefly describes the reasons various sites were dismissed from further

consideration. As you note, some sites were identified as posing particular challenges in relocation of services. However, we disagree that the LATC site should be treated similarly to these sites. As noted in the IFR, private sites were excluded except when critical to meeting study objectives. The CSY site identified as having comparable circumstances is only 25 acres. Moreover, the functions at that site serve the immediate area. By contrast, the LATC site is one of only two large single owner parcels in the historic floodplain adjacent to the river. As further discussed in the IFR, under Corps policy, sites with known or suspected HTRW contamination are to be avoided whenever practicable to do so. However, in this case, the Corps determined avoidance was impracticable because of the substantial constraints within the study area. As discussed above, the Corps searched diligently for other sites that would meet the need, but no other site provides the same restoration potential at the downstream end of the project. The inclusion of the LATC site provides the only opportunity within the study area to remove concrete from the bottom of the river channel. Agencies, stakeholders and the public overwhelmingly supported Alternative 20, often specifying that the hydrologic and hydraulic reconnection of the river to the LATC site was critical to the project objectives and effective river restoration. We appreciate your concern that a site of appropriate size and proximity be identified for the replacement of LATC operations. The City of Los Angeles has expressed its continued commitment to work with you on the resolution of site identification and a negotiated transaction for site acquisition.

13. Comments on the Draft IFR are addressed in the Comment Appendix of the Final IFR.

14. Opposition to project and request for recirculation of Draft IFR: The Corps and the City do not agree that recirculation or supplementation of the Draft IFR is required at this time. Under NEPA, an agency shall respond to all comments submitted in the Final EIS, discussing at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised. 40 CFR 1502.9(b). A supplement to a draft EIS is to be prepared when the agency makes substantial changes in the proposed action that are relevant to environmental concerns, or there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. 40 CFR 1502.9. Neither of these circumstances is present here. Our responses to your comments address your views, but no significant new circumstances or information has been identified, nor does the Corps plan to make substantial changes to the proposed actions addressed by the Draft IFR in the Final IFR that are relevant to environmental concerns. The discussion of effects related to the LATC site will be clarified, but no substantial new information has been identified. We appreciate your input on the Los Angeles River Ecosystem Restoration Feasibility Study. As requested, your comments have been shared with decision-making bodies of both the Corps and City and will be included in the Final IFR submitted to the Chief of Engineers.

Union Pacific Railroad 2nd Letter

Thank you for your letter regarding the Los Angeles River Ecosystem Restoration Feasibility Study. Your comments are noted. We appreciate your acknowledgement of your long history of cooperation with the City of Los Angeles and acknowledgement that a sale or exchange with the City could be reached in the future for a site that is compatible with the use and needs associated with the existing site. As you know, the ecosystem restoration project would be implemented in phases over time, dependent on appropriations, construction scheduling and other considerations. The City has an established reputation of working effectively with railroads. We appreciate your

willingness to continue dialogue with the City to meet the purpose of the restoration study and Union Pacific's own needs.

Urban Rivers Institute

See GR-A.

Urban Waters Federal Partnership

1. Opportunities for complentary projects in the future remain a viable avenue for the City to continue to explore as resources allow if funding sources other than the Corps become available. If the City were interested in exporing expanded opportunities in and along the River beyond the recommended plan, this could be pursued through the Section 408 modifications to completed projects permitting process.
2. See GR-A.
3. The Corps recognizes that real estate costs are significantly higher within the Los Angeles area relative to other parts of the country. In recognition of those costs, the City offered to voluntarily waive reimbursement of the costs of lands, easements, rights of way, relocations, and disposal sites exceeding its statutory share of total ecosystem restoration costs. While all of the plans in the Final Array are Best Buy Plans, and are, therefore, effective and efficient, Alternative 13 was identified in the Draft IFR as more efficient than Alternative 20 in providing ecosystem outputs. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

Following public review, a more detailed cost analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan.

However, the non-Federal Sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final Integrated Feasibility Report and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.

4. It is recognized that Alternative 20, as the largest of the final array of plans, will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment. As noted above, the Corps is recommending Alternative 20 as the Locally Preferred Plan, in recognition of the additional benefits provided by this plan.
5. With an updated cost of $694 million, the NER Plan (Alternative 13v) represents a very significant investment in ecosystem restoration along the LA River, and also generates substantial habitat and connectivity benefits. However, as noted above, the Corps is recommending Alternative 20 as the Locally Preferred Plan, in recognition of the additional benefits provided by this plan.
6. In addition to the ecosystem restoration plan, a complementary recreation plan is also included. This will allow the public to access and appreciate the restoration project without negatively impacting restoration outputs.

USC School of Architecture, Landscape Architecture

See GR-A and GR-B.

USC School of Architecture, Landscape Morphologies Lab

1. See GR-A.
2. See GR-B.
3. Alternative 10 is the least cost of the four alternatives in the final array, and minimally meets the planning objectives. As shown in Table 6-4 it provides a minor improvement to nodal (local) connectivity. Therefore, the incremental increases in nodal (local) connectivity beyond that alternative were displayed in the report for comparison.
4. The feasibility study evaluated a range of restoration alternatives. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

Following public review, further analysis was performed that included a more detailed cost analysis using Mii software, real estate cost updates, and further modified contingencies based upon a full cost risk summary analysis. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. This

alternative is within the spectrum of alternatives considered in the Draft IFR. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan.

Alternative 13v provides the greatest amount of ecosystem restoration output for the investment cost; in other words, for the total project cost of $694 million, there is no other plan of similar cost that produces more restoration output. Therefore, Alternative 13v is identified as the NER Plan. However, the non-Federal Sponsor requested that Alternative 20 be recommended instead of the NER Plan. The Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final Integrated Feasibility Report and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public.
5. Thank you for the information; a similar analysis of connectivity has been conducted and is included in the Final IFR.

Valley Industry & Commerce Association

1. See GR-A.
2. The recommended plan will involve the conversion of some lands that are currently zoned industrial to accommodate the project's ecosystem use. This activity is a responsibility of the non-Federal sponsor (City of Los Angeles), which must provide all lands for the project. The City of Los Angeles will work closely with any business that needs to be relocated as a result of the project to relocate within the region, per the requirements of the Uniform Relocation Act. Preservation of industrial land is a priority of the City as expressed in its industrial land use policies; therefore, this will be considered by the City as the project moves forward.
3. This is an important issue throughout the Los Angeles Watershed; however, the issues of recycled water, increased capture, and use of stormwater are outside of the scope of Corps ecosystem restoration. It is the City's desire to use recycled water, when feasible for construction and maintenance of the completed project to support habitat.
4. Preferences for funding are noted.

Walk Bike Glendale

See GR-A.

Wild Heritage Planners
See GR-A.

Petitions

Restore the LA River Petition
See GR-A.

LA River Revitalization Corporation Petition
See GR-A.

St. Sebastian Catholic Church Petition
See GR-A.

Individuals

Agner, Herb

See GR-A.

Aguilera-Gonzalez, Emiliana

1. Wildlife, including coyote, bobcat, and mountain lion currently reside in Griffith Park and often make their way to the river. For this reason, the alternatives were designed with the intent of enhancing their movement through (rather than to) urban LA, as opposed to the existing condition where they may enter the river with no outlet or corridor to adjacent wilderness areas, prompting them to enter local neighborhoods. The wildlife connectivity measure you reference was considered as a means to allow existing mammals to safely transit the area. This measure was evaluated and found in many cases not to be effective. However, the restoration design will include slopes and vegetation suitable for wildlife passage. Only by improving connectivity along the river through the use of wildlife tunnels/bridges and other such methods, can safety for wildlife be enhanced by providing a means to get to other natural areas through enhanced corridors and habitat nodes.
While turf reinforcement mats are currently considered for erosion control, specific designs will be determined during the detailed design phase prior to construction. The Corps will continue to evaluate options for erosion control to minimize impacts to wildlife.
2. The Corps would cut a slot into an existing drain so all flow up to a certain amount would now flow through the slot into a wetland area. If the water level continued to rise, it would exceed the height of the slot and flow into the river as it did before. The diversion will be effective whenever there is flow in the storm drain, which will include urban runoff.
3. There are a number of excellent references on the history of the Los Angeles River which provide the thought processes that went into the design for the Los Angeles River channel. The design process for the Corps has progressed over time, and we now strive to include ecosystem restoration features into our projects. Fencing has a negative impact on wildlife migration so the

intent is to limit it as much as possible. However, there are some adjacent uses that may still require fencing. The Corps will also incorporate appropriate fencing wherever safety is paramount.
4. Thank you for your comment. The Los Angeles River is still the primary feature in the flood risk management for the City of Los Angeles. One of our main constraints is that proposals cannot affect the current level of protection afforded by the channel.

Alas, Kevin

See GR-A.

Alexander, Peter

See GR-A.

Alpern, EstherLee

The authority under which the study is being conducted is for ecosystem restoration. That Corps authority allows for integration of passive recreation features, such as multi-purpose trails, where they do not conflict with restoration. Active recreation elements, such as ball fields, are not compatible with restoration and are beyond the scope of an ecosystem restoration project.

Amsden, Liz

See GR-A.

Anderson, Carolyn

See GR-A.

Anderson, Michael S.

1. Comment noted; this task force was a precursor to the LARRMP. We will add a reference to this task force in the earlier reports section.
2. Comment noted. A more recent multiple objective feasibility study was completed for Taylor Yard in 2002. Taylor Yard studies were examined and documented as part of the planning process in Section 1.4 of the main IFR.
3. As an ecosystem restoration project, this project is not formulated for flood risk management improvements. Although some increase in flood storage may occur due to excavation of substrate, this result is incidental to the overall goals and objecives of the study.
4. The study you refer to focused on using the entire Taylor Yard site as a detention basin with incidental ecosystem enhancement and recreation. The area at Taylor Yard is not large enough to provide significant flood relief for the entire lower Los Angles River. The goal of the Taylor study was to reduce peak flows and provide some flood risk benefits as far downstream as possible. Since that time, portions of Taylor Yard have been sold and are in use for alternate purposes including the Rio de Los Angeles State Park and a school, along with private development. As part of the current ecosystem restoration study, we looked for opportunities for

peak flow reduction in concert with restoration. The parcels of Taylor Yard we included in our study may still offer some lesser incidental peak flow reduction, but it will not be on the order of what could have been achieved using the entire Taylor Yard.

Antos, Mike

See GR-A.

Appleton, Steven

1. Public coordination occurs throughout the NEPA/CEQA process and through some permitting processes. Continued opportunities for public input will be offered as the project moves forward.
2. Construction phasing will be dependent on several factors including those mentioned in the comment.
3. Your comment noted several different proposals for site specific projects; we agree that some of these proposals may be outside the scope of this study but could be implemented by others in the future. In regards to your recommendations pertaining to acquisition of the "Bimbo Bakery Parcel," greening of Blimp Street, and tunnel or bridge connections to Elysian Park, the acquisition of properties only for recreation is beyond the authority of the Corps for a restoration project, and any recreation elements must be on lands acquired for the restoration. A pedestrian/wildlife bridge between the river channel and Elysian Park is a creative idea; however, it may not be used by wildlife due to exposure and size of the structure. A bridge of sufficient size would likely be impracticable.
4. Fencing will be designed in accordance with Corps and sponsor safety requirements, and in consideration of aesthetic values as well as wildlife movement. The non-Federal sponsor would have an opportunity to select (and provide additional funding for) fencing materials or designs that exceed Corps standards. For the feasibility study, it was assumed that existing chain link fencing that occurs in several locations along the study area would be replaced in kind. However, modifications may be made during the design phase.
5. The recreational plan as proposed will allow connection and trails and will try to maximize public access without detracting from the ecosystem restoration outputs of the project to the extent it does not conflict with the ecosystem restoration outputs and function of the project. Accessibility needs differ between flood risk management facilities and recreational sites; final design plans will include evaluation of best safety measures for protection of facilities and access to recreation. Safe and compatible access will be considered as detailed design is completed. Assuming you were referring to Executive Order 12898 (Environmental Justice), the recreation plan includes trails and access points along the river.
6. Recreational features that fall within the footprint of this project and which are affected by the project or where use patterns are affected by the project will be constructed or repaired in compliance with applicable building codes and health and safety regulations.
7. Widening of channel walls in some reaches to increase the channel width and allow additional habitat in the channel was included in some of the alternatives considered; where a vertical wall is used, it is typically used only on one side of the channel at a time. However, you are correct that the sentence referring to Reach 6 on page 67 of the Design Appendix is a typographical error, and it will be corrected.
8. Concur. It should be referencing the Taylor Yard section, not the West bank.

9. Thank you for reporting your observation. Hydraulic modeling and detailed design will consider sediment transport and possible impacts to restored areas. More detailed designs to be completed in the Preconstruction Engineering and Design phase will identify if there are springs within Taylor Yard that are viable for providing project water.
10. Wetland restoration will be completed with vector control in mind, and necessary coordination will occur during design, implementation and operation.
11. Noted.

Aronson, Robert

See GR-A.

Babila, Phyllis

See GR-A.

Bander, Falicia

In terms of modifying the river banks to allow public access, presumably this relates to a desire for public access to the river for recreation purposes. The recommended plan includes a recreation plan that complements the ecosystem restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function, preventing recreation visitation adversely impacting the restored areas. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

Banner, Michael

See GR-A.

Barden, Lane

See GR-A.

Barker, Urte

See GR-A.

Barnett, Geoff

See GR-A.

Barngrove, Sally

This feasibility study is evaluating ecosystem restoration alternatives in and along an 11-mile stretch of the Los Angeles River from Griffith Park to downtown Los Angeles. None of the alternatives evaluated included features in the vicinity of Devil's Gate Dam.

Baron, Vic

See GR-A.

Barretto, Brandon

See GR-A.

Bartrosouf, Alek

See GR-A.

Bates, Russell

See GR-A.

Battin, Susanna

See GR-A.

Belden, Edward

See GR-A.

Benoit, Jay

See GR-A.

Bevilacqua, Anthony

See GR-A.

Bilson, Renne

See GR-A.

Bise, Ava

See GR-A.

Bossone, Lynn

See GR-A.

Bouville, Fabienne

See GR-A.

Bowers, Paul

See GR-A.

Bowling, William

See GR-A.

Brenner, Maya

See GR-A.

Brotman, Daniel

See GR-A.

Brown, Lynn

See GR-A.

Brown, Syd

See GR-A.

Brye, Steve

The commenter correctly assumes that the study alternatives do not involve restoration of the entire LATC parcel. No assumptions are made regarding the most appropriate use of the other portions of the parcel not included in the project. The suggestion to utilize such lands for a higher education institution/purposes is noted.

Budzik, Mike

See GR-A.

Cabrera, Mirella

See GR-A.

Camacho, Maria

See GR-A.

Campbell, Alice

Thank you for your comment. The proposed project alternatives are for the purposes of restoration, not beautification. The appendix cited is consistent with the main IFR document and evaluates the hydrologic and hydraulic conditions and impacts of the project alternatives. The maintenance of existing flood risk management function is a major constraint of the restoration formulation, so it is discussed throughout the study documents. The Corps of Engineers and the City of Los Angeles are aware of the flood risks near the area to which you are referring. In fact, in 1992, the Corps of Engineers performed a flood risk reevaluation study for the entire Los Angeles County Drainage Area (LACDA) to consider changed conditions. The study resulted in channel improvements, consisting primarily of floodwalls along the lower Los Angeles River and the Rio Hondo Diversion Channel. Although the 1992 report identified the potential flood conditions along the upper Los Angeles River, no improvements to the upper Los Angeles River, including the ARBOR reach, were economically justified at that time. Flood risk management is not within the scope of the current Ecosystem Restoration Feasibility Study.

The City of Los Angeles is in the process of requesting a LOMR (letter of map revision) to FEMA that would identify the flood risks and flood zones along the Los Angeles River. That effort should be complete before any construction has begun for the current Ecosystem Restoration study. A major constraint of the current Ecosystem Restoration study is that the proposed features will not have an adverse impact on the level of protection currently afforded by the Los Angeles River channel.

Contamination on lands to be included in the restoration project would, as described in the IFR, be remediated prior to project construction. The costs of the remediation would be at 100% non-project cost. The City is responsible for ensuring the remediation of the lands to support the ecosystem restoration features. Where groundwater contamination is present and would be encountered during construction, the City shall ensure the proper handling, treatment and disposal of the contaminated groundwater at 100% non project cost.

Recreation is a minor component of the proposed project alternatives, constituting less than 1 percent of total project cost.

Camphuis, Kay

See GR-A.

Carpenter, Cathy

See GR-A.

Carrillo, Juliette

See GR-A.

Casillano, Matthew

See GR-A.

Chauser, Lee

Thank you for your comment.

Chesler, Stewart

Comment Noted. The array of alternatives in the Draft IFR included Alternatives 10, 13, 16 and 20; as noted elsewhere, a more cost effective variation on Alternative 13, utilizing the Reach 7 plan from Alternative 20, was identified through subsequent cost analysis. Alternatives smaller than Alternative 10 were dismissed from further consideration for failure to meet the project purpose and objectives. The LATC site is one of only two large single-owner parcels available along the river corridor within the study area where substantial river widening can occur.

Colacion, Edward

See GR-A.

Conway, Rebecca

See GR-A.

Crane, Rebecca

See GR-A.

Cruz, Ray

Thank you for your comment. An aerial tramway is outside the scope of the feasibility study and the Corps mission for ecosystem restoration.

Dawson, Robert

See GR-A.

de Zamaroczy, Nicolas

See GR-A.

de Zamaroczy, Nicolas

See GR-A.

Deptula, Anthony

See GR-A.

Deutsch, Lauren

See GR-A.

Devereaux, Toni

See GR-A.

Dillard, Joyce

1. The Corps of Engineers and the City of Los Angeles are aware of the flood risks along the Los Angeles River. In fact, a 1992 study by the Corps of Engineers identified the floodplains for all areas along the Los Angeles River. A major constraint of the current Ecosystem Restoration study is that the proposed features will not have an adverse impact on the level of protection currently afforded by the Los Angeles River channel. As such, any modifications to the channel will entail detailed engineering analyses to ensure the project will not adversely impact channel capacity or structural stability of the existing channel. The selected plan will not increase flood risks nor residual flood risks for all reaches of the Los Angeles River.
2. We do not concur that recreation and flood risk management are inherently incompatible. Final design plans will include necessary safety measures to ensure continued protection of the public and flood risk management facilities, while providing reasonable access for compatible passive recreation.
3. Dates will be investigated and corrected if necessary.
4. Comment on the LARRMP noted.
5. Thank you for your investigation of this Study. The additional projects mentioned will be added to the cumulative impacts analysis as appropriate.
6. The ecosystem restoration study has been developed with the understanding of numerous constraints that are present in an urban environment.
7. Evaluating the potential effects of any such developments (which are not currently proposed) on ecosystem restoration would be the responsibility of those project proponents.
8. Although Repetto Hills and Ascot Hills were not specifically mentioned in the IFR, the proximity of adjacent undeveloped or open space areas was determined to be a key benefit as the project will allow greater access to and from these areas. Ecosystem restoration for wildlife values is the primary objective of this project. Compatible recreation elements are a secondary objective. With or without a "Significant Ecological Area" designation, the project area would

not be a "front for development," as any future proposals within its boundaries would need to be compatible with restoration objectives.
9. Cost estimates have been developed using the best available data, and reflect the best estimates that can be made at the current level of design.
10. Contamination on lands to be included in the restoration project would, as described in the IFR, be remediated prior to project construction. The costs of the remediation would be at 100% non-project cost. The City is responsible for ensuring the remediation of the lands to support the ecosystem restoration features. Where groundwater contamination is present and would be encountered during construction, the City shall ensure the proper handling, treatment and disposal of the contaminated groundwater at 100% non project cost.
11. No claims are made that this project alone would result in sustainable economic development for the region, although it is anticipated that visitors and recreation trail users (as well as construction) would provide some economic lift.
12. The Corps identified Alternative 13 in the Draft IFR as the NER plan. As noted elsewhere, a more cost effective variation on Alternative 13 (Alternative 13v), utilizing the Reach 7 plan from Alternative 20, was identified through subsequent cost analysis.
See GR-A.
13. The alternatives have been designed to be primarily self-sustaining, within the available and anticipated water budget. Maintenance that is required (such as removal of non-native vegetation as well as mosquito abatement, if required) has been identified and accounted for in project cost estimates, and the non-Federal sponsor has agreed to take on that responsibility.
14. All local cities and agencies, as well as the general public, have been made aware of the proposed project, and received a copy of the Draft IFR.
15. A Health Impact Assessment has been included as part of the Final IFR in Section 5.11.3. The HIA did not identify any unmitigable effects to public health and safety arising from the proposed project.
16. Public health and safety remain a paramount concern of the U.S. Army Corps of Engineers and the City of Los Angeles.
17. The IFR describes the estimated project costs. Future appropriations will be required to fund the implementation.

Dillon, Raquel

See GR-A.

Din, Stephanie

See GR-A.

Dragert, Tobi

See GR-A.

Egeler, David

See GR-A.

Epstein, Scott

See GR-A.

Erasmo, Rocio

See GR-A.

Ferrufino, Chantelly

See GR-A.

Field, Corey

See GR-A.

Fine, Jocelyne and Steve

See GR-A.

Ford, Chris

See GR-A.

Forster, Peggy

See GR-A.

Fourier, Jason

See GR-A.

Franco, Veronica

See GR-A.

Freilich, Lawrence

See GR-A.

Frimmer, Justin

1. See GR-A.
2. The Los Angeles River and associated structures provide a necessary flood risk management function for all communities within its watershed. Simply tearing out all of the concrete without adding a suitable area for flood water conveyance is not an acceptable alternative and acquiring land is extremely expensive. Significant water flows in the river only during storms. The rest of the year, the flow of water in the river is dominated by releases from Tillman Treatment Plant.

The study seeks to restore natural processes and functions within existing constraints, including maintaining existing levels of flood risk management.

Frye, Lauren Lajoie

1. Thank you for your letter. The initial study area included 32 miles of the river within the City. The study process resulted in narrowing that area to the ARBOR reaches described in section 1.2.1 of the IFR. Further studies could address other areas within the watershed, however, that is beyond the scope of this study.
2. Restoration opportunities throughout the entire 32 miles of the LA River within the City of Los Angeles were evaluated and, during the preliminary analysis phase, choices were made to focus on areas that could be most easily connected to the river's most extensive existing riparian habitat corridor—the 11-mile Glendale Narrows stretch. Other areas were deemed infeasible, because of infrastructure barriers, including the Sepulveda Dam, narrow all-concrete box channel configuration of the channel through Studio City, all-concrete character of the channel upstream of the Basin and because the Basin itself already hosts rich riparian habitat with nearby large multi-purpose open spaces, including the Sepulveda Basin Wildlife Refuge. Additionally, the scope of the study had to be limited, because it was not feasible to cover so much territory with the available resources. Restoration, runoff management, and peak flow reduction in the river's watershed will be important to LA River restoration, but the detailed strategy planning must be addressed by other complementary efforts.
3. The Blue Boulevards concept you propose is in line with identified goals of the City of Los Angeles for stormwater capture, treatment, and beneficial reuse of runoff. The alterations you suggest fall outside of the jurisdiction of the Corps and purpose of this feasibility study.

Funaro, Charles

See GR-A.

Gallardo, Ruth

1. See GR-A.
2. See GR-B.

Garlington, Todd

See GR-A.

Garrison, Elizabeth

See GR-A.

Gedeon, Geza

Thank you for your comments. The Corps appreciates your desire to reach the general public, to allow them to learn the distinctions among the various, complex alternatives, and to make more informed comments. The Corps and City of Los Angeles made the IFR document publicly

available on the Corps' website on Friday, September 13, 2013, and delivered copies of the document to libraries and agencies by September 20, 2013, noting a close to the public comment period on Tuesday, November 5, 2013 (45 days from September 20). The availability of the document was heavily publicized through news releases and press reports, and the Corps began to receive comments almost immediately. The Notice of Availability (NOA) was published in the Federal Register on October 4, 2013, which extended the public comment period an additional 2 weeks to Monday, November 18, 2013. By November 18, the document was available to the public for review and comment for over 9 weeks. Due to extremely tight project deadlines, the Corps was not able to grant an extension beyond the end of Public Review on Monday, November 18, 2013. The public will have an additional opportunity to comment on the Final IFR during a 30-day review period. Thank you for the information on the neighborhood councils.

Gill, Jennifer

See GR-A.

Giroux, Helen

See GR-A.

Gleason, Patricia

See GR-A.

Gomez, Horacio

1. See GR-A.
2. While benefits such as enhancing public accessibility and creating green spaces are important, they are not the primary purpose of the project. The primary purpose of the project is ecosystem restoration. The recreation plan complements the restoration plan. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. Subsequently, a decision was made to support the recommendation of Alternative 20 as the Locally Preferred Plan. The recreation plan was adjusted to be compatible with the ecosystem restoration features included in Alternative 20. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite. The IFR recognizes the various social benefits, including providing recreational resources to lower income and minority population, public health, and community connectivity.

Gonzalez, Jay

See GR-A.

Goodman, Howard

See GR-A.

Gray, Evelyn

See GR-A.

Griffin, Linda

1. See GR-A.
2. This study is the Los Angeles River Ecosystem Restoration Feasibilty Study and not the LA River Revitalization Master Plan, which is a City of Los Angeles plan.

Haagenson, Kathleen

See GR-A.

Hall, C. Andrew

See GR-A.

Hanna, Mark, PhD, PE

Water quality improvement is considered an ancillary problem/opportunity and is not an objective of the Study. It was considered as an objective initially because of public concerns about the River's poor water quality, but was not carried forward for several reasons. While water quality improvement objectives would be focused on improvement for aquatic organisms and restoration purposes (not human use or consumption), the existing riparian and freshwater marsh habitats and the associated wildlife have been sustained and are viable under the current water quality conditions. Certain measures evaluated in the study will incidentaly improve water quality through natural processes such as 1) increased acreage of riparian and freshwater marsh, 2) daylighting storm drains and planting wetlands at their confluences, and 3) creating side channels that remove water from the River, direct it through created wetland and riparian areas, and return this naturally treated water to the River. While it is recognized that water supply is an important issue in Southern California water conservation, recharge and similar efforts are beyond the scope of this study. Incidental recharge benefits may occur with restoration but are not quantified.

Hardin, Cindy

See GR-A.

Hatrick, Adrienne

See GR-A.

Hauck, Adam

See GR-A.

Hays, Sarah

See GR-A.

Hedge, Joanne

See GR-A.

Hernandez, Eugene

Comment Noted.

Hess, Peter and Marguerite

See GR-A.

Hidalgo, Kimberly

See GR-A.

Hildebrand, Charlotte

See GR-A.

Hopkins, Alexandra

See GR-A.

Horne, Mark

See GR-A.

Hough, Jessica

See GR-A.

Hrenda, Cathy

See GR-A.

Hudnut, Alec

See GR-A.

Husseini, Salah

See GR-A.

Hutchins, Michele

See GR-A.

Hutson, Clifford

See GR-A.

Jackson, Malcolm

See GR-A.

Javier, Linda

See GR-A.

Jessler, Darynne

See GR-A.

Jocoy, Christine

See GR-A.

Juergens, Kate

See GR-A.

Kammerer, Carolyn

See GR-A.

Kaplan, Fred

See GR-A.

Kapoor, Daveed

See GR-A.

Kasperkovitz, Chrisian

See GR-A.

Kaye, Dessa

See GR-A.

Keiner, Scott

See GR-A.

Kelley, Celeste

See GR-A.

Kirschbaum, Saran

See GR-A.

Klengler, Joan and Inglof

See GR-A.

Kugelman, Francie

See GR-A.

Kuppers, Fred and Sheri

See GR-A.

Lamm, Jim

See GR-A.

Lange, Trent

See GR-A.

LaValley, Tim

See GR-A.

LeBoeuf, Elaine

See GR-A.

Legras, Larry (and family)

See GR-A.

Lerner, Erik

1. See GR-A.
2. The recommended plan includes a recreation plan that complements the restoration features. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function, preventing recreation visitation from adversely impacting the restored areas. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

Lester, Ely

See GR-A.

Lindsey, Philippe

See GR-A.

Lizama, Dalma

See GR-A.

Lloyd, Grace

See GR-A.

Lundy, Ian

See GR-A.

MacAdams, John

See GR-A.

Magali

See GR-A.

Marks, Marilyn

See GR-A.

Mather, Evan

See GR-A.

Mayreis, Rex

See GR-A.

Mazzoleni, Ilaria

See GR-A.

McCain, Brain

See GR-A.

McCreary, Diane

Thank you for your comment. The Corps of Engineers and the City of Los Angeles are aware of the flood risks near the area you are referring to. In fact, a 1992 study by the Corps of Engineers identified the 1% annual chance exceedance floodplain for all areas along the Los Angeles River. A major constraint of the current Ecosystem Restoration study is that the proposed features will not have an adverse impact on the level of protection currently afforded by the Los Angeles River channel. The upstream limit for the current project is near Bette Davis Park just east of the Warner Brothers Studio lot. It will not have any impact on the Los Angeles River next to your property.

McQuiston, J.H.

1. Thank you for your comment. The Corps appreciates the anecdotal evidence provided by the commenter and would encourage documenting as much local knowledge as possible for historic purposes.
2. The Corps of Engineers and the City of Los Angeles are aware of the flood risks along the Los Angeles River. In fact, a 1992 study by the Corps of Engineers identified the floodplains for all areas along the Los Angeles River. A major constraint of the current Ecosystem Restoration study is that the proposed features will not have an adverse impact on the level of protection currently afforded by the Los Angeles River channel. The City of Los Angeles is in the process of requesting a LOMR (letter of map revision) to FEMA that would identify the flood risks and flood zones along the Los Angeles River. That effort should be complete before any construction has begun for the current Ecosystem Restoration study.

3. The Corps understands that a multi-objective project has a high value. During the detailed design phase, the Corps will further evaluate how much vegetation can be allowed in the channel while still maintaining the current level of flood protection.
4. Public safety is addressed in Section 5.12.3 of the report.
5. The Operations and Maintenance plan for the restoration project will include regular maintenance of all the proposed features including maintenance required to address potential effects of increased public access such as dumping, trash, and debris.
6. Local and regional water resources are considered in our water budget for the ecosystem restoration. Water conservation, recharge and similar efforts are beyond the scope of this study.
7. The basis for the study area is described in Sections 1.1.2 and 1.2.1. The alternative analysis considered historic and existing habitat configuration within this reach of the river that included their linkages and connectivity. That alternative analysis is described in detail in chapter 4 of the IFR.
8. Recreation and public access are described in Section 3.9 of the IFR and in Appendix B Economics. There are some large regional parks, such as Griffith Park in the study area. However much of Los Angeles is considered park deficient and has less than 3 acres of park space per 1,000 residents. This includes reaches 7 and 8 of the study area.
9. Your cost concerns are noted.

Medberry, Mike

See GR-A.

Medford, Roberta

See GR-A.

Mehta, Michelle

See GR-A.

Melchiorre, Marion

See GR-A.

Mendelson, Jodie

See GR-A.

Menzies, Leila

See GR-A.

Mersola, Jr. Michael (PLG Estates)

See GR-A.

Milam, Ron

See GR-A.

Miller, Blair

See GR-A.

Mills, Melissa

See GR-A.

Mischke, Gerald

See GR-A.

Montealegre, Andrew

See GR-A.

Morales, Ashley

See GR-A.

Morton, Patricia

Thank you for your comment. The recommended plan includes a recreation plan that complements the restoration features. The recreation plan features are integrated into the ecosystem restoration plan and designed to avoid impacts to the restored habitat within the river while allowing for passive recreation to occur.

Moyer, Harlan and Virginia

See GR-A.

Myers, Kalisa

See GR-A.

Nachtrab, Tom

See GR-A.

Nemtzow, David

See GR-A.

Ng, Carol

See GR-A.

Nicholson, Sonia

See GR-A.

O'Brien, Frank

1. Only those water bodies within the ARBOR area of consideration were included as part of the project area.
2. Noted, the figure was intended to show historic conditions, not specific to all sites.
3. Noted.
4. The CE/ICA analysis was an important component in identifying the best buy plans, the plans in the final array, and the NER plan. However, the CE/ICA was not the only consideration. The NER plan selection specifically considered additional benefits not captured by the CHAP model, including ecosystem benefits relating to nodal (local), hydrologic and regional connectivity associated with adding different plan features. Per Corps policy, regional economic development effects from project construction and post construction redevelopment, other social effects, resource significance, and reasonableness of cost are also considered in plan selection. While it is true that it is not possible to fully evaluate and capture all plan benefits and costs in our analysis, we believe that the analysis reasonably captures the primary benefits and costs necessary to support the identification of the NER Plan. The NER plan in the Final IFR is Alternative 13v and reflects further detailed cost analysis performed following public review. Alternative 13v replaces the Reach 7 plan in Alternative 13 with the Reach 7 plan from Alternative 20 and is a more cost effective plan than Alternative 13. The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan. However, in recognition of the additional benefits provided by Alternative 20 and strong support by federal, state and local agencies as well as various stakeholders and the general public, the Corps is recommending Alternative 20 as the Locally Preferred Plan.
5. Comment noted. Numerous alternative components were considered which were within the scope and purview of the Corps.
6. The analysis captured benefits of the alternatives either with the CHAP model, or through quantitative and qualitative assessment of connectivity. We feel that we have captured most of the benefits provided by the alternatives.
7. See GR-A.
8. Due to the complexity involved, it would not be possible to capture all of the potential ecosystem benefits in a single model. The CHAP model used for this study assessed habitat

restoration output within the project area. Also, as noted above, the evaluation and comparison of the final array of alternatives and identification of the NER Plan factored in considerations outside the immediate project area, most notably the regional connectivity benefits associated with implementing restoration in key areas. In addition to efficiency, which is measured by the CE/ICA analysis, the recommended plan identification also factored in plan effectiveness, completeness and acceptability, in accordance with Corps planning regulations.

Ocas, Beverly

See GR-A.

Olson, Carl

Thank you for your comment. Water conservation efforts are outside the scope of this study.

Olson, Eraina

See GR-A.

O'Neill, William

See GR-A.

Oswald, Ben

See GR-A.

Otto, Harry

See GR-A.

Padilla, S. David

See GR-A.

Paravecchio, Robin

See GR-A.

Pardinas, Ilka Erren

See GR-A.

Paredes, Daniel

1. See GR-A.

2. Although we cannot include your requested recommendations on local hires as a commitment in our feasibility report, it is anticipated that the local professional and skilled labor force will be eligible for the design and implementation of the project through competitive selection.

Parke, Andrew

See GR-A.

Pearce, Richard

See GR-A.

Pedersen, Karen

See GR-A.

Perez, Gladys

See GR-A.

Petteway, Susan

See GR-A.

Phan, Marjorie

Addressing local and regional transportation is beyond the scope of the Corps Authority. However, local and regional transportation projects and planning efforts that will connect or potentially have an impact on better access to the LA River include the Juan Bautista de Anza National Historic Trail; the existing LA River Bikeway and Greenway System and future plans to expand it along the entire 51 miles of the LA River on both sides (102 miles total of trails and bikeway) through the LA River Greenway 2020 Campaign; the Glendale Riverwalk Project which is currently underway; Union Station Master Plan; both the City of Los Angeles Bike Plan 2010 where the LA River is included in the Green Network, and LA County's Bicycle Master Plan 2012; the City of Los Angeles' General Plan Update, specifically the Mobility Element (formerly the Transportation Element) and the Health and Wellness Chapter, Mobility 2035 Plan where the LA River is identified as an opportunity for bikeway and pedestrian linkages: "The Los Angeles River plays a significant role in Los Angeles' environmental, non-motorized transportation and recreational identity" (http://planning.lacity.org/Cwd/GnlPln/MobiltyElement/Text/MobilityPlan_2035.pdf).

Phillips, Grace

See GR-A.

Phillips, Shane

See GR-A.

Piane, Marge

See GR-A.

Pierola, Antonio

See GR-A.

Plamondon, Anthony

See GR-A.

Pollock, Mikaela

See GR-A.

Pryor, Larry

See GR-A.

Ragosine, Dorrit

See GR-A.

Rahman, Abir

See GR-A.

Ramseyer, William

See GR-A.

Rand, Jae

See GR-A.

Rapp, Eric

See GR-A.

Raquedan, Inah

See GR-A.

Renaker, Mary

See GR-A.

Rene-Weissman, Elaine

The Corps is aware of the potentially significant features of the Los Angeles River. We will comply with Section 106 of the National Historic Preservation Acts (36 CFR 800). This consultation and review process will involve consultation and coordination with the SHPO, Tribal organizations and individuals, and interested parties. If any cultural resources are found eligible for listing on the NRHP and if those elements will be adversely effected by the project, mitigation measures will be developed and implemented. The development of mitigation measures would include efforts to design features that would blend into the historic setting of the Los Angeles River.

Rene-Weissman, Elaine

See GR-A.

Revkin, Dr. Cheryl

See GR-A.

Reyes, Christine

See GR-A.

Risemberg, Richard

See GR-A.

Rivas, Armando

See GR-A.

Rizzo, Christina

See GR-A.

Roberts, Buddy

See GR-A.

Robin, Lauren

See GR-A.

Robinson, Kathleen

See GR-A.

Robledo, Damian

1. See GR-A.
2. While some of the goals of the RIO Plan are outside the scope of this study, the alternaives considered in the IFR are consistent with the RIO as well as the LARRMP.
3. Accessibility needs differ between flood risk management facilities and recreational sites; final design plans will include evaluation of best safety measures for protection of facilities and access to recreation. Safety ramps are included in the plans.
4. The Corps estimates for remediation of contaminants were based on a robust data search and use of best available sources. Inevitably, additional sources of information may be indicated by reviewers, but researchers cannot be aware of all such sources. Estimates reflect a good-faith effort to fully account for all possible contamination and develop realistic costs. The costs of remediation are non-project costs.

As stated in the IFR, the Corps prepared an HTRW survey report for the proposed project as required by Engineering Regulation 1165-2-132 that includes a review of over 100 HTRW sites in the vicintiy of the proposed project. The HTRW survey report is presented in Appendix K of the IFR. A search of Geotracker (www.geotracker. waterboards.ca.gov) was performed on March 26, 2014, to determine if additional information has become available regarding contamination at the sites presenting the highest probability for impacts associated with the project: San Fernando Valley Superfund Site, Taylor Yard sites G1 and G2, and the LATC site. The findings of the Geotracker search were consistent with the analysis presented in the Draft IFR. In addition, Section 5.7.3 of the Draft IFR describes additional measures that would be taken to ensure that known or unanticipated soil or groundwater contamination is identified and addressed properly. The City would undertake all appropriate inquiries prior to land acquisition and would adequately investigate City-owned lands. The City is responsible for ensuring that all lands provided for the project are remediated to the standards required for the uses of the ecosystem restoration project as determined by the local regulator and with input from USACE. The City may undertake the remediation or ensure the remediation is undertaken prior to providing such lands for construction of project features. Prior to providing a parcel for project construction, the City must ensure that it is either shown to be free of contamination through adequate site investigation or that it has been remediated to regulator and USACE satisfaction to the standards necessary to support the ecosystem restoration project. Additionally, the non-Federal sponsor will ensure proper handling, treatment and disposal of any contaminated groundwater encountered during construction, including dewatering activities, at 100 percent non-project cost.These measures are also described in Appendix K.
5. ADA requirements will be integrated into design where necessary, as noted in Section 5.9.1.

Rock, Dave

See GR-A.

Rose, Sara

See GR-A.

Rossman, George

See GR-A.

Rouge, Robert

Comment noted.

Saccacio, Anthony

See GR-A.

Sandoval, Barbara

See GR-A.

Savage, Kathryn

See GR-A.

Scarcelli, Ernest

Comment noted.

Schmitt, Marilyn

See GR-A.

Shabanian, Victoria

See GR-A.

Shipman, Margaret

See GR-A.

Shorr, Gil and Herschel

See GR-A.

Sinclair, Duncan

See GR-A.

Siskind, Nicole

See GR-A.

Smith, Jerry

1. Much of the community has indicated an interest in utilizing the river for additional recreation. Safety design is integrated into all Corps facilities.
2. Safety and security of visitors to the LA River is a serious consideration of the Corps, and all restoration designs will have policy-guided safety measures implemented. Safety issues related to encampments or illegal behavior will continue to be under the purview of local police jurisdictions.
3. Comment noted. As stated in the Cumulative Effects analysis (Section 5.14), "All of the proposed alternatives include efforts to provide additional environmental restoration. These are likely to decrease potential growth, rather than induce growth, since these lands would be converted to open space. The conversion of lands from high density uses to open space may have the effect of decreasing the potential for growth.... Where larger-scale restoration measures are suggested such as at LATC (Piggyback Yard), these measures would convert industrial and rail facilities into restored habitat and remove them from the potential of being developed into higher density commercial or industrial uses or converted into housing developments. Conversely, it is possible that large scale restoration would attract a greater number of residents to the surrounding areas, particularly as a result of the area becoming a desirable place to live due to its proximity to restored open space. "
4. Comment noted.
5. The purpose of this project is ecosystem restoration, not water conservation.

Squires, Kathy

We hope you enjoy visiting the LA River. Restoration amenities, however, will likely not be available for some years to come. Implementation of the proposed project would begin after congressional authorization, development of detailed plans and specifications, and land acquisition have taken place, and after necessary funding has been appropriated.

Stemwedel, Peter

See GR-A.

Stephenson, Rhoads

See GR-A.

Stilwell, Carl

See GR-A.

Stowell, Dan

See GR-A.

Strick, Nancy

The Recommended Plan includes a recreation plan that complements the restoration features. The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river, increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite.

Additionally, the restoration of the ARBOR reach may induce participation in additional recreation activities which do not currently exist, or which see low participation levels. These might include activities such as kayaking, wildlife viewing, new areas for bird watching, environmental education, stewardship training, or even visits to the ARBOR reach specifically to view the ecosystem restoration features.

Sullivan, Dr. Robert

See GR-A.

Suntree, Susan

See GR-A.

Suri, Chris

See GR-A.

Szuhay, Daniel

See GR-A.

Taylor, Tony

Thank you for your comment. Improving water quality is not an objective of this study although it is an incidental benefit. Restoration objectives cannot be fully realized by only improving water quality and removing trash.

Taylor, Tony (second letter)

Thank you for your comment.

Teutsch, Carol

See GR-A.

Thomas, Aaron

See GR-A.

Thompson, Eddie

See GR-A.

Thompson, Kalee

See GR-A.

Thorne, David

See GR-A.

Thraves, Jill

See GR-A.

Thronson, Frances

The primary purpose of the proposed project and alternatives considered in this study is to restore approximately 11 miles of the Los Angeles River from Griffith Park to Downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the River to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo mountain ranges while maintaining existing levels of flood risk management.

Tokash, Jennifer

See GR-A.

Tornborg, Kay (Flora Thorton)

See GR-A.

Trisolini, Katherine, Associate Professor of Law, Loyola Law School

1. See GR-A.

2. Policy requires that the Corps consider potential climate change impacts when undertaking long-term planning, setting priorities, and making decisions affectings its resources, programs, policies, and operations. Per this requirement, the IFR has incorporated climate change in the existing conditions chapter in Section 3.2, in the impacts chapter in Sections 5.2 and 5.4, and in the Hydrology and Hydraulics Appendix (E), Section 9. Because it is difficult to quantify resilience of restoration measures to climate change, the Corps intends to design all restoration features with climate change resiliency built in. Because all restoration measures are designed to consider climate change resiliency, and because the nuances between levels of restoration are difficult to quantify, including them in the CHAP would provide little meaningful cost-benefit analysis.

Umbdenstock, Linda

See GR-A.

Unwin, Dr. Stephen

See GR-A.

Uribe, Oscar

See GR-A.

Valencia, Nestor

The initial study area included 32 miles of the river within the City. The study process resulted in narrowing that area to the ARBOR reach as explained in the IFR in section 1.2.1. Further studies could address other portions of the watershed; however, that is beyond the scope of the present study.

Van Hook, Chris

See GR-A.

Villasenor, Vernon

See GR-A.

Walker, Alissa

See GR-A.
The Corps is not responsible for water allocation or supply within the river. The City would be responsible for ensuring the provision of water sufficient to support the restoration features. The study includes a water budget in Section 4.14.7.

Ward, Kay

See GR-A.

Warner, Tim

See GR-A.

Watts, Chris

See GR-A.

Weisman, Sharon and Bill

See GR-A.

West, Carolyn & David Petzold

See GR-A.

West, Carolyn (second letter)

Thank you for your comments. Below are responses to your questions:
1. The report refers to the banks of the river looking downstream. The right side would be the South side of the River in that reach.
2. Modifications to the channel in that area under Alternative 20 includes changing the trapezoidal channel wall to a vertical wall in a reach adjacent to the 134. This would widen the bottom of the channel in the reach and additional vegetation would also be added between the river and the 134 and overhanging the river bank.
3. Restoration measures include installation of habitat corridors and planting along the bank of the river in this area. That would include the installation of trees and shrubs.
4. Existing trails will be maintained as they are currently. If they are to be disturbed during construction it will be temporary, and any trails affected will be replaced or repaired. Maps of the recreation plan are found at the end of Chapter 6 of the report.

West, Carolyn (third letter)

1. The Draft IFR and technical appendices were made available for public coordination per NEPA regulations. Additional data requests were not supported except through formal coordination with other regulatory agencies. A list of acronyms is available at the beginning of the document. Terms are defined as needed within document.
2. The Draft IFR and technical appendices were made available for public coordination per NEPA regulations, including proper public notification. The IFR was available to the public for comment for approximately 9 weeks.
3. The modification in Reach 2 included in Alternative 20 involves changing the channel configuration from trapezoidal to a vertical wall; right side only (looking downstream). This extends from a point about 1200 feet upstream of Riverside Drive to about 500 feet downstream

from the 5 Freeway. This effectively changes the bottom or bed width from 180 feet wide to about 235 feet wide, to allow additional native habitat to establish in the widened channel. Vegetation would be allowed to grow in the channel only to the extent it does not increase the flood risks. Where a vertical wall is included in plans, it is included on one side only, and appropriate safety measures, including fencing and ramps, would be incorporated in the design.
4. Seasonal non-motorized boating is currently allowed within the non-concrete bottom portion of the river from Fletcher Bridge to upstream of the Riverside Drive crossing, when consistent with the flood risk management project operation and maintenance. That program is managed by the Mountains Recreation and Conservation Authority on behalf of the City of Los Angeles, in consultation with the Corps and the County of Los Angeles.
5. Information on proposed features at Verdugo Wash included in Alternative 20 may be found in Chapter 4 of the Final IFR.
6. All existing and planned activities that overlap with the selected alternative in footprint and timing will undergo coordination to ensure a cohesive design and streamlined construction period.
7. During the construction period, a number of Best Management Practices (BMPs) will be utilized to avoid or reduce the generation of dust. These are listed in Section 5.2.4.
8. The selected alternative is not expected to increase mosquito populations above existing conditions, and operation of the project will include the ongoing monitoring of pest populations and coordination with vector control agencies as needed to provide treatment (Section 5.11.3). Additional language has been added regarding the project's impact on rodent populations (Section 5.11.3).

West, Carolyn (fourth letter)

The Corps will continue to coordinate with the City's Recreation & Parks Dept. during the pre-construction engineering and design phase to address any potential issues such as those described in your comment.

Weston, Janis

See GR-A.

Wexman, Todd

See GR-A.

White, Lisa

See GR-A.

Wilhelm, Nicholas

See GR-A.

Wilson, Ed

See GR-A.

Wolfe, Kim - lariverannex.com

Specific requirements/regulations dictate what additional study and approval may be required for future modifications to any authorized project. Future decision makers will utilize all of the information that has already been generated. However, as more time passes, more changes may occur to the baseline condition, such as environmental resources, the economic climate, and possibly laws and regulations. All of these factors would need to be considered in a new study or study update, and would need to be documented in a new or supplemental environmental document. Major changes or additions would require Congressional authorization.

Wolff, Pat

See GR-A.

Wright, Anja Stadelmann

See GR-A.

Yonai, John

See GR-A.

Young, Jennifer

1. See GR-A.
2. There are no plans to reclaim water, as the goals and objectives of this project are to restore aquatic and riparian habitat. Some water reclamation may occur as groundwater seepage in soft-bottom areas.

Zaide, Karen

See GR-A.

Zell, Jennifer

See GR-A.

Public Meeting Comments

1. Dodge, Marian

See GR-A.

2. Lopez, Humberto

See GR-A.

3. Friedman, Laura

See GR-A.

4. Smith, Kathleen

See GR-A.

5. Schnieder, Richard

See GR-A.

6. Linton, Joe

See GR-A.

7. Williams, Tom

See GR-A.

8. Morgetti, Karen

A. Thank you for your comments. Regarding your comments about access bridges, the following describes recreation facility access and pedestrian bridges included in the recreation plan.

Taylor Yard/Rio de Los Angeles State Park: As shown in the Reach 6 map depicted on Plate 8 to the Recreation Appendix, access is planned on the eastern edge of Taylor Yard. The access point is proposed near the southwest corner of the State Park property, which would be accessible due to the existing underpass. This would provide more convenient movement between Taylor Yard and the State Park. The Taylor Yard Bridge noted on the map is not a component of this project, but is currently in the planning stages at the City of Los Angeles.

Griffith Park Connections: In Reach 1, upgraded and new trails will improve connection of Griffith Park and the river. In Reach 4, new multi-use pathway will be placed along Griffith Park. As part of a separate project, the City of Los Angeles is seeking to place a non-motorized use bridge across the river in order to connect both banks and Griffith Park. This is the Atwater Bridge (La Kretz Crossing) in Reach 4.
B. Regarding your point relating to the cost/benefit analysis, while largest plans will generate the greatest benefits to the regional economy, both from project construction expenditures as well as anticipated post-construction redevelopment, the primary focus of the project is ecosystem restoration. The NER plan was identified based upon an evaluation of ecosystem

outputs relative to costs. The increased benefits for habitat value, nodal (local) and regional habitat connectivity, hydrologic connectivity, and aquatic ecosystem restoration provided by Alternatives 16 and 20, including the increase in Regional Economic Development (RED) benefits attained by these two larger alternatives, provided justification for their inclusion in the final array of alternatives considered. However, these added benefits also come at a significantly higher cost.

Following public review, a more detailed analysis was performed. This analysis identified a more cost effective variation on Alternative 13 (referred to in this IFR as "Alternative 13v" for variation) that is identical to Alternative 13 except for Reach 7, where it includes the reach plan included in Alternative 20 that provides 10 acres of marsh and a terraced bank connection to the Los Angeles State Historic Park as well as daylighting three streams and restoration of the lower Arroyo Seco. The analysis found that the Reach 7 plan included in Alternative 20 provides greater benefits than the Reach 7 plan included in Alternative 13, at lower cost.

The NER plan should be the justified alternative and scale having the maximum excess of monetary and non-monetary beneficial effects over monetary and nonmonetary costs. This plan occurs where the incremental beneficial effects just equal the incremental costs, or alternatively stated where the extra environmental value is just worth the extra costs. Selecting the NER plan requires careful consideration of the plan that meets planning objectives and constraints and reasonably maximizes environmental benefits while passing tests of significance of outputs, cost effectiveness, efficiency, acceptability, and completeness. Compared to the rest of the alternatives, Alternative 13v is the plan that more than minimally meets these criteria. Accordingly, Alternative 13v has been identified as the NER plan.

However, the non-Federal Sponsor requested that Alternative 20 be recommended instead of the NER Plan, and the Corps requested that the Assistant Secretary of the Army (Civil Works) grant an exception to allow the Corps to recommend Alternative 20 as the locally preferred plan (LPP) instead of recommending the NER Plan. The ASA(CW) granted the requested LPP exception and permitted the Corps to recommend the LPP in the Final IFR and in the Chief of Engineers Report, in recognition of the additional benefits provided by this plan and strong support by federal, state and local agencies as well as various stakeholders and the general public. The features of the Alternative 20 recreation plan include trail improvements, pedestrian bridges, trail access points and wildlife viewing points. The recreation plan includes a separate benefit/cost analysis to show economic justification and federal interest in the recreation features.

9. Murphy, Deborah

See GR-A.

10. Golding, Arthur

See GR-A.

11. Jones, Andrew

See GR-A.

12. Higgins, Lila

See GR-A.

13. Appleton, Steven

See GR-A.

14. Cortes, David

See GR-A.

15. Madrid, Jorge

See GR-A.

16. Gedeon, "Blue" Geza

See GR-A.

17. Brown, Russell

See GR-A.

18. Barden, Lane

See GR-A.

19. Murphy, Edward

See GR-A.

20. Stefani, Giulia Good

See GR-A.

21. Sourial, Jill

See GR-A.

22. Sheedy, Keenan

See GR-A.

23. Jones, Susan

See GR-A.

24. Brownson, Omar

See GR-A.

25. Hans, Gerry

See GR-A.

26. West, Carolyn

Some alternatives considered the widening of the south bank of the river within Reach 2 by modifying the channel wall from trapezoid to vertical. See response to written West letters.

27. Oinuma, Colleen for Congressman Adam Schiff

Thank you for your comments. Please reference response to written congressional letter under federal representatives above.

28. Lombardi, Sergio

See GR-A.

29. Khan, Mohammed

See GR-A.

30. Vargas, Brenda for Congressman Xavier Becerra

Thank you for your comments. Please reference response to written congressional letter under federal representatives above.

31. DeRosa, Charles (LA Kayaking Club)

See GR-A.

32. Tachiki-Chin, Kim for Congresswoman Lucille Roybal-Allard

Thank you for your comments. Please reference response to written congressional letter under federal representatives above.

33. Tachiki-Chin, Kim for Pauline Louie

See GR-A.

34. Maulano, Lucia

See GR-A.

35. Hedge, Joanne

See GR-A.

36. Reyes, Ed

A. Comment noted.
B. This is an important issue throughout the Los Angeles Watershed; however, the issues of recycled water, increased capture, and use of stormwater are outside of the scope of the ecosystem restoration study. It is the City's desire to use recycled water, when feasible for construction and maintenance of the completed project to support habitat.
C. Comment noted.

37. MacAdams, Lewis

See GR-A.

38. Nunez, Irma Beserra

See GR-A.

39. Lester, Ely

See GR-A.

40. Moreau, Jack

See GR-A.

41. Drennan, Michael

See GR-A.

42. Bleitz-Sanburg, Dana

See GR-A.

43. Huerta, Denita

See GR-A.

44. O'Brien, Frank

See responses to individual O'Brien letter.

45. Benson, Mary

See GR-A.

46. Schlick, Alison

See GR-A.

47. Collins, Craig

See GR-A.

48. Morrison, William Rodriguez

Thank you for your comments and interest in the Feasibility Study. The plan that is recommended and authorized by Congress will be cost shared between the Federal government and the non-Federal sponsor (in this case, the City of Los Angeles). The Federal cost sharing portion of the project will be funded through annual appropriations, passed by Congress and signed into law by the President. The non-Federal sponsor is responsible for providing a Self-Certification of Financial Capability to establish that it will be able to meet its cost sharing obligations for the project. This is included in the Final IFR.

49. Barnett, Karen

A. Flood conveyance is the top priority for the LA River channel. Hydrologic and engineering analysis ensure that the channel will continue to convey floodwaters. There will be no change to flood levels, and therefore, no changes to FEMA flood zone mapping.
B. The non federal sponsor is responsible for operation and maintenance of the project after construction. The non-Federal responsibilties are described in Section 7.2.2 of the Integrated Feasibiltiy Report.
C. This project is not intended specifically to replenish aquifers or groundwater tables. As an ecosystem restoration project, the goal is to increase habitat value throughout the study area.

50. Landregan, Stephanie

See GR-A.

Public Meeting Comment Cards

Banner, Michael

See GR-A.

Brown, Lynn

Thank you for your comment in support of the proposed plans for the Los Angeles River. The Recommended Plan includes a recreation plan.The recreation plan features are integrated into the ecosystem restoration plan; however, these features are formulated as separable components of the plan. The features of the recreation plan are designed to capitalize on the areas where substantial ecosystem restoration is proposed and are designed to prevent interference with restoration of ecologic function. Plan features and benefits include: improved quality and quantity of trails for multiple user groups along the river (including equestrian), increased connectivity of each side of the river's recreation resources, increased public safety through better signage and trail development along the river, improved viewing and lines of sight along the river, especially in areas of substantial restoration via the ecosystem restoration plan, opportunity for interpretive signage and environmental education, and improved public health by providing opportunities for exercise and psychological respite. The proposed recreation features have been developed at a feasibility level. However, it is anticipated that unpaved multiuse trails will be open for equestrian use as feasible (e.g., as long as safety of people, horses, and wildlife can be safely accommodated simultaneously without negative effects on the restoration features).

Burman, Tsilah

See GR-A.

Cheng, Suellen

See GR-A.

Hernandez, Mike

See GR-A.

Kumamoto, Alan

See GR-A.

Kumamoto, Joanne

See GR-A.

Lambarri, Ally

Thank you for your participation. Youth are definitely encouraged to participate in the process.

Lowry, Mike

Habitat units used in the analysis are described in Section 4.9 of the report. Habitat units were based on an assessment of habitat and quantity. The inclusion of neighboring communities did not factor into the habitat outputs analyzed. However, the overall process does consider

Environmental Quality, Regional Economic Development, and Other Social Effects, which is where the inclusoin of benefits to neighboring communities would be considered.

McQuiston, J.

This is an important issue throughout the Los Angeles Watershed; however, the issues of recycled water, increased capture, and use of stormwater are outside of the scope of Corps ecosystem restoration. It is the City's desire to use recycled water, when feasible, for construction and maintenance of the completed project to support habitat.

Rankell, David

Comment noted.

Reagan, Rourk

See GR-A.

Sanburg, Delmer

See GR-A.

Sebahar, Thomas

1. Your concerns are noted. Groundwater pollutant potential is addressed in the Evaluation of Alternative Plans and Environmental Consequences Section 5.4.3 of the report.
2. The selected alternative is not expected to increase mosquito populations above existing conditions, and operation of the project will include the ongoing monitoring of pest populations and coordination with vector control agencies as needed to provide treatment (Section 5.11.3).
3. Your cost concerns are noted.

Shankar, Cheri

See GR-A.

Stephenson, Roads

See GR-A.

Taylor, Ric

See GR-A.

Teran, Alexia

1. No taxes are proposed by the study, but identification of specific funding sources for the non-Federal share is not part of the analysis in the study. Project funding will be accomplished in phases over many years, with Federal funding subject to appropriations. The first step is project

authorization. The next step is project financing. Upon authorization of the project, the City, as non-Federal sponsor, will work with its partners in the public, private, and nonprofit sectors to develop a financing plan that balances the investment in this project with those of other public priorities. Project authorization does not obligate any local funds. Project authorization will identify the details of the project, which can then be matched with appropriate funding sources.
2. The Corps is supportive of educating the public in the importance of clean watersheds.

Walnum, Ann

See GR-A.

Wendlandt, Wendy

See GR-A.

Wilhelm, Nicholas

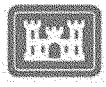
See GR-A.

Yesayan, Erik

See GR-A.

Zuniga, Rubi

The commenter refers to "Proposition 20" instead of Alternative 20, but for the purposes of the response, these are assumed to be the same. Project funding will be accomplished in phases over many years, with Federal funding subject to appropriations. The first step is project authorization. The next step is project financing. Upon authorization of the project, the City, as non-Federal sponsor, will work with its partners in the public, private, and nonprofit sectors to develop a financing plan that balances the investment in this project with those of other public priorities. Project authorization does not obligate any local funds. Project authorization will identify the details of the project, which can then be matched with appropriate funding sources.



US Army Corps
Of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX M

Draft Clean Water Act Section 404(b)(1) Evaluation

September 2015

Appendix M Draft Clean Water Act Section 404(b)(1) Evaluation

TABLE OF CONTENTS

1.0 Clean Water Act Section 404(b)(1) Regulatory Background 1

2.0 Basic and Overall Project Purpose 2
- 2.1 Basic Project Purpose 2
- 2.2 Overall Project Purpose 2
- 2.3 Study Area Description 2
- 2.4 Jurisdictional Determination of Waters of the U.S. 5
  - Los Angeles River 5
  - Arroyo Seco, Verdugo Wash, and Burbank Western Channel 5

3.0 Alternatives Considered 7
- 3.1 Management Measures and Associated Discharges of Fill 7
  - Daylight Streams 7
  - Widen River and Tributaries 7
  - Creation of Side Channels 7
  - Vegetated Channel Walls 7
  - Modify Channel Banks 8
- 3.2 Alternatives and Impacts to Waters of the U.S. 8
  - No Federal Action 8
  - Alternative 10 9
  - Alternative 13 11
  - Alternative 16 13
  - Alternative 20 17
  - Alternative 13v 20
- 3.3 Impacts to Water of the U.S. 23
- 3.4 Permanent Losses of Existing Waters of the U.S. 24

4.0 Alternatives Analysis 26
- 4.1 Restrictions on Discharge 26
- 4.2 Overall Project Purpose 26
- 4.3 Practicability (Technology) 26
- 4.4 Practicability (Logistics) 26
- 4.5 Practicability (Cost) 26

5.0 Environmental Effects 28
- 5.1 Effects on Aquatic Resources 28
- 5.2 Effects on Non-Aquatic Resources 28
- 5.3 Potential Direct and Secondary Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C) 29
- 5.4 Potential Direct and Indirect Impacts on Biological Characteristics of the Aquatic Ecosystem (Subpart D) 39
- 5.5 Potential Direct and Indirect Impacts on Special Aquatic Sites (Subpart E) 46

5.6 Potential Direct and Indirect Effects on Human Use Characteristics (Subpart F)..... 50
5.7 Evaluation and Testing (Subpart G)..... 55
6.0 Measures to Minimize Adverse Impacts (Subpart H)..... 55
7.0 Summary of Effects to the Aquatic Environment..... 57
8.0 Conclusion..... 57

LIST OF TABLES

Table 3-1 Alternative 10 – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S. 10

Table 3-2 Alternative 13 – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S. 12

Table 3-3 Alternative 16 – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S. 15

Table 3-4 Alternative 20 – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S. 18

Table 3-5 Alternative 13v – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S. 21

Table 3-6 Classes of Permanent Fill Material for Restoration Activities 24

Table 3-7 Fill and Loss of Existing Waters of the U.S. and New Waters of the U.S. Established. 25

Table 4-1 Comparison of Costs and Habitat Output (October 2014 Price Levels) 27

Table 4-2 Comparison of 404(b)(1) Evaluation Criteria 28

LIST OF FIGURES

Figure 1: Study Area Reaches 4

1.0 Clean Water Act Section 404(b)(1) Regulatory Background

Section 404 of the Clean Water Act (CWA) governs the discharge of dredged or fill material into waters of the U.S. Although the Corps does not process and issue permits for its own activities, the Corps authorizes its own discharges of dredged or fill material by applying all applicable substantive legal requirements, including application of the Section 404(b)(1) Guidelines, 33 C.F.R. 336.1(a).

Under the Section 404(b)(1) Guidelines, an analysis of practicable alternatives is the primary tool used to determine whether a proposed discharge is prohibited. The Section 404(b)(1) Guidelines prohibit discharges of dredged or fill material into waters of the U.S. if a practicable alternative to the proposed discharge exists that would have less adverse impacts on the aquatic ecosystem, including wetlands, as long as the alternative does not have other significant adverse environmental impacts (40 C.F.R. 230.10(a)). An alternative is considered practicable if it is available and capable of being implemented after considering cost, existing technology, and logistics in light of overall project purpose (40 C.F.R. 230.10(a)(2)). The Section 404(b)(1) Guidelines follow a sequential approach to project planning that considers mitigation measures only after the project proponent shows no practicable alternatives are available to achieve the overall project purpose with less environmental impacts. Once it is determined that no practicable alternatives are available, the guidelines then require that appropriate and practicable steps be taken to minimize potential adverse effects on the aquatic ecosystem (40 C.F.R. 230.10(d)). Such steps may include actions controlling discharge location, material to be discharged, the fate of material after discharge or method of dispersion, and actions related to technology, plant and animal populations, or human use (40 C.F.R. 230.70-230.77).

Beyond the requirement for demonstrating that no practicable alternatives to the proposed discharge exist, the Section 404(b)(1) Guidelines also require the Corps to compile findings related to the environmental impacts of discharge of dredged or fill material. The Corps must make findings concerning the anticipated changes caused by the discharge to the physical and chemical substrate and to the biological and human use characteristics of the discharge site.

These guidelines also indicate that the level of effort associated with the preparation of the alternatives analysis be commensurate with the significance of the impact and/or discharge activity (40 C.F.R. 230.6(b)).

2.0 Basic and Overall Project Purpose

2.1 Basic Project Purpose

The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether a project is water dependent. The Section 404(b)(1) Guidelines state that if an activity associated with the discharge proposed for a special aquatic site does not require access or proximity to, or siting within, the special aquatic site in question to fulfill its basic purpose, the activity is not water-dependent.

The basic project purpose is aquatic ecosystem restoration. The activity is water dependent. See Section 5.5 of the Integrated Feasibility Report (IFR) for in-water construction required for all action alternatives.

2.2 Overall Project Purpose

The overall project purpose serves as the basis for the Corps' section 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the goals and accounts for logistical considerations for the project, and which allows a reasonable range of alternatives to be analyzed. It is critical that the overall project purpose be defined to provide for a meaningful evaluation of alternatives. It should not be so narrowly defined as to give undue deference to the preferred alternative, thereby unreasonably limiting the consideration of alternatives. Conversely, it should not be so broadly defined as to render the evaluation unreasonable and meaningless.

As indicated in Section 1.1.1 of the IFR, the overall project purpose is to restore approximately 11 miles of the Los Angeles River (River) from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities and reconnecting the River to major tributaries, its historic floodplain, and the regional habitat zones of the Santa Monica, San Gabriel, and Verdugo mountain ranges while maintaining existing levels of flood risk management.

There is a secondary objective of the project to provide passive recreational opportunities consistent with the restored ecosystem, which is considered incidental to the overall project purpose and therefore not part of the overall project purpose under the CWA. There are no impacts to waters of the U.S. associated with recreation features corresponding to the restoration alternatives.

2.3 Study Area Description

There are eight geomorphically different reaches within the study area as shown in Figure 1 (see Section 2.2 of the IFR for additional information). They were defined based on the physical characteristics of channel morphology, bank characteristics, soil exposure, existing habitat, and surrounding land uses. Specific geomorphic criteria include: (1) channel bed type (either soft bed with groundwater/surface water exchange, or concrete), (2) side slope type (vertical or trapezoidal), and (3) adjacent land uses or open space. The reaches are described as follows:

- **Reach 1**: Reach 1 is the upstream segment of the study area and is approximately 1.5 river miles in length. In this reach the River's channel has a rectangular concrete-lined configuration with subdrains and no low flow channel.
- **Reach 2**: Reach 2 is approximately 0.75 mile in length. The bed transitions from concrete-lined to a cobblestone bed, and then transitions back to concrete. The channel has a trapezoidal configuration with grouted derrick stone banks. The banks are toed-down (secured by extending the bank wall below the River bed) with sheet pile and quarry run stone.
- **Reach 3**: This reach is approximately 1 mile in length. From upstream to downstream, the bed transitions from cobbles to concrete and back to cobbles. The channel in this area has a rectangular concrete configuration.
- **Reach 4**: This reach is approximately 1.75 miles long. The bed transitions from a concrete-lined rectangular channel to a trapezoidal channel with a cobble bed and grouted derrick stone banks. Banks are toed-down with sheet pile and quarry run stone. Sediment deposited in the channel has formed sand bars/islands, which are stabilized by the root systems of the many trees and other vegetation.
- **Reach 5**: This reach is approximately 1.55 miles long. The bed transitions from concrete under each of the large bridges to a trapezoidal channel with a cobblestone bed and grouted derrick stone banks between the bridges. Banks are toed-down with sheet pile and quarry run stone. Sediment deposited in the channel has formed sand bars/islands, which have stabilized as the root systems of the many trees and other vegetation have trapped sediment.
- **Reach 6**: This reach is approximately 2.34 miles long. From upstream to downstream, the bed transitions from cobblestone to concrete-lined. Here, the channel is in a trapezoidal configuration with a cobble bed and grouted derrick stone banks. The banks are toed-down with sheet pile and quarry run stone. Sediment deposited in the channel has formed sand bars/islands, which have become stabilized as the root systems of the many trees and other vegetation have trapped sediment.
- **Reach 7**: This reach is approximately 1-mile-long. The channel in this area transitions out of the rectangular concrete channel at the Arroyo Seco confluence, and becomes a trapezoidal concrete channel that is approximately 30 feet deep.
- **Reach 8**: This approximately 1-mile-long reach is a trapezoidal concrete channel approximately 30 feet deep.

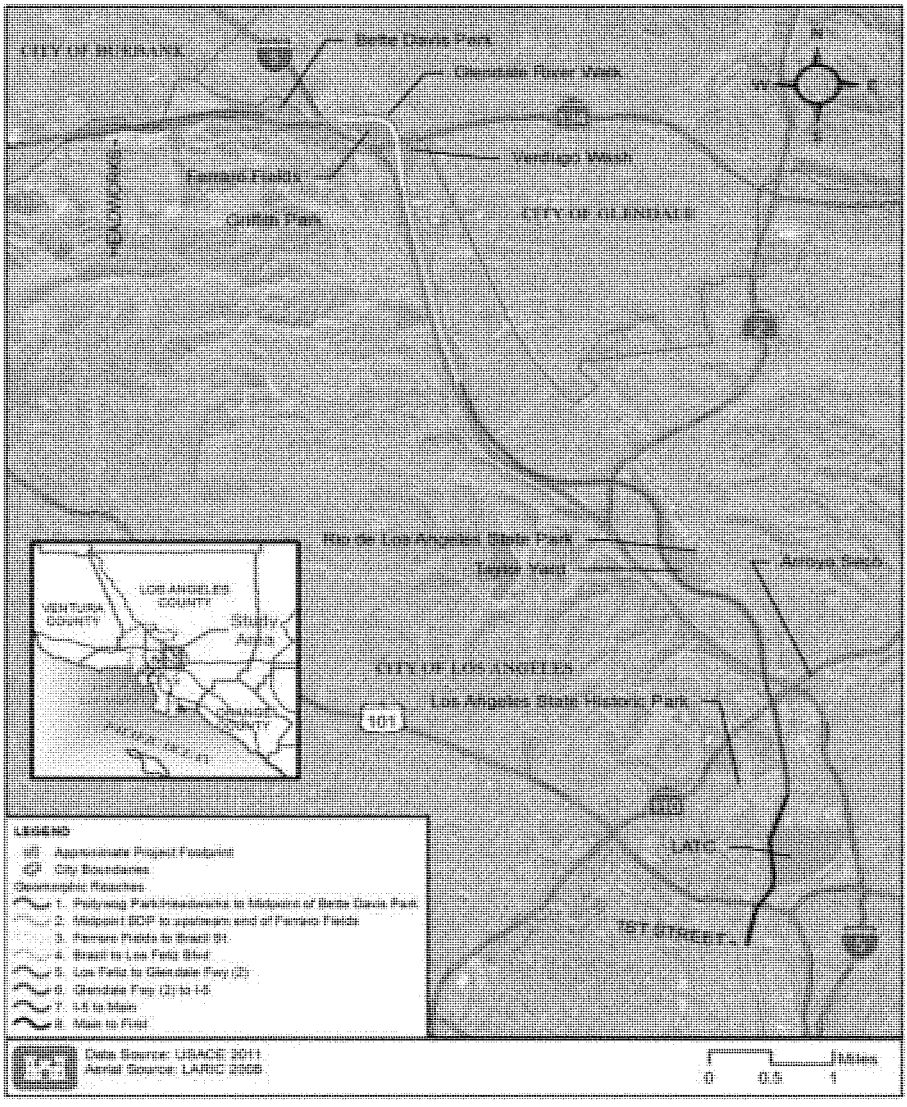


Figure 1: Study Area Reaches

2.4 Jurisdictional Determination of Waters of the U.S.

The study area encompasses 11 miles of the River and approximately 1,500 feet of the lower reaches of Verdugo Wash, Arroyo Seco Channel, and Burbank Western Channel.

Los Angeles River

In the 2010 Special Case Evaluation Regarding Status of the River, the U.S. Environmental Protection Agency documented the historical and current navigability of the River and deemed the River to be a Traditional Navigable Water (TNW), a water of the U.S. pursuant to 33 C.F.R. 328.3(a)(1).

In the absence of adjacent wetlands, jurisdictional limits in non-tidal waters of the U.S. extend to the ordinary high water mark (OHWM). When adjacent wetlands are present, jurisdiction extends beyond the OHWM to the limit of the adjacent wetlands. No adjacent wetlands were identified in the River study area. Wetlands within the non-concrete bottom portions of the River are located on sand banks and are variable, prone to changes in size and location depending on the severity of storm flows.

OHWM within the River was established by examining debris lines deposited on the trapezoidal embankments during and after storm flows. Based on a conservative interpretation of physical evidence, the OHWM is halfway up the embankment.

Arroyo Seco,Verdugo Wash, Burbank Western Channel

Per the 2008 joint U.S. Environmental Protection Agency-Department of the Army guidance implementing the Supreme Court's decision in the consolidated cases Rapanos v. United States and Carabell v. United States which address the jurisdiction over waters of the U.S. under the CWA, the agencies will assert jurisdiction over relatively permanent non-navigable tributaries of TNWs. A non-navigable tributary of a TNW is a non-navigable water body whose waters flow into a TNW either directly or indirectly by means of other tributaries. Non-navigable tributaries of TNWs are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months). Relatively permanent waters do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally.

The Arroyo Seco Channel is a direct tributary to the River. Due to a high ground water table in unlined reaches as well as nuisance flows and runoff from golf courses, daily base flow ranges from 0.25-1 cubic feet per second (cfs). As such, flows are perennial. Arroyo Seco Channel is therefore a relatively permanent non-navigable tributary of a TNW, and a jurisdictional water of the U.S. pursuant to 33 C.F.R. 328.3(a)(5). No adjacent wetlands were identified. OHWM was established by examining the extent of concrete stains on the vertical wall. Based on the physical evidence, the OHWM is halfway up the vertical walls.

Verdugo Wash is a relatively permanent non-navigable tributary of a TNW. The wash is a direct tributary to the River, draining an urbanized area within the City of Glendale as well as the Verdugo Hills. Due to nuisance flows and runoff from golf courses, daily base flow ranges from 1-3 cfs. As such, flows are perennial. Verdugo Wash is therefore a relatively permanent non-navigable tributary of a TNW, and a jurisdictional water of the U.S. pursuant to 33 C.F.R.

328.3(a)(5). No adjacent wetlands were identified. Examination of available photographs does not indicate presence of concrete stains or other physical evidence of OHWM. Thus, based on the available evidence at Arroyo Seco, the OHWM is assumed to be halfway up the vertical walls.

The Burbank Western Channel is a relatively permanent non-navigable tributary of a TNW. The channel is a direct tributary to the River, draining an urbanized area within the City of Burbank as well as the Verdugo Hills. Daily base flow averages at approximately 10 cfs. As such, flows are perennial. Burbank Western Channel is therefore a relatively permanent non-navigable tributary of a TNW, and a jurisdictional water of the U.S. pursuant to 33 C.F.R. 328.3(a)(5). No adjacent wetlands were identified. Examination of available photographs does not indicate presence of concrete stains or other physical evidence of OHWM. Based on the available evidence at Arroyo Seco, the OHWM is assumed to be halfway up the vertical walls.

3.0 Alternatives Considered

3.1 Management Measures and Associated Discharges of Fill

Alternatives were formulated from a combination of management measures. See Chapter 4 of the IFR for additional information. This section describes the management measures and qualitatively characterizes the anticipated discharges of fill material associated with each management measure.

Daylight Streams

This management measure entails excavation of currently enclosed drainages in the historic floodplain of the River. Once excavated, the drainages would be naturalized in areas within the vicinity of their respective confluences with the River. Many of the enclosed drainages convey storm flows from the uplands into the River through existing storm water outfalls. Materials to be excavated/removed from the drainages include, but are not limited to, corrugated metal pipes and reinforced concrete boxes. Once excavated, the drainages would be graded, contoured, and planted with native riparian vegetation. In some cases, storm drains that are not being daylighted (naturalized) may need to be reconfigured or new outfalls constructed, due to other restoration work occurring in the vicinity. These activities may also result in discharges of fill material. Discharges of fill material into existing waters of the U.S. for all storm drain modification activities would entail placement of concrete for new outfalls, and would entail like-for-like replacement of existing outfalls. Temporary discharges of fill material would include potential placement of dewatering structures within the invert in the area of the outfalls.

Widen River and Tributaries

This management measure entails excavation of uplands behind the existing embankment, construction of a new embankment in the uplands, and removal of the existing embankment of the River, Verdugo Wash, or Arroyo Seco. The activity would require discharge of native substrate associated with grading in the vicinity of the existing embankment as well as temporary discharges of fill material for dewatering structures, such as k-rails, to divert water around the work area during construction; establishment of access ramps; and establishment of staging areas.

Creation of Side Channels

This management measure entails the excavation of new drainages in the uplands parallel to the River. Once excavated, the drainages would be graded, contoured, and planted with native riparian vegetation. The principal sources of hydrology could be storm water or existing flows from the River. Discharges of fill material into existing waters of the U.S. would be limited to discharges of fill material associated with the construction or reconstruction of concrete outfalls or construction of intake structures in the River. In many cases, the discharges would entail like-for-like replacements.

Vegetated Channel Walls

This management measure supplements the existing riparian vegetation in the River by attaching turf reinforcement mat, a pre-seeded turf matrix, to the existing sloped embankments of the River. The portion of the turf laid upon the sloped embankments would be anchored with

fasteners. The portion of the turf within the invert would be anchored with engineered rock keys. The work would also require the temporary discharges of fill material for dewatering structures, such as k-rails, to divert water around the work area during construction; establishment of access ramps; and establishment of staging areas.

Modify Channel Banks

This management measure would remove a portion of the upper sloped embankments of the River to create a two-tiered sloped embankment profile. It would include excavation to create basins or terraces that tie into the channel and adjacent topography. These modifications would have slopes at a 3 to 1 transition ratio or more gradual and be interspersed with freshwater marsh (retention basins) and riparian vegetation. In other cases, the trapezoidal embankments of the River would be replaced with a vertical wall to widen the channel. The work would also require the temporary discharge of dewatering structures, such as k-rails, to divert water around the work area during construction.

3.2 Alternatives and Impacts to Waters of the U.S.

The IFR evaluated an array of alternatives in Chapter 4. A number of alternatives were deemed impracticable due to costs while one would not have met the overall project purpose. Due to the need to maintain existing flood risk levels, several alternatives incorporated tunnels to divert flood flows around the study area. These alternatives were determined to be impracticable due to the approximately $1.5 billion cost of tunneling (see Section 4.10 of the IFR). Another alternative that would have widened the channel width by 3 to 5 times to accommodate a natural riparian river system was determined to be impracticable due to the approximately $7.6 billion real estate acquisition cost (see Section 4.10.1 of the IFR). One alternative limiting the ecosystem restoration to the Los Angeles County Drainage Area (LACDA) right–of-way (i.e., channel and bicycle paths) would not meet the overall project purpose (see Section 4.10.1 of the IFR). Chapter 4 of the IFR provides complete descriptions of these alternatives as well as discussions of alternatives considered but not carried forward for further analysis.

Subsequent to the application of measures to screen alternatives, four action alternatives (Alternatives 10, 13, 16, and 20) as well as the No Federal Action Alternative were further evaluated in the IFR, constituting a reasonable range of alternatives. Furthermore, after additional economic analysis, a more cost effective variation was identified for one alternative; this variation alternative, known as Alternative 13v, is identical to Alternative 13 except in Reach 7, where it includes restoration measures in Reach 7 identical to those proposed under Alternative 20. Specifically, the Reach 7 plan in Alternative 20 includes the three daylighted streams in the Reach 7 plan from Alternative 10, the Arroyo Seco softening and backwater wetland creation from Alternative 13, and adds restoration of wetland habitat at the Los Angeles State Historic Park (LASHP) along with terracing of the right bank of the channel adjacent to the LASHP.

No Federal Action

Under the No Federal Action alternative, none of the proposed management measures would be implemented. The Corps would continue to maintain the channel for flood risk management purposes, but would not seek to restore habitat values. There would be no impacts to wetlands or

other waters of the U.S. from restoration activities as none would occur. Channel maintenance activities would continue to include vegetation and sediment removal as funding allows.

Alternative 10

Alternative 10 is called the ART (for ARBOR Riparian Transitions) as it provides some restoration in all reaches and provides transitions or connections between existing riparian corridors and concrete lined river reaches. In Reach 1, it establishes riparian corridors along the overbanks of both sides of the River channel, improving potential wildlife connections from the river to the Headworks study site and the Santa Monica Mountains. It also restores riparian habitat at the Pollywog Park Area of Griffith Park and along the left overbank of the Burbank Western Channel. In Reach 2, the plan continues the establishment of the riparian corridor along the overbank on both sides of the River, with habitat connections to the Santa Monica Mountains. In Reach 3, it continues the riparian corridor on the right side of the River along Zoo Drive and daylights and restores riparian and freshwater marsh habitat at three streams currently encased in culverts, two on the east side of the River and one on the west side. In Reach 4, it establishes a riparian corridor on the left overbank, creates a side channel at the edge of Griffith Park Golf Course with inlet and outlet to the River under I-5 on the right bank, lowers a portion of the Los Feliz Golf Course on the left bank of the River to allow seasonal flooding through existing culverts, and daylights eight streams. In Reach 5, this alternative continues the riparian corridor on the left overbank and includes a daylighted stream at the downstream end. In Reach 6, it widens the channel approximately 80 feet along Taylor Yard, restores riparian habitat in the widened area and overbank, and creates a small terraced area in the Bowtie parcel. Restoration is continued in Reach 7 with three daylighted streams. In Reach 8, at the LATC site, it restores a historic wash and riparian habitat. This restoration would allow flows from the ephemeral wash to enter the River through existing culverts under the railroad lines. In addition to the specific features outlined above, this alternative removes invasive vegetation throughout the restoration features and within the River and tributary channel bottom throughout the project footprint. Table 3-1 below details measures that either fill waters of the U.S. or create new waters of the U.S. In total, Alternative 10 would discharge fill material into approximately 4.63 acres of waters of the U.S. Permanent fill material would be discharged into 4.52 acres. Dewatering structures would temporarily discharge fill material into 0.11 acre. Alternative 10 would establish approximately 56 acres of new waters of the U.S.

Maintenance of ecosystem restoration features would be conducted under this alternative by the City of Los Angeles, the non-Federal sponsor. Maintenance in general would include removal of invasive species throughout the project footprint, including the River and tributary channel bottom; repair and replacement of irrigation pipes and sprinklers; maintenance of constructed trails, terraces, and viewing areas; trimming of native vegetation; removal of trash and accumulated sediment; graffiti abatement; vector management; and like-for-like structural repair. Project areas subject to invasive removal include the channel bottom of the River, Verdugo Wash-River confluence, Burbank-Western Channel-confluence and short distance upstream, and the Arroyo Seco-River confluence as well as constructed restoration features. The Corps would continue to be responsible for maintaining all other aspects of the portion of the LACDA project that overlaps with the restoration project footprint.

Maintenance activities within waters of the U.S. may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Maintaining design grades, elevations,

contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases, there may be discharges of fill material associated with the use of earthmoving equipment such as bulldozers within newly established waters of the U.S. Impacts would be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material into waters of the U.S. However, temporary or permanent discharges of fill material would not decrease the amount of newly established waters of U.S. Invasive species in the River and tributary channel bottom within the study area would typically be removed by hand tools. Thus, the activity would not result in discharges of fill material in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, impacts would be temporary and there would be no loss of waters of the U.S.

Table 3-1 Alternative 10 – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S.

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
3. Ferraro Fields area of Griffith Park	Daylight Streams	5	None: activity is occurring in overbank area outside of existing waters of the U.S.	NA	NA	NA
4. Griffith Park	Daylight Streams	9	None: activity is occurring in overbank area outside of existing waters of the U.S.	NA	NA	NA
	Side Channel	1	None: Removal of materials at inlet and outlet connections	NA	(200 CY)	0
			Backfill as needed to create stable inlet and outlet	Perm.	100 CY	.02
			Install k-rails or sandbags	Temp.	220 linear feet (LF)	0.01
5. Riverside Drive	Daylight Streams	1	None: activity is occurring in overbank area outside of existing waters of the U.S.	NA	NA	NA
6. Taylor Yard	Modify Channel Banks/Widen Channel	12	None: Excavate embankment to channel bed to within the waters of the U.S.	Perm.	(145,381 CY)	0
			Backfill with clean topsoil	Perm.	8,066 CY	4.5
			Install k-rails or sandbags	Temp.	4,224 LF	0.10
7. Arroyo Seco	Daylight Streams	3	None: activity is occurring in overbank area outside of existing waters of the	NA	NA	NA

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
			U.S.			
8. LATC	Restore historic wash	25	None: activity is occurring in overbank area outside of existing waters of the U.S.	Perm.	NA	NA

Alternative 13

Alternative 13 is named ACE (for ARBOR Corridor Extension). Alternative 13 has the same restoration features as Alternative 10 in Reaches 1, 2, 4, 5, and 8 and provides additional restoration in Reaches 3, 6, and 7. In Reach 3, in addition to the measures identified in Alternative 10, this alternative would create a side channel entering upstream from the River behind Ferraro Fields and re-entering the River at the downstream end of the reach. In Reach 6, this alternative widens the river channel by over 300 feet into Taylor Yard with restoration of the floodplain and freshwater marsh in the widened channel. It also creates a backwater wetland at the Bowtie parcel, and it restructures the left bank upstream of the backwater wetland and downstream of Taylor Yard, as well as the entirety of the right bank, in this reach with implanted vegetation. In Reach 7, this alternative restores a portion of the Arroyo Seco tributary and makes nodal connections on the left side of the River to the Arroyo Seco watershed. This is accomplished through softening of the bed and banks with development of a riparian corridor in the tributary confluence and for one half mile upstream. The Arroyo Seco restoration supports connections through the River from the Santa Monica Mountains to the San Gabriel Mountains. Instead of the daylighted streams included in this reach in Alternative 10, this alternative lines the banks of the River downstream from the Arroyo Seco with overhanging vines and implanted vegetation. In addition to the specific features outlined above, this alternative removes invasive vegetation throughout the restoration features and within the River and tributary channel bottom throughout the project footprint. Table 3-2 below summarizes the measures that either fill waters of the U.S. or create new waters of the U.S. In total, Alternative 13 would discharge fill material into approximately 27.51 acres waters of the U.S. Permanent fill material would be discharged into 26.84 acres. Dewatering structures would temporarily discharge fill material into 0.67 acre. Alternative 13 would establish approximately 86 acres of new waters of the U.S.

Maintenance of ecosystem restoration features would be conducted under this alternative by the City of Los Angeles. Maintenance in general would include removal of invasive species throughout the project footprint, including the River and tributary channel bottom; repair and replacement of irrigation pipes and sprinklers; maintenance of constructed trails, terraces, and viewing areas; trimming of native vegetation; removal of trash and accumulated sediment; graffiti abatement; vector management; and like-for-like structural repair. Project areas subject to invasive removal include the channel bottom of the River, Verdugo Wash-River confluence, Burbank-Western Channel-confluence and short distance upstream, and the Arroyo Seco-River confluence as well as constructed restoration features. The Corps would continue to be

responsible for maintaining all other aspects of the portion of the LACDA project that overlaps with the restoration project footprint..

Maintenance activities within waters of the U.S. may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases, there may be discharges of fill material associated with the use of earthmoving equipment, such as bulldozers, within newly established waters of the U.S. Impacts would be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material into waters of the U.S. However, temporary or permanent discharges of fill material would not decrease the amount of newly established waters of U.S. Invasive species in the River and tributary channel bottom within the project area are typically removed by hand tools. Thus, the activity would not result in discharges of fill material in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, impacts would be temporary and there would be no loss of waters of the U.S.

Table 3-2 Alternative 13 – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S.

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
3. Ferraro Fields area of Griffith Park	Daylight Streams	5	None: activity is occurring in overbank area outside of existing waters of the U.S.	NA	NA	NA
	Side Channel	6	Removal of materials at inlet and outlet connections, above existing waters of the U.S.	Perm.	(200 CY)	0
			Backfill to create stable inlet and outlet	Perm.	100 CY	.02
			Install k-rails or sandbags	Temp.	220 LF	.01
4. Griffith Park	Daylight Streams	9	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
	Side Channel	1	Removal of materials at inlet and outlet connections, above existing waters of the U.S.	Perm.	(200 CY)	0
			Backfill as needed to create stable inlet and outlet, above existing waters of the U.S.	Perm.	100 CY	.02
			Install k-rails or sandbags	Temp.	220 LF	0.01

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
5. Riverside Drive	Daylight Streams	1	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
6. Taylor Yard	Vegetated Channel Walls (Right Bank)	NA	Install vegetation anchor materials	Perm.	67,819 Square Yards (SY)	14
			Rock at vegetation anchor tie-in	Perm.	2,833 CY	
			Install k-rails or sandbags	Temp.	7,392 LF	0.2
	Vegetated Channel Walls (Left Bank)	NA	Install vegetation anchor materials	Perm.	16,855 SY	3.3
			Rock at vegetation anchor tie-in	Perm.	778 CY	
			Install k-rails or sandbags	Temp.	11,960 LF	0.25
	Modify Channel Banks/Widen Channel	12	None: Excavate embankment to channel bed to within the waters of the U.S.	Perm.	(145,381 CY)	0
			Backfill with clean topsoil	Perm.	8,066 CY	4.5
			Install k-rails or sandbags	Temp.	4,224 LF	0.10
	Create New Wetlands Behind Bank	13	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
7. Arroyo Seco/Los Angeles River State Park	Modify Channel Banks	14	None: Excavate embankment to channel bed to within the waters of the U.S.	Perm.	(79,723 CY)	0
			Backfill with clean topsoil	Perm.	3,000 CY	5
			Install k-rails or sandbags	Temp.	4,200 LF	0.10
8. LATC	Restore Historic Wash	25	None: activity is occurring in overbank area outside of existing waters of the U.S.	NA	NA	NA

Alternative 16

Alternative 16 is called AND (for ARBOR Narrows to Downtown). This alternative includes the same features as Alternative 13 in Reaches 1-4 and 6-8 and includes greater restoration in Reaches 5 and 8. In Reach 5, this alternative widens the River channel by modifying the right

bank from a trapezoidal bank to a vertical wall and modifies the left bank from trapezoidal to a terraced vegetated bank. At the downstream end of this reach, the River channel will also be widened by modifying the left bank. The daylighted stream in Alternatives 10 and 13 is also included in this reach. In Reach 8, the alternative includes additional restoration by terracing upstream of LATC on the right bank of the River, terracing downstream on the left bank, and removing the left bank and the concrete bed adjacent to LATC. The channel bed will be naturalized to support freshwater marsh in the River. This alternative widens the River into the LATC site by 500 feet on a low terrace and another 1000 feet on a second terrace. The restoration features at the LATC site would also include the restoration of the historic wash, along with wetland habitat. In addition to the specific features outlined above, this alternative removes invasive vegetation throughout the project footprint, including the River and tributary channel bottom. Table 3-3 below summarizes the measures that either fill waters of the U.S. or create new waters of the U.S. In total, Alternative 16 would permanently discharge fill material into approximately 50.25 acres waters of the U.S. Permanent fill would be discharged into 49.21 acres. Dewatering structures would temporarily discharge fill material into 1.04 acres. Alternative 16 would establish approximately 145.6 acres of new waters of the U.S.

Maintenance of ecosystem restoration features would be conducted under this alternative by the City of Los Angeles. Maintenance in general would include removal of invasive species throughout the project footprint; repair and replacement of irrigation pipes and sprinklers; maintenance of constructed trails, terraces, and viewing areas; trimming of native vegetation; removal of trash and accumulated sediment; graffiti abatement; vector management; and like-for-like structural repair. Project areas subject to invasive removal include the channel bottom of the River, Verdugo Wash-River confluence, Burbank-Western Channel-confluence and short distance upstream, and the Arroyo Seco-River confluence as well as constructed restoration features. The Corps would continue to be responsible for maintaining all other aspects of the portion of the LACDA project that overlaps with the restoration project footprint.

Maintenance activities within waters of the U.S. may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases, there may be discharges of fill material associated with the use of earthmoving equipment, such as bulldozers, within newly established waters of the U.S. Impacts would be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material into waters of the U.S. However, temporary or permanent discharges of fill material would not decrease the amount of newly established waters of U.S. Invasive species in the river and tributary channel bottom within the project area are typically removed by hand tools. Thus, the activity would not result in discharges of fill material in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, impacts would be temporary and there would be no loss of waters of the U.S.

Table 3-3 Alternative 16 – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S.

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
3. Ferraro Fields area of Griffith Park	Daylight Streams	5	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
	Side Channel	6	Removal of materials at inlet and outlet connections	Perm.	(200 CY)	0
			Backfill to create stable inlet and outlet	Perm.	100 CY	.02
			Install k-rails or sandbags	Temp.	220 LF	.01
4. Griffith Park	Daylight Streams	9	None: activity is occurring in overbank area, outside of existing waters of the U,S,	NA	NA	NA
	Side Channel	1	Removal of materials at inlet and outlet connections	Perm.	(200 CY)	0
			Backfill as needed to create stable inlet and outlet	Perm.	100 CY	.02
			Install k-rails or sandbags	Temp.	220 LF	0.01
5. Riverside Drive	Daylight Streams	1	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
	Terrace/Vegeta ted Channel Walls	NA	Install vegetation anchor materials	Perm.	14,520 SY	3
			Rock at vegetation anchor tie-in	Perm.	778 CY	0.02
			Install k-rails or sandbags	Temp.	11,960 LF	0.25
	Modify Trapezoidal Channel to Vertical Banks	20.6	Demolition and materials removal	Perm.	(140,763 CY)	0
			Backfill for stabilization	Perm.	113,991 CY	6.2
			Install k-rails or sandbags	Temp.	8,448 LF	0.02
6. Taylor Yard	Vegetated Channel Walls (Right Bank)	NA	Install vegetation anchor materials	Perm.	67,819 CY	14
			Rock at vegetation anchor tie-in	Perm.	2,833 CY	0.2

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
			Install k-rails or sandbags	Temp.	7,392 LF	0.2
	Vegetated Channel Walls (Left Bank)	NA	Install vegetation anchor materials	Perm.	16,855 SY	3.3
			Rock at vegetation anchor tie-in	Perm.	778 CY	.05
			Install k-rails or sandbags	Temp.	11,960 LF	0.25
	Modify Channel Bed and Banks	12	Excavate embankment to channel bed within waters of the U.S.	Perm.	(145,381 CY)	0
			Backfill with clean topsoil	Perm.	8,066 CY	4.5
			Install k-rails or sandbags	Temp.	4,224 LF	0.10
	Create New Wetlands Behind Bank	13	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
7. Arroyo Seco/Los Angeles River State Park	Modify Channel Banks	14	Excavate embankment to channel bed to within the waters of the U.S.	Perm.	(79,723 CY)	0
			Backfill with clean topsoil	Perm.	3,000 CY	5
			Install k-rails or sandbags	Temp.	4,200 LF	0.10
8. LATC	Create Side Channel	13	Demolition and materials removal	NA	(46,826 CY)	0
			Backfill for stabilization	Perm.	42,476 CY	0.2
			Install k-rails or sandbags	Temp.	220 LF	0.01
	Modify Channel Bed and Banks	26	Excavate embankment and channel bed to within the waters of the U.S.	Perm.	(397,871 CY)	0
			Backfill with clean topsoil	Perm.	18,996 CY	11.3
			Install k-rails or sandbags	Temp.	3,168 LF	0.08
	Restore Historic Wash	25	Demolition and materials removal within waters of the U.S.	Perm.	(48,340 CY)	0
			Backfill for stabilization	Perm.	2,193 CY	1.4
			Install k-rails or sandbags	Temp.	3,168 LF	0.01

Alternative 20

Alternative 20 is called RIVER (for Riparian Integration via Varied Ecological Reintroduction) as it includes the same features as Alternative 16 in Reaches 1, 4, 5, 6, and 8 and includes greater restoration in Reaches 2, 3 and 7. In Reach 2, this alternative widens the the River channel by modifying the right bank from a trapezoidal bank to a vertical wall. In Reach 3, the alternative restores the confluence with Verdugo Wash by softening the bed of the stream and significantly widening the mouth of the wash, thus providing riparian habitat and an additional connection to the San Gabriel Mountains through the Verdugo Hills. In Reach 7, this alternative includes the same Arroyo Seco restoration as Alternative 13, and in addition, reintroduces the daylighted streams included in Alternative 10 in lieu of the channel bank vegetation features that were in Alternatives 13 and 16. Also in Reach 7, this alternative restores freshwater marsh at the Los Angeles State Historic Park and creates a terraced bank connection to the River. In addition to the specific features outlined above, this alternative removes invasive vegetation throughout the project footprint, including within the River and tributary channel bottom. Table 3-4 below summarizes the measures that either fill waters of the U.S. or create new waters of the U.S. In total, Alternative 20 would permanently discharge fill material into approximately 67.29 acres waters of the U.S. Permanent fill would be discharged into 65.61 acres. Dewatering structures would temporarily discharge fill material into 1.68 acres. Alternative 20 would establish approximately 168.6 acres of new waters of the U.S.

Maintenance of ecosystem restoration features would be conducted under this alternative by the City of Los Angeles. Maintenance in general would include removal of invasive species throughout the project footprint; repair and replacement of irrigation pipes and sprinklers; maintenance of constructed trails, terraces, and viewing areas; trimming of native vegetation; removal of trash and accumulated sediment; graffiti abatement; vector management; and like-for-like structural repair. Project areas subject to invasive removal include the channel bottom of the River, Verdugo Wash-River confluence, Burbank-Western Channel-confluence and short distance upstream, and the Arroyo Seco-River confluence as well as constructed restoration features. The Corps would continue to be responsible for maintaining all other aspects of the portion of the LACDA project that overlaps with the restoration project footprint.Maintenance activities within waters of the U.S. may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases, there may be discharges of fill material associated with the use of earthmoving equipment, such as bulldozers, within newly established waters of the U.S. Impacts would be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material into waters of the U.S. However, temporary or permanent discharges of fill material would not decrease the amount of newly established waters of U.S. Invasive species in the River and tributary channel bottom within the study area would typically be removed by hand tools. Thus, the activity would not result in discharges of fill material in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, impacts would be temporary and there would be no loss of waters of the U.S.

Table 3-4 Alternative 20 – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S.

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
2. Bette Davis Park area of Griffith Park	Vegetated Channel Walls	NA	Install vegetation anchor materials	Perm.	8,206 SY	1.7
			Rock at vegetation anchor tie-in	Perm.	424 CY	0.02
			Install k-rails or sandbags	Temp.	11,960 LF	0.25
	Modify Trapezoidal Channel to Vertical Banks	5.5	Demolition and removal of materials	Perm.	(7,020 CY)	0
			Backfill for stabilization	Perm.	41,625 CY	1.75
			Install k-rails or sandbags	Temp.	8,448 LF	0.2
3. Ferraro Fields/Verdugo Wash area of Griffith Park	Daylight Streams	2	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
	Side Channel	6	Removal of materials at inlet and outlet connections, above OHWM	Perm.	(200 CY)	0
			Backfill to create stable inlet and outlet	Perm.	100 CY	0.02
			Install k-rails or sandbags	Temp.	220 LF	0.01
	Widen Tributaries	8	Demolition and removal of materials	Perm.	(509,058 CY)	0
			Backfill for stabilization and add vegetation anchoring materials	Perm.	24,115 CY	6.5
			Install k-rails or sandbags	Temp.	2,000 LF	0.02
4. Griffith Park	Daylight Streams	9	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
	Side Channel	1	Removal of materials at inlet and outlet connections, above OHWM	Perm.	(200 CY)	0
			Backfill as needed to create stable inlet and outlet	Perm.	100 CY	0.02
			Install k-rails or sandbags	Temp.	220 LF	0.01
5. Riverside Drive	Daylight Streams	1	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
	Vegetated Channel Walls (Both Banks)	NA	Install vegetation anchor materials	Perm.	14,520 CY	9
			Rock at vegetation anchor tie-in	Perm.	2,333 CY	0.05
			Install k-rails or sandbags	Temp.	11,960 LF	0.25
	Modify Trapezoidal	20.6	Demolition and materials removal	Perm.	(140,763 CY)	0

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
	Channel to Vertical Banks		Backfill for stabilization	Perm.	113,991 CY	6.2
			Install k-rails or sandbags	Temp.	8,448 LF	0.02
6. Taylor Yard	Vegetated Channel Walls (Right bank)	NA	Install vegetation anchor materials	Perm.	67,819 SY	14
			Rock at vegetation anchor tie-in	Perm.	2,833 CY	0.2
			Install k-rails or sandbags	Temp.	7,392 LF	0.2
	Vegetated Channel Walls (Left bank)	NA	Install vegetation anchor materials	Perm.	16,855 SY	3.3
			Rock at vegetation anchor tie-in	Perm.	778 CY	0.05
			Install k-rails or sandbags	Temp.	11,960 LF	0.25
	Modify Channel Banks	12	Excavate embankment to channel bed to within the waters of the U.S.	Perm.	(145,381 CY)	0
			Backfill with clean topsoil	Perm.	8,066 CY	4.5
			Install k-rails or sandbags	Temp.	4,224 LF	0.1
	Create New Wetlands Behind Bank	13	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
7. Arroyo Seco and Los Angeles State Historic Park	Daylight Streams	3	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA.	NA	NA
	Create Wetland	9	Install vegetation stabilization features, concrete, riprap, and topsoil	Perm.	NA	NA
	Modify channel Banks	14	Excavate embankment to channel bed to within the waters of the U.S.	Perm.	(79,723 CY)	0
			Backfill with clean topsoil	Perm.	3,000 CY	5
			Install k-rails or sandbags	Temp.	4,200 LF	0.1
	Terrace banks	0.5	Demolition and removal of materials to within waters of the U.S.	Perm	(3,771 CY)	0
			Backfill for stabilization and add vegetation anchoring materials	Perm	3,052 SF	0.5
		0	Install k rails or sandbags	Temp	595 LF	0.5
8. LATC	Create Side Channel	13	Demolition and materials removal	Perm.	(46,826 CY)	0
			Backfill for stabilization	Perm.	42,476 CY	0.1
			Install k-rails or sandbags	Temp.	220 LF	0.01
	Modify Channel Bed	26	Excavate embankment and channel bed within waters of the U.S.	Perm.	(397,871 CY)	0

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
	and Banks		Backfill with clean topsoil	Perm.	18,996 CY	11.3
			Install k-rails or sandbags	Temp.	3,168 LF	0.08
	Restore Historic Wash	25	Excavate embankment to channel bed within waters of the U.S.	Perm.	(48,340 CY)	0
			Backfill with clean topsoil	Perm.	2,193 CY	1.4
			Install k-rails or sandbags	Temp.	3,168 LF	0.01

Alternative 13v

Alternative 13v would include all measures and impacts of Alternative 13. Moreover, Alternative 13v would add restoration measures in Reach 7 identical to those proposed under Alternative 20. Within Reach 7, streams would be daylighted; freshwater marsh would be created; embankments would be terraced; and channel banks would be modified. Like the other alternatives, this alternative includes invasive vegetation removal throughout project footprint, including the River and tributary channel bottom. This Alternative has been identified as the National Ecosystem Restoration plan. Table 3-5 below summarizes the measures that either fill waters of the U.S. or create new waters of the U.S. In total, Alternative 13v would permanently discharge fill material into approximately 27.51 acres waters of the U.S. Permanent fill would be discharged into 26.84 acres. Dewatering structures would temporarily discharge fill material into 0.67 acre. Alternative 13v would establish approximately 98.5 acres of new waters of the U.S.

Maintenance of ecosystem restoration features would be conducted under this alternative by the City of Los Angeles. Maintenance in general would include removal of invasive species throughout the the project footprint; repair and replacement of irrigation pipes and sprinklers; maintenance of constructed trails, terraces, and viewing areas; trimming of native vegetation; removal of trash and accumulated sediment; graffiti abatement; vector management; and like-for-like structural repair. Project areas subject to invasive removal include the channel bottom of the River, Verdugo Wash-River confluence, Burbank-Western Channel-confluence and short distance upstream, and the Arroyo Seco-River confluence as well as constructed restoration features. The Corps would continue to be responsible for maintaining all other aspects of the portion of the LACDA project that overlaps with the restoration project footprint.

Maintenance activities within waters of the U.S. may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases, there may be discharges of fill material associated with the use of earthmoving equipment, such as bulldozers, within newly established waters of the U.S. Impacts would be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material into waters of the U.S. However, temporary or

permanent discharges of fill material would not decrease the amount of newly established waters of U.S. Invasive species in the River and tributary channel bottom within the project area would typically be removed by hand tools. Thus, the activity would not result in discharges of fill material in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, impacts would be temporary and there would be no loss of waters of the U.S.

Table 3-5 Alternative 13v – Summary of Fill Material in Existing Waters of the U.S. and Establishment of New Waters of the U.S.

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
3. Ferraro Fields area of Griffith Park	Daylight Streams	5	None: activity is occurring in overbank area outside of existing waters of the U.S.	NA	NA	NA
	Side Channel	6	None: Removal of materials at inlet and outlet connections, above existing waters of the U.S.	Perm.	(200 CY)	0
			Backfill to create stable inlet and outlet	Perm.	100 CY	0.02
			Install k-rails or sandbags	Temp.	220 LF	0.01
4. Griffith Park	Daylight Streams	9	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
	Side Channel	1	None: Removal of materials at inlet and outlet connections, above existing waters of the U.S.	Perm.	(200 CY)	0
			Backfill as needed to create stable inlet and outlet, above existing waters of the U.S.	Perm.	100 CY	0.02
			Install k-rails or sandbags	Temp.	220 LF	0.01
5. Riverside Drive	Daylight Streams	1	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
6. Taylor Yard	Vegetated Channel Walls (Right Bank)	NA	Install vegetation anchor materials	Perm.	67,819 (SY)	14
			Rock at vegetation anchor tie-in	Perm.	2,833 CY	
			Install k-rails or sandbags	Temp.	7,392 LF	0.2
	Vegetated Channel Walls (Left Bank)	NA	Install vegetation anchor materials	Perm.	16,855 SY	3.3
			Rock at vegetation anchor tie-in	Perm.	778 CY	
			Install k-rails or sandbags	Temp.	11,960 LF	0.25
	Modify	12	None: Excavate embankment to channel bed to	Perm.	(145,381	0

Reach	Management Measures	Acres of New Waters of the U.S.	Fill Material in Existing Waters of the U.S.			
			Discharge Material and Activity	Impacts (Perm./ Temp.)	Quantity	Acres Filled
	Channel Banks/Widen Channel		within the waters of the U.S.		CY)	
			Backfill with clean topsoil	Perm.	8,066 CY	4.5
			Install k-rails or sandbags	Temp.	4,224 LF	0.1
	Create New Wetlands Behind Bank	13	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
7. Arroyo Seco and Cornfields	Daylight Streams	3	None: activity is occurring in overbank area, outside of existing waters of the U.S.	NA	NA	NA
	Create Wetland	9	Install vegetation stabilization features, concrete, riprap, and topsoil	NA	NA	NA
	Terrace banks	0.5	None: Demolition and removal of materials to within waters of the U.S.	Perm	(3,771 CY)	0
	Modify Channel Banks	14	None: Excavate embankment to channel bed to within the waters of the U.S.	Perm.	(79,723 CY)	0
			Backfill with clean topsoil	Perm.	3,000 CY	5
			Install k-rails or sandbags	Temp.	4,200 LF	0.1
8. LATC	Restore Historic Wash	25	None: activity is occurring in overbank area outside of existing waters of the U.S.	NA	NA	NA

3.3 Impacts to Waters of the U.S.

All action alternatives would entail both temporary and permanent discharges of fill material into waters of the U.S. None of the alternatives would entail permanent loss of waters of the U.S.

There are incremental increases in permanent and temporary discharges of fill material from Alternative 10 through Alternative 20. Likewise, there are incremental increases in the scope of restoration activities from Alternative 10 through Alternative 20.

The types of fill material include restoration fill and stabilization fill.

- **Restoration fill** includes fill that would enhance aquatic functions and services.
    - **Seeded Turf Mat:** The management measure to vegetate channel walls (See Section 3.1.4) with seeded turf would entail discharge of a seeded mat on top of the existing concrete embankments. The discharge of the seeded mat would not change the channel configuration, or reduce groundwater recharge area. Alternatives 13, 13v, 16, and 20 would include the discharge of this fill material. The turf reinforcement mat is a pre-seeded mat that would be put in place to facilitate the process of formation of riparian and wetland plant communities.
    - **Clean Backfill:** Another management measure entails removal of concrete from waters of the U.S. and discharge of backfill into the excavated areas to support riparian vegetation. The discharge of clean backfill would not change the channel configuration, but would increase the area of riparian vegetation and surface area for groundwater recharge. In both cases, the discharge of permanent fill material would not lead to the permanent loss of existing waters of the U.S. All action alternatives include the discharge of clean backfill. Clean fill material would be placed to allow formation of wetland and riparian habitat where concrete is excavated from the channel.
- **Stabilization fill** is fill material required to stabilize the substrate of newly created waters of the U.S. Alternatives 13, 13v, 16 and 20 would entail measures that would set back the existing levees which in turn would widen channel invert. Fill material such as rocks or concrete would be discharged as appropriate within the widened channel invert to stabilize the substrate. The discharge of this material would not result in the permanent loss of existing waters of the U.S. All action alternatives include the discharge of concrete or rock backfill. This type of fill material would be installed in areas where trapezoidal channel walls were set back to increase the invert width, thereby exposing erodible soils; where the channel banks were notched to allow for creation of inlets and outlets for new side channels; and where existing concrete banks were terraced to allow for plantings.

Table 3-6 Classes of Permanent Fill Material for Restoration Activities

Alternative	Permanent Fill Within Existing Waters of the U.S. (Acres)	Classes of Permanent Fill		
		Seeded Turf (Acres)	Soil Backfill Within Excavated Concrete (Acres)	Fill to Stabilize Expanded Waters of the U.S.
10	4.52	0	4.5	0.02
13	26.84	17.3	9.5	0.04
13v	26.84	17.3	9.5	0.04
16	49.21	20.57	20.8	7.84
20	65.61	28.32	22.20	15.09

3.4 Permanent Losses of Existing Waters of the U.S.

The discharge of permanent fill material would not result in the permanent loss of waters of the U.S. Typical examples of changes that constitute permanent loss of waters of the U.S. include permanent decrease in surface area available for water recharge or permanent loss of riparian habitat.

- **Ground Water Recharge**: All action alternatives would discharge permanent fill material into existing waters of the U.S. However, the fill material would not result in an increase of impermeable surfaces. Seeded reinforced mats would be placed on top of existing embankments. Excavated concrete would be replaced with either soil backfill or rocks. Furthermore, all action alternatives would create new, soft bottom waters of the U.S., resulting in an increase of permeable surface areas to enhance groundwater recharge functions.
- **Riparian Habitat:** There would be no permanent loss of aquatic habitat associated with discharges of fill under any of the action alternatives. The discharges of fill material would entail placement of reinforced vegetated mats or rocks and clean soil for the establishment of vegetation in open water area and soft river bottom area, and at side channels and tributaries.

Table 3-7 Fill and Loss of Existing Waters of the U.S. and New Waters of the U.S. Established

Alternative	Fill Within Existing Waters of the U.S. (Acres)		Permanent Loss of Existing Waters of the U.S. (Acres)	New Waters of the U.S. Established (Acres)
	Permanent	Temporary		
10	4.52	0.11	0	56
13	26.84	0.67	0	86
13v	26.84	0.67	0	98.5
16	49.21	1.04	0	145.6
20	65.61	1.68	0	168.6

4.0 Alternatives Analysis

4.1 Restrictions on Discharge

The 404(b)(1) Guidelines prohibit the discharge of dredged or fill material into waters of the U.S. if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem[1], so long as the alternative does not have other significant adverse environmental consequences. 40 C.F.R. 230.10(a). To be "practicable," an alternative must be "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." 40 C.F.R. 230.10(a)(2).

4.2 Overall Project Purpose

With the exception of the No Federal Action Alternative all alternatives meet the overall project purpose. The No Federal Action Alternative has been dropped from consideration in the 404(b)(1) evaluation since it does not meet the overall project purpose.

4.3 Practicability (Technology)

All action alternatives can be constructed with existing technology. All action alternatives would utilize conventional construction techniques and conventional construction equipment.

4.4 Practicability (Logistics)

As detailed in Appendix J of the IFR, all action alternatives would require acquisition of approximately 145 acres of privately-owned lands and relocation of private businesses and industrial operations which include two railway yards: 93 acres at LATC (existing yard) and 43 acres at Taylor Yard (former yard, no existing business/operations). Acquisition of up to 8 acres of private land with business operations would occur at the confluence of Verdugo Wash under Alternative 20. Implementation of any action alternative would require the acquisition of land, changes in zoning, and relocation of the rail facilities and operations. The City of Los Angeles is responsible for acquisition of lands, easements and rights-of-way and performing relocations (Appendix J, Section 11). Furthermore, City of Los Angeles is fully capable of fulfilling its responsibility (Appendix J, Section 13). Based on the above, all action alternatives are practicable with respect to logistics.

4.5 Practicability (Cost)

Per Engineer Regulation (ER) 1105-2-100 the economic analysis associated with the IFR is required to identify the alternative that reasonably maximizes benefits, the NER. Under ER 1105-2-100, the NER plan is the recommended plan unless a waiver is granted to consider an alternative plan as the Locally Preferred Plan. Though not bound to do so, the U.S. Congress

[1]In this instance, the terms *aquatic environment* and *aquatic ecosystem* mean waters of the U.S., including wetlands that serve as habitat for interrelated and interacting communities and populations of plants and animals. 40 C.F.R. 230.3.

may select the recommended plan for authorization and appropriation. Alternatively, the U.S. Congress may select another plan from the final array of alternatives for authorization and appropriation. All alternatives are considered practicable in terms of cost.

The cost comparison discussion is a summary of a detailed cost analysis prepared for the action alternatives in Chapters 4 and 6 of the IFR. As summarized in Tables 6-2 and 6-3 of the IFR, all action alternatives from Alternative 10 through Alternative 20 would incrementally increase the scope of ecosystem restoration activities. Likewise, there is an incremental increase in total construction costs from Alternative 10 through Alternative 20. See Table 6-6 of the IFR and Table 7, below. Alternative 10 would entail the smallest scope of restoration activities and would cost the least. In contrast, Alternative 20 would entail the largest scope of restoration activities and would cost the most. However, as summarized in Table 4-10 of the IFR, the incremental-increase pattern is not evident in more refined measurements. With respect to incremental construction cost Alternative 13v would result in the smallest incremental construction cost. In contrast, Alternative 16 would result in the largest incremental construction cost. With respect to habitat output, Alternative 13v would result in the largest incremental output while Alternative 20 would result in the smallest incremental output. In sum, Alternative 13v maximizes incremental habitat output and minimizes total construction costs. Therefore, Alternative 13v is identified as the plan that maximizes NER benefits (See Section 6.6 of the IFR).

However, the City of Los Angeles has requested the Corps recommend Alternative 20 as a Locally Preferred Plan. The Assistant Secretary of the Army (Civil Works) has permitted the Corps to consider Alternative 20 as a Locally Preferred Plan for recommendation to Congress.

Table 4-1 Comparison of Costs[2] and Habitat Output (October 2014 Price Levels)

	Alternative 10	Alternative 13	Alternative 13v*	Alternative 16	Alternative 20
First Cost	$591,371,000	$707,800,000	$703,062,000	$1,050,057,000	$1,309,332,000
Average Annual Costs (AAC)	$26,722,000	$32,089,000	$31,851,377	$49,271,000	$60,656,000
Annual Average Habitat Output (AAHU)	5,321	5,902	5,989	6,509	6,782
Cost/Habitat Output (AAC/AAHU)	$5,022	$5,437	$5,318	$7,570	$8,944

* The IFR identifies Alternative 13v as the plan that maximizes NER benefits.

[2] Costs in Table 4-1 are based upon estimates in December 2014. MCACES estimates have only been prepared for Alternatives 13v and 20 and therefore these will differ from more refined estimates found elsewhere in the IFR.

Table 4-2 Comparison of 404(b)(1) Evaluation Criteria

Alternatives	Practicability Test			Significant Environmental Impacts to Non-Aquatic Resources?	Permanent Fill Within WoUS (acres)	Permanent Loss of WoUS (acres)	Meets Overall Project Purpose?
	Cost (Amount)	Logistics	Technology				
Alternative 10	Yes ($591M)	Yes	Yes	Yes	4.52	0	Yes
Alternative 13	Yes ($708M)	Yes	Yes	Yes	26.84	0	Yes
Alternative 13v	Yes ($703M)	Yes	Yes	Yes	26.84	0	Yes
Alternative 16	Yes ($1,050M)	Yes	Yes	Yes	49.21	0	Yes
Alternative 20	Yes ($1,309M)	Yes	Yes	Yes	65.61	0	Yes
No Federal Action Alternative	N/A	N/A	N/A	No	0	0	No

5.0 Environmental Effects

5.1 Effects on Aquatic Resources

The potential impacts of the construction associated with all action alternatives have been analyzed in the IFR.

The purpose of the Section 404(b)(1) Guidelines is to restore and maintain the chemical, physical, and biological integrity of the waters of the U.S. through the control of discharges of dredged or fill material. Except as provided under CWA Section 404(b)(2), no discharge of dredged or fill material will be authorized if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, as long as the alternative does not have other significant adverse environmental consequences. In accordance with the Section 404(b)(1) Guidelines, the potential short-term or long-term effects of a proposed discharge of dredged or fill material on the physical, chemical, and biological components of the aquatic environment must be determined.

All action alternatives would entail the discharge of fill material into waters of the U.S. The following discussion evaluates impacts of all action alternatives on environmental resources identified in Subpart C through Subpart F of the Section 404(b)(1) Guidelines.

5.2 Effects on Non-Aquatic Resources

All action alternatives would result in significant impacts to:

- **Land Use:** Restoration of the LATC site and other properties in Reach 8 would result in a conflict with the existing industrial land use designation, constituting a significant impact to land use. See Section 5.3 of the IFR. Alternative 20 would also convert lands designated industrial to restored habitat in Reach 3, constituting a significant impact to land use.

5.3 Potential Direct and Secondary Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C)

Substrate

Construction: All alternatives would entail excavation or disturbance of substrate during the construction process. In some cases, excavated materials would be replaced with materials such as natural substrate and vegetation that would support the proposed habitat restoration measures. In other cases, fill material such as concrete would be discharged to create grade stabilizers or similar features at key transition points to ensure that flood damage reduction is not impaired. Native substrates that are supportive of riparian or wetland vegetation will be left in place to the degree possible.

Alternative 10 would have minimal disturbance on existing substrates at or below the OHWM, and would require minimal permanent fill. Excavation of the channel wall and some soil removal would occur to allow upstream and downstream River connections to a proposed side channel at Griffith Park. Approximately 100 cy of concrete and topsoil would be removed at each of the connections for a total of 200 cy of excavated substrate. Each connection would be backfilled with approximately 50 cy of clean topsoil and riprap and/or concrete for a total of approximately 100 cy of permanent fill. These and all other construction areas would be temporarily isolated from the River during construction by installation of k-rails or sandbags, resulting in up to 4,440 linear feet of temporary fill. It is estimated that these materials would be used in the River channel for no more than one month at any given location, after which this temporary fill would be removed.

Under Alternative 10, up to 12 acres of new waters of the U.S. would be created at Taylor Yard by excavating and permanently removing approximately 145,381 cy of mostly earthen substrate to lower the channel banks, reconnecting the River with a portion of the historic floodplain. Revegetating this area would require backfilling with up to 8,066 cy of clean topsoil, meaning that on balance the prism of waters of the U.S. would increase by up to 137,315 cy at this location. Backfilling would not entail discharge into waters of the U.S. since the temporary isolation of the construction area would prohibit establishment of the OHWM. Both the excavation and backfill would occur in order to allow wetland and riparian conditions to develop.

Alternative 13 would include the measures described under Alternative 10, and would include additional measures that would increase the amount of permanent substrate removal, permanent backfill, and temporary fill. Additional excavation of 79,723 cy of concrete and soil would occur by lowering the channel banks at Arroyo Seco, and additional backfilling with 3,000 cy of clean topsoil would then occur at this location. Toe of the bank on both sides would be moved outward to create a vertical wall and widen the Riverbed in Reach 5. Twelve storm drains would

be daylighted. An additional side channel would be created, which would double both the permanent and temporary fill and excavation amounts relative to Alternative 10, but which would also double the amount of waters of the U.S. in the newly created side channels. In newly created waters of the U.S., engineered substrates such as concrete, asphalt, or corrugated metal pipe as well as compacted earthen substrates would be replaced with earthen vegetated substrate similar to those found in natural riparian systems. Within existing waters of the U.S., concrete would be discharged for the construction or modification of existing outfalls. Therefore, in many instances the change in substrate would be like-for-like.

Vegetating the channel walls would require permanent fill in the form of pre-seeded turf reinforcements matting, which is a thin geotextile mesh that is installed to allow for retention of soil and vegetation in relatively steep areas. This mesh would cover approximately 84,650 square yards (sy) of waters of the U.S. and would be anchored by approximately 3,600 cy of rock. Both the pre-seeded turf reinforcements matting and rock would constitute permanent fill, but would allow wetland vegetation to occur in areas that are now covered by concrete.

Alternative 16 would include the same measures as Alternative 13, and additional measures that would increase the amount of both permanent substrate removal, permanent backfill, and temporary fill. The toe of the bank would be moved outward to create a vertical wall and widen the Riverbed in Reach 5. Twelve storm drains would be daylighted. Addition of a side channel relative to Alternative 13 would increase the amount of permanently removed concrete and topsoil by excavating an additional inlet and outlet, and would increase the amount backfill with stabilizing rock and/or concrete in these locations. Temporary fill would also increase in the form of sandbags or k-rails to allow for dewatering at construction areas. An additional 14,520 sy of pre-seeded turf reinforcements matting would be installed in Reach 5, and would be anchored by 778 cy of rock, constituting permanent fill to allow for retention of soil and vegetation. K-rails or sandbags would be installed at 11 locations to allow for dewatering, and would constitute temporary fill. Backfilling with clean topsoil to allow for wetland and riparian vegetation establishment would occur at 3 locations, all of which would be newly created waters of the U.S. that were isolated from the River by dewatering devices.

Terracing banks would allow for increased wetland and riparian vegetation in Reach 5 and at LATC. This measure would entail both excavation of existing materials, primarily concrete, and backfill with both concrete and clean topsoil. Temporary fill in the form of sandbags or k-rails would also occur at these locations. Additional waters of the U.S. would be created by modifying the trapezoidal channel. The toe of the bank would be moved outward to create a vertical wall and widen the Riverbed in Reach 5. Backfill would occur at this location to stabilize the bank, but would occur in newly created waters of the U.S. which would be isolated from the River by dewatering structures, such as k-rails or sandbags. Dewatering structures at this location would add approximately 8,450 lf of temporary fill.

In these existing and newly created waters of the U.S., engineered substrates such as concrete, asphalt, or corrugated metal pipe as well as compacted earthen substrates would be replaced with earthen vegetated substrate similar to those found in natural riparian systems. Within existing waters of the U.S., concrete would be discharged for the construction or modification of existing outfalls. Therefore, in many instances the change in substrate would be like-for-like.

Alternative 20 would entail all measures specified above, and increase the amount of waters of the U.S. over Alternative 16, including by widening the trapezoidal channel in Reach 2 and excavating upland areas to create wetland and riparian habitat at the Verdugo Wash confluence in Reach 3. Thirteen storm drains would be daylighted. Within Reach 7, streams would be daylighted and wetlands be created and channel banks modified at the Arroyo Seco confluence and the LASHP. Permanent and temporary fill would be most extensive under this alternative, as would creation of new waters of the U.S.

In these existing and newly created waters of the U.S., engineered substrates such as concrete, asphalt, or corrugated metal pipe as well as compacted earthen substrates would be replaced with earthen vegetated substrate similar to those found in natural riparian systems. Within existing waters of the U.S., concrete would be discharged for the construction or modification of existing outfalls. Therefore, in many instances the change in substrate would be like-for-like.

Alternative 13v would include all measures and impacts of Alternative 13. Moreover, Alternative 13v would add restoration measures in Reach 7 identical to those proposed under Alternative 20. Within Reach 7, streams would be daylighted; wetlands would be created; embankments would be terraced; and channel banks would be modified.

In these existing and newly created waters of the U.S., engineered substrates such as concrete, asphalt, or corrugated metal pipe as well as compacted earthen substrates would be replaced with earthen vegetated substrate similar to those found in natural riparian systems. Within existing waters of the U.S., concrete would be discharged for the construction or modification of existing outfalls. Therefore, in many instances the change in substrate would be like-for-like.

Under all action alternatives, invasive species would be removed throughout the project area, including the River channel and tributary bottom. Invasive species in channel within the project area would typically be removed by hand tools. Thus, the activity would not result in discharges of fill in most instances and the existing substrate would be left intact. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, the fill would be identical to the existing native substrate.

Secondary effects of the fill would be de minimis for all alternatives. Concrete, rocks, and soils discharged in waters of the U.S. would not be substantially different from the existing concrete, rocks, and soils at the site.

Operation: Maintenance activities within waters of the U.S. for all action alternatives may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Invasive species removal throughout the project footprint, including the River channel and tributary channel bottom, would typically be performed with hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, the fill would be identical to the existing native substrate. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases there may be discharges of fill material associated with the use of earthmoving equipment, such as bulldozers, within newly established waters of the U.S. Impacts will be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material

into waters of the U.S. However, temporary or permanent discharges of fill would not decrease the amount of existing or newly established waters of U.S.

Secondary effects of the fill would be de minimis for all maintenance activities. Concrete, rocks, and soils discharged in waters of the U.S. would not be substantially different from the existing concrete, rocks, and soils at the site.

Suspended particulates and turbidity

Construction: Alternative 10 would require construction activities within waters of the U.S. Work areas within the channel invert would be isolated from flows with k-rails or sandbags during construction. In total, Alternative 10 would result in the temporary discharge of approximately 4,444 lf of the k-rails. Movement of vehicles across earthen substrate during the placement and removal of dewatering structures would temporarily elevate turbidity in the water column. When fully isolated from surrounding flows, work within River would result in minimal or no increases in turbidity.

Alternative 13 would require construction activities within waters of the U.S. Work areas within the channel invert would be isolated from flows with k-rails or sandbags during construction. In total, Alternative 13 would result in the temporary discharge of approximately 24,544 lf of the k-rails. Movement of vehicles across earthen substrate during the placement and removal of dewatering structures would temporarily elevate turbidity in the water column. When fully isolated from surrounding flows, work within River would result in minimal or no increases in turbidity.

Alternative 16 would require construction activities within waters of the U.S. Work areas within the channel invert would be isolated from flows with k-rails or sandbags during construction. In total, Alternative 16 would result in the temporary discharge of approximately 61,276 lf of the k-rails. Movement of vehicles across earthen substrate during the placement and removal of dewatering structures would temporarily elevate turbidity in the water column. When fully isolated from surrounding flows, work within River would result in minimal or no increases in turbidity.

Alternative 20 would require construction activities within waters of the U.S. Work areas within the channel invert would be isolated from flows with k-rails or sandbags during construction. In total, Alternative 20 would result in the temporary discharge of approximately 118,639 lf of the k-rails. Movement of vehicles across earthen substrate during the placement and removal of dewatering structures would temporarily elevate turbidity in the water column. When fully isolated from surrounding flows, work within River would result in minimal or no increases in turbidity.

Alternative 13v would include all measures and impacts of Alternative 13 in Reaches 1-6 and 8. Moreover, Alternative 13v would include restoration measures in Reach 7 identical to those proposed under Alternative 20. Within Reach 7, streams would be daylighted; wetlands would be created; embankments would be terraced; and channel banks would be modified. When fully isolated from surrounding flows, work within River would result in minimal or no increases in turbidity.

Secondary effects of the fill would mostly be identical for all alternatives. Concrete and rocks discharged into waters of U.S. would not increase turbidity. The increase in soft bottom waters of the U.S. would likely increase the potential for turbidity beyond existing baseline levels. The potential increase would be commensurate with increased project footprints. However, most of the soft bottom areas would be vegetated. The vegetation would attenuate turbidity levels. Secondary impacts over the long-term would be minimal.

The amount of in-channel work would increase from Alternative 10 through Alternative 20. However, active construction areas would be dewatered and isolated from active flows to minimize water quality impacts. Furthermore, adherence to the storm water pollution prevention plan (SWPPP) and permitting requirements, and implementation of best management practices (BMPs) described in Section 5.6 of the IFR, would further reduce water quality impacts. Furthermore, because most of the surfaces in the River channel are hardened, channel modifications are not expected to result in water quality impacts due to excessive erosion, scour, and head cuts. Thus, long term impacts to water quality across all alternatives are expected to be approximately the same.

Under all action alternatives, invasive species would be removed throughout the project area, including the River channel and tributary bottom, during construction. Invasive species in the channel would typically be removed by hand tools. Thus, the activity would not result in discharges of fill in most instances and there would be no temporary increases in turbidity. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, any increase in turbidity would be temporary.

Secondary effects of the fill would mostly be identical for all alternatives. Concrete and rocks discharged into waters of U.S. would not increase turbidity. The increase in soft bottom waters of the U.S. would likely increase the potential for turbidity beyond existing baseline levels. The potential increase would be commensurate with increased project footprints. However, most of the soft bottom areas would be vegetated. The vegetation would attenuate turbidity levels. Furthermore, much of the permanent fill would also be chemically inert, and would consist of materials such as concrete, rock from a certified source, or pre-seeded turf reinforcement matting, none of which would leach contaminants into the water column. Topsoil would be acquired from a certified contaminant-free source, and would be free of most weed seeds and free of hazardous toxic, and radioactive wastes (HTRW) or other contaminants. Thus, potential for long-term leaching of contaminants into the water column would be minimal.

Operation: Maintenance activities within waters of the U.S. may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Invasive species removal throughout the project footprint, including the River channel and tributary channel bottom, would typically be performed with hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, the fill would be identical to the existing native substrate. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases, there may be discharge of fill material associated with the use of earthmoving equipment, such as bulldozers, within newly established waters of the U.S. Impacts will be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material. However,

temporary or permanent discharges of fill material would not decrease the amount of existing or newly established waters of U.S.

Maintenance may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Maintenance activities requiring in-water work would likely require the use of water diversion structures, such as k-rails or sandbags. Movement of vehicles across earthen substrate during the placement and removal of dewatering structures would temporarily elevate turbidity in the water column. When fully isolated from surrounding flows, maintenance work within aquatic areas would result in minimal or no increases in turbidity.

Secondary effects of the fill associated with maintenance activities would be minimal. Discharge of concrete or rocks within waters of the U.S. would be associated with associated with like-for-like repairs. Thus, impacts would be small in scope. Furthermore, concrete and rocks discharged into waters of U.S. would you not increase turbidity. Vegetation within restoration elements would attenuate turbidity from soils. Discharge of soils would also be limited in scope. Furthermore, much of the permanent fill would also be chemically inert, and would consist of materials such as concrete, rock from a certified source, or pre-seeded turf reinforcement matting, none of which would leach contaminants into the water column. Topsoil would be acquired from a certified contaminant-free source, and would be free of most weed seeds, and free of HTRW, or other contaminants. Thus, potential for long-term leaching of contaminants into the water column would be minimal.

Contaminants

Construction: All temporary fill would be chemically inert and would consist of either concrete k-rails or sandbags comprised of clean sand obtained from a source that is certified in providing contaminant-free materials. Much of the permanent fill would also be chemically inert, and would consist of materials such as concrete, rock from a certified source, or pre-seeded turf reinforcement matting, none of which would leach contaminants into the water column. Topsoil would be acquired from a certified contaminant-free source, and would be free of most weed seeds, HTRW, or other contaminants.

All alternatives would entail excavation at or below the OHWM, potentially allowing for release or suspension of contaminants at or below the ground surface into the water column. All HTRW impacted soil within the project footprint must be remediated to the requirements of the local environmental regulatory agencies and be compatible with the future land uses for and needs of the restoration project prior to the City of Los Angeles providing those lands to the restoration project. At this time, those areas with HTRW impacted soil to be addressed by the City of Los Angeles are anticipated to be the Taylor Yard G1 and G2 sites and the LATC. In addition, groundwater contamination is known to be present due to the San Fernando Valley Superfund Site (SFVSS), and other localized groundwater contamination may also be present. With respect to groundwater contamination that cannot be remediated prior to construction, the City of Los Angeles will design, implement, coordinate and fully fund all treatment and disposal of contaminated groundwater during construction, with regulator concurrence and any necessary permits. These temporary operations should also be consistent with current management of contaminated groundwater at SFVSS and Pollock Well Field. Furthermore, all work areas would be isolated from the River during construction, and storm water runoff at construction locations would be contained according to SWPPP conditions.

Use of construction vehicles increases the potential for accidental release of fuels, solvents, or other petroleum-based contaminants. Although releases of such substances in any part of the construction footprint could drain to the River and thereby affect aquatic resources, releases in the overbank area are most removed from the River and most likely to be contained and removed before reaching the River, compared to releases occurring below the top of the bank. Also, under any alternative, BMPs designed to minimize the potential for release of toxic substances will be implemented. These BMPs are listed in Section 5.11.4 of the IFR.

Under Alternative 10, most of the ground-disturbing work and work involving heavy machinery will occur in the overbank area, outside of the River channel. As with all alternatives, some use of machinery in the channel is anticipated to assist in removing invasive species and to install dewatering equipment. Additional ground-disturbing work and use of construction equipment in the River channel would occur in Reach 4 to create an inlet and outlet for a side channel, and in Reach 6 to lower the channel banks.

Alternative 13 would require ground-disturbing work and use of construction equipment at up to 6 locations within the River channel, not including invasive species removal areas. Measures under this alternative that could increase the potential for releases of contaminants from ground sources into waters of the U.S. include the same measures as under Alternative 10, as well as creation of additional side channels and additional lowering of channel banks.

Alternative 16 would require ground-disturbing work and use of construction equipment at up to 12 locations within the River channel, not including invasive species removal areas. Measures under this alternative that could increase the potential for releases of contaminants from ground sources into waters of the U.S. include the same measures as under Alternative 13, as well as creation of additional side channels, additional lowering of channel banks, terracing banks, and modifying the trapezoidal channel to vertical banks.

Alternative 20 would require ground-disturbing work and use of construction equipment at up to 15 locations within the River channel, not including invasive species removal areas. Measures under this alternative that could increase the potential for releases of contaminants from ground sources into waters of the U.S. include the same measures as under Alternative 16, and would excavate upland area at the mouth of Verdugo Wash in Reach 3 to create additional wetland and riparian habitat.

Alternative 13v would include all measures and impacts of Alternative 13 in Reaches 1-6 and 8. Moreover, Alternative 13v would include restoration measures in Reach 7 identical to those proposed under Alternative 20. Within Reach 7, streams would be daylighted; wetlands would be created; embankments would be terraced; and channel banks would be modified. Ground-disturbing work will be undertaken at Arroyo Seco-River confluence and LASHP.

The potential for accidental release of contaminants from construction equipment into the water column increases as the amount of in-channel work increases. However, impacts would be short term and would be minimized with the implementation of BMPs, such as use of water diversion structures or regulatory requirements such as SWPPPs. Per requirements of ER 1165-2-132 discussed above, long term release of HTRW into the water column under all alternatives would be unlikely.

Under all action alternatives, invasive species would be removed throughout the project area, including the River channel and tributary bottom, during construction. Invasive species in the channel would typically be removed by hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, the fill would be identical to the existing native substrate.

Secondary effects of the fill would mostly be identical for all alternatives. Much of the permanent fill would also be chemically inert, and would consist of materials such as concrete, rock from a certified source, or pre-seeded turf reinforcement matting, none of which would leach contaminants into the water column. Topsoil would be acquired from a certified contaminant-free source, and would be free of most weed seeds; HTRW, or other contaminants. Thus, potential for long-term leaching of contaminants into the water column would be minimal.

Operation: Maintenance activities within waters of the U.S. may require use of excavators, backhoes, or grapple trucks for removal of trash, debris, and sediment. Invasive species removal throughout the project footprint, including the River channel and tributary channel bottom, would typically be performed with hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, the fill would be identical to the existing native substrate. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases, there may be discharges of fill material associated with the use of earthmoving equipment, such as bulldozers, within newly established waters of the U.S. Though minimal, there is potential for accidental release of petroleum based products from construction equipment into the water column during maintenance activities. However, impacts would be short term and would be minimized with the implementation of BMPs such as use of water diversion structures or regulatory requirements, such as SWPPPs.

Secondary effects of the fill associated with maintenance activities would be minimal. Discharge of concrete, rocks, or soils within waters of the U.S. would be associated with associated with like-for-like repairs. Thus, impacts would be small in scope. Much of the permanent fill would also be chemically inert, and would consist of materials such as concrete, rock from a certified source, or pre-seeded turf reinforcement matting, none of which would leach contaminants into the water column. Topsoil would be acquired from a certified contaminant-free source, and would be free of most weed seeds and free of HTRW or other contaminants. Thus, potential for long-term leaching of contaminants into the water column would be minimal.

Water Flow

Construction: For all alternatives, restoration measures would be designed to not impair flood risk management functions in any portion of the study area or areas downstream. It is assumed that in-channel construction and modification of the project reaches would be conducted outside of the winter storm season (April 15 - October 15) to avoid wet weather storm flows, or that work areas would be adequately protected and not affect flood conveyance. In areas where in-channel construction would occur, diversions would be implemented to bypass dry weather flows downstream. Base flows may be temporarily affected in the immediate construction zone, but would not be affected upstream or downstream of the study area.

Under all alternatives, modifications to the channel will not increase the maximum water surface elevation. Under all alternatives, modifications to the channel are not expected to result in substantial changes to water velocity and circulation. While initial assessment identified that an increase in water surface elevation could occur at transition areas (areas where the channel has geometric changes (transitioning from trapezoidal to rectangular or from a widened section to a narrow section) or changes in construction material (transitioning between soft-bottom and concrete)) if no design refinements were made, the detailed design will ensure the maximum water surface elevations will not increase when compared to the existing conditions. Any change in water surface in the transition areas will be avoided through design refinements to the project modifications to channel geometry and/or avoidance of introduction of vegetation and enforcing O&M requirements limiting vegetation growth in those areas. Additional hydraulic analysis will be conducted and design modifications will be implemented during the design phase to provide more detail on the channel hydraulics with the recommended plan in place. Under all the alternatives, with implementation of such design refinements, there will be no increase in flood damages through the project area as compared to existing conditions.

Under all action alternatives, invasive species would be removed throughout the project area, including the River channel and tributary bottom, during construction. Invasive species in the channel would typically be removed by hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. Removal of invasive vegetation from in-channel areas would facilitate conveyance of flows and would not increase flood risks.

Operation: Maintenance activities within waters of the U.S. required to maintaining design flow velocity and water surface elevations would primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA. An operation and maintenance would be developed as part of the project. Full implementation of the maintenance regimen would ensure that maintenance activities do not impact flow velocity, circulation, and water surface elevation.

Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases there may be discharge of fill associated with the use of earthmoving equipment such as bulldozers or temporary stockpiling within newly established waters of the U.S. Impacts will be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material into waters of the U.S. However, temporary or permanent discharges of fill would not change the design elevations or contours. Invasive species removal throughout the project footprint, including the River channel and tributary channel bottom, would typically be performed with hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, the fill would be identical to the existing native substrate. Removal of invasive vegetation from the project footprint would facilitate conveyance of flows and would not increase flood risks. Thus, changes in velocity and circulation are not expected.

Cumulative Impacts

Due to the reduced flood risks subsequent to the channelization of the River, development increased within the vicinity of the study area, with residential, commercial, and industrial uses

abutting the channel. As development increased, the channel was further modified for bridge crossings, utility crossings, and construction of storm drain outfalls. In addition, maintenance activities were conducted. These modifications and maintenance activities resulted in the discharge of concrete structural fill below the OHWM. Since the River was channelized, concrete-on-concrete discharges would not have resulted in significant impacts to substrate.

Previous construction likely resulted in temporary impacts to water quality during construction. However, increased development in the uplands has resulted in long-term water quality impairments from nuisance flows. The River is consistently listed on the CWA Section 303(d) List from 1998-2010 for water quality impairments. The 2010 Integrated Report CWA Section 303(d) List indicates that the water quality of the River traversing the study area is impaired due to presence of ammonia, copper, lead, algae, and trash.

All action alternatives would entail direct impacts on the physical and chemical characteristics of the aquatic ecosystem due to the discharge of temporary and permanent fill. Furthermore, the potential for impacts to water quality, circulation, and water surface elevations from construction and maintenance would increase from Alternative 10 to Alternative 20 as the amount of in-channel work and required maintenance incrementally increases. However, with implementation of design refinements increase in water surface elevations across all alternatives would be attenuated to a sufficiently acceptable level that would not compromise the flood risk management functions of the River. Furthermore, with implementation of BMPs to fully isolate work areas from surrounding flows, and implementation of SWPPPs, short-term impacts to water quality would be minimal and remain the same across all action alternatives.

Under all action alternatives, there would be incidental benefits to functions of the aquatic environment through increase adsorption and absorption of contaminants. Furthermore, there would be increased structural and functional heterogeneity as concrete structures are modified into vegetative connections, side channels, and in some cases restoration of restoration of full floodplain connectivity within particular reaches. See Section 5.4 of the IFR for further information.

Under all action alternatives, invasive species would be removed throughout the project area, including the River channel and tributary bottom, during construction. Invasive species in the channel would typically be removed by hand tools. Thus, the activity would not result in discharges of fill in most instances and there would be no temporary increases in turbidity. In cases where limited earthmoving may be required, there would be discharges of earthen fill. Impacts to turbidity would be minimal. There would be no impacts to substrate, contaminants or flow characteristics.

In addition to project construction, constructed ecosystem features would be maintained and invasives management conducted throughout the project footprint under all alternatives. Furthermore, the Corps would continue to conduct maintenance for flood risk management operation of the LACDA project in the channel areas outside the restoration features except for invasives removal throughout the in-channel areas. Maintenance would continue to include native vegetation management. Under both maintenance programs there may be discharge of fill associated with the use of earthmoving equipment such as bulldozers or temporary stockpiling within existing or newly established waters of the U.S. Impacts will be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges

of fill material into waters of the U.S. However, temporary or permanent discharges of fill would not change the design elevations or contours. Thus, changes in velocity and circulation are not expected.

Removal of invasive vegetation from the project footprint, including the River channel and tributary channel bottom, would typically be performed with hand tools. Thus, this activity is not expected to result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. Such fill would be identical to the existing native substrate. Impacts to turbidity would be minimal. There would be no impacts to substrate, contaminants or flow characteristics.

The channel is currently surrounded by a developed urban landscape consisting of commercial, public, and residential uses in adjacent areas. As a result, present and future projects in the uplands within the study area would likely entail redevelopment or conversion of existing land uses. Minor modifications to the River channel associated with construction, modifications, and maintenance of existing and future infrastructure such as bridges and utilities are anticipated. Changes to circulation, velocity, and water surface elevations would be mitigated as appropriate for actions requiring Rivers and Harbors Act Section 408, 33 U.S.C. 408, approvals and reviews. Impacts to water quality would be temporary and would be attenuated through CWA Section 401 and Section 404 permitting requirements.

With a renewed public interest in the revitalized River, additional projects within the study area are likely. Future projects include the Atwater Pedestrian-Equestrian Bridge and the Los Angeles Waterwheel. Construction would temporarily affect water quality. However, land uses are expected to remain urban. Thus, the existing water quality impairments are unlikely to change substantially. Therefore, construction of the ecosystem restoration project would not result in cumulative significant impacts to the physical and chemical characteristics of the aquatic ecosystem. See Chapter 5 if the IFR for additional discussion on cumulative impacts.

5.4 Potential Direct and Indirect Impacts on Biological Characteristics of the Aquatic Ecosystem (Subpart D)

Threatened and Endangered Wildlife

Construction: The only listed species with a potential to occur in the study area is the least Bell's vireo, a federally listed bird species associated with the riparian areas. The study area does not include any designated critical habitat for vireo. Due to the linear and confined nature of existing habitat and the lack of breeding pairs in the most recent survey conducted in 2009, presence of the vireo is unlikely. Pre-construction surveys would be performed with all the action alternatives. If nesting vireos are found, construction in those areas would be halted until the Corps completes consultation with the U.S. Fish and Wildlife Service (USFWS) under the Endangered Species Act. Construction in areas not occupied with vireo would continue as scheduled. At this time, however, the Corps has determined that no effects to listed species will occur under any of the action alternatives. Please refer to Section 5.5.3 of the IFR for additional discussion. No other special status species are expected to occur due to the degraded conditions within the study area and lack of suitable habitat.

During construction, noise and presence of visual forms associated with an active construction site may discourage establishment of nests or foraging within the vicinity of the construction footprint. Under all action alternatives, invasive species would be removed from the project footprint, including the River and tributary channel bottoms, during construction.

However, construction would not occur simultaneously within the entire project area. The construction footprint would migrate from one location to another over a number of years through the project area. As a result, avian and wildlife species within the active construction zone should be able to relocate to and utilize unaffected areas. Upon completion of construction, presence of native vegetation within the restoration project footprint would indirectly benefit wildlife by restoring regional connectivity to the Santa Monica Mountains, San Gabriel Mountains, and the Verdugo Mountains.

Operation: Maintenance activities within waters of the U.S. required for maintaining habitat restoration or recreational features would primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases there may be discharges of fill material associated with the use of earthmoving equipment such as bulldozers or temporary stockpiling within existing or newly established waters of the U.S. Impacts will be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in permanent discharges of fill material into waters of the U.S. However, temporary or permanent discharges of fill material would not change the design elevations or contours.

The only listed species with a potential to occur in the study area is the least Bell's vireo, a federally listed bird species associated with the riparian areas.

The Corps has determined that there will be no effect to least Bell's vireo from operations of the proposed project. Removal of non-native vegetation and trimming of in-channel vegetation to maintain flood conveyance would occur outside the breeding season. Overall, operations will support the establishment and expansion of native riparian vegetation in the restored areas, which has the potential to support future populations of vireo, and may support foraging and stop over habitat for southwestern willow flycatcher and coastal California gnatcatcher. Presence/absence surveys for these species will be performed during operation of the proposed project as part of the Monitoring and Adaptive Management Plan. The Corps and non-Federal sponsor will continue to coordinate with the U.S. Fish and Wildlife Service and the California Department of Wildlife during operations of the proposed project.

Vegetation management activities, including removal of invasive vegetation from the project footprint, including the River channel and tributary bottom, would be scheduled outside of migratory bird nesting season to the extent practicable. However, vegetation management or other types of maintenance may be required during the nesting season in order to maintain design flow velocities; water surface elevations; and conveyance capacity. In such cases, pre-construction surveys for the vireo would be performed prior to maintenance activities. If nesting vireos are found, maintenance activities would be coordinated with a qualified biologist to avoid take, or consultation with the USFWS would first be required.

No other special status species are expected to occur due to the degraded conditions within the study area and lack of suitable habitat. Impacts to threatened and endangered species are not expected to occur.

During maintenance activities, noise and presence of visual forms associated with an active construction site may discourage establishment of nests or foraging within the vicinity of the work area. However, the duration of maintenance activities would be approximately 30 days. Furthermore, the work area would be small and would migrate from one location to another as needed. Other vegetated areas within the ecosystem restoration project and the flood risk minimization project will continue to be available for nesting and foraging. As a result, there would be no indirect impacts to the vireo or other avian species within the project area. Maintenance of the ecosystem restoration elements would indirectly benefit wildlife by maintaining established regional connectivity to the Santa Monica Mountains, San Gabriel Mountains, and the Verdugo Mountains.

Other Wildlife

Construction: Wildlife species that utilize the open aquatic areas, wetlands, and riparian areas along the River channel may be temporarily impacted by construction in those areas, and will experience long-term beneficial impacts from restoration in those areas. In general, species present in the study area are those that are opportunistic and/or habituated to human presence. These species are able to move to alternative locations if they are disturbed by construction activities and, therefore, are not anticipated to be impacted adversely. Alternative 10 would result in the least overall temporary impacts to wildlife, while each subsequent alternative would result in incremental increases in temporary impacts and benefits to wildlife. BMPs would be implemented under all action alternatives to avoid or minimize impacts to wildlife during construction, including but not limited to:

- Vegetation clearing activities would be avoided to the maximum extent practicable in any areas identified as breeding or nesting habitat for any bird species during the breeding season, which generally runs from March 1-August 31.
- If vegetation removal must occur during the breeding season, a qualified biologist would perform nesting bird surveys following established protocol prior to construction. If nests are detected during these surveys, a 300-foot no construction buffer would be delineated around the nest (500 feet for raptors).
- Construction in breeding areas would be monitored by a qualified biologist.
- Construction would be phased to minimize impacts to wildlife species, so that the entire study area would not be under construction all at once to minimize human intrusion.

Under all action alternatives, invasive species would be removed throughout the project area, including the River channel and tributary bottom, during construction. Invasive species in the channel have typically been removed by hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. All BMPs listed above would be implemented during invasive vegetation removal operations.

There would be no permanent loss of native habitat or impacts to wildlife under any action alternatives. Thus, no significant adverse impacts will result. All action alternatives will result

in beneficial impacts to the aquatic ecosystem through the expansion of open water area, soft river bottom area, riparian zones, wetlands, and connection to side channels and tributaries. Beneficial impacts would be commensurate with the footprint of restoration. Thus, long-term beneficial impacts will increase with Alternatives 13, 13v, and 16, with the greatest amount of beneficial impact occurring under Alternative 20.

Operation: Maintenance activities within waters of the U.S. required for maintaining habitat restoration or recreational features would primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA. Invasive species removal throughout the project footprint, including the River channel and tributary channel bottom, would typically be performed with hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, the fill would be identical to the existing native substrate.

Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases there may be discharges of fill associated with the use of earthmoving equipment such as bulldozers or temporary stockpiling within existing or newly established waters of the U.S. Impacts will be temporary in nature. In other cases, like-for-like structural repair below the OHWM could result in discharges of permanent fill. However, temporary or permanent discharges of fill material would not change the design elevations or contours.

Wildlife species that utilize the open aquatic areas, wetlands, and riparian areas along the River channel may be temporarily impacted by noise and temporary changes in the acreage of invasive vegetation as well as height and density of all vegetation. In general, species present in the study area are those that are opportunistic and/or habituated to human presence. These species are able to move to alternative locations if they are disturbed by construction activities and, therefore, are not anticipated to be impacted adversely. Maintenance of Alternative 10 would result in the least overall temporary impacts to wildlife, while maintenance of each subsequent alternative would result in incremental increases in temporary impacts to wildlife. BMPs would be implemented under all action alternatives to avoid or minimize impacts to wildlife during construction. There would be no permanent loss of habitat or impacts to wildlife under any action alternatives. Thus, no significant adverse impacts will result.

Aquatic Organisms

Construction: As indicated in Section 3.5.3 of the IFR, the study area supports nonnative fish species such as mosquito fish, catfish, and green sunfish, and carp throughout the study reach. Native fish species are not present. In-channel activities during construction will require dewatering. However, dewatering would only occur with phased construction designed to impact isolated areas for short periods of time. As with impacts to wildlife, temporary adverse impacts will be least in Alternative 10, increasing with each alternative, but overall would be temporary and not significant. There would be no permanent adverse impacts to aquatic organisms under any build alternative. Instead, with each increasing footprint in each alternative, a greater area of aquatic habitat will be created or enhanced, resulting in improved conditions for aquatic organisms. This indirectly benefits the rest of the fish and wildlife assemblage in the area through creating more abundant food sources.

Operation: Maintenance activities within waters of the U.S. required for maintaining habitat restoration or recreational features would primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA. Furthermore, the City of Los Angeles would also be responsible for removal of invasive species throughout the project footprint, including the River channel and tributary bottom. Invasive species within the project footprint would typically be removed by hand tools. Thus, in most instances there would be no impacts to aquatic organisms.

Maintaining design grades, elevations, contours, and conveyance may require in-water work on a periodic basis. In-water work would likely require the use of water diversion structures, such as k-rails or sandbags. Movement of vehicles across earthen substrate during the placement and removal of dewatering structures would temporarily elevate turbidity in the water column. When fully isolated from surrounding flows, maintenance work within aquatic areas would result in minimal or no increases in turbidity. As indicated in Section 3.5.3 of the IFR, the study area supports nonnative fish species such as mosquito fish, catfish, and green sunfish, and carp throughout the study reach. Native fish species are not present. As a result, impacts would result in de minimis impacts to fish population.

Vegetation

Construction: Within each alternative, a number of measures are designed to create additional riparian and wetland habitats, which are closely associated with water and may be indirectly affected by changes to water during construction or operation. During construction, in-water work may temporarily affect riparian vegetation. Impacts would be temporary. Due to the existing seed bank and perennial flow, affected vegetation is expected to recover soon after completion of construction. Under all action alternatives, invasive species would be removed throughout the project area, including the River channel and tributary bottom, during construction. Invasive species in the channel would typically be removed by hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. Invasive species removal would result in a more natural and functional plant community. There would be no permanent loss or impact to existing native vegetation under any action alternative. After construction is complete, under each alternative, new acres of riparian and wetland habitat would be present within the study area. Day lighting uplands culverts will create riparian corridors which will provide additional filtration of storm water entering the system. Riparian and wetland vegetation, along with vegetated embankments, will combine to increase shading of the River, which may reduce microclimate temperatures. Alternative 10 provides the least total area of new vegetation, with increasing areas in each subsequent Alternative, meaning that beneficial impacts increase with each alternative. Alternative 20 provides the greatest area of beneficial impacts.

Operation: Maintenance activities within waters of the U.S. for maintaining habitat restoration or recreational features would primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA. Invasive species removal throughout the project footprint, including the River channel and tributary channel bottom, would typically be performed with hand tools. Thus, the activity would not result in discharges of fill in most instances. In cases where limited earthmoving may be required, there would be discharges of earthen fill. However, the fill would be identical to the existing native substrate.

Vegetation maintenance would result in temporary changes in the acreage of invasive vegetation as well as the height and density of all vegetation. Maintaining design grades, elevations, contours, and conveyance may require in-water work on a periodic basis. Impacts to during construction would be temporary. Due to the existing seed bank and perennial flow, affected vegetation is expected to recover soon after completion of construction. Impacts would be temporary and less than significant.

Cumulative Impacts

The study area for biological resources includes the River watershed. The River was once a 51-mile-long backbone of a vast system of riparian foothill, riverine, and freshwater marsh habitat that carried seasonal rains and subterranean flows to the coastal plain and the Pacific Ocean. Over time, the River has been degraded by a cycle of increasing urban development, flooding, and channelization, culminating in the mid-20th Century with the LACDA system. The LACDA project encased the River in concrete banks and a mostly concrete bed, and straightened the river's course, thereby significantly diminishing its plant and wildlife diversity and quality, and disconnecting it from its floodplain and significant ecological zones. The entire River corridor is degraded due to historic activities.

During construction activities, noise and presence of visual forms associated with an active construction site may discourage establishment of nests or foraging within the vicinity of the work area. However, construction would not occur simultaneously within the entire project area. The construction footprint would migrate from one location to another over a number of years through the project area. As a result, avian and wildlife species within the active construction zone should be able to relocate to and utilize unaffected areas. Upon completion of construction, presence of vegetation within ecosystem restoration elements would indirectly benefit wildlife by restoring regional connectivity to the Santa Monica Mountains, San Gabriel Mountains, and the Verdugo Mountains. No other special status species are expected to occur due to the degraded conditions within the study area and lack of suitable habitat in the immediate future. Impacts to threatened and endangered species are not expected to occur.

In addition to project construction, constructed ecosystem features would be maintained under all alternatives. Furthermore, the City of Los Angeles would also be responsible for removal of invasive species from the project footprint, including the River channel and tributary bottom areas. The Corps would continue to be responsible for maintaining all other aspects of the portions of the LACDA project that overlap with the restoration project footprint.

Under both maintenance programs vegetation within LACDA project and the ecosystem restoration project would be managed in accordance with the respective operating manuals. Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. During maintenance activities noise and presence of visual forms associated with an active construction site may discourage establishment of nests or foraging within the vicinity of the work area. However, the duration of maintenance activities for both projects would be approximately 30 days. Furthermore, the work area would be small and would migrate from one location to another as needed. Other vegetated areas within the ecosystem restoration project and the flood risk management project will continue to be available for nesting and foraging. As a result, avian and wildlife species within the active construction zone should be able to relocate to and utilize unaffected areas.

The restoration measures in Alternatives 10, 13, 13v, 16, and 20 would contribute to beneficial cumulative impacts to biological resources. These impacts would increase the amount of fish and wildlife habitat; provide greater ecological/biological benefits; aid in linking isolated habitats; help increase the amount of open space; help expand species diversity; and reduce the amount of impermeable surface area in the study area. These impacts would be beneficial from a regional perspective since they would benefit fish and wildlife species that may migrate outside of the study area. These benefits would also accrue to past, present, and reasonably foreseeable projects including the Albion Dairy Park, Griffith Park on the East Bank, Sennett Creek Park, and the Rio de Los Angeles State Parks that are located along or in the vicinity of the River. Cumulative impacts have been assessed in Chapter 5 of the IFR.

5.5 Potential Direct and Indirect Impacts on Special Aquatic Sites (Subpart E)

Sanctuaries and refuges

Construction: There are no sanctuaries or refuges designated under state or federal laws within the footprint of any of the action alternatives. Therefore, no alternative would directly or indirectly impact sanctuaries or refuges.

Operation: There are no sanctuaries or refuges designated under state or federal laws within the footprint of any of the action alternatives. Operations and maintenance would not directly or indirectly impact sanctuaries or refuges.

Wetlands

Construction: Wetlands are known to occur in the soft bottom areas in Reach 2 and in the Glendale Narrows (Reaches 4-6) and at the River-Verdugo Wash confluence. When there is low-energy, sediment-laden flow within these reaches, the sediments will occasionally form sandbars, and remain intact as flow diminishes. Wetland vegetation will establish temporarily on these sandbars until high flows wash them away. Wetland vegetation establishment will vary from year to year due to flows and ongoing LACDA maintenance activities. Because wetland vegetation in the channel does not expand jurisdictional waters and is highly variable, prior to each phase of construction, the project area would be surveyed for the current location of jurisdictional wetlands.

Aside from invasive species removal efforts, the only actions that would occur in the River channel under Alternative 10 would be creation of an inlet and outlet for a side channel in Reach 4 and lowering the channel banks to widen the River in Reach 6. Primary construction for these measures would occur relatively high on the River channel banks, away from any wetlands, which would be found at the bottom of the channel. Construction at the toe of the slope in Reach 6 could occur close to wetlands and may necessitate working in wetland areas, resulting in temporary adverse impacts to this resource. Construction would avoid or minimize impacts to wetlands to the maximum extent practicable.

Unavoidable impacts to wetlands during construction would be temporary. Due to the existing seed bank and perennial flow, affected wetland vegetation is expected to recover soon after completion of construction. Subsequent to construction, Alternative 10 would result in a net gain in wetlands in the study area. Because Alternative 10 has the least amount of construction in the River channel in Reaches 2, 4, 5, and 6, it also has the least potential for adverse impacts to wetlands of any action alternative. New riparian areas would be created in the overbank areas where streams would be daylighted and a side channel constructed, and additional wetlands may form where channel banks are lowered in Reach 6. With presence of sufficient hydrology either seasonally or on a relatively permanent basis, the riparian areas could develop hydric soils, one indicator of jurisdictional wetlands.

Potential for impacts to wetlands under Alternative 13 would be similar to Alternative 10, since the amount of in-channel construction remains similar. Construction would avoid or minimize impacts to wetlands to the maximum extent practicable. Unavoidable impacts to wetlands during construction would be temporary. Due to the existing seed bank and perennial flow, affected

wetland vegetation is expected to recover soon after completion of construction. New riparian areas would be created in Reaches 3 and 4 where streams would be daylighted and side channels constructed in the overbank areas; in Reaches 6 and 7 where channel banks would be lowered; and in Reach 8 where a historic wash would be restored. With presence of sufficient hydrology either seasonally or on a relatively permanent basis, the riparian areas could develop into wetlands.

Potential for impacts to wetlands under Alternative 16 would increase relative to Alternative 13 due to the increased amount of in channel construction associated with terracing the banks and modifying the trapezoidal channel in Reach 5. Construction would avoid or minimize impacts to wetlands to the maximum extent practicable. Unavoidable impacts to wetlands during construction would be temporary. Due to the existing seed bank and perennial flow, affected wetland vegetation is expected to recover soon after completion of construction. New riparian areas would be created in Reaches 3 and 4 where streams would be daylighted and side channels constructed in the overbank areas; in Reach 5 where streams would be daylighted and a concrete-lined, tropical channel would be converted into a soft bottom rectangular channel; in Reaches 6 and 7 where channel banks would be lowered and additional riparian areas would be treated behind the banks; and in Reach 8 where a historic wash would be restored and channel banks would be modified. With presence of sufficient hydrology either seasonally or on a relatively permanent basis, the riparian areas could develop into wetlands.

Potential for impacts to wetlands under Alternative 20 would be similar to Alternative 16. Construction would avoid or minimize impacts to wetlands to the maximum extent practicable. Unavoidable impacts to wetlands during construction would be temporary. Due to the existing seed bank and perennial flow, affected wetland vegetation is expected to recover soon after completion of construction. Furthermore, modifying the trapezoidal channel in Reach 2 to increase the amount of soft bottomed surface area under Alternative 20 could yield additional wetlands.

Under all action alternatives, invasive species would be removed from the project footprint, including the River and tributary channel bottom, during construction. Invasive species within the project footprint would typically be removed by hand tools. Thus, in most instances there would be no impacts to wetlands.

In general, long-term direct or indirect impacts to wetlands are not anticipated. Subsequent to the completion of construction and sufficient growth of plants and vegetation, the ecosystem restoration elements would provide increased wetland functions and services such as increasing foraging and nesting habitat for wildlife especially avian species. Though not designed as treatment wetlands, wetlands within newly created waters of the U.S. would provide some level of filtration commensurate with the duration of water residence times within these areas. There would be an increase in turbidity minimization functions.

Operation: Maintenance activities within waters of the U.S. required for maintaining habitat restoration or recreational features would primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA. Furthermore, the City of Los Angeles would also be responsible for removal of invasive species throughout the project footprint. Invasive species within the project footprint

would typically be removed by hand tools. Thus, in most instances there would be no impacts to wetlands.

Maintaining design grades, elevations, contours, and conveyance may require in-water work on a periodic basis. Impacts to during construction would be temporary. Due to the existing seed bank and perennial flow, affected vegetation is expected to recover soon after completion of construction. Impacts would be temporary and less than significant.

Long-term direct or indirect impacts to wetlands are not anticipated for maintenance activities within ecosystem restoration elements. Maintenance and adaptive management of habitat elements (such as non-native removal) would ensure that benefits continue to be realized for the life of the project.

Mudflats

Construction: Mudflats are generally found in intertidal, estuarine or near-shore habitats, in deltas, or at river mouths. None of these conditions occur in the study area. Sediment deposits may occur on occasion in some parts of the River, but they do not function as mudflats, which are generally rich biologically and support benthic organisms that are supportive of fish and avian species. The action alternatives would not directly or indirectly affect mudflats.

Operation: As no mudflats are present or will result from construction of restoration features, operations and maintenance activities would not directly or indirectly affect mudflats.

Vegetated shallows

Construction: Vegetated shallows are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as sea grasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems. Vegetated shallows are not present in the study area. The action alternatives would not directly or indirectly affect vegetated shallows.

Operation: As no vegetated shallows are present or will result from construction of restoration features, operations and maintenance activities would not directly or indirectly affect vegetated shallows.

Coral reefs

Construction: Coral reefs consist of skeletal deposits, usually of calcareous or silicaceous materials, and occur in marine environments, which does not exist in the study area. Therefore, there would be no direct or indirect effects to coral reefs.

Operation: As no coral reefs are present or will result from construction of restoration features, operations and maintenance activities would not directly or indirectly affect coral reefs.

Riffle and pool

Steep gradient sections of streams are sometimes characterized by riffle and pool complexes. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high

dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. Although this habitat type is generally associated with higher-gradient streams, some form of riffle and pool complex may occur where boulders and gravel have accumulated to the extent that they can back up flows to cause pools and allow for increased water velocity or formation of eddies on the downstream side.

Occasional riffle and pool complexes may be found in the soft bottom reaches of the study area and are subject to variation based on flows and maintenance activities (Reaches 2, 4, 5 and 6). Prior to initiation of construction, the study area would be surveyed for the current location of riffle and pool complexes. Per recommendations of the Fish and Wildlife Coordination Act Report, feasibility of constructing riffle and pool complexes in the soft bottom reaches would be further evaluated during the design phase. During construction, the potential for impacts would increase from Alternative 10 through Alternative 20, commensurate with the amount of in-channel work. Construction would avoid or minimize impacts to these features to the maximum extent practicable. Furthermore, the project would create conditions that would allow for the natural formation of riffle and pool complexes.

Under all action alternatives, invasive species would be removed from the project footprint, including the River and tributary channel bottom, during construction. Invasive species within the project footprint would typically be removed by hand tools. Thus, in most instances there would be no impacts to riffle and pool complexes.

Long-term impacts to aeration and downstream scour would be de minimis since the River downstream of the project area would remain channelized. Furthermore, as indicated in Section 3.5.3 of the IFR, the study area supports nonnative fish species such as mosquito fish, catfish, and green sunfish, and carp throughout the study reach. Native fish species are not present. As a result, impacts would result in de minimis impacts to fish population. Under all action alternatives, direct and indirect impacts to functions and services associated with riffle and pool complexes would be temporary.

Implementation of any action alternative may result in indirect long term benefits to aquatic species. Per recommendations of the Fish and Wildlife Coordination Act Report, feasibility of implementing design refinements and placement of measures to support native fish habitat in the study area would be examined during the design phase. The measures in the soft bottom reaches include but are not limited to water shaded by riparian vegetation, riffle and pool complexes, refugia, in-channel woody debris, and gravel and cobble substrates. In concrete reaches the measures may include installation of boulder clusters to provide some refugia for native fish between widened areas depending on results of design analysis.

Operation: Maintenance activities within waters of the U.S. required for maintaining habitat restoration or recreational features would primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA. Furthermore, the City of Los Angeles would also be responsible for removal of invasive species throughout the project footprint. Invasive species within the project footprint would typically be removed by hand tools.

Maintaining design grades, elevations, contours, and conveyance may require in-water work on a periodic basis. Maintenance activities would avoid or minimize impacts to riffle and pool

complexes to the maximum extent practicable. If disturbed during maintenance activities, riffle and pool complexes would be restored to match pre-construction configurations to the maximum extent practicable. Furthermore, the project would create conditions that would allow for formation of additional riffle and pool complexes.

Long-term impacts to aeration and downstream scour would be de minimis since the River downstream of the project area would remain channelized. Furthermore, as indicated in Section 3.5.3 of the IFR, the study area supports nonnative fish species such as mosquito fish, catfish, and green sunfish, and carp throughout the study reach. Native fish species are not present. As a result, impacts would result in de minimis impacts to fish population. For all maintenance activities, direct and indirect impacts to functions and services associated with riffle and pool complexes would be de minimis.

Cumulative impacts

The River was once a 51-mile-long backbone of a vast system of riparian foothill, riverine, and freshwater marsh habitat that carried seasonal rains and subterranean flows to the coastal plain and the Pacific Ocean. Coral reefs and mudflats have not been present historically within the study area. However, wetlands as well as riffle pool and complexes were likely present. Over time, the River has been degraded by a cycle of increasing urban development, flooding, and channelization, culminating in the mid-20th Century with the LACDA system. The LACDA project encased the river in concrete banks and a mostly concrete bed, and straightened the river's course, thereby significantly diminishing the range and size of special aquatic sites.

In addition to project construction, constructed ecosystem features and invasives removal throughout the project footprint would be maintained under all alternatives. The Corps would continue to be responsible for maintaining all other aspects of the portions of the LACDA project that overlap with the restoration project footprint. Removal of invasive vegetation would benefit recruitment of riparian vegetation and establishment of wetlands.

In-channel work under both maintenance programs may require work within wetland areas. Impacts to wetlands during construction would be temporary. Due to the existing seed bank and perennial flow, affected wetland vegetation is expected to recover soon after completion of construction. Naturally formed or engineered riffle and pool complexes within the ecosystem restoration project would be maintained.

5.6 Potential Direct and Indirect Effects on Human Use Characteristics (Subpart F)

Municipal and private water supplies

Construction: The River is not a source for municipal or private water supplies. It conveys storm flows and discharge from wastewater treatment plants, which are not suitable for potable use. Furthermore, the proposed action alternatives would not alter flows through the system. Therefore, there would be no direct or indirect effects on municipal or private water supplies under any alternative.

Operation: Maintenance activities within waters of the U.S. required for maintaining habitat restoration or recreational features would primarily entail vegetation maintenance especially in

areas where ecosystem restoration features transition to flood risk management elements of LACDA. Furthermore, the City of Los Angeles would also be responsible for removal of invasive species throughout the project footprint. Invasive species within the project footprint would typically be removed by hand tools.

Maintaining design grades, elevations, contours, and conveyance may require limited earthmoving activities on a periodic basis. In such cases there may be discharge of fill associated with the use of earthmoving equipment such as bulldozers or temporary stockpiling within newly established waters of the U.S. Impacts will be temporary in nature. In other cases like-for-like structural repair below the OHWM could result in discharge of permanent fill. However, temporary or permanent discharges of fill would not change the design elevations or contours. Because the River is not a source for municipal or private water supplies, in-channel work would not directly or indirectly affect municipal or private water supplies.

Recreational and commercial fisheries

Construction: Recreational fishing at the Elysian Valley area (Reaches 4-6) is authorized during the summer months from Memorial Day through Labor Day by the Mountains Recreation and Conservation Authority and City of Los Angeles in cooperation with the Corps and County of Los Angeles. Though access is generally discouraged or unauthorized during other times of the year, recreational fishing still occurs. Fish within the Glendale Narrows reach are nonnative, primarily mosquito fish, catfish, and green sunfish, and carp. There is no commercial fishery associated with the River.

Short-term adverse impacts may occur to the recreational fishery if pools where fish may occur are made inaccessible during construction. Due to construction phasing, the amount of area made inaccessible at any given time would be a minor amount of the available area, so adverse impacts would likewise be minor and short-term. This type of effect would be least under Alternative 10 since it has the smallest amount of in channel construction, and greatest under Alternative 20 since it has the greatest amount of in channel construction. Under all action alternatives, impacts would be temporary.

Implementation of any build alternative may result in indirect long term benefits to aquatic species and recreational fishing. Per recommendations of the Fish and Wildlife Coordination Act Report, feasibility of implementing design considerations and placement of measures to support native fish habitat in the study area would be examined during the design phase. The measures in the soft bottom reaches include but are not limited to water shaded by riparian vegetation, riffle and pool complexes, refugia, in channel woody debris, gravel and cobble substrates. In concrete reaches the measures may include installation of bolder clusters to provide some refugia for native fish between widened areas.

Water-related recreation

Construction: Kayaking and fishing are permitted in the Elysian Valley area (Reaches 4-6) from Memorial Day to Labor Day each year through the Mountains Recreation and Conservation Authority and City of Los Angeles in cooperation with the Corps and County of Los Angeles. Under all alternatives, access may be limited during construction if parts of these reaches need to be restricted for dewatering. Impacts would be temporary.

Alternative 10 proposes the least construction in Reaches 4-6, and would therefore have the least temporary effect on water-related recreation.

Alternative 13 proposes additional restoration measures. These measures may require construction access in the River channel. Thus, a larger portion part of the channel maybe restricted during construction than under Alternative 10.

Alternatives 16 and 20 propose the same measures in Reaches 4 and 6 as Alternative 13, and add the measure of modifying the banks to a vertical wall on one side and primarily terracing the bank on the other in Reach 5. This additional measure may require construction access in the River channel, meaning that a larger portion of the channel may be restricted during construction than under Alternative 13.

Alternative 13v would include all measures and impacts of Alternative 13 in Reaches 1-6 and 8. Moreover, Alternative 13v would include restoration measures in Reach 7 identical to those proposed under Alternative 20. Within Reach 7, streams would be daylighted; wetlands would be created; embankments would be terraced; and channel banks would be modified. This additional measure may require construction access in the River channel. However, since water related recreation is not supported in Reach 7, impacts to water-related recreation would be identical to Alternative 13.

There would be long-term, indirect benefits to water-related recreation upon completion of the ecosystem restoration project. As noted above, the study area already supports water-related recreation through the Mountains Recreation and Conservation Authority. With increasing public interest in a revitalized River, the ecosystem restoration project would likely catalyze implementation of future water-related recreational programs.

Operation: Maintenance activities within waters of the U.S. required for maintaining habitat restoration or recreational features primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA as well as invasive management throughout the project footprint, including the River and tributary channel bottom. Maintaining design grades, elevations, contours, and conveyance may require in-water work on a periodic basis. In-water work during from Memorial Day to Labor Day may temporarily disrupt kayaking, fishing, or other authorized recreation programs. However, since work would likely be localized, impacts would be de minimis and temporary.

Indirect benefits to water-related recreation from maintenance activities would be limited. In general, maintenance activities would ensure that the ecosystem research elements are maintained to design specifications and would not interfere with flood risk minimization functions of the LACDA project.

Aesthetics

Construction: As noted in the IFR, minor, short-term adverse impacts to aesthetic resources are likely to occur under all action alternatives during construction. The proposed restoration measures under all alternatives require large equipment to be present to conduct extensive earthwork and in-channel construction. The extent and duration of temporary impacts is commensurate with the scope of the construction footprint, increasing from Alternative 10 to Alternative 20.

The fewest temporary adverse impacts would occur under Alternative 10, since it entails the smallest construction footprint and would occur over the shortest timeframe (9 years). There would be no significant adverse impacts from this alternative.

Alternative 13 and 13v would have more adverse and beneficial impacts than Alternative 10 due to the larger footprint of construction, and would occur over a longer time period (10 years). There would be no significant adverse impacts from this alternative.

Alternative 16 and 20 would have more adverse and beneficial impacts than Alternative 13 and 13v due to the larger footprint of construction, and would occur over a longer time period (15 year). There would be no significant adverse impacts from this alternative.

Long-term beneficial impacts would occur under all action alternatives. The benefits are commensurate with the scope of the construction footprint, increasing from Alternative 10 to Alternative 20. Management measures common to all alternative would benefit aesthetics. Riparian plantings would occur under all action alternatives as would non-native plant removal, trash removal, installation of linear strips for biofiltration, greening of River channel walls, and creation of buffer zones and planted swales. These common elements require little to no machinery, can be implemented quickly, and would have less than significant impacts on aesthetic resources.

There would be long-term, indirect benefits to aesthetics upon completion of the ecosystem restoration project. Currently, views from waters of U.S. are composed of trapezoidal concrete or rectangular channels, urban development at the top of banks, perennial water, debris, graffiti, and intermittent vegetation. With the project, existing views of the River composed of linear lines, sharp angles and other geometric forms as well as industrial colors and textures associated with an engineered channel would be attenuated by non-linear forms, heterogeneous textures and a natural color palette associated with a vegetated River. Furthermore, future projects within waters of the U.S., such as the Atwater Pedestrian-Equestrian Bridge or the Los Angeles Waterwheel, would juxtapose unique architectural elements against the enhanced natural views. With increasing public interest in a revitalized River, the ecosystem restoration project may catalyze implementation of future projects that would further accentuate the aesthetic elements described above.

Operation: Maintenance activities within waters of the U.S. for maintaining habitat restoration or recreational features would primarily entail vegetation maintenance especially in areas where ecosystem restoration features transition to flood risk management elements of LACDA. Furthermore, the City of Los Angeles would also be responsible for removal of invasive species throughout the project footprint. Invasive species within the project footprint would typically be removed by hand tools. Removal of invasive vegetation would benefit recruitment of riparian vegetation and establishment of wetlands.

Vegetation maintenance would result in temporary changes in the height and density of vegetation, affecting aesthetics. Impacts to during construction would be temporary. Due to the existing seed bank and perennial flow, affected vegetation is expected to recover soon after completion of construction. Furthermore, since work would likely be localized, impacts would be de minimis and temporary.

Indirect impacts to aesthetics from maintenance activities would be limited.

Parks, national and historical monuments, national seashores, wilderness areas, and research sites

Two state parks and several city parks are located in the study area, and would be affected by construction. There are no national parks, national or historical monuments or seashores, wilderness areas, or research sites in the study area.

Temporary partial closure of Harding Park Golf Course, and temporary full closure of Los Feliz Golf Course, would occur under all alternatives. This is considered a less than significant adverse impacts because closures would be phased and golfers would have options to golf elsewhere during construction. Conversion of a small portion of the LASHP to wetland habitat is proposed under Alternative 20, but this is not expected to result in a significant impact as the new use is consistent with the parks' general plan.

Operation: Maintenance activities within waters of the U.S. within the River would not affect parks. However, maintenance of restored historic channels in the uplands could be located in parks and result in temporary closure of the immediate area surrounding the restoration feature. Impacts would be de minimis and temporary.

Cumulative impacts

The study area encompasses a built out urban environment with residential, commercial, industrial, and recreational land uses. As a result, present and future projects within the study area would likely entail redevelopment or conversion of existing land uses. Thus, the existing urban viewshed is unlikely to change substantially. The views from waters of U.S. are composed of trapezoidal concrete or rectangular channels, urban development at the top of banks, perennial water, debris, graffiti, and intermittent vegetation. The project would substantially alter the views from waters of the U.S. Existing views of the River composed of distinctive form, line, color, and texture associated with an engineered channel would be attenuated by non-linear forms, textures and color palette associated with a vegetated channel. Furthermore, future projects within waters of the U.S., such as the Atwater Pedestrian-Equestrian Bridge or the Los Angeles Waterwheel, would add unique architectural elements to views from waters of the U.S. Cumulative impacts to aesthetics would be beneficial and significant.

Existing recreational uses within the vicinity of the study area includes a number of parks. Immediately adjacent to the study area is Griffith Park, a large regional recreational area that supports many recreational activities. Recreational opportunities along the study reach include year-round jogging and biking trails. In addition, annual kayaking and fishing in the River during summer months is offered through the Mountains Recreation and Conservation Authority. The project would indirectly increase recreational opportunities within the study area. Demand for recreation is expected to increase proportionally to population growth in the study area. Furthermore, due to the increasing public interest in revitalizing the River, implementation of additional recreational programs or construction of recreational amenities within the vicinity of the study reach in the future is likely. Cumulative impacts to recreation would be beneficial and significant.

The River is not a source for municipal or private water supplies. It conveys storm flows and discharge from wastewater treatment plants, which are not suitable for potable use. In consideration of the on-going drought in the Los Angeles area and an increasing emphasis on water conservation to augment water supplies, future implementation of programs and infrastructure to utilize existing flows remains a possibility. Due to real estate requirements and technical challenges for establishment of large groundwater recharge basins within the vicinity of the study area, future projects would likely entail small-scale demonstration or pilot programs. Impacts to water supplies would be less than significant.

Please refer to Section 5 of the IFR for the scope of analysis and discussion of past, present, and reasonably foreseeable future projects.

5.7 Evaluation and Testing (Subpart G)

All action alternatives would entail discharges of fill materials within waters of the U.S. Temporary discharges of fill would entail dewatering structures such as k-rails and sand bags. Dewatering structures would be removed upon completion of each phase of construction. Permanent discharges of fill would entail discharges of rock, concrete, reinforced vegetated matting, and top soil.

Both temporary and permanent fills would be chemically inert and would not leach contaminants into the water column. Topsoil would be acquired from a certified contaminant-free source to ensure that fill material is most likely to be free from chemical, biological, or other pollutants. Thus, topsoil would be suitable for discharge into the aquatic environment. Per 40 C.F.R. 230.60(a), additional chemical, biological, and physical evaluation testing would not be required.

6.0 Measures to Minimize Adverse Impacts (Subpart H)

Under any alternative, the following measures will be taken prior to and during construction to monitor the degree of impacts related to wetland and riparian construction, and to ensure that materials used in construction or operations are appropriate for use in an aquatic restoration project.

- Sources of seeds used for revegetation and soils used for backfilling will be required to show that they are weed free to the degree possible.
- Soils and all materials used for backfilling or stabilization must be certified to be free of contaminants.
- All sites with known and suspected HTRW soil contamination will be investigated and remediated prior to project construction. All groundwater contamination that cannot be remediated prior to project construction will be subject to appropriate handling, treatment and disposal ensured by the non-Federal sponsor. All work shall be consistent with ER 1165-2-132.

Construction plans will identify optimum phasing and timing and specify the guidelines for minimum standards necessary to protect soils, biological resources, and water and prevent generation of fugitive dust. Specific guidelines may include;

- Limiting certain aspects of in-channel construction outside of the winter storm season (April 15 - October 15) to minimize soil erosion.
- Installing silt fences around construction areas to prevent silt and sediment from entering the River channel.
- Designing and implementing a dewatering plan to avoid operating equipment in flowing water by using temporary cofferdams or some other suitable diversion to divert channel flow around the channel and bank construction area.
- Complying with an established Spill Prevention and Response Plan, which would define requirements for storage, handling, and containment of hazardous materials.
- Developing and implementing a storm water pollution prevention plan.
- Vegetation clearing activities would be avoided to the maximum extent practicable in any areas identified as breeding or nesting habitat for any bird species during the breeding season, which generally runs from March 1-August 31.
- If vegetation removal must occur during the breeding season, a qualified biologist would perform nesting bird surveys following established protocol prior to construction. If nests are detected during these surveys, a 300-foot no construction buffer would be delineated around the nest (500 feet for raptors).
- Construction in breeding areas would be monitored by a qualified biologist.
- Construction would be phased to minimize impacts to wildlife species, so that the entire study area would not be under construction all at once to minimize human intrusion.
- Stabilizing and reseeding disturbed areas with native grasses, shrubs, and trees after construction is complete.
- Conducting operation and maintenance during times of the year when wildlife is not likely to be breeding or nesting.
- Avoiding sensitive habitat types to the degree possible when performing maintenance,
- Prior to initiation of construction of each project phase, the relevant portion of the project area would be surveyed for wetlands. Construction would avoid or minimize impacts to wetlands to the maximum extent practicable.
- Prior to initiation of construction of each project phase, the relevant portion of the project area would be surveyed for riffle and pool complexes. Construction would avoid or minimize impacts to these features to the maximum extent practicable.

7.0 Summary of Effects to the Aquatic Environment

In general, potential for temporary impacts during construction would increase from Alternative 10 through Alternative 20, commensurate with the increasing scope for a number of aquatic resources. However, with implementation of measures to minimize adverse impacts, there would be no permanent loss or reduction of aquatic functions and services for any build alternative.

8.0 Conclusion

Alternatives 10, 13, 13v, 16, and 20 meet the overall project purpose and are practicable with respect to cost, technology, and logistics (See Section 4.3, 4.4, and 4.5). All action alternatives would entail significant impacts to non-aquatic resources (See Section 4.7). *The long term benefits to aquatic services and functions would be commensurate with the scale of construction and associated impacts.* The acreage of permanent fill within existing waters of the U.S. would increase from Alternative 10 (4.52 acres) through Alternative 20 (65.61 acres). The acreage of temporary fill would also increase correspondingly. However, all temporary fill would be removed upon completion of construction. Likewise, the acreage of new waters of the U.S. created will increase from Alternative 10 (56 acres) through Alternative 20 (156.9 acres).

All action alternatives would entail discharges of permanent fill into waters of the U.S. The discharge of fill material is required for the restoration of aquatic functions and services within waters of the U.S, and stabilization of new waters of the U.S. The discharge of permanent fill material would not result in the permanent loss of existing waters of the U.S.

All action alternatives would require implementation of environmental commitments to further avoid and minimize effects to the aquatic environment. No significant adverse impacts to aquatic resources have been identified in the IFR. No take of protected or sensitive aquatic species would occur under any build alternative.

Based on the preliminary analysis above, the project is in compliance with the Section 404(b)(1) Guidelines. The final 404(b)(1) evaluation and Findings of Compliance will be included with the Record of Decision for this project.

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

Final
USFWS Coordination Act Report (CAR)
Appendix N

September 2015

Appendix N: U.S. Fish and Wildlife Service (USFWS) Coordination Act Report (CAR)

Summary

The U.S. Army Corps of Engineers (Corps) has coordinated with the U.S. Fish and Wildlife Service (USFWS) on the Los Angeles River (LAR) Ecosystem Restoration Feasibility Study throughout the planning process. USFWS participated in the project's stakeholder charettes in December 2009 and throughout the Habitat Evaluation (CHAP) process.

The Corps also coordinated with USFWS per the Fish and Wildlife Coordination Act (FWCA) (16 U.S.C. 703, et seq.), which provides the authority for involvement of the USFWS in evaluating impacts to fish and wildlife from proposed water resource development projects. Federal agencies undertaking water projects are required to fully consider recommendations made by the USFWS regarding the conservation, maintenance, and management of wildlife resources and habitat, which are provided in a Coordination Act Report (CAR) or Planning Aid Letter (PAL). For this project, USFWS was funded to prepare a CAR.

USFWS provided preliminary CAR recommendations on the project in November 2013, and the Draft CAR was submitted to the Corps in January 2014. The Corps coordinated with USFWS during development of the CAR from November 2013 to January 2015. The Corps met with USFWS regarding the CAR recommendations on September 29, 2014 and on October 30, 2014. The Corps fully considered the CAR recommendations and committed to continued coordination with USFWS during the detailed design phase of the project. The Corps received the revised Final CAR on January 5, 2015. The CAR and the Corps' responses to the CAR's recommendations are included in this Appendix N.

The Corps will continue coordination with USFWS regarding the CAR recommendations and ways to improve project designs for fish and wildlife resources.

The following documents the specific recommendations from the U.S. Fish and Wildlife Service's (USFWS) Coordination Act Report (CAR) and the Corps' responses to these recommendations. The Corps has coordinated with USFWS throughout development of this CAR. The complete CAR is included in this Appendix N.

RECOMMENDATIONS SUMMARY

The FWCA states that "...wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs through the effectual and harmonious planning, development, maintenance, and coordination of wildlife conservation." With the following recommendations we are suggesting "...measures that should be adopted to prevent the loss of or damage to ...wildlife resources, as well as to provide concurrently for the development and improvement of such resources."

Available funding for fish and wildlife conservation is sparse and usually competitive, normally limiting related actions. Expending conservation resources in areas of high human density is quite costly and often considered less likely to succeed. Yet, coastal southern California contains a large fraction of endemic at-risk species and (now) rare ecosystems, as well as the state's three largest metropolitan regions. As such, understanding the context and capacity to enhance, restore, conserve, and access ecosystems and native fish and wildlife species within this highly urbanized coastal region is a conservation/societal priority. The values of partially restoring and enhancing the ecosystems of the River are greater than the potential biological conservation benefits alone.

As outlined below, we generally suggest that the designs for proposed Project be developed with a stronger focus on principles of restoration of stream natural communities and processes. We understand that the Study Area is within a heavily populated urban area, and we acknowledge that the varied constraints to ecological restoration of the River are tremendous; we are also well aware that the Project design selected cannot increase flood risks.

Based on our Project discussions, the Corps appears to define partial ecological restoration as improvements in habitats or ecological functions. As we have noted above, we expect that full or partial restoration also includes a self-sustaining component as essential to the definition of restoration, even in highly constrained project areas. This is more than semantics, due to the considerable number of restoration projects continuing to be developed and reviewed by our agencies; it is important that we understand each of our respective definitions. While ecological improvements and benefits such as artificial enhancements are highly important and valuable in many areas, we continue to stress the essential long-term importance of at least partial recovery of self-sustaining ecological functions for restoration projects. For example, this would mean evaluating whether proposed native vegetation in some planting areas would not only survive in the long-term without permanent irrigation, but would it also effectively reproduce and replace itself (or naturally succeed) both over time and following expected disturbances such as periodic flooding events.

In part, the current proposed Project designs (all alternatives) appear substantially compromised by proposed recreational, and aesthetic features, often at the expense of otherwise practicable ecological restoration potential (e.g., restoration of relatively natural complexities of processes, substrates, channel/floodplain forms, and natural communities/habitats in some areas). The current designs in many locations are also heavily compromised by the lack of channel widening; this is understandable given the consistent need to maintain channel flood flow capacity and the surrounding constraints. It is understood that widening the channel and floodplain cannot be practicably accomplished throughout the whole Study Area with the subject Project. The resultant potential for partial restoration of ecological functions in these areas of unwidened channel is quite low.

RESPONSE TO SUMMARY:

The Corps appreciates the summary comments from the USFWS and, as has been expressed at meetings between the two agencies, we share the goal of restoring a self-regulating, dynamic ecosystem within the constraints imposed by the existing flood risk management project along this highly urbanized river. Corps restoration guidance supports restoring ecological functions that "mimic, as closely as possible, conditions which would occur in the area in the absence of human changes to the landscape and hydrology" (ER 1105-2-100). As the USFWS has noted, channel widening throughout all project reaches in order to restore ecological functions is constrained by the need to maintain the flow capacity requirements of the existing flood damage reduction project.

Corps planning guidance values the "ability of the restored area to continue to function and produce the desired outputs with a minimum of continuing human intervention" and emphasizes the development of restoration projects, to the extent possible, "in a systems context... in order to improve the potential for long-term survival as self-regulating, functioning systems" (USACE 2000). Corps guidance on ecosystem restoration underscores the importance of restoring structure, function, and dynamic processes that have been degraded, as well as reestablishing attributes of a naturalistic and interconnected systems (EP 1165-2-501; EP 1165-2-502). While a fully functioning ecological system is not achievable in every portion of the project area, the project as a whole meets the Corps' criteria for ecosystem restoration, in that all features collectively contribute to habitat, function, and ecological connectivity creation and improvement.

As documented in the IFR (Integrated Feasibility Report), the project restores native vegetation, wildlife habitat, and ecosystem functions within each reach at varying levels. Wherever possible with available lands, river widening has been included as a project measure to maximize restoration of natural hydrologic functions and support self-sustaining ecologic functions. Other areas rely on surface flows to support native vegetation on the overbank. The proposed project also supports ecological connectivity between widened areas.

With recent input from USFWS, opportunities for additional connectivity have been identified in reaches 1, 3, and 7. The Corps has committed to further evaluate these areas in the design phase, in partnership with USFWS, to ensure that opportunities for wildlife movement are provided throughout the project area.

The proposed project would restore self-sustaining riverine and riparian functions in widened areas and provide opportunities for both aquatic and terrestrial wildlife foraging, shelter, and movement between widened areas in order to meet the Corps' criteria for ecosystem restoration.

The Corps disagrees that the project is compromised by recreational and aesthetic features. As required by Corps policy, the project's Recreation Plan was developed after restoration features were planned and is designed to be compatible with restoration features. Recreation features include passive activities such as hiking, walking, and wildlife viewing. Widened areas supporting restoration of a more natural hydrologic regime such as Taylor Yard and LATC (a.k.a. Piggyback Yard) will also support a limited length of dirt/gravel trails that will not impede hydrologic and ecologic functioning. No features were developed purely for aesthetic improvement.

The Corps has reaffirmed its commitment to the environment by formalizing a set of "Environmental Operating Principles," which are applicable to all of its decision-making and programs. The principles are described in Engineering Circular 1105-2-404 "Planning Civil Work Projects under the Environmental Operating Principles," 1 May 2003. The Implementation Guidance for the Corps Environmental Operating Principles defines environmental sustainability as "a synergistic process whereby environmental and economic considerations are effectively balanced through the life cycle of project planning, design, construction, operation and maintenance to improve the quality of life for present and future generations." In accord with this definition, the Corps' goal is to strive to achieve the appropriate balance between the economic and environmental benefits provided by a project.

The Corps values the close working relationship it has with the USFWS and appreciates the USFWS's continued willingness to discuss the proposed project and assist with project refinements to maximize restoration potential.

RECOMMENDATION 1

We promote the restoration and enhancement of fully functioning and self-sustaining ecosystems, where and to the extent practicable. As we have noted otherwise herein, the River is not restorable to a self-sustaining, full function stream system, even within the proposed widened floodplain areas of the Project, due to the constraints of the Study Area and watershed (e.g., reduced fluvial sediment supply from upstream, modified hydrograph, water quality and temperature, etc.). On the

other hand, substantial enhancement and partial restoration of the River is practicable in respective portions of the Study Area. The proposed Project has good basic goals and objectives in relation to general fish and wildlife resources, though they (combined with the Project description and figures) are currently too vague for us to assess the fundamental ecological functions and values of restoration and enhancement that would be implemented. Pursuant to the current Project goals and objectives (to the extent practicable), we suggest the Project designs be modified to more clearly focus on restoration of substantially more natural function of riverine and riparian natural communities in the Project. The proposed channel/streamside ecological structures and natural communities within the River reaches to be partially restored/widened (e.g., former rail yards) should be designed to be more like similarly situated southern California River reference sites (e.g., less open/slow moving water areas), including designing in greater channel/aquatic and riparian area complexity and utilizing natural community compositions and substrates that support higher sensitive taxa richness. The current proposed designs and descriptions for restoration areas read more like landscaping plans than restoration plans. The objectives, designs, and Project description should indicate enough specificity to allow evaluation of the rough elemental ecological gains that would be made (for example, specify the individual minimum acreage of valley foothill riparian strand, freshwater marsh, etc., that would be created or enhanced in each reach, instead of consistently lumping this information); these data are currently lacking. We commend the integrated multi-project, step-wise approach planned for partial restoration and enhancement of the River that would be hopefully continued with future projects.

RESPONSE 1:

As described in previous coordination with USFWS, the objectives as currently defined are appropriate and reflective of the naturally occurring habitat that the project restoration is proposing to achieve. Objectives are described in Section 4.2 of the IFR, with measurable objectives criteria outlined in Section 4.2.2. The final array of alternatives meets these objectives' criteria based on Corps standards as described in Section 6.2, Tables 6-2 and 6-3. These objectives allow us to optimize conceptual designs to achieve benefits for multiple species within variable urban site conditions and constraints. In the design phase, the next phase in the process, the Corps will elaborate on the current conceptual plans and further delineate the complexities of the proposed habitats. The overall goal of the restoration effort is to restore more natural functioning of riverine and riparian communities in the study area. Especially based on recent discussions with the USFWS, the Corps is confident that the ecological value of the identified habitat types will be maximized.

The Corps has proposed full functioning ecological restoration wherever it can be achieved, which because of the urban context of the study area, occurs primarily in widened areas of the river where properties containing historic floodplain adjacent to the river can be acquired. In planning these features, the Corps strived to use any available lands within and outside the river to provide opportunities for restoration of a more natural hydrologic regime that will support complex, self-sustaining native southern California river habitat. The detailed designs will further describe and

delineate the specific suite and interrelationships of substrates, hydrologic and geomorphic features, and vegetation to be restored in these areas. Most similarly situated southern California rivers, i.e., larger perennial systems, with similar flow and gradient both in the watershed and in southern California, generally also have altered hydrologic and hydraulic functioning. Given the constraints in the study area, the project would not be able to reproduce these altered conditions or mimic reference site responses exactly. However, reference conditions from these other sites could be extrapolated to align with the dynamics of the Los Angeles River through the project area. Reference sites to be considered for detailed design, particularly for design of habitat for Santa Ana sucker and Least Bell's vireo, may include portions of the Santa Ana River which currently supports target habitats and populations of both species.

The plans provided are at a conceptual level and contain planting plans and habitat configurations for the purposes of restoration; the plans are not appropriate for nor do they contain the specificity of landscape plans. Many of the proposed restoration areas are currently comprised of urban land uses, where concrete will be removed. Since the majority of restored areas are being graded from current urban (often industrial) uses, some amount of planned planting is expected to be needed in the initial stages of restoration, as native vegetation in these areas is currently limited to nonexistent (i.e., limited seed bank for natural recruitment). Active planting and temporary irrigation will initially be required in these areas to begin establishing native vegetation. The plans provided in the report are indicative of the planting to be implemented initially; however, over time, storm events will bring seed material from upstream, actively planted vegetation will establish a new seed bank in the soil, the restored natural hydrologic regime will develop dynamic braided channels will form, and areas denuded through scour or other disturbance are expected to naturally re-establish. Once these processes are reestablished, O&M consisting mainly of invasives removal can be implemented as necessary to support passive restoration in widened areas.

Temporary irrigation will be used to establish restored vegetation in widened and overbank areas, after which vegetation is expected to be self-sustaining, requiring minimal maintenance and relying on groundwater and surface flows to persist. Temporary irrigation will also be used to establish vegetation in the concrete channel walls (e.g., vegetated terraces, vegetation hanging from top of bank). Detailed design will identify all water sources to support the proposed vegetation within the concrete channel walls, including surface flows and runoff that may be redirected to sustain this vegetation and avoid permanent irrigation (See Section 4.4.5 of the Final IFR, measure 4a).

Passive restoration will also be implemented for existing vegetation in the soft bottom portions of the channel where trash and invasives removal will occur. The Final IFR document includes clarifications regarding passive restoration and provisions for natural

hydrologic functioning in widened areas.

Information regarding acreages of habitats created is provided in Table 6-7 of the IFR. Chapter 7 of the IFR describes the Recommended Plan and NER Plan in terms of features restored by reach. The Corps will continue to provide detailed restoration and habitat information during the PED (Pre-Construction Engineering & Design) phase as coordination with USFWS on detailed project features continues.

RECOMMENDATION 2

Of the Project alternatives currently proposed, we recommend Alternative 20, with modifications (as noted below). Alternative 20 has the highest potential of the proposed alternatives to restore considerable ecological functions of the River. In order to perform any substantial riverine and riparian restoration or enhancement on the River (and maintain current flood flow capacities for flood risk management), the right-of-way (ROW) and floodplain currently utilized by the River will need to be re-widened in considerable River reaches (as noted in the 2013 EIS/EIR). This is because effective restoration cannot be performed within the confines of the existing channelized River without reducing flood carrying capacity of that same channelized reach (e.g., due to channel "roughness" associated with mature woody vegetation) unless a wider/larger area to carry the same flood flows is provided. As such, truly effective ecological restoration of the River (partial restoration) can only occur in areas of widened River ROW.

We recommend substantive modification of any approved Project alternative to increase the focus of proposed Project resources on practicable levels of restoration of River hydrology and geomorphology. We expect that the current proposed designs (all proposed alternatives), if implemented, would result in improvements, but relatively small native fish and wildlife resource net gains and overall low ecological integrity and function for these species within Project restoration and enhancement areas, due to very important remaining stressors such as: a) resultant low complexities of substrates/ geomorphology/ hydrology/ natural communities; b) large areas of artificial (slow moving low flow) open water and channel; c) high human disturbance near stream banks; d) low cover levels, structure, and diversity (e.g., age classes) of native riparian and riverine vegetation; and e) substantial use of proposed hard structures. These stressors can be reduced with potential Project designs, such as maintenance of relatively natural lotic (flowing water; we suggest less area of still, open water) conditions over the length of the Study Area, but some of these stressor would remain with all practicable designs. Considering the constraints involved, we nevertheless suggest that it is practicable for the designs for Project restoration areas (areas of widened floodplain) to be more "wild" and less "naturalistic"[15]/ordered (such as by hard structures and slope protection) than as shown within Project concept drawings and designs.[16]

[15] Naturalistic: looking similar to what appears in nature; not looking artificial or man-made. Not necessarily retaining the functional characteristics of natural ecosystems, such as self-sustainability, functional food webs/native species interactions, etc.

[16] In email attachment to us dated 25 November 2014, the Corp[s] noted: "The Corps' intent is that the stressors described will be addressed in widened areas, where increased flood capacity will allow for varied substrates

We suggest that riverine and riparian ecological (partial) restoration be more clearly the primary goal within the specific River reaches to be widened. For instance, most widened floodplain areas should be designed for riparian scrub-woodland-forest communities relatively similar to those that existed historically in the Project reaches, including providing for cyclical and episodic succession of riparian natural community age classes over time following denudation events (floods). Proposed Project designs should rely on utilization of existing groundwater (e.g., less than 6 to 8 ft from the ground surface for riparian natural communities) and natural surface water flows for native vegetation needs (e.g., see Stromberg et al. 1996; Stromberg 1998). Restoration of widened floodplain areas should also be designed with the expectation of some channel form changes over time: large flood events should be allowed to provide some channel re-setting (geomorphic change) action within the necessary outside flood risk management sideboards of widened River reaches.

RESPONSE 2:
Alternative 20 is the Locally Preferred Plan (LPP) and the Corps' recommended plan. The Corps agrees that it has the potential to restore considerable ecological functions of the River.

As outlined in the feasibility study, aquatic ecosystem restoration is the primary goal and the driver for development of all alternatives. Each alternative strives to maximize aquatic and riparian restoration. The Corps has worked closely with the non-Federal sponsor to consider all areas within the project footprint that can be acquired for widening, with Alternative 20 supporting the maximum amount of widening. The Corps has proposed full functioning ecological restoration wherever it can be achieved, which because of the urban context of the study area, occurs primarily in widened areas of the river where properties containing historic floodplain adjacent to the river can be acquired. In planning these features, the Corps strived to use any available lands within and outside the river to provide opportunities for effective restoration of a more natural hydrologic regime that will support complex, self-sustaining native southern California river habitat while maintaining the necessary flood protection. Passive recreation is included where it is compatible with the ecosystem restoration features.

The Corps' intent is that the stressors described will be addressed in widened areas,

---

and natural hydrology, high vegetative cover and structural diversity, and very limited and well-buried hard structures. Open water areas will be designed to support native fish such as Santa Ana sucker and Arroyo chub, including riffle/pool/glide sequences. Human disturbance is expected to be minimal in widened areas, where recreational dirt trails will be designated. In widened areas, it is expected that the active channel will migrate and change form and that sediments will be redistributed with storm events. Vegetation is expected to be denuded with natural higher flows and velocities, and be re-established naturally. Any grade stabilizers in these areas will be well buried, and uot visible from the surface."

where increased flood capacity will allow for varied substrates and a more natural hydrologic regime, high vegetative cover and structural diversity of historically occurring riparian communities, and very limited and well-buried hard structures. Monitoring of depth to groundwater will be included as part of the Monitoring and Adaptive Management Plan to ensure riparian habitats can persist. Open water areas will be designed suitable to support native fish such as Santa Ana sucker and arroyo chub, including riffle/pool/glide sequences. Human disturbance is expected to be minimal in widened areas, where recreational dirt trails will be designated. In widened areas, it is expected that the active channel will migrate and change form and that sediments will be redistributed with storm events. Vegetation is expected to be denuded with natural episodic higher flows and velocities, and be re-established naturally. Any grade stabilizers in these areas will be limited to those necessary to maintain the integrity of the flood damage reduction project, and are not intended to further constrain the restoration of the aquatic or riparian system. Given the constraints of this highly urbanized system, all stressors may not be entirely removed from the restored areas of the channel; however, high ecological function and integrity sufficient to support these objectives can be achieved.

Alternative 20 will provide large restored widened areas (such as Verdugo Wash, Taylor Yard, and the LATC site) to serve as riparian habitat patches with a more natural hydrologic regime. Vegetation and habitat elements in these widened areas will be restored with the goal to support a large number of territories for various riparian obligate birds, including least Bell's vireo, yellow warbler, and yellow breasted chat, stop over habitat for migrants, as well as habitat and refugia for amphibians, reptiles, and mammals, including larger carnivores such as coyote and possibly bobcat. River channels in widened areas will be designed to support habitat for Santa Ana sucker and arroyo chub. These restored widened patches will be connected in part via soft bottom reaches 2, 4, 5, and 6 and restored in-channel habitat in Reach 8.

The remaining project areas that are not widened will support varying levels of restored native vegetation and function. In these areas, some of the described stressors may remain due to urban constraints and the requirement to maintain flood conveyance. The Corps is committed to working with USFWS to develop methods during detailed design to reduce any remaining stressors while not compromising the flood risk management function of the channel including channel conveyance.

Movement on a regional scale is expected to be accommodated to Griffith Park via wildlife use of existing equestrian tunnels in Reaches 1 and 4. Recent studies using wildlife cameras indicate tunnels have been used by coyote and deer, with one bobcat sighting. Other species that could use the tunnels, if presence of appropriate habitat were available surrounding them, include raccoons, skunks, and gray foxes. Future opportunity for movement to further open space areas such as the Verdugo and San Gabriel Mountains is provided via restoration of the confluences of the Verdugo Wash

and Arroyo Seco. Restoration upstream on the remainder of these tributaries is needed via additional projects to complete the connection between the River and these mountainous areas.

In existing hard-bottom reaches 1, 3 and 7, which cannot be widened, opportunities for aquatic connectivity, to maximize restoration potential for aquatic wildlife, will be further evaluated during detailed design. These measures would create in-channel diversity and heterogeneity needed to support passage of wildlife, including aquatic species such as native fish. Such measures may include 1) use of anchored boulders and a new meandering low flow channel in the existing concrete, 2) "speed bumps" perpendicular to flow that can trap sediment and allow small to moderate sized vegetation to grow, and 3) a new v-shaped low flow channel with varying widths and depths. These measures may, in particular, improve passage for aquatic and terrestrial wildlife in Reach 3 from the Verdugo Wash confluence to the upstream edge of the soft bottom Reach 4, and in Reach 7 from the downstream edge of the soft bottom Reach 6 to Arroyo Seco. In addition, terrestrial wildlife may then more easily move from Griffith Park using the equestrian tunnel in Reach 4 upstream to Verdugo Wash or downstream to Arroyo Seco. Additional restoration of these tributaries outside the project area would facilitate further regional movement in the future. This restoration may be accomplished by other federal, state, or local stakeholders.

Specific features for wildlife access will be considered during the detailed design stage, and would depend on the detailed design and hydraulic analysis developed during the detailed design phase, to ensure that they are not in conflict with flood damage reduction and flow conveyance requirements or other constraints on the project. Movement for bobcats will be the standard for design of access, and such designs will be implemented wherever practicable.

Placement of wildlife access measures may include access in Reach 1 from Pollywog Park into the river channel, as practicable. In this area, wildlife access may be achieved through the creation of a slope along the currently vertical bank, as described in measure 3b in Section 4.4.5. Such a design would allow wildlife moving from Griffith Park into the river channel access to the restored Pollywog Park site, which is currently disconnected from the River by a vertical wall. Implementation of specific methods and location of access would be dependent on the detailed hydrologic and hydraulic modeling developed during the design phase.

Considerations for segregation of "spring fed waters" from surface water flows would also be made during the detailed design phase. This segregation would be considered to support refugia for fish, where groundwater would feed the refugia while surface flows might bypass such areas.

The Corps will further evaluate these measures during the design phase, as their implementation or placement is likely to require hydrologic and hydraulic modeling data and/or more detailed design. Prior to implementation of the measures identified, the Corps will assess whether supplemental analysis is required to address new or different effects than those already assessed.

For the project area as a whole, the restoration features provide an overall gain in ecologic function and integrity, as well as connectivity for aquatic and terrestrial species. The Final IFR document includes these clarifications regarding provisions for natural hydrologic functioning in widened areas.

The Corps will develop detailed designs for the widened reaches during the PED phase that will carefully evaluate and consider USFWS recommendations. The Corps will continue to coordinate with USFWS during the PED phase and development of detailed designs to ensure that restoration in widened reaches achieves the maximum level of ecological function, focusing on passive restoration, a more natural hydrologic regime, and more natural geomorphic character. The Corps is committed to restoring the maximum ecological function while meeting flood conveyance requirements.

RECOMMENDATION 3

Project recreation/access features involving hard structures should be limited to the outside periphery of widened/restored River stretches (such as Taylor Yard and Piggyback Yard). Many of the design drawings show substantial "hard-scaped" recreational features well within widened-reach restoration areas. Limiting recreational structures within the interior of restoration areas would both reduce potential for flood damage/maintenance of expensive structures, and would likely increase the biological function in these widened reaches for native species. The proposed construction of instream and floodplain hard structures that are out of context with naturally functioning systems (e.g., retaining walls, curbs, formal paved or heavily compacted or surfaced paths, boardwalks, grade control structures, etc.) should be minimized within restored areas in widened reaches (Kauffman et al. 1993). Also, such hard structures typically reduce the actual and perceived "wild" nature of areas, reducing the effective nature experience for people (Louv 2012, Cookson 2013).[17] We recognize that recreation enhancement projects within the River should inspire new River "stewards," who would be fundamental in the protection of these natural systems in the future. As such, we suggest designing "organic" recreation enhancement features

[17] In email attachment to us dated 25 November 2014, the Corp[s] noted: "As required, the Recreation Plan was developed after restoration features were planned. Recreation features include passive activities such as hiking, walking, and wildlife viewing. Widened areas supporting restoration of more natural hydrology such as Taylor Yard and LATC (a.k.a. Piggyback Yard) will support a limited length of dirt/gravel trails that will not impede hydrologic and ecologic functioning. Recreation structures such as restrooms and parking lots will be limited to the outside edges of widened areas and along overbank recreation trails. New trails throughout the project area will be unpaved, and certain currently paved access roads will be converted to dirt/gravel."

that instill "adventure" and "challenge," in part through subtle engineering solutions that accommodate River recreation without degrading development of natural River ecosystem features and functions (e.g., see Borgman 1995). Pursuant to our Connecting People with Nature policies, we suggest that Project designs be modified with a greater emphasis on restoration of (and access to) the "wildness" of the River within these widened reaches, to the fullest extent practicable. Compared to current designs, such restoration would likely result in higher abundance of native fish and wildlife and greater levels of native biodiversity, with resultant enhanced opportunities for uncommon wildlife observation and nature experiences. [18]

RESPONSE 3:
As documented in previous coordination and as referenced in footnote 17, recreation features are proposed for passive activities such as hiking, walking, and wildlife viewing where they will not conflict with the restored habitat. Widened areas supporting restoration of a more natural hydrologic regime such as Taylor Yard and LATC will support a limited length of dirt/gravel trails that will not impede hydrologic and ecologic functioning. Hard structures such as restrooms and parking lots will be limited to the outside edges of widened areas.

The Recreation Analysis in Appendix B (Economics) of the IFR showed a restroom located in the middle of the LATC site. This restroom has been moved to the edge of the site in the Final IFR to be consistent with Corps policy. Section 4.16, Recreation Plan, of the IFR also has been revised to further emphasize that recreation features are designed after restoration features are planned, and per Corps policy must be compatible with the restoration function.

The Corps will continue to coordinate with USFWS during the development of detailed designs (PED) to ensure that recreation features are designed and implemented compatible with restoration. The Corps will ensure that the passive recreational use is compatible with the more in depth design of restoration features.

RECOMMENDATION 4
Similar to our suggestions regarding Project recreation structures above, we suggest that the potential ecological interactions between the riparian and aquatic ecosystems be reflected more fully in the Project restoration and flood damage reduction features proposed. We suggest minimization of instream flow-control hard structures and unburied hard stream bank slope protection in widened reaches, particularly along the riverine-riparian interface. These features often result in severed linkages between aquatic and riparian ecosystems (Kauffman et al. 1997). Any new essential instream and riparian hard-structure features (e.g., flow control and retaining walls, culverts, etc.) should be naturally complex (e.g., buried rock instead of surface concrete

[18] Please see additional information at: http://www.fws.gov/home/fwn/pdf/NewsSuFall07.pdf, https://www.facebook.com/USFWSPacificCPWN, and http://www.fws.gov/letsgooutside/families.html

where practicable), accelerate riparian recovery, and imitate natural processes and functions (Kauffman et al. 1997). While acknowledging the context of the Study Area, the hydrology designs for widened River reaches to be restored (such as Taylor Yard and Piggyback Yard) should accommodate, to the maximum extent practicable, the dynamic and episodic nature of surface low and high River flows and the fluvial processes that were natural to the River, including water inlet and outlet structures that provide for a relatively natural high-flow hydrograph to newly created riparian areas. Restoration designs for low-flow channel paths and water inlet/outlet structures for widened reaches should emulate the full range of natural flow events and groundwater levels that original riverine and riparian terrace natural communities were subjected to before development. Restoration designs should reflect and emulate the fact that the natural River channel and riparian zones were (historically) dynamic both spatially and temporally, and that episodic denudation flood flows are natural and necessary to riparian integrity (e.g., cycling of seral stages) in the Study Area.

While we understand the major design constraints of the Project area, we suggest that the current proposed Project designs (even though an improvement over existing conditions) would retain many of the existing rather simplified ("naturalistic") features of the River in widened/restored areas. These reaches of low natural heterogeneity, as designed, would have continuing negative influences on local channel hydrodynamics, channel morphology, and native stream bank surface cover and function for native species. As such, these features would likely have long-term detrimental influences on important riparian/aquatic interactions by reducing shade over water, stream nutrient inputs, and woody debris inputs, and ecosystem productivity would not meet its full potential.

The riverine and riparian ecosystems that are expected to be at least partially restored by the proposed Project are episodic disturbance oriented/dependent ecosystems. As such, in areas where the River would be substantially widened, we suggest that Project designs should not intend to fully "lock" the low-flow channel in one place, but instead should allow for some limited amount of channel migration over time between the "sideboards" otherwise necessary for flood damage reduction capacities (in the heavily constrained context of the Project area). Almost all restored floodplain terrace ground surfaces should be well within the distances to groundwater that can be utilized naturally by the expected native riparian vegetation and designed for appropriate episodic succession- setting flooding events necessary to sustain the target natural communities (e.g., willow-cottonwood woodland) and habitats (e.g., vireo habitat) in the long-term, with no reliance on periodic replanting for replacement recruitment.[19]

[19] In email attachment to us dated 25 November 2014, the Corp[s] noted: "...the Corps' intent is that that widened areas will support high levels of heterogeneity. The active channel will migrate and change form and terraces and sediments will be redistributed with storm events. Initial grading during construction of widened areas will be heterogeneons and diverse topography will be created. The dynamic and episodic nature of the River flows will be accommodated in these areas, allowing the River to carve new channel configurations over time. Vegetation is expected to be denuded with natural higher flows and velocities, and be re-established naturally. Any grade stabilizers in these areas will be well buried perpendicular to flows, and not visible from the surface. Once initially planted and a seed bank established, passive recovery will be the method for re-vegetation after flood events. Such natural hydrologic

RESPONSE 4:
As outlined in previous coordination and as documented in your footnote 19, under Alternative 20, we agree that the widened areas should be designed to support high levels of heterogeneity, and the existing plan provides for that. The active channel will be allowed to migrate and change form, and terraces and sediments will be redistributed with storm events. Initial grading during construction of widened areas will create diverse topography. The dynamic and episodic nature of the River flows will be accommodated in these areas, allowing the River to carve new channel configurations over time, creating the complexities of a natural river system. Vegetation is expected to be denuded with natural higher flows and velocities, and be re-established naturally. Any grade stabilizers in these areas will be well buried perpendicular to flows, and not visible from the surface. Once initially planted and a seed bank established, passive recovery will be the method for re-vegetation after flood events. Such natural hydrologic functions would support riparian/aquatic interactions by providing habitat elements including shade over water, and stream nutrient and woody debris inputs. The Final IFR document includes these clarifications regarding provisions for natural hydrologic functioning.

As described in Response 1, temporary irrigation will be used to establish restored vegetation in widened and overbank areas, after which vegetation is expected to be self-sustaining, requiring minimal maintenance and relying on groundwater and surface flows to persist. Detailed design will identify all water sources to support the proposed vegetation. Monitoring of depth to groundwater will be included as part of the Monitoring and Adaptive Management Plan to ensure riparian habitats can persist. Active planting and temporary irrigation will initially be required in these areas to begin establishing native vegetation. The plans provided in the report are indicative of the planting to be implemented initially; however, over time, storm events will bring seed material from upstream, actively planted vegetation will establish a new seed bank in the soil, a restored natural hydrologic regime will develop dynamic channel forms, and areas denuded through scour or other disturbance are expected to naturally re-establish.

The Corps will continue to coordinate with USFWS during the development of detailed designs to ensure that restoration in widened reaches mimics a natural hydrologic regime and fluvial processes to the extent possible, allowing for channel migration and reworking of restored widened areas following flood events, while not compromising existing levels of flood protection. Flood damage reduction features are not proposed as part of this project. Additional H&H (hydrology and hydraulics) modeling will be conducted during the detailed design phase to inform design refinements that will

---

functions would support riparian/aquatic interactions by providing habitat elements including shade over water, and stream nutrient and woody debris inputs."

achieve a sustainable balance between flood damage reduction and natural hydrologic functioning.

RECOMMENDATION 5

Within the Project portions of the River that would not be widened by the proposed Project, we suggest that ecological enhancement, native landscaping, recreation, buffer, and/or stream water shading be the stated goals for and focus of Project activities in most of these areas. While providing some ecological improvement, we suggest that these features be treated as ecological enhancement because the substantial constraints in these reaches preclude self-sustaining full or partial restoration of most of the important riverine or riparian ecological functions of the River. Expectations of substantial occupation or connectivity use by typical target native species in portions of the River that would not be widened should be low, with the exceptions of any implementation of specific artificial enhancements (such as developed artificial snags, nesting cavities and shelves, and riverine hardscape pools and riffles). Establishment of native trees on the south side of the River where water shading can be accomplished would enhance stream water temperature reductions that may help provide for limited use of other Project areas by native fish. We find this distinction between restoration and enhancement to be important due to the precedent this could set for ecological restoration within other projects.[20]

RESPONSE 5:

The project provides native vegetation, wildlife habitat, and ecosystem functions within each reach at varying levels, within existing constraints. Each project feature is designed for restoration benefit. The Corps recognizes that in some cases the possible features are highly constrained by the need to maintain flood conveyance or to work within existing major infrastructure constraints such as freeways, railroad, and residential uses.

The proposed project maximizes ecological restoration where it can be achieved, primarily in widened areas of the river where floodplain property adjacent to the river can be acquired. In other portions of the project area, the Corps has planned for construction of features that would improve value for wildlife in the vicinity and for connectivity between restored widened areas. Constrained areas planted with native vegetation still provide opportunities for foraging and shelter, as well as cover for movement, and contribute value to the project as a whole, especially when considering the complex limitations afforded by the urban landscape.

[20] In email attachment to us dated 25 November 2014, the Corp[s] noted: "The Corps disagrees that individual project features should be parsed out as "restoration" vs. "landscaping" vs. "greening". While the definition of "restoration" as provided by USFWS is not achievable in every portion of the project area, the project as a whole meets the Corps' criteria for ecosystem restoration, in that all features collectively contribute to habitat and connectivity creation and improvement throughout the project area. In this way, wildlife is provided new large areas (e.g. 35+ acre sites such as Verdugo Wash, Taylor Yard, and LATC (a.k.a. Piggyback Yard)) of restored habitat with a means to move between them, as well as into other surrounding natural areas."

As documented in your footnote 20, the Corps disagrees that individual project features should be parsed out as restoration versus enhancement. While the definition of "restoration" as provided by USFWS is not achievable in every portion of the project area, the project as a whole meets the Corps' criteria for ecosystem restoration, in that all features collectively contribute to habitat and connectivity restoration and improvement throughout the project area. In this way, wildlife is provided new large areas (e.g. 35+ acre sites such as Verdugo Wash, Taylor Yard, and LATC) of restored habitat with a means to move between them, as well as into other surrounding natural areas. A description of potential features to accommodate such movement is provided above in the response to Recommendation 2.

Restoration of habitat and wildlife movement at a more regional level is expected to be a collaborative effort, whereby other federal, state, and local agencies and stakeholders have expressed interest in contributing to meet restoration goals along the LA River, within the watershed, and in surrounding natural areas. Restoration associated with this project as a whole has been considered by many local NGOs as the backbone of future restoration efforts that may be undertaken by others to improve other portions of the river and tributaries.

RECOMMENDATION 6

We suggest that the Project ecological guidelines and designs for restoration be based on typical restoration ecology[21] science and terminology, and less on landscape architecture[22] science and terminology. Baseline and post-Project implementation surveys/assessments for fish, amphibians, reptiles, and the associated parameters of potential habitats for target species should be performed in the Study Area. Non-native species with considerable potential to adversely affect Project restoration success should also be assessed, including potential source populations in the watershed.

The following water quality parameters of specific Project reaches should be evaluated and mapped as part of Project planning and implementation: water temperature, dissolved oxygen, pH, conductivity, turbidity, substrates, water velocities, channel forms (e.g., deep or exotic predator-free pools), flood refugia and back-channel areas, woody debris and leaf litter. These parameters and natural community mapping should be analyzed relative to current non-native fish, amphibian, and reptile occupation of the Study Area. These parameters should then be compared to known ideal (and minimum) necessary natural parameters and conditions of habitats normally

[21] Restoration ecology: the scientific study of repairing disturbed ecosystems through human intervention. Ecological restoration implementation aims to recreate, initiate, or accelerate the recovery of an ecosystem that has been disturbed.

[22] Landscape architecture: the art and practice of designing the ontdoor environment, especially designing parks or gardens together with buildings and roads.

utilized by species such as Santa Ana sucker, arroyo chub, two-striped garter snake, California toad, Baja California tree frog, and other appropriate restoration indicator and surrogate/umbrella species. This survey information should be used to inform basic Project design development (e.g., to provide functional habitats for specific native fish and aquatic wildlife species), as well as post-construction adaptive management decisions, and future restoration projects in the watershed.[23]

RESPONSE 6:

As described in the above Response to Summary and Response 1, the Corps ecosystem restoration guidance and policy followed by this study is grounded in restoration science and terminology; recreation features are designed after restoration plans are in place, are designed to be compatible with restoration plans, and utilize standard landscape architecture principles. As described in previous coordination and as documented in your footnote 23, the Monitoring and Adaptive Management Plan (MAMP) included in Appendix H of the Final IFR includes restoration monitoring to evaluate the performance of restoration actions. As described in Section 5.5.4 of the Final IFR, pre-construction surveys would be performed for least Bell's vireo and for special status plant and wildlife species, and the Corps would continue to coordinate with the USFWS throughout the design and construction period. Monitoring includes an inventory of wildlife species based on observations of wildlife and signs of usage, mapping of habitat, as well as inventory of habitat elements present within the project footprint.

Monitoring of riparian, marsh, and fish habitat is outlined in the MAMP, which evaluates various habitat parameters including, but not limited to, invasive plants, hydrology, soils, sedimentation, water quality, in-stream structure, and also includes bird, fish, and amphibian species surveys. The water quality parameters suggested in this recommendation will be monitored as part of the MAMP. These habitat parameters can be compared to reference conditions, as suggested in Response 1, to inform adaptive management decisions and direct restoration actions. The MAMP includes a list of target species in order to direct restoration of habitat elements in

[23] In email attachment to us dated 25 November 2014, the Corp[s] commented: "The Monitoring and Adaptive Management Plan (MAMP) to be included in the Final IFR document includes pre- and post- restoration monitoring to evaluate the performance of restoration actions. Habitat evaluations will be performed as restoration progresses to assess habitat values of restored features and inform adaptive management decisions. These [cont'd next page] evaluations require an inventory of wildlife species based on observations of wildlife and signs of usage, mapping of habitat, as well as inventory of habitat elements present within the project footprint. Monitoring of riparian, marsh, and fish habitat is outlined in the MAMP, which evaluates various habitat parameters including, but not limited to, invasive plants, hydrology, soils, sedimentation, water quality, in-stream structure, and also includes bird, fish, and amphibian species surveys. These habitat parameters can be compared to ideal reference conditions to inform adaptive management decisions and direct restoration actions. The MAMP will be revised to include a list of target species in order to direct restoration of habitat elements in ways that would benefit the life history requirements of those species."

ways that would benefit the life history requirements of those species.

Non-native plant species will also be removed as part of construction and managed as part of operation and maintenance of the project. Removal of non-native wildlife could be performed by resource agencies or other interested entities separate from this project. If a removal program were to be proposed, the Corps and non-Federal sponsor would coordinate with the proponent and the agencies with jurisdiction over such removals to ensure compatibility of the program with the restoration project, including project operation and maintenance.

The Corps will coordinate further with the USFWS and other resource agencies during the detailed design phase to identify any additional parameters or methodologies that may be appropriate in specific locations or circumstances.

RECOMMENDATION 7

In relation to the needs of any of the seven native fish that could potentially be re- established in the River (such as arroyo chub), the proposed Project as currently designed would appear to: a) lack necessary complexity of habitats; b) lack necessary substrates and channel forms, including refugia; c) provide low food availability; d) be subject to excessive water temperatures; e) have an overabundance of large areas of open water; and f) provide/retain competitive advantage for exotic fish species over native species. The Project ecological restoration designs should provide higher priority to creating the natural parameters and conditions needed for the restoration of at least one specific native fish species, to the extent practicable, so as to both support their basic survival and to give them competitive advantages over exotic species that would likely continue to occupy the Study Area following Project implementation (e.g., see Moyle and Light 1996). Assessments of whether proposed Project designs would likely provide these specific natural conditions for target species, including expectations of associated non- native species competition, should be provided before Project designs are developed further.[24]

RESPONSE 7:

As described in our previous discussions (and documented in your footnote 24), the design drawings at the feasibility level are conceptual and will be revised and refined during the detailed design stage to include the necessary parameters that

[24] In email attachment to us dated 25 November 2014, the Corp[s] commented: "The design drawings at the feasibility level are conceptual, and will be revised and refined during the detailed design stage to include the necessary parameters that would support native fish habitat in widened areas and in overbank areas during the detailed design phase. In concrete reaches, where features are more limited by maintenance of flood capacity, designs will focus on providing refugia and passage. As discussed with USFWS, designs will focus on providing the hydrology, substrates, and habitat elements required by Arroyo chub and Santa Ana sucker. In the Draft IFR, in Section 4.2.2, Santa Ana sucker are identified as a target for restoration of native fish habitat. Other target fish species for restoration as well as their general requirements will be clarified in the Final IFR document."

would support native fish habitat in widened areas and in overbank areas during the detailed design phase. In concrete reaches, where features are more limited by maintenance of flood capacity, designs will focus on providing refugia and passage.

As discussed with USFWS, designs will focus on providing the hydrologic regime, substrates, and habitat elements required by arroyo chub and Santa Ana sucker. In the IFR, in Section 4.2.2, Santa Ana sucker are identified as a target for restoration of native fish habitat. Other target fish species for restoration as well as their general requirements are clarified in the Final IFR document. The Corps will continue to coordinate with USFWS during the development of detailed designs to ensure that the appropriate habitat parameters and design elements are captured.

Text added to the IFR includes the following:

> "In widened areas, restored river channels will be designed to support habitat for native fish including arroyo chub and Santa Ana sucker, and provide the necessary constituent elements including but not limited to water shaded by riparian vegetation, riffle/run/pool/glide sequences and refugia, in channel woody debris, gravel and cobble substrates."
>
> "In existing hard-bottom reaches 1, 3 and 7, which cannot be widened, opportunities for aquatic connectivity, to maximize restoration potential for aquatic wildlife, will be further evaluated during detailed design. These measures would create in-channel diversity and heterogeneity needed to support passage of wildlife, including aquatic species such as native fish. Such measures may include 1) use of anchored boulders and a new meandering low flow channel in the existing concrete, 2) "speed bumps" perpendicular to flow that can trap sediment and allow small to moderate sized vegetation to grow, and 3) a new v-shaped low flow channel with varying widths and depths. Implementation of these measures would depend on the detailed design and hydraulic analysis developed during the detailed design phase, to ensure that they are not in conflict with flow conveyance requirements or other constraints on the project."

RECOMMENDATION 8

In our opinion, the various alternatives proposed would provide limited restored functions for typical stream restoration target species. Considering the heavy constraints of the Study Area, some excellent opportunities exist for artificial enhancement measures, particularly where restoration is not practicable. Additionally, these types of features (e.g., large hollow snags, tall steep river banks) are not likely to otherwise develop in the short-term or over time in significant number/area within the Study Area due to the limited floodplain widths and modified hydrology in even the widest proposed restoration sites of the Project. The directed artificial measures suggested below would likely be substantially and quickly utilized by some uncommon or sensitive bird and

bat species and could provide very attractive and important watchable wildlife opportunities along the River for residents and visitors. These features could be effectively incorporated into many otherwise heavily constrained channel reaches and off-channel adjacent areas that otherwise lack the space to support aquatic or riparian restoration features (such as artificial features added to walls, bridges, and other hard structures). These include: provision of various nest cavities and structures (e.g., for wood duck, barn owl, osprey, tree swallow, white throated swifts, and western bluebird) such as nest holes/crevices created in/on new and existing hard structures, and nest platforms/shelves/boxes; placed/erected large hollow snags and suitable vertical shafts with heavy inside texture (e.g., swifts); and creation of artificial large steep sandy/earth banks (e.g., northern rough-winged swallow and belted kingfisher; note that these supported banks could functionally occur along channel tops in some areas, without affecting flood conveyance). Directed artificial enhancement measures for some local bat species (e.g., Yuma myotis, western pipistrelle, Mexican free-tailed bat, and big brown bat) should include increasing availability of roosts in the Project area by providing large hollow vertical snags and shafts, rock outcrops, bat boxes, and artificial roost cavities designed into new hard structures. Almost all of these artificial features would require some limited periodic maintenance or replacement.

RESPONSE 8:
The design drawings at the feasibility level are conceptual, and are revised and refined during the detailed design stage. Installation of artificial habitat features as recommended could be considered in the detailed design stage in coordination with USFWS, as practicable in relation to meeting project objectives.

The Final IFR will include additional text as follows clarifying the inclusion of such directed restoration measures.

> "Other design features specific to certain species may be incorporated in the detailed design phase and accommodated where practicable and appropriate. It is expected that while these features could potentially be installed artificially during restoration activities, many of these features will also evolve naturally over time as vegetation matures and natural hydrologic forces continue to shape the hydrologic regime of widened areas. These features may include, but are not limited to, artificial nest cavities (which could be used by wood duck, barn owl, tree swallow, and western bluebird among other species), large hollow snags (used by swifts), and artificial steep sandy banks (used by northern rough-winged swallow and belted kingfisher)."

RECOMMENDATION 9
Brown-headed cowbird occupation of the Study Area should be assessed during Project planning, including potential source populations in the region within several miles. Cowbird feeding areas (e.g., outdoor human feeding areas, stables and other equestrian facilities, and some turf zones) should be reduced or modified in the Project general region, to the extent practicable. If brown-

headed cowbird parasitism levels are still likely to be problematic for sensitive birds potentially occurring within the Project area, then management of cowbird numbers should be performed by the Project for the life of the Project, such as through trapping at local horse stables and other cowbird source or breeding areas, with standard cowbird traps. We recommend a long-term management strategy for cowbirds be developed by the City and Corps for the lowland region of the River.

RESPONSE 9:
Corps guidance on ecosystem restoration directs the Corps to focus on restoring structure, function, and dynamic processes of habitats that have been degraded (EP 1165-2-501; EP 1165-2-502). Focus on presence of particular species of wildlife, and absence of undesirable wildlife species, is expected to be within the jurisdiction of wildlife resource agencies or local entities. General wildlife surveys are included as part of monitoring in the Monitoring and Adaptive Management Plan. If surveys document a large population of cowbirds in the project area, as well as the presence of vireo, the Corps would inform the Adaptive Management Team member agencies, one or more of which may implement a removal program separate from the restoration project or identify other entities interested in doing so. If a removal program were to be proposed, the Corps and non-Federal sponsor would coordinate with the proponent and the agencies with jurisdiction over such removals to ensure compatibility of the program with the restoration project, including project operation and maintenance.

RECOMMENDATION 10
Restoration of basic natural stream features is a highly important first design step in the re-establishment of any of the native fish to the River (e.g., channel substrates, water quality/flow, channel configuration/complexity). Nevertheless, many of the factors affecting the current extirpation of most native fish in the River extend well beyond the riparian/stream ecotone. We suggest that riparian and riverine native fish restoration designs within the Project's widened reaches include specific measures (where practicable) for development of: a) water shaded by riparian woody vegetation; b) sediment and leaf-fall inputs to aquatic areas; c) channels with steep native-soil stream banks and in-channel woody debris; d) substantial channel diversity including riffle-run-pool-glide sequences, point bars; e) back channel refugia that utilizes upwelling groundwater (low temperature water of higher quality) and provides protected waters during larger flood flow events; f) appropriate channel substrates, including sand, gravel and cobble; g) potential for some channel movement/meander over time in widened channel areas; h) minimal areas of wide ponded or open water; i) riparian hiding cover for native fish (e.g., herbaceous plants and woody shrubs providing overhanging vegetation on stream banks for hiding cover); and j) target fish species passage and appropriate water temperatures and oxygenation levels, including shading of water surfaces through native tree landscaping on the south side of non-widened channel reaches, where practicable and appropriate. Periodic

artificial substrate import (e.g., sand and gravel) into the upper end of the Study Area during the Project life will likely be necessary to maintain some important fluvial processes and conditions for native fish through the Study Area, considering the artificial fluvial conditions of the watershed and upstream channel. The Project should initiate an aquatic exotic species control program for the Study Area: complementary to the level of competitive advantages to native target species provided by the Project (e.g., through channel morphology, riparian cover, etc., as outlined above), periodic direct control of the problematic exotic aquatic species should be implemented in the Study Area, including mosquito fish, tilapia, common carp, green sunfish, fathead minnow, bullfrog, red swamp crayfish (*Procambarus clarkii*), and other species, as appropriate. The closer the River is restored to natural conditions, the greater the competitive advantage for native species over exotic species, with concomitantly less control of exotic species needed. Considering the conditions of the watershed and the constraints of the Study Area, it is very likely that periodic control of some exotic aquatic species would be needed in perpetuity in order to maintain native fish and their habitats in the Study Area.

RESPONSE 10:
As described in the response to Recommendation 7, detailed designs will focus on providing the hydrologic regime, substrates, and vegetation required by arroyo chub and Santa Ana sucker. Detailed designs will also consider the incorporation of opportunities for aquatic and terrestrial passage in hard bottom reaches. Implementation of such measures would depend on the detailed design and hydraulic analysis developed during the detailed design phase, to ensure that they are not in conflict with flow conveyance requirements or other constraints on the project. The Corps will continue to coordinate with USFWS during the development of detailed designs to ensure that the appropriate habitat parameters and design elements are captured.

Sediment import is included as a potential adaptive management action in the Monitoring and Adaptive Management Plan. If monitoring determines that additional sediment is needed to achieve suitable native fish habitat, sediment import could be implemented.

As described in Response 9, Corps guidance on ecosystem restoration directs the Corps to focus on restoring structure, function, and dynamic processes of habitats that have been degraded (EP 1165-2-501; EP 1165-2-502). Focus on presence of particular species of wildlife, and absence of undesirable wildlife species, is expected to be within the jurisdiction of wildlife resource agencies or local entities. Removal of non-native fish could be implemented by resource agencies or other interested entities separate from this project. The Corps and non-Federal sponsor would coordinate with the proponent and the agencies with jurisdiction over such removals to ensure the compatibility of the program proposed with the restoration project, including operation and maintenance activities.

RECOMMENDATION 11
Feral mammal populations should be controlled in Project restoration areas, as practicable and appropriate. As part of restoration designs, competitive advantage over exotic mammals should be provided to native species to the extent practicable.

RESPONSE 11:
As described in Response 9 and 10, focus on presence of particular species of wildlife, and absence of undesirable wildlife species is expected to be within the jurisdiction of wildlife resource agencies or local entities. General wildlife surveys are included as part of monitoring in the Monitoring and Adaptive Management Plan. If monitoring documents feral or nuisance mammals, the Corps would inform the Adaptive Management Team member agencies, one or more of which may implement a removal program separate from the restoration project or identify other entities interested in doing so. The Corps and non-Federal sponsor would coordinate with the proponent and the agencies with jurisdiction over such removals to ensure the compatibility of the program proposed with the restoration project, including operation and maintenance activities.

RECOMMENDATION 12
Project designs and objectives should include greater specificity regarding minimum levels of ecological functions and values to be created or enhanced. As currently written, the designs, objectives, and criteria are difficult to assess as to the basic or minimum ecological functions that would be gained. We suggest the use of appropriate umbrella species to help briefly outline/translate minimum ecological functions to be restored in meaningful ways, and for planning, design, and implementation purposes.

As such, we suggest that the Project include restoration of specified minimum acreages of functional habitats in the long-term for typical restoration planning species for southern California riparian areas, including vireo, chat, and yellow warbler.[25] These species are excellent umbrella planning species that guide restoration for a variety of currently uncommon or extirpated native riparian wildlife species in the Project area by targeting the necessary components of relatively high-function riparian natural communities with a variety of vegetation structures, densities, and seral stages. For example, vireo, yellow warbler, and chat typically utilize different forms, configurations, and seral stages of riparian scrub/woodland/forests.

RESPONSE 12:
As described in Response 1, the objectives as currently defined are appropriate and

[25] The 2013 EIS/EIR provides a proposed target objective to restore a "minimum of one habitat node with a minimum width of 250 meters (820 feet) to support high frequencies" of vireo. In our opinion this and the other related objectives remain too vague to effectively evaluate the minimum that would be accomplished for target species from an ecological restoration perspective.

reflective of the naturally occurring habitat that the project restoration is proposing to achieve. Objectives are described in Section 4.2 of the IFR, with measurable objectives criteria outlined in Section 4.2.2. The final array of alternatives meet these objectives criteria based on Corps standards as described in Section 6.2, Tables 6-1 and 6-2. Detailed designs will provide more specificity in terms of habitat, ecological, and hydrologic features to be created and restored based on the necessary habitat components for such recommended target species.

The Corps will continue to coordinate with USFWS during the development of detailed designs to ensure that the appropriate habitat parameters for such umbrella species are captured.

RECOMMENDATION 13

Any federally listed species occupying the Project footprint should be the subject of consultation under the Endangered Species Act, as appropriate. An unknown number of vireo likely occupy the Project direct activity footprint and would likely be positively affected by the beneficial aspects of the Project and temporarily adversely affected (through loss of habitat and function) by the action's construction activity of riparian vegetation clearing within seasonally occupied habitat in the River. As such, the action would likely warrant consultation. Appropriate surveys should be performed to determine occupation and usage areas (protocol surveys of the Study Area for vireo have apparently not been performed in the last decade; recent surveys of all appropriate vireo habitat should have been performed and reported during development of the 2013 EIS/EIR). Any listed species expected to be attracted to the Project area that would subsequently be potentially adversely affected by Project operations or maintenance should also be monitored and addressed through consultation (for instance, potential translocation and establishment of Santa Ana sucker).[26]

RESPONSE 13:

As described in previous coordination and in footnote 26, Section 5.5.1 of the IFR outlines that Section 7 of the ESA requires consultation with USFWS if the project would affect listed species. As documented in Section 10.1 of the IFR, the Corps determined that the proposed project would have no effect on federally listed threatened or endangered species.

[26] In email attachment to us dated 25 November 2014, the Corp[s] commented: "Section 5.5.1 of the Draft IFR outlines that Section 7 of the ESA requires consultation with USFWS if adverse impacts to listed species are anticipated. Under Section 10.1 of the Draft IFR, the Corps determined that the proposed project would have no effect on federally listed threatened or endangered species. The Corps will continue to review conditions to determine if endangered species may be present, and coordinate or consult with USFWS as necessary through the design and construction of each project phase/feature. Endangered species surveys will be conducted during the detailed design phase and in the nesting season(s) immediately prior to construction within any potentially suitable areas to confirm presence or absence of federally and state listed threatened and endangered species. The Corps will continue to coordinate with the USFWS throughout the design and construction period, and consult under ESA if necessary."

Marginal habitat for the federally endangered least Bell's vireo (*Vireo bellii pusillus*) exists within the vegetated portions of the channel within the study area in Reaches 2, 4, 5, and 6. Riparian vegetation in these reaches is linear and confined, and lacks suitable adjacent foraging habitat. Vireo were observed within the study area in 2007; however the most recent protocol surveys in 2009 did not detect vireo. An incidental observation of an unpaired male vireo near Taylor Yard was documented in April 2013 during a one-day nesting bird survey of the area. A similar one-day nesting survey of the area in May 2013 did not detect vireo.

The recommended plan will avoid impacts to least Bell's vireo. Least Bell's vireo are not expected to be present in the study area and are not known to nest in the study area due to the marginal existing habitat. In the locations where vireos were observed during 2007 protocol surveys and from incidental observations in 2013 (Glendale Narrows Reach 6), the proposed construction will target removal only of existing non-native vegetation. In areas where marginal habitat for the least Bell's vireo exists, vegetation would be removed outside of the breeding season. Potential nesting habitat would be avoided. The Corps has determined that there will be no effect to least Bell's vireo.

Protocol level surveys for least Bell's vireo would be performed during the detailed design phase and in the nesting season(s) immediately prior to construction of each feature within any potentially suitable areas to confirm presence or absence of this species within the study area. The Corps will continue to coordinate with the U.S. Fish and Wildlife Service and the California Department of Wildlife throughout the design and construction period, and would consult under the Endangered Species Act if conditions change such that the Corps determines the project may affect the vireo or other listed species. With implementation of the alternative, riparian vegetation would be further expanded through widening and restoration of river adjacent areas, which could potentially support future populations of vireo.

No other special status species, including the southwestern willow flycatcher and coastal California gnatcatcher, are expected to occur due to the degraded conditions within the study area and lack of suitable habitat. Impacts to threatened and endangered species are not expected to occur. Construction would be temporary, and overall would benefit endangered species by expanding native riparian, riverine, and wetland habitat.

The Corps will continue to coordinate with the U.S. Fish and Wildlife Service and the California Department of Wildlife throughout the design and construction period.

RECOMMENDATION 14

A table describing the various acreages of all of the existing conditions in the Project alternatives' direct activity footprints should be developed. Only portions of this information

were available in the 2013 EIS/EIR in any form. This table (and related map) should describe land uses, wetlands, and natural communities acreages (pre- and post-Project alternative), and should clearly demonstrate the specific biological impacts and gains that would be provided by the proposed Project alternatives, by acreage and natural community/land use type. In this way the Project can be evaluated for what resources would be lost and gained with implementation. We suggest that this be standard practice for most Corps projects.

RESPONSE 14:
Information regarding acreages of habitats created is provided in Table 6-7 of the IFR. Chapter 7 of the IFR describes the Recommended Plan and NER Plan in terms of features restored by reach. The Corps will continue to provide detailed restoration and habitat information during the PED (Pre-Construction Engineering & Design) phase as coordination with USFWS on detailed project features continues.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer To:
FWS-14B0040-15CPA0063

JAN 05 2015

Colonel Kimberly M. Colloton, PMP District Engineer
U.S. Army Corps of Engineers, Los Angeles District
915 Wilshire Boulevard, Suite 930
Los Angeles, California 90017-3409

Subject: Revised Final Fish and Wildlife Coordination Act Report on the Los Angeles River Ecosystem Restoration Project, Los Angeles County, California

Attention: Josephine Axt, PhD

Dear Colonel Colloton:

Enclosed is our Revised Final Fish and Wildlife Coordination Act Report (Report) for the proposed Los Angeles River Ecosystem Restoration Project (Project) in Los Angeles County, California. This Report is provided in fulfillment of Scope of Work Agreement Number W81EYN72434461 between our agencies, requesting us to provide Draft and Final Fish and Wildlife Coordination Act reports for the Project. This Report is prepared in accordance with the Fish and Wildlife Coordination Act (FWCA; 48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) and constitutes the revised final report of the Secretary of the Interior on the Project as required by section 2(b) of the Act.

The primary concern and mandate of the U.S. Fish and Wildlife Service (Service) is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. Specifically, the Service administers the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 *et seq.*), and the FWCA. The purposes of the FWCA are to recognize the contribution of fish and wildlife resources to the Nation and the increasing public interest and significance thereof due to expansion of our national economy and other factors, and to ensure that fish and wildlife conservation receives equal consideration and is coordinated with other features of water-resources development programs (16 U.S.C. 661). Because the Project would involve changes to a water body, pursuant to Section 2(a) of the FWCA, the Corps is consulting with the Service on the action. Per Section 2(b) of the FWCA, our goal herein with our report is to provide "justifiable means and measures" for fish and wildlife conservation purposes that we "find should be adopted to obtain overall project benefits."

If you have any questions regarding the Report, please contact Jon Avery at 760-431-9440, extension 309.

Sincerely,

G. Mendel Stewart
Field Supervisor

REVISED FINAL FISH AND WILDLIFE COORDINATION ACT REPORT

for the proposed

Los Angeles River Ecosystem Restoration Project
Los Angeles County, California

Prepared for the
U.S. Army Corps of Engineers
Los Angeles District
Los Angeles, California

By the
U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
Carlsbad, California

FWS-LA-14B0040-15CPA0063

January 2015

EXECUTIVE SUMMARY

Consistent with the requirements of the FWCA, the Service's goal with this report is to: suggest appropriate measures for restoring or enhancing fish and wildlife resources in the Project region; determine the possible damage from proposed Project activities on fish and wildlife resources; and make recommendations for preventing, minimizing, and mitigating loss or damage to these resources from the proposed Project. This report was authored by Jon Avery of the Carlsbad Fish and Wildlife Office. In January 2014 we provided a Preliminary Draft Coordination Act Report on the proposed Project to the Corps.[1] In September 2014 we delivered a Final Draft Coordination Act Report to the Corps. Based on a series of meetings between the Service and the Corps, and a revised proposed Project description and background information subsequently provided by the Corps in November 2014, we developed this Revised Final Coordination Act Report.

The Corps published a Feasibility Study and Environmental Impact Statement/Environmental Impact Report (2013 Draft EIS/EIR) for the proposed Project in September 2013. The Corps Los Angeles District is the Federal lead agency for the proposed Project under the National Environmental Policy Act (NEPA) of 1969. The local lead agency and non-Federal sponsor responsible for implementing the California Environmental Quality Act (CEQA) is the City of Los Angeles (City). The Corps and City prepared the 2013 Draft EIS/EIR, jointly with a Feasibility Study (together also known as an Integrated Feasibility Report), which evaluates various alternatives for the Project purpose of partially restoring approximately 11 linear miles (mi) of the Los Angeles River (River), while providing recreation and maintaining existing levels of flood risk management. This 11-mi stretch of the River, also known as the Glendale Narrows, stretches from approximately Griffith Park (in the City of Burbank) downstream to downtown Los Angeles, in Los Angeles County, California (see Figure 1). This historically perennial reach of the River ranges from about 23 to 33 mi upstream of the Pacific Ocean.

The River lies within the coastal plain of the Los Angeles Basin and has been very highly modified for flood damage reduction purposes. Restoration measures considered for the proposed Project include enhancement and reestablishment of riparian strand, freshwater marsh, and aquatic natural communities, and partial reconnections of the River to major tributaries, portions of its historical floodplain, and the ecological areas of the Santa Monica and San Gabriel mountains and Verdugo Hills. Stated restoration goals for the Project include increased or re-established populations of native wildlife and fish, and enhanced ecological connectivity (e.g., wildlife corridors and linkages) within the Study Area and regionally. Proposed restoration measures would also include the reestablishment of some ecological and physical processes. The 2013 Draft EIS/EIS also evaluates and proposes passive recreation and associated facilities in the River. It evaluates the No Action Alternative and four action alternatives, termed Alternatives 10, 13, 16, and 20. The 2013 Draft EIS/EIR describes the proposed Project's need, goals, objectives, and the potential environmental effects in detail. As of September 2013 the Corps' tentatively selected plan was Alternative 13. In May 2014 the Corps gave approval to

[1] At the time we provided a relatively brief preliminary draft report, rather than a typical draft report, per a request from the Corps for the Service to provide a Draft CAR within a short period of time.

Alternative 20 as the Corps preferred alternative.[2] Alternative 20 is the Locally Preferred Plan and the Corps' recommended plan (USACOE 2014c).

The Planning Objectives for the proposed Project, as identified in the 2013 Draft EIS/EIR, are to:

1. Restore valley foothill riparian strand and freshwater marsh natural communities: Restore valley foothill riparian natural community types, aquatic freshwater marsh communities, and native fish habitats within the "Area with Restoration Benefits and Opportunities for Revitalization" (ARBOR) reach throughout the Project period of analysis, including restoration of supporting ecological processes and biological diversity, and a more natural hydrologic and hydraulic regime that reconnects the River to some historic floodplains and tributaries, reduces velocities, increases infiltration, and improves natural sedimentary processes.

2. Increase habitat connectivity: Increase connectivity of habitats between the River and the historical floodplain, and increase nodal connectivity for wildlife between restored natural community patches and nearby significant ecological zones such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills, and San Gabriel Mountains within the ARBOR reach throughout the period of analysis.

3. Increase passive recreation: Include recreation that is compatible with the restored environment in the ARBOR reach throughout the period of analysis.

The proposed Project would, over the long-term, provide partial re-establishment and enhancement of the currently highly degraded or eliminated aquatic/riverine and riparian natural communities within the Glendale Narrows portion of the River.

The riparian and riverine natural communities of the Study Area and environs are currently highly fragmented and generally isolated, and they would largely continue to be so following Project implementation, though with some improvements in connectivity due to Project partial restoration and enhancement as proposed. The ecological functions of such fragments normally depend not only their contiguous size and internal characteristics, but also on their configuration relative to one another and the characteristics of the surrounding landscape (Andren 1992 & 1994; Sisk et al. 1997; Saab 1999; Tewksbury et al. 2002). As such, additional projects would need to be implemented outside of the Project area in order to restore many of the important riparian and riverine ecosystem functions within the Project footprint. Nevertheless, substantial restoration potential exists within the Study Area, and we view the Project as an incremental step to partial restoration of the River in an urban context.

The Project could have direct, indirect, and cumulative impacts on biological resources during and following the activities of: demolition, clearing, grading, construction, maintenance, and operations throughout the Project life. These potential effects include: a) physical disturbance

[2] On May 28, 2014, Assistant Army Secretary for Civil Works Jo-Ellen Darcy decided to recommend approval of Alternative 20 as the Corps preferred alternative for the proposed Project.

of currently degraded natural communities from these activities; b) impacts on terrestrial, aquatic, and riparian-associated native biota from equipment use; and c) effects from increased/modified noise and human activities (e.g., construction, maintenance, and recreation), nighttime lighting, contaminant release/exposure (from construction vehicles and equipment, maintenance activities, disturbance of existing soils, etc.), and increased siltation and contaminants release into the River waters on site and downstream. Most of these impacts would likely be short-term or temporary; some could be recurrent, such as recreation activities. The proposed Project would likely result in net and long-term gains in ecological functions and values for almost all native species that currently use the areas in the Project reach of the River, depending on Project designs ultimately implemented.

Proposed increases/re-establishment of riparian and riverine natural communities (in both acreage and function) as a result of the Project would likely provide expanded or restored habitats for several resident/migratory/transient native birds, as well as a limited number of native of reptile, amphibian, and smaller mammal species. With some modifications to the proposed designs the Project has potential to re-establish some native fish species that are currently extirpated from the Project area. Additional increases in ecological functions from restoration and enhancement could be gained with some modifications to proposed Project designs, as outlined in our Recommendations below.

The least Bell's vireo (*Vireo bellii pusillus*; "vireo"), a federally listed endangered species, occurs in the Project footprint and environs in small (undetermined) numbers. The vireo could be adversely affected by Project-related equipment use, nighttime lighting, and/or other human activities associated with construction or operations, including clearing (e.g., temporary or permanent loss of riparian vegetation in some specific locations) of extant vireo habitat, likely during the non-breeding season. Project operations (including recreation) or maintenance activities could potentially disturb breeding vireos attracted to Project restoration areas following Project implementation. Net increases through restoration and enhancement of riparian woodland and scrub areas proposed within the Project footprint as part of the Project would likely provide overall benefits to the vireo, including an undetermined increase in the currently limited (potential) breeding use and carrying capacity of the area, particularly if brown-headed cowbird (*Molothrus ater*) parasitism is controlled in the Project area.

The existing heavily degraded and fragmented ecological conditions within all of the Project Study Area indicate that potential for other Federal or state listed species of any taxa occurring in the Project area during construction is low. As such, other listed species besides the vireo are not likely to be adversely affected by proposed construction activities. Depending on the ecological restoration and enhancement designs ultimately implemented and maintained as part of the Project (see Recommendations below), the Santa Ana sucker (*Catostomus santaanae*), a federally listed threatened species, has some potential to utilize restored riverine reaches in the Project area during the Project life as a result of improved habitat conditions, including water flow and quality parameters, channel form, and riverine substrates. Occasional adverse effects to this species from Project maintenance or operations could occur following any re-establishment of the species in the Project area. Re-establishment of Santa Ana sucker would likely require translocation of the species from extant populations elsewhere in the region following

appropriate restoration measures. Without additional restoration projects implemented beyond the scope of the proposed Project, occupation of the Project area by other federally listed species of any taxa does not currently appear of substantial potential to occur.

In general, while the Project as designed would improve ecological conditions of the Study Area to a less degraded condition, we expect that the proposed Project can be practicably modified to better utilize the restoration potential of the River and provide substantially greater ecological gains from the Project. Compared to current proposed designs, within Project floodplain/channel areas where the existing channel would be widened we generally recommend that Project design plans include:

a) fewer new hard structures be utilized at the ground/channel surface, including those that would modify/control stream flows;
b) increased creation of riverine (aquatic stream) areas with tree-shaded flowing water and native fish refugia within a relatively natural stream geomorphology and associated substrates (e.g., sand and gravel), with concomitant reductions in proposed areas of artificial open or ponded water; and
c) expanded areas of unmaintained native riparian scrub, woodland, and forest natural communities that are situated within the widened/restored floodplain so as to be subject to a relatively natural flooding regime (including periodic denudation flood flows consistent with natural seral stage compositions over the Project life).

We understand that ecologically healthy and accessible urban streams can help expand local businesses and enhance economic, educational, recreational, and social opportunities in nearby communities. Restoring and enhancing urban streams helps re-connect metropolitan residents—youth in particular—to natural open spaces and a relationship with nature. We suggest that the above noted modifications to the Project can be made consistent with all of the stated goals and objectives of the Project, including maintenance of flood risk management capacity, as well as considerable increases and improvements in appropriate recreation, "greening,"[3] and human access to the River. .

PREFACE

This is the U.S. Fish and Wildlife Service's (Service) Revised Final Coordination Act Report for the U.S. Army Corps of Engineers' (Corps) proposed Los Angeles River Ecosystem Restoration Project (Project). Pursuant to the mandates of the Fish and Wildlife Coordination Act (FWCA) of 1958, as amended (87 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Corps is consulting with the Service to ensure that equal consideration is provided for fish and wildlife resources

[3] Greening: the process of transforming spaces into more environmentally friendly and/or more naturalistic versions, such as urban green spaces, sustainable landscape improvement projects, and greenways. Planning for a greener townscape involves provision or preservation of greenery with greater sensitivity to the balance between hard-surfaced built-up areas and green vegetated areas.

during the planning of the Corps' proposed Project. The goal of the FWCA is to ensure that fish and wildlife conservation is an integral part of the development of our Nation's water resources.

The FWCA directs Federal agencies that plan and/or implement water-use projects to incorporate elements into their projects to improve fish and wildlife resources, and to avoid and minimize damages to these resources where feasible (Hearing on Coordination Act Amendments 1958; McBroom 1958). The purpose of the FWCA is to recognize the contribution of wildlife resources to the Nation, the increasing public interest and significance of these resources due to expansion of our national economy and other factors, and to provide that wildlife conservation receives equal consideration and be coordinated with other features of water-resources development programs (16 U.S.C. 661).

This document constitutes the Revised Final FWCA Report in fulfillment of a Military Interdepartmental Purchase Request between the Service and the Corps regarding the potential effects of the proposed Los Angeles River Ecosystem Restoration Project in Los Angeles County, California, on fish and wildlife resources. We have prepared this FWCA Report on behalf of the Secretary of the Interior pursuant to the requirements section 2(b) of the FWCA and in keeping with the intent of the NEPA (P.L. 91-190).

Our analysis of the proposed Project and the recommendations provided herein are based on information in: 1) the Corps' 2013 Draft EIS/EIR; 2) other reports and data provided by the Corps; 3) the Los Angeles River Revitalization Master Plan (City of Los Angeles 2007); 4) a review of the published and unpublished literature on the history, biota, and ecosystems of the region; 5) field visits by Service personnel; 6) discussions and meetings with professional biologists and representatives from other Federal, state and local agencies; 7) revised proposed Project description, commitments, and information provided to the Service by the Corps by email in November 2014; and 8) our best collective professional judgment.

Our goals in the analysis in this report are to: a) identify and evaluate the potential effects of the proposed Project on fish and wildlife resources and the ecosystems they depend upon within the action area; b) provide suggestions for improving the currently proposed Project designs for ecological restoration and fish and wildlife recreational/nature access; c) recommend methods for avoiding, minimizing, and offsetting potential negative ecological effects of the Project; and d) suggest other actions that the lead agencies can plan and/or implement that would partially restore the natural ecosystems, and/or improve or enhance native fish and wildlife resources, associated with the River.

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....ii

PREFACE.....v

LIST OF FIGURES.....ix

INTRODUCTION.....1

FISH AND WILDLIFE COORDINATION ACT.....5

DESCRIPTION OF PROJECT REGION AND STUDY AREA.....9

PROPOSED PROJECT PURPOSE.....24

DESCRIPTION OF PROPOSED PROJECT ALTERNATIVES.....24

RELATIONSHIP OF THE PROPOSED PROJECT TO EXISTING MASTER PLAN.....34

DESCRIPTION OF BIOLOGICAL RESOURCES.....35

EFFECTS OF THE PROPOSED PROJECT ON BIOLOGICAL RESOURCES.....61

CUMULATIVE EFFECTS.....64

RECOMMENDATIONS.....65

LITERATURE CITED.....76

LIST OF FIGURES

Figure 1. Project Study Area.....3

Figure 2. Watersheds and tributaries of the Los Angeles River.....11

Figure 3. Aerial photo of a portion of Reach 1 of the Study Area.....16

Figure 4. Aerial photo of a portion of Reach 2 of the Study Area 17

Figure 5. Aerial photo of a portion of Reach 3 of the Study Area 18

Figure 6. Aerial photo of a portion of Reach 4 of the Study Area 19

Figure 7. Aerial photo of a portion of Reach 5 of the Study Area 20

Figure 8. Aerial photo of a portion of Reach 6 of the Study Area 21

Figure 9. Aerial photo of a portion of Reach 7 of the Study Area 22

Figure 10. Aerial photo of a portion of Reach 8 of the Study Area 23

Figure 11. Natural community types along the Los Angeles River, 1896 and 2010.....36

INTRODUCTION

The Los Angeles region's history is inseparably intertwined with the River. The historic occupation, settlement, and development patterns of the region were centered on the River due to its huge importance for residential, municipal, and agricultural water supply. Several large Native American Tongva villages and the first Spanish settlement in the region (in the area of what is now downtown Los Angeles) were developed adjacent to the River near the Study Area, mostly due to the perennial supply of surface water the River provided along its middle reaches (Crespí 2001; Gumprecht 1999). An extensive series of contiguous riparian natural communities, including woodlands and forests, sided the River in the Project area during this period (Crespí 2001; Gumprecht 1999). In the Project area the River's floodplain provided relatively flat and fertile agricultural land that was heavily used during and following the 18th /19th century Spanish settlement period. Competing uses of the River corridor and floodplain in modern society (including flood damage reduction facilities), combined with large-scale alteration the River's watershed over the last hundred years, have drastically reduced the abundance and function of the aquatic and riparian natural communities of the River (Garrett 1993).

Streams and rivers, with their associated floodplain and riparian ecosystems, provide essential or highly important habitat elements for much of the region's native non-marine fish and wildlife species. Much of southern California's native terrestrial vertebrate wildlife species depend on riparian ecosystems for essential portions of their life histories (Schoenherr 1992).

Over the past century, increasing urbanization of watersheds in southern California has resulted in large losses and degradation of wetlands and riparian areas (Dahl 1990, Holland et al. 1995). As a result of the wholesale changes to the River and its watershed over the last 100-plus years, the current abundance and diversity of native flora and fauna along the River has drastically diminished as compared to its pre-channelization state, as evidenced by a comparison of current biota with that documented by literature, collections, and historical photographs (Garrett 1993). Commensurate with these reductions in River ecosystems has been the urban development of the surrounding areas, and the concomitant greatly diminished opportunities for exposure and experiences in nature for local residents. The River, as with most low-lying points in the landscape, is strongly influenced by the stormwaters, pollutants, and streamflow warming that characterize this urban development and the associated water catchment.

Historically, typical open channel flood damage reduction ("flood control") systems in the U.S. have been designed for mostly a single function: to enhance human safety by reducing flood damage to human landscape infrastructure. This single-purpose objective is increasingly an untenable practice (Williams and Swanson 1989; Greco and Larsen 2014). Because river and stream systems in human-dominated landscapes often play important conservation roles for biota (e.g., habitats for sensitive species) and exposing/connecting people with nature, it is important that flood risk management planning be integrated with conservation planning principles and goals where practicable. In river and stream systems, we suggest that flood damage reduction channels should be multifunctional where feasible, and be designed to accommodate native vegetation as well as geomorphic processes. In many cases, expanding the flood channel

footprint and unlined channel bottom while increasing design channel roughness coefficients (Manning's n[4]) with vegetation can be performed while still effectively meeting multifunctional objectives (Greco and Larsen 2014).

The stated primary purpose of the proposed Project alternative plans (including Corps preferred alternative) considered in the 2013 Draft EIS/EIR is to restore approximately 11 mi of the River from Griffith Park to downtown Los Angeles by reestablishing or increasing riparian strand, freshwater marsh, and aquatic natural communities and reconnecting the River to major tributaries, its historic floodplain, and the regional ecological zones of the Verdugo Hills and Santa Monica and San Gabriel mountains at the central nexus of the River watershed's former and existing ecosystems, while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within the 11-mi Project reach of the River.

Implementation of any substantial project in the Corps' Study Area[5] may indirectly affect biological resources beyond the political or jurisdictional boundaries used to delimit the Study Area chosen by the Corps. For example, most water and a substantial portion of the sediments and contaminants that enter or occur in the Study Area move downstream along the River and ultimately move beyond the Study Area limits. Also, many invasive exotic and native plant, fish, and wildlife species typically move through and beyond the Study Area limits, both upstream and downstream. Therefore, the analysis in this Final FWCA Report considers all potential appreciable ecological effects associated with the alternatives to be evaluated, not just those effects limited to the Study Area. We also considered in our analysis the potential effects to biological resources resulting from the possible interactions between the proposed Project and other known regional planning efforts.

Ecological restoration is an intentional activity that initiates or accelerates the recovery of an ecosystem with respect to its health, integrity, and sustainability (Society for Ecological Restoration 2004). Frequently, the ecosystem that requires restoration has been degraded, damaged, transformed, or entirely destroyed as the direct or indirect result of human activities. Restoration attempts to return an ecosystem to its historic ecological trajectory. Historic conditions are therefore the ideal starting point for restoration design. The restored ecosystem will not necessarily recover its full former state, since contemporary constraints and conditions may cause it to develop along an altered or limited trajectory. The historic conditions and trajectory of a severely degraded ecosystem may be difficult or impossible to determine with accuracy. Nevertheless, the general direction and boundaries of that trajectory can be established through a combination of knowledge of the damaged ecosystem's pre-existing structure,

[4] The empirical Manning roughness coefficient characterizes channel surface roughness and thus characterizes the resistance or impedance to flow. Small values of n such as <0.012 describe a smooth surface with little resistance (such as concrete), whereas large values of n such as >0.15describe a rough surface consisting of trees and boulders posing greater resistance (Mount 1995). The Manning equation is a key tool used by civil engineers to design open channel flood control structures.

[5] Study Area – the Study Area refers to the area that was studied in the 2013 Draft EIS/EIR.

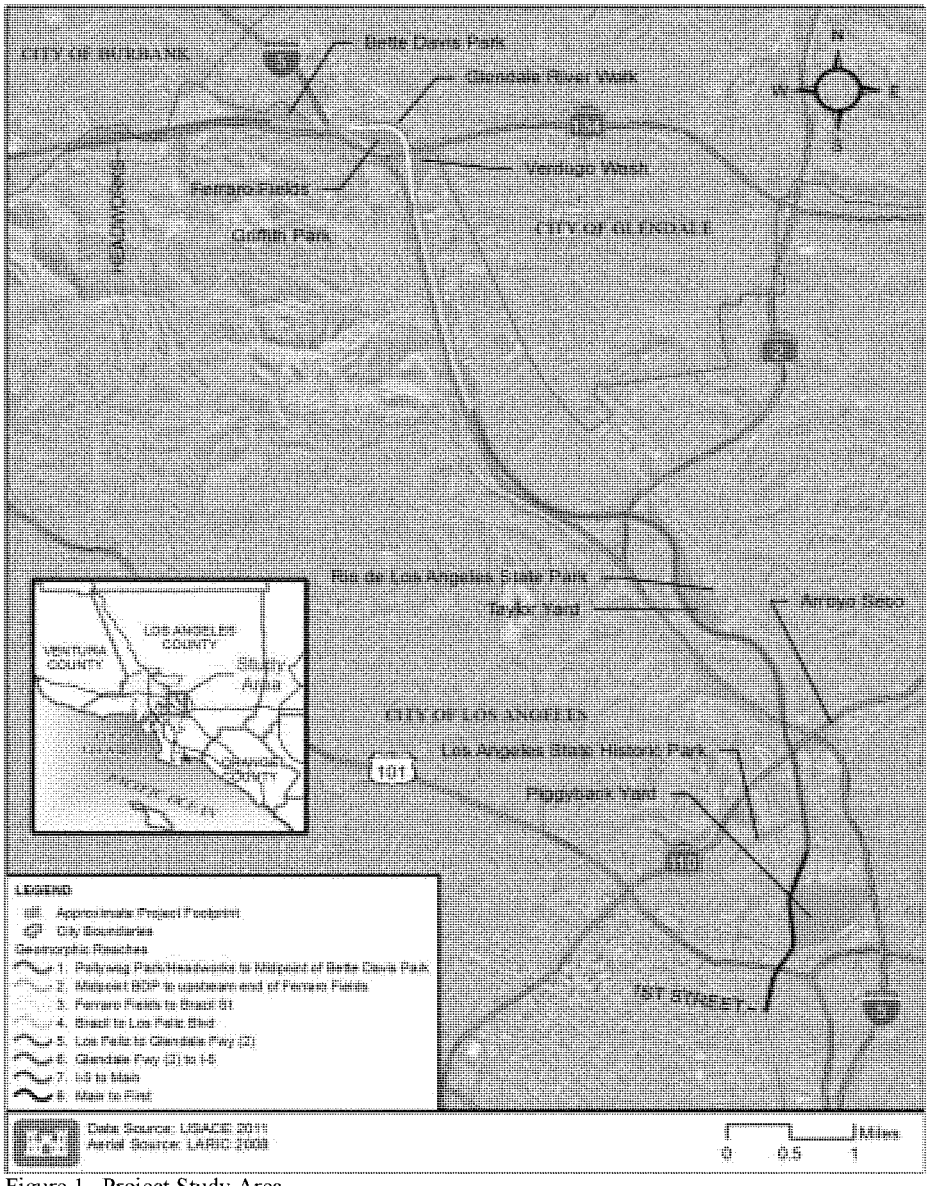


Figure 1. Project Study Area

composition and functioning, studies on comparable intact ecosystems, information about regional environmental conditions, and analysis of other ecological, cultural and historical reference information. These combined sources allow the historic trajectory or reference conditions to be charted from baseline ecological data and predictive models, and its emulation in the restoration process should aid in piloting the ecosystem towards improved ecological health and integrity.

An ecosystem is considered recovered/restored when it contains sufficient biotic and abiotic resources to continue its normal development without further assistance or subsidy. It will sustain itself structurally and functionally and will demonstrate resilience to normal ranges of environmental stress and disturbance. The eight attributes listed below provide a basis for determining when partial or full restoration would be been accomplished (Society for Ecological Restoration 2004). The full expression of all of these attributes is not essential -- it is only necessary for these attributes to demonstrate an appropriate trajectory of ecosystem development towards the intended goals or reference.

1. The restored ecosystem contains a characteristic assemblage of the native species that occur in the reference ecosystem and that provide appropriate community structure.
2. All functional groups necessary for the continued development and/or stability of the restored ecosystem are represented or, if they are not, the missing groups have the potential to colonize by natural means.
3. The physical environment of the restored ecosystem is capable of sustaining reproducing populations of the species necessary for its continued stability or development along the desired trajectory.
4. The restored ecosystem apparently functions normally for its ecological stage of development, and signs of dysfunction are absent.
5. The restored ecosystem is suitably integrated into a larger ecological matrix or landscape, with which it interacts through abiotic and biotic flows and exchanges.
6. Potential threats to the health and integrity of the restored ecosystem from the surrounding landscape have been eliminated or reduced as much as possible.
7. The restored ecosystem is sufficiently resilient to endure the normal periodic stress events in the local environment that serve to maintain the integrity of the ecosystem.
8. The restored ecosystem is self-sustaining to the same degree as its reference ecosystem, and has the potential to persist indefinitely under existing environmental conditions.

Ecosystem restoration is a primary mission of the Corps Civil Works program (USACE 2014a). Pursuant to Corps policy, ecosystem restoration projects should examine the need for improving or re-establishing both the structural components and the functions of the natural system (USACE 2014b). Restored ecosystems should mimic, as closely as possible, conditions which would occur in the area in the absence of human changes to the landscape and hydrology. In some instances, a return to pre-disturbance conditions may not be feasible (USACE 2014a), such as within the Study Area. In situations where partial restoration may be possible, the goal of Corps Civil Works projects is typically significant and valuable improvements of degraded ecological resources (USACE 2014a). Indicators of successful restoration would include the presence of a large variety and number of native plants and animals, the ability of the area to sustain larger numbers of certain indicator species or more biologically desirable species, and the

ability of the restored area to continue to function and produce the desired outputs with a minimum of continuing human intervention (USACE 2014b). Those restoration opportunities that are associated with wetlands, riparian and other floodplain and aquatic systems are most appropriate for USACE involvement (USACE 2014b).

After examining the needs and potential for improving or re-establishing both the structural components and ecological functions of the Study Area, we expect that partial reestablishment of the attributes and functions of the former natural self-regulating ecosystems of the River is practicable. Our design analysis and Recommendations herein take, in part, a realistic hydrological and geomorphic approach to the substantial constraints and opportunities presented by the River and environs in their current state. We have evaluated past development impacts, historical uses, fluvial sediment transport, current and potential channel forms, riparian and riverine functions, hydraulics (e.g., channel water flow), flood damage reduction and right-of-way constraints, and potential recreation in the watershed and Study Area. The past and ongoing anthropogenic impacts along the River have drastically altered the geomorphic processes and disconnected the River from its former floodplain. Sediment erosion/transport/deposition potential within most of the length of the River is currently artificially very low (and would remain so with the Project) due to channelization and hard surface bottom and slope protection along most of the River, and development within the watershed. Floodplain interaction with the River and overbank flows are vital to maintaining balanced riparian and riverine ecosystems of moderate to high function and integrity; as such, even partial restoration of these processes (e.g., within future proposed widened River floodplain reaches) is essential to partial restoration of basic River ecosystem functions and biological integrity. Our Recommendations also take a whole system approach to River restoration that, if implemented, would result in appreciably increased riparian and riverine systems regeneration and improved ecological sustainability and function. Nevertheless, even partially restoring substantial ecological connections (such as wildlife corridors from areas within the Study Area to larger natural areas outside) in and with the Study Area will remain highly challenging, considering the existing fragmented conditions, hard structures, and extensive development within and surrounding the Study Area, as well as the Project scope, competing proposed uses, and likely available resources.

FISH AND WILDLIFE COORDINATION ACT

The FWCA directs or authorizes consultation, reporting, consideration, and in many cases, installation/implementation of fish and wildlife conservation features. The authorities of the FWCA are considered to be "supplementary legislation" to the various Federal project authorizations, such as the Corps public works authorizations (Smalley and Mueller 2004). The FWCA conditions or supplements other water development statutes to require consideration of recommendations generated under the FWCA procedures, including portions of the Clean Water Act (Zabel v. Tabb, 430 F2d 199 [5th Cir. 1970] cert. denied 401 U.S. 910 [1972]). For Federal water resources development projects, the FWCA requires that fish and wildlife conservation receive equal consideration by Federal agencies with other project purposes, and that such conservation be coordinated with other project features. The FWCA authorizes the project implementation of means and measures for both mitigating losses of fish and wildlife resources, and for enhancing these resources beyond offsetting project effects (Smalley and Mueller 2004).

Sections 1 and 2 of the FWCA direct and authorize Federal agencies that they have an affirmative duty to both conserve and improve wildlife resources in connection with water development projects (Metcalf 1958; Smalley and Mueller 2004). While acceptance of Service's conservation recommendations is not mandatory, the FWCA does provide clear, general authority for the Corps to fund and construct measures that will provide for fish and wildlife conservation and enhancement as part of their water projects, and directs that fish and wildlife conservation is a goal of all Federal water projects (Smalley and Mueller 2004). Similarly, while the results of the FWCA consultation with the Service are not binding, the Federal agency must strongly consider input received during consultation to prevent loss or damage to wildlife resources and to provide for measures to mitigate such impacts.

To help accomplish the above outlined requirements, Section 2(a) of the FWCA establishes that preconstruction planning on water project development shall be coordinated with the Service through consultation. The findings and recommendations of the Service under the FWCA are communicated to project decision makers by three main means: orally in the interactive planning process, through notes and memoranda/letters, and through the formal reporting authorized by section 2(b). Section 2(b) requires that the Service provide a report and recommendations that determine "the possible damage to wildlife resources" and provide "means and measures that should be adopted to prevent the loss of or damage to such wildlife resources, as well as to provide concurrently for the development and improvement of such resources." The "means and measures" refer to both those for mitigation of impacts, and for enhancement fish and wildlife resources (Smalley and Mueller 2004). The purpose of the Section 2(b) report is to document and recommend: it should document the results and findings of the Service's study, planning, and coordination. It should recommend those actions considered necessary by the Service to accomplish the fish and wildlife conservation goals of the FWCA.

Section 2(b) also requires Federal agencies to give "full consideration to the report and recommendations" of the Service and directs Federal agencies that "the project plan shall include such justifiable means and measures for wildlife purposes as the reporting agency finds should be adopted to obtain maximum overall project benefits." The 2(b) report must be made available to the Congress or other authorizing agents when decisions are made to authorize (or not to authorize, or authorize with modifications) a project. Section 2(c) of the FWCA authorizes the Service to: conduct surveys and investigations to determine the possible damage of proposed developments on wildlife resources; to make recommendations for preventing their loss or damage; and to offer measures for developing and improving these wildlife resources.

The definitions of the terms "mitigation," "compensation," and "loss prevention," (associated with "conservation of wildlife resources by preventing loss of and damage to such resources") contained in Section 2 of the FWCA are sometimes subject to confusion. The objective of mitigation under the FWCA is to "prevent loss of or damage to" fish and wildlife. Mitigation under the FWCA is accomplished through the use of a five step process for reducing or eliminating losses from a project: avoidance, minimization, rectification, rectification over time, and compensation. Compensation is used to mitigate for unavoidable losses after the first four

components of mitigation have been applied. The terms "wildlife" and "wildlife resources," as used in the FWCA, "include birds, fishes, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent" [Section 6(b)]. Thus, although the FWCA uses the term wildlife, it is representing all fish and wildlife and their habitats/ecosystems. Evaluations made under the FWCA can, therefore, take into consideration a wide spectrum of environmental factors, including a watershed or ecosystem approach (Smalley and Mueller 2004). Per Section 2(d) of the FWCA, fish and wildlife conservation costs (mitigation and enhancement) are to be considered Federal project costs. No regulations for implementing the provisions of the FWCA currently exist.

APPROACHES TO FLOOD RISK REDUCTION, RIVERINE AND RIPARIAN MANAGEMENT, AND ECOLOGICAL DESIGN OF OPEN CHANNELS

In most developed countries, rivers proximate to urban development typically have open channel flood damage reduction systems designed with fixed parameters and narrow objectives that frequently overlook important ecological functions of river systems, making these channels of limited value to ecological conservation. The conventional single objective for open channel design is to convey water as efficiently as possible, and historically such designs have been implemented to help protect to urban and rural infrastructure. Using this utilitarian goal, flood water is efficiently routed with the goal of reducing property damage and loss of human lives, and the open channel design is mainly driven by minimizing channel right-of-way space and construction costs. The most extreme form of this open channel design replaces the entire river channel and its floodplain by smooth trapezoidal- or rectangular-shaped concrete conveyance structures with slopes high enough to contain design flows.

We herein suggest that open channel flood risk management designs consistently should have co-equal goals of flood damage reduction and ecological conservation. This multifunctional approach necessitates adopting a 'regenerative design' paradigm (Cole 2012; Zari 2012) combined with 'reconciliation ecology' (Rosenzweig 2003) to create and sustain viable and productive river systems. Our approach builds on previous work such as the "space for the river" concept proposed in the Netherlands and elsewhere (Nienhuis & Leuven 1998). In recent decades it has been increasingly recognized that riverine and riparian ecosystems have highly important ecological conservation values and provide human communities with numerous ecosystem services (Opperman et al. 2009; Thorp et al. 2010). Various aspects of the fundamental mechanics of these ecosystems have been described relatively recently in the literature and they illustrate why conventional open channel flood channel design has been detrimental to ecological conservation. Key essential natural community and ecosystem patterns, processes, and concepts, which are not considered in conventional flood damage reduction channel design, include: naturalized flow regimes (Poffet al., 1997), flood-pulse (Junk, Bayley & Sparks, 1989), geomorphically effective stream power (Larsen, Fremier, & Greco,2006), channel meander (Hickin, 1974), floodplain age (Greco,Fremier, Larsen, & Plant 2007; Hooke, Harvey, Miller, & Redmond 1990), bedload transport (Kondolf 1997), vegetation dynamics(Amoros and Wade 1996), patch dynamics and minimum dynamic area (Greco 2013; Pickett & Thompson 1978; Wu & Loucks 1995), minimum dynamic area for channel meander using set-back levees (Larsen, Girvetz, & Fremier 2006); river continuum (Vannote, Minshall,

Cummins, Sedell, & Cushing 1980), large woody debris recruitment (Latterell & Naiman 2007), large river ecology (Johnson, Richardson, & Naimo 1995), and riparian landscape ecology (Malanson 1993). It is important that in the planning of river and stream projects that these riverine-riparian landscape patterns, processes, and concepts are considered and integrated into multifunctional open channel design processes where possible, such that essential ecological functions and values are maintained or enhanced for ecological conservation.

Because conventional flood damage reduction channel design seeks to minimize right-of-way width and economic costs, the typical open channel footprint (land area utilized) is minimized, the channel depth is increased with the use of floodwalls or levees, and the roughness coefficient is minimized. Herein lie the two main reasons why conventional flood channel design is of little conservation value. First, channel water flow capacity is created or increased by artificial means to constrict the floodplain instead of using floodplain width to expand capacity and decrease depth. Second, the design use of very smooth roughness coefficient values requires the routine,systematic removal of any trees, shrubs or woody debris that subsequently grow or get deposited within the channel that act to increase the roughness of the channel beyond its design roughness value. However, it is precisely this roughness component that has critically important value as habitats for most native aquatic and terrestrial organisms. Engineers will frequently design channels to create additional capacity (e.g., flood conveyance) by creating higher levees along a narrow channel to contain floodwaters to a smaller footprint thus reducing the width of the floodplain and lowering land acquisition costs. At the design (peak) flow the water is typically deep and the velocity is high. Consequently any non-flying terrestrial animals living in the flood channel typically must be able to reach refugia or drown. Refugia from floodwaters can be provided by high ground, a nearby tree, or a debris pile that rises above the flood water surface. In large river systems flood damage reduction channels can be wide with few or no trees in the floodplain, and for many terrestrial organisms, traversing long distances to safety is dubious. In a study on the Sacramento River researchers found an 86 percent decline in the presence of small mammals in areas subject to flooding as compared to non-flooded areas (Golet, Hunt, & Koenig 2013). The use of setback levees (i.e., widening the distance between levees to increase channel width) to reduce channel depth and create additional capacity and conveyance is a more ecologically beneficial design practice (Mount 1995) and also provides opportunities for refugia habitats from floodwaters.

The second problem with a conventional engineering approach is designing the channel with very smooth Manning roughness coefficients and requiring that the n value be maintained overtime to pass the peak flow. Around the world millions of dollars are spent to remove vegetation that grows near the channel or in the floodplain to maintain these smooth roughness coefficients. In those same landscapes where flood damage reduction channels are cleared of their riparian vegetation are often sensitive terrestrial and aquatic species whose floodplain habitats are increasingly rare.

DESCRIPTION OF PROJECT REGION AND STUDY AREA

Region

Coastal southern California is a semi-arid region with a Mediterranean climate dominated by long dry summers and usually brief winters with short, sometimes intense cyclonic winter storms. The taller mountains in the region receive a portion of their precipitation as snow, which typically contributes water to streams until mid- to late-summer. Much of the higher elevations of the region are undeveloped and remain partially protected in national forests and a network of national, state, and county parks. The lower elevations in the region have been pervasively altered by urbanization or conversion to agriculture (Mazor et al. 2011). Wildfires and drought are frequent in the region. By area, the overall coastal southern California region is 59 percent undeveloped open space, 28 percent urban, and 13 percent agricultural (NOAA 2001). Watersheds within the Project surrounding region fall into two basic types: those characterized by short coastal streams draining mountain ranges immediately adjacent to the coast and those watersheds containing larger river systems, such as the River, that extend inland through gaps in the coastal ranges.

The River is located within the California Floristic Province, an 8-million-acre (ac) region that extends from southern Oregon to northern Baja, Mexico, and encompasses areas west of the interior deserts. The California Floristic Province is considered one of the world's 25 most biologically rich and threatened terrestrial ecoregions (Myers et al. 1999). Indeed, while these 25 ecological hotspots cover less than 1.5 percent of the earth's land surface, they account for roughly 60 percent or more of the remaining diversity of life on earth (Mittermeier et al. 1998, 1999). The California Floristic Province is a biological hotspot for nearly every taxonomic group (except freshwater fish) including plants, invertebrates, birds, mammals, and reptiles, in part due to the region's mild Mediterranean climate. The California Floristic Province harbors more endemic plant and animal taxa and more identifiable subspecies than any other area of comparable size in North America (Calsbeek et al. 2003); 44 percent of its plant and vertebrate species are endemic (restricted) to California (Myers et al. 1999). The California floristic province harbors more plant species than the central and northeastern United States and Canada combined, and over 30 percent of the known North American insect species north of Mexico (Raven & Axelrod 1978; Arnett 1985; Raven 1988; Messick 1997). California supports the second-greatest number of species listed under the Endangered Species Act in the United States, following to the State of Hawaii (USFWS 2001). This concentration of endangered and threatened species stems predominately from a combination of very high biological diversity and ongoing losses and threats from growing human population and associated development.

The River watershed/drainage dominates the geographical setting of the nation's second largest urban area (Garrett 1993). Los Angeles County has the largest human population of any county in the nation, and is exceeded by only eight states. Approximately 27 percent of California's residents live in the County. More than 1 million of the 10.4 million Los Angeles County residents live in unincorporated areas with the other 9.3 million living in 88 cities, located throughout a 4,084-square-mile (mi^2) area (County of Los Angeles 2013). Rainfall in the Project region typically falls between November and April, with monthly precipitation rarely exceeding

4 inches (in) (Kwan et al. 2010). Annual average rainfall since 1877 in the Study Area is approximately 15 in (Los Angeles Almanac 2013). Daily high temperatures range from 68 deg. Fahrenheit (F) to 86 deg. F, and lows range between 48 deg. F and 68 deg. F (California Department of Water Resources 2013).

The River within the City of Los Angeles was, and is, much more than the approximately 750 ac/32 mi (City of Los Angeles 2007) of existing flood channel facility. The River remains closely associated and dependent upon the watershed surrounding it (see Figure 2 below) (Garrett1993). Before channelization, the River was naturally an alluvial river that migrated and flooded periodically across a wide flood plain that is now occupied by developed portions of Los Angeles, Long Beach, and other communities (Gumprecht 1999). Much of the precipitation within the River's watershed, predominately rainwater, historically and currently collects within a large groundwater basin underlying the San Fernando Valley. This groundwater basin historically and currently drains as surface water flow in the River through the Project Study Area (Gumprecht 1999).

The River drains an 834 mi^2 watershed, with an overall length of the River and tributaries combined of 322 mi. Within the watershed, current land use (all tributaries combined) is approximately 40 percent open, 1 percent agricultural, and 59 percent urban (Mazor et al. 2011).

The River was historically a 51-plus-mi-long interconnected system of riparian and riverine natural communities (Gumpect 1999, Garrett 1993). It was and remains one of the largest sources of fresh water along the southern California coast (Friends of the Los Angeles River 2008). The River provided a source of water and food for the Gabrielino Indians prior to European occupation of the region. The Gabrielinos were gatherers and hunters who lived primarily off the acorns from the abundant oak trees that formerly occurred along the River's floodplain, as well as on fish and mammals (Gumpect 1999). Before Spanish settlement of the area at least 45 Gabrielino villages were located near the River, concentrated in the San Fernando Valley and the Elysian Valley, in what is present-day Glendale.

The natural path of the River was historically relatively unstable. In the 18th and early 19th centuries, the alignment of the River ran southwest downstream of the Glendale Narrows (near present-day downtown Los Angeles), where it joined what is now Ballona Creek, and the River discharged into Santa Monica Bay in present-day Marina del Rey; this course is drastically different than the River's alignment today (Gumprecht 1999). During a large flood in 1825, the River's course diverted itself to approximately its present one, flowing due south just east of downtown and discharging into San Pedro Bay (Gumprecht 1999; Dark et al. 2011). Between 1825 and the "Great Flood" of 1862, the River was joined by the San Gabriel River in present-day Long Beach, but in 1862 the San Gabriel River carved out a new course 6 mi to the east, and has discharged into Alamitos Bay ever since.

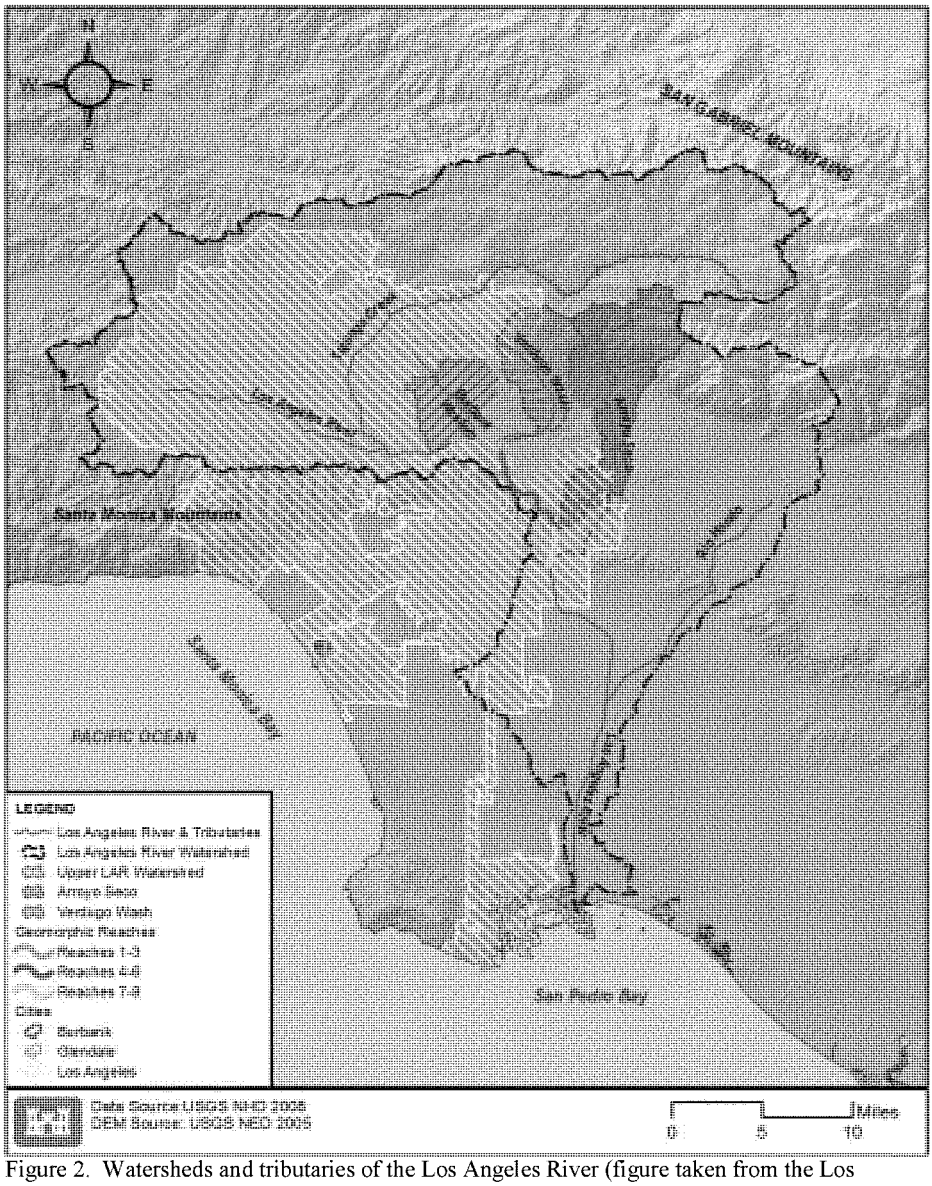


Figure 2. Watersheds and tributaries of the Los Angeles River (figure taken from the Los Angeles River Ecosystem Restoration Integrated Feasibility Report/2014 Draft EIS/EIS)

Until the completion of the Los Angeles Aqueduct for the importation of water , the River was the primary agricultural, industrial, and domestic water source for the Los Angeles region, through River surface water diversions and groundwater pumping. Floods continued to affect the partially developed floodplain areas along the River into the 1930s, leading to calls for additional flood damage reduction measures. The Corps then began a project of channelizing the River. Since completion of this project, the River has served primarily as a flood channel. The only portions of the River that are not both completely channelized and covered with hard structures are: a flood-damage reduction basin behind the Sepulveda Dam near Van Nuys; an approximately 3-mi stretch east of Griffith Park (the Glendale Narrows Project area, where groundwater levels continue to mostly be at the ground surface) where the channel is unlined (soft-bottomed) and along the last few mi of the River in Long Beach where the channel is also soft-bottomed. Treated wastewater from three wastewater reclamation plants currently increase surface flows in the River, starting at the Sepulveda Basin.

Based on past accounts, the River's surface flow through the Project area was historically perennial (Crespí 2001; Gumprecht 1999; etc.), although common current perceptions are often that it was naturally intermittent or that the River was normally "dry" (e.g., see Smith 2013). For example, Juan Crespí reported considerable surface flow of the River near what is now downtown Los Angeles in the mid-summer of 1769 (Crespí 2001), and significant perennial surface baseflows were consistently reported in the Project area of the River throughout the 19th century (Gumprecht 1999). Portions of this surface water was consistently diverted from the Project area of the River in all seasons during the late 18th and 19th centuries as the primary source for regional irrigation and domestic use in the "Zanja" ditch water distribution system; this canal-ditch water supply was key to the early agricultural and urban development of the area (Gumprecht 1999).

The natural year-round surface water flow of the River in the Study Area was predominately from surfacing groundwater continually draining the large upstream groundwater basin that underlies the San Fernando Valley (Gumprecht 1999). The River's surface flow was reportedly historically intermittent in stretches upstream of the Project area in the San Fernando Valley and downstream of downtown (Gumprecht 1999).

The first written description of the inland River was made by Juan Crespi during the Portola Expedition in summer of 1769, as they explored the area around what is now downtown Los Angeles (Crespí 2001):

> Wednesday, August 2—On going three hours, in which we must have made about three leagues as well, we came to the water found by the scouts yesterday, another river with another very green lush valley in no wise inferior to the two past ones [noting the San Gabriel and Santa Ana rivers to the south]; rather, of all of them, I should say that this one bears away the prize. This river here [the Los Angeles River] is a bit smaller than the last ones, its bed being where we crossed about some seven yards wide. It is not deep. It flows from the north-north west, from the quite high mountains lying next by here; while by the same mountains, there is a dry creek [the Arroyo Seco] to the northeast, with a very large bed, closing with the river here; it is plain what large torrents this must carry in

> the season, with many dead trees that must have come down from the mountains. The beds of both are lined with large trees, sycamore, willows, cottonwoods, and very large live oaks....The river flows on down nearly at ground level through a very green, lush, wide-reaching valley of level soil some leagues in extent...upon one and the other side of the river, which runs continually onward [downstream to the west] with a great amount of trees, lie very large, very green bottomlands, looking from afar like nothing so much as large cornfields...The waters of all three rivers are very fresh and pure, and in point of flow this one here is very slightly less than the other two...There are a great many [pronghorn] antelopes at all of these rivers, and very large hares, the latter especially here at this spot.

Today the mostly-concrete channel of the River continues to carry a relatively constant low-flow through much of the region (LARRC 2011). Some of this flow comes from water reclamation plant discharge and street runoff. A substantial portion of the treated water in the River flows from the Donald C. Tillman Water Reclamation Plant (WRP), located upstream of the Project area adjacent to the Sepulveda Basin Wildlife Reserve. The Tillman WRP adds approximately 60 million gallons of reclaimed water to the River each day. Additional treated discharge runs to the River from the Burbank WRP, the Los Angeles/Glendale WRP in North Atwater, and the Whittier Narrows WRP on the Rio Hondo tributary.

Over the last 150 years the River has been substantially degraded by water diversions, agriculture and development within its watershed and floodplain, and channelization of almost all of its floodway. Urbanization of the watershed has deprived the River of needed sediment for riverine and riparian ecosystem function, while also degrading water quality. Like most other larger coastal Los Angeles County streams, the watershed of the River is now heavily urbanized. Much of the River's original watershed land surface is now underneath impermeable surfaces such as pavement and buildings. As a result, rain runoff now enters the River faster—making the River storm flows "flashier" (increased flood flow peaks and short-term volumes for a given rainfall event). In the 1920s and 1930s, substantial flood events damaged many structures on large developed portions of floodplains in southern California; the River flood of 1938 was one of the most famous flooding episodes of this period.

The state and Federal governments have been building dams, debris basins, bridges and channel structures on the River for more than 70 years to reduce the human impacts from recurrent flooding. The primary purpose of the River has been flood damage reduction since Congress made that declaration in the Flood Control Act of 1936 and five years later authorized the Corps to build and operate major flood-control facilities. When concrete channelization of the River began during the 1930s Depression, it was a national era of big public works projects that produced jobs. Major flood damage reduction projects on the River culminated in the mid-20th century with a Federal flood risk management project, the Los Angeles County Drainage Area project (LACDA project). The River has been completely channelized though its lowland reaches; the LACDA project channelized and lined the River in concrete banks and a mostly concrete bed and straightened/shortened the River's course (Garrett 1993).

The combination of flood damage reduction projects eliminated most of the riverine and riparian natural communities along the River, greatly reducing its plant and wildlife diversity and numbers. The combination of channelization and surrounding development also essentially eliminated the landscape linkages and corridors of the River to surrounding ecosystems such as the Santa Monica Mountains. The entire River corridor is now heavily degraded ecologically.

Apart from the Sepulveda Basin, the San Fernando Valley area of the River (upstream of the Study Area) is characterized by large segments of channel that are entirely concrete-covered, with dense adjacent development of the former floodplain; this has created substantial challenges for adjacent land acquisition that would be necessary for River widening and restoration in this stretch. The lower reaches of the River (downstream of the Study Area) are also highly constrained by development, including downtown Los Angeles and an adjacent heavy industrial corridor that also includes a major powerline transmission corridor and a freeway system along the River. The reaches of the River above and below the Study Area also have lower potential to connect to regional ecological "core areas" (e.g., the Santa Monica Mountains) because of this dense surrounding existing development, as compared to the Study Area.

A decision by the U.S. Environmental Protection Agency in 2010 reversed an earlier decision by the Corps and recognized the River as a navigable waterway. Several projects have been implemented on the River recently, and more are planned: for example, the 32-ac Chinatown-Cornfields site north of downtown Los Angeles was originally slated for industrial development but has become the Los Angeles State Historic Park. The Los Angeles River Revitalization Master Plan has identified more than 240 potential projects to increase recreation and public access all along the River and to provide some ecological enhancement and restoration along the River (City of Los Angeles 2007).

Study Area

The Corps in the 2013 Draft EIS/EIR identifies the Study Area as the "ARBOR Reach" of the River. The 11.5-mi Study Area stretch of the River stretches from approximately Griffith Park (City of Burbank) downstream to downtown Los Angeles (see Figure 1). The Study Area is dominated by a portion of the River that was altered and engineered as part of the Corps' LACDA project. The principal River tributaries of the Study Area include Burbank Western Channel, Verdugo Wash, and Arroyo Seco (see Figures 1 and 2).

Despite its highly degraded condition, the ARBOR reach of the Study Area has higher potential for restoration along the River than the other reaches because it includes the Glendale Narrows, one of the few reaches in the River with a non-concrete (soft-bottom consisting mostly of cobblestones) bed and relatively natural perennial River baseflows fed by surfacing groundwater. The Glendale Narrows currently supports some of the only remaining riparian and freshwater marsh natural communities on the River. These existing riparian and marsh areas and the perennial baseflow maintain one of the most diverse assemblages of wildlife remaining on the River today. The Study Area portion of the River has connections to the tributaries of Verdugo Wash and Arroyo Seco; these are channelized streams that could eventually (with substantial

restoration) provide ecological linkages or corridors to significant ecological areas; additionally, the Study Area reach has potential for corridors to relatively large natural areas in Griffith Park).

Griffith Park covers over 4,000 acres at the eastern end of the Santa Monica Mountains, and supports various natural community types (chaparral, coastal sage scrub, oak-walnut woodland, riparian), with southern mixed chaparral as the dominant form, as well as exotic and ornamental vegetation. Its topography is rugged, with elevations ranging from 384 ft to 1,680 ft, including deep canyons, rocky outcrops and escarpments, perennial and ephemeral streams, and portions of the River in the Study Area. Land use in the park is overwhelmingly dominated by recreation, with no area of the park formally protected for ecological preservation. However, the ruggedness of the topography has kept human disturbance minimal over large areas of the park's interior. Although Griffith Park lies within the Santa Monica Mountains Range, it, along with an adjacent block of privately-held open space north of the Hollywood Reservoir, is relatively isolated from undeveloped areas in the main part of the range by urbanization. Griffith Park and this adjacent open space is bordered by Burbank and the 134 Freeway to the north, Glendale and Interstate-5 to the east, Los Angeles to the south, and by a variety of urban land uses, including the 101 Freeway, to the west (Remington and Cooper 2009).

The existing open bed portions of the River, existing natural communities, and perennial surface flows in the Study Area provide a base for enhancement and partial restoration. Additionally, some of the railroad facilities along the River in the Study Area have been abandoned or removed, providing increased opportunity for widening the channel and restoring former floodplain in these areas while maintaining existing flood capacity levels for the River.

Reaches

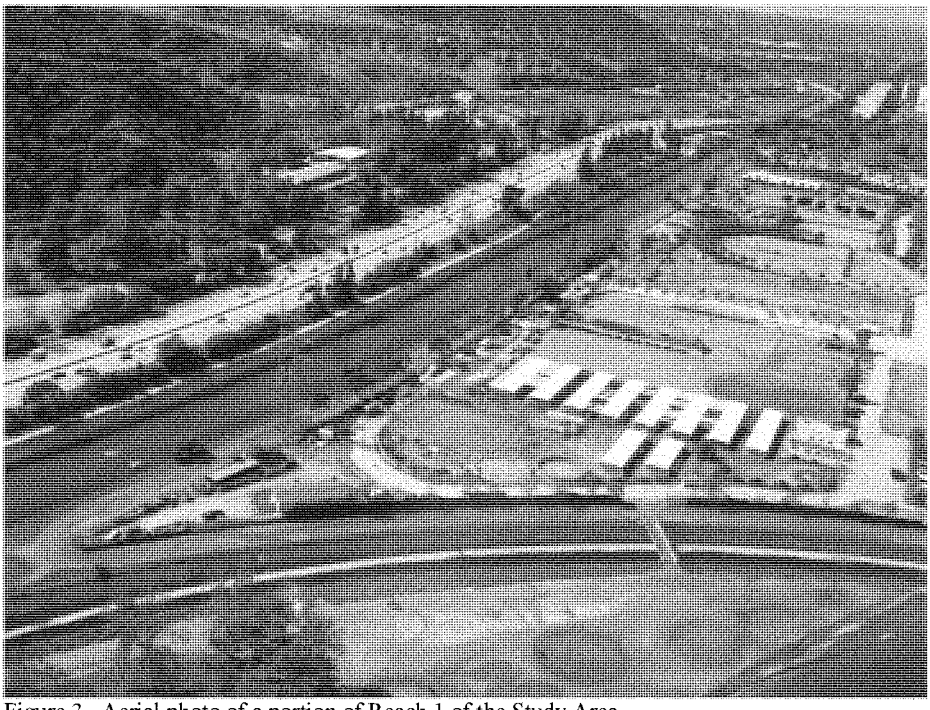


Figure 3. Aerial photo of a portion of Reach 1 of the Study Area

Reach 1: Pollywog Park/Headworks to Midpoint of Bette Davis Park
Reach 1 is the furthest upstream segment of the Study Area and is about 1.5 mi in length. The reach runs west to east, adjacent to and near the Pollywog Park area of Griffith Park and the Corps Headworks project site. In this reach the River channel is a rectangular concrete-lined configuration with subdrains and no low-flow channel (a low-flow channel is located in the bottom center in the other, all-concrete reaches of the Study Area). A small temporary dam exists within the River bed near the upstream end of this reach that was once used to divert River surface water to the Headworks spreading grounds that were operated by the Los Angeles Department of Water and Power for many years to percolation River surface water to supply domestic water use. The channel in this reach is approximately 18 feet (ft) deep and the top of bank to top of bank width is approximately 115 ft.

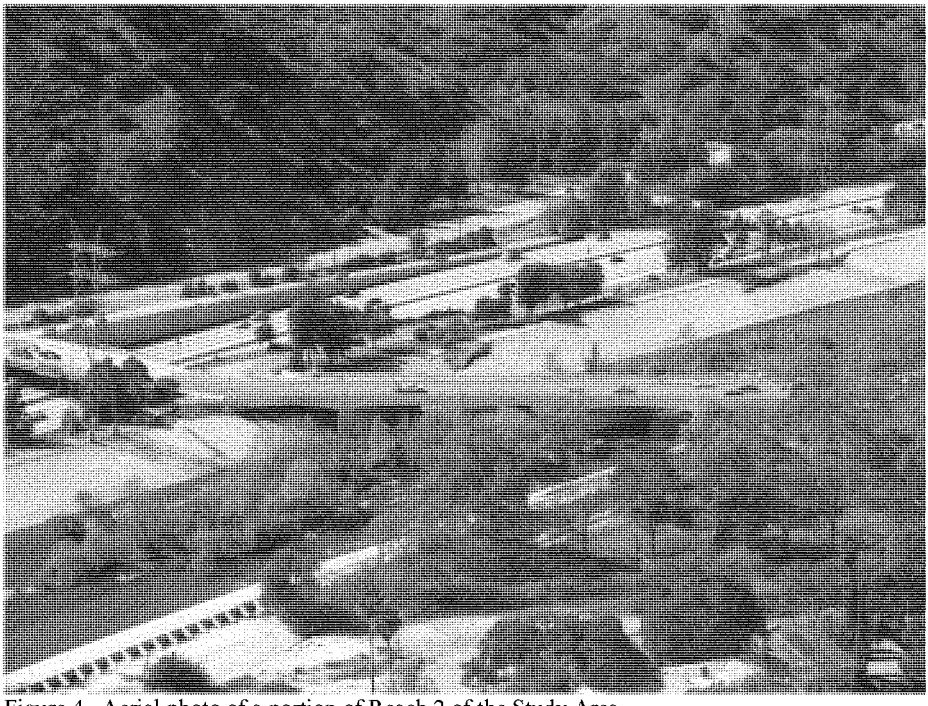


Figure 4. Aerial photo of a portion of Reach 2 of the Study Area

Reach 2: Midpoint of Bette Davis Park to Upstream End of Ferraro Fields
This reach is approximately 0.8 mi in length and extends from the midpoint of the Bette Davis Park to the Ferraro Fields, a public soccer field facility. In this reach the River bed transitions from concrete-lined to a cobblestone bed, and then transitions back to concrete. The channel has a trapezoidal configuration with grouted stone banks. The banks are toed-down (secured by extending the bank wall below the river bed) with sheet pile and quarry run stone. The bed is approximately 18 ft deep from the top of banks and approximately 175 ft wide. Sediment deposited in the channel has formed sand bars/islands partially stabilized by vegetation. This reach is not as densely vegetated as the River bed areas farther downstream in Reaches 4 to 6.

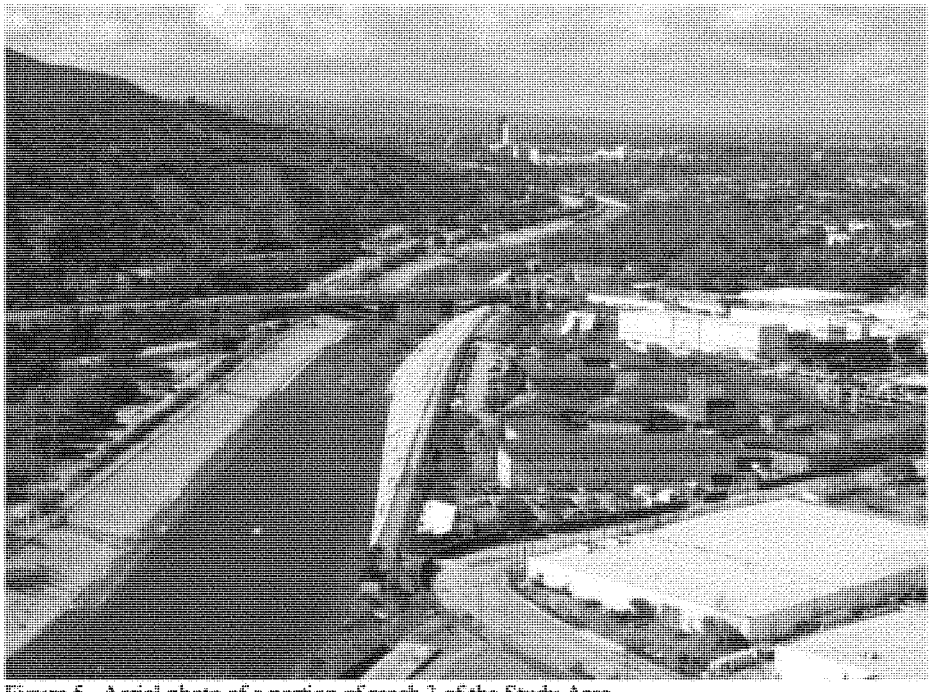


Figure 5. Aerial photo of a portion of reach 3 of the Study Area

Reach 3: Ferraro Fields to Brazil Street

This reach is approximately 1.0 mi in length. It begins at the upstream edge of the Ferraro Fields where the River bed transitions from cobbles to concrete. The River alignment makes an approximately 90-degree curve to the south around Griffith Park and the bed transitions back to cobbles at approximately Brazil Street. The channel in this area is trapezoidal and concrete lined. The bed is approximately 18 to 23 ft deep from the top of bank and approximately 180 ft wide, widening to 380 ft just downstream of the Verdugo Wash confluence. State Route (SR)-134/Ventura Freeway crosses the River at Verdugo Wash.

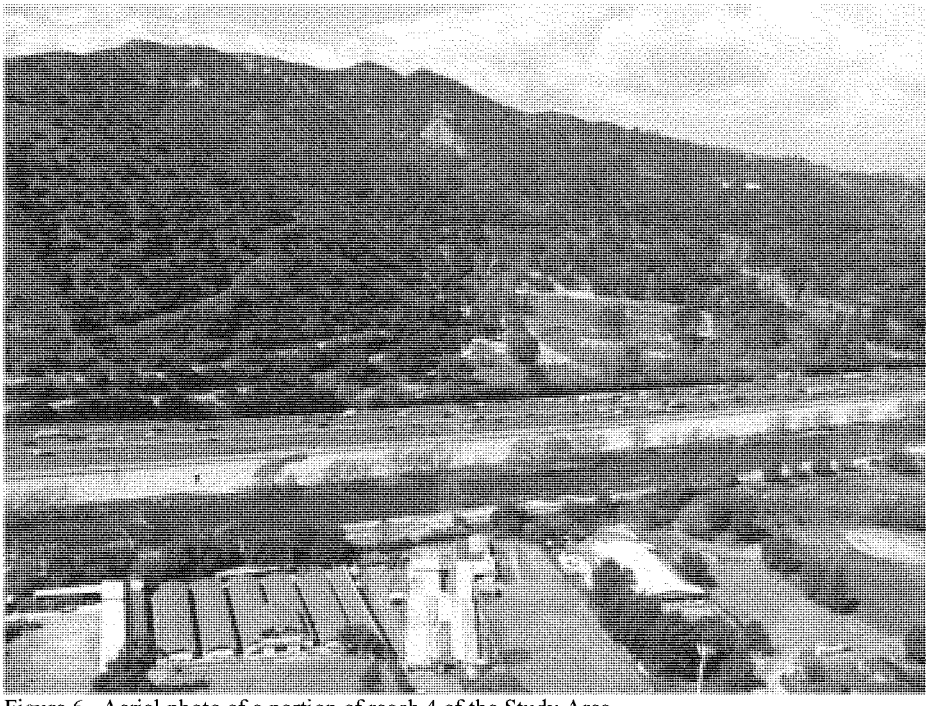


Figure 6. Aerial photo of a portion of reach 4 of the Study Area

Reach 4: Brazil Street to Los Feliz Boulevard

This reach of the River is approximately 1.8 mi long and extends from Brazil Street on the left bank downstream to the Los Feliz Boulevard Bridge. The River bed in this reach transitions from a concrete-lined rectangular channel to a trapezoidal channel with a cobble bed and grouted stone banks. The banks are toed-down with sheet pile and quarry run stone. The bed was constructed approximately 18 ft deep from the top of the slope, and the channel ranges from approximately 130 to 160 ft wide at the bank tops. Sediment deposited in the channel over time has formed sand bars/islands that are partially stabilized by vegetation. This reach ends at the Los Feliz Boulevard Bridge, where localized concrete lining of the bed and banks, plus pier noses that extend upstream, have been constructed to protect the bridge.

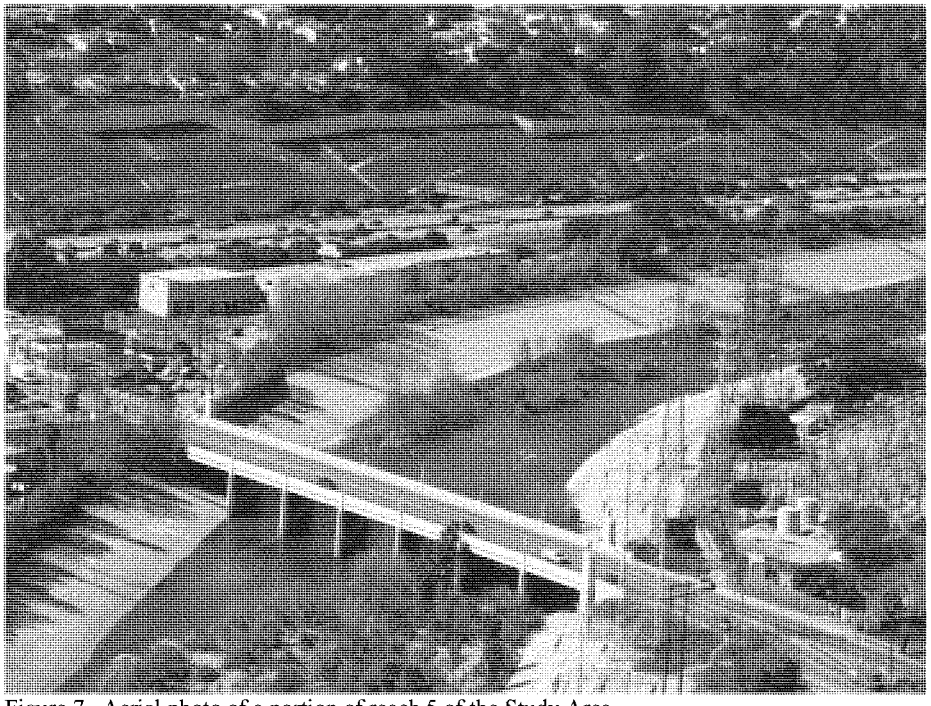


Figure 7. Aerial photo of a portion of reach 5 of the Study Area

Reach 5: Los Feliz Boulevard to Glendale Freeway

Within this approximately 1.6 mi reach the River alignment flows east between Hyperion Ave. and SR-2/Glendale Freeway. The reach extends from the Los Feliz Boulevard Bridge, under the Sunnynook pedestrian bridge and the Hyperion Ave. Bridge, downstream to the Fletcher Drive Bridge and ends at the SR-2 Bridge. The River bed transitions from concrete under each of the large bridges (e.g., Los Feliz Boulevard, Hyperion Ave.) to a trapezoidal channel with a cobblestone bed and grouted stone banks between the bridges. Banks are toed-down with sheet pile and quarry run stone. The bed is approximately 18 ft deep and the channel at the bank tops is approximately 130 to 160 ft wide. Sediment deposited in the channel over time has currently formed bars that are somewhat stabilized by the root systems of vegetation. This reach ends as the River alignment begins to curve back east as it approaches Taylor Yard.

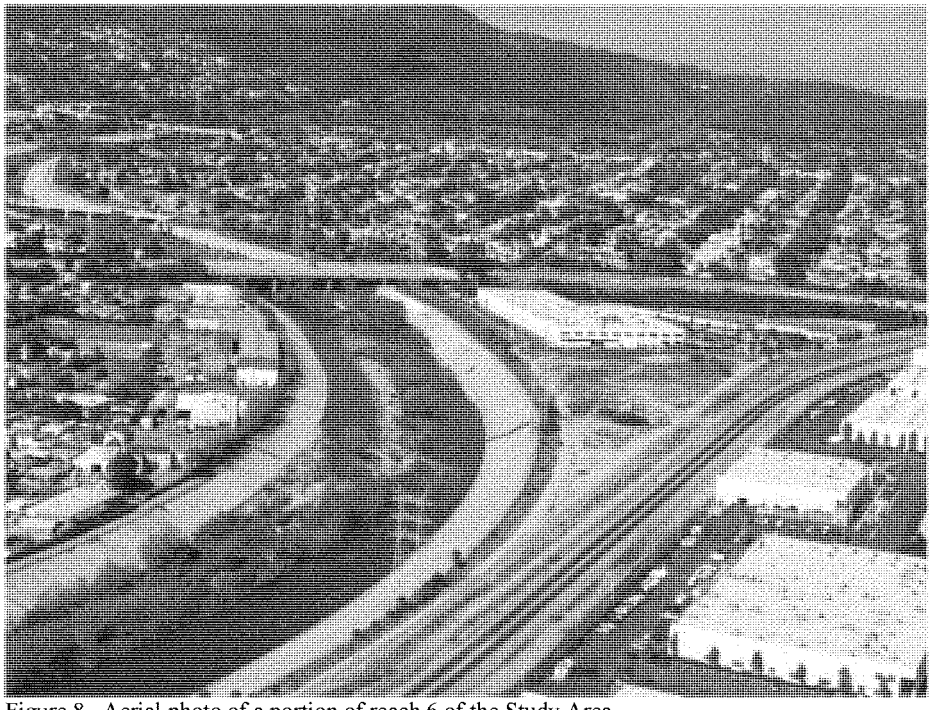


Figure 8. Aerial photo of a portion of reach 6 of the Study Area

Reach 6: Glendale Freeway to I-5 Freeway

This reach is approximately 2.3 mi long and flows through three bends of the River. The reach extends from the SR-2 Bridge to the downstream crossing of Interstate 5 (I-5), where the River bed transitions from cobblestone to concrete-lined. Here the channel is in a trapezoidal configuration with a cobble bed and grouted stone banks. The banks are toed-down with sheet pile and stone. The bed is approximately 30 ft deep from the top of the slope and the top of the channel ranges from approximately 190 to 215 ft wide. Sediment deposited in the channel has formed bars that have become partially stabilized by vegetation. The channel narrows to 170 ft wide and transitions to a rectangular configuration just upstream of the I-5/SR-110 interchange.

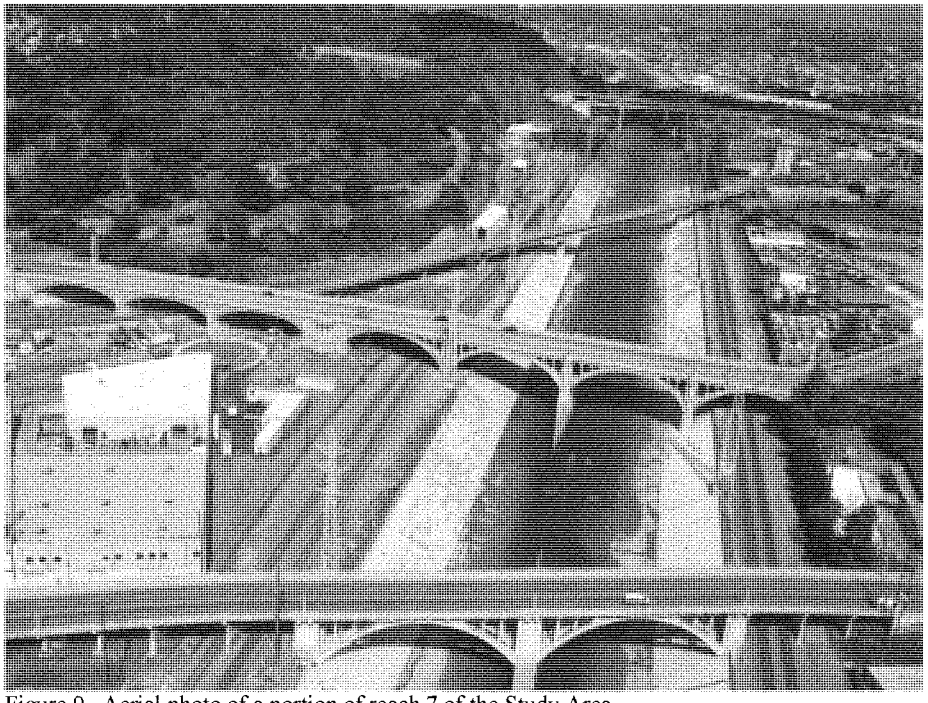


Figure 9. Aerial photo of a portion of reach 7 of the Study Area

Reach 7: I-5 Freeway to Main Street

This approximately 1-mi-long reach begins at the I-5 Bridge and extends to the Main Street Bridge. The channel in this reach transitions out of the rectangular concrete channel at the confluence with the Arroyo Seco, and becomes a trapezoidal concrete channel that is approximately 30 ft deep, with top of bank widths that range from approximately 150 to 190 ft. Three bridges cross the River in this reach, including a railroad bridge, the North Broadway Bridge, and the Spring Street Bridge. The channel has adjacent rail lines on both banks.

Figure 10. Aerial photo of a portion of reach 8 of the Study Area

Reach 8: Main Street to First Street

This approximately 1-mi-long reach is the most downstream portion of the Study Area: it begins at the Main Street Bridge and extends downstream to the First Street Bridge. The trapezoidal concrete channel in this reach is approximately 30 ft deep with top of channel widths that range from approximately 170 to 200 ft. Rail lines run adjacent to the channel along both banks, and two railroad bridges cross the River. Bridges for US-101 cross the River between César Chàvez Ave. and First Street.

PROPOSED PROJECT PURPOSE

The primary purpose of the proposed Project Alternatives considered in the 2013 Draft EIS/EIR is to ecologically restore approximately 11 mi of the River from Griffith Park to downtown Los Angeles (known within the 2013 Draft EIS/EIR as the ARBOR reach) by reestablishing riparian strand, freshwater marsh, and aquatic natural communities and reconnecting the River to major tributaries, its historic floodplain, and the regional ecological zones of the Verdugo Hills and Santa Monica and San Gabriel mountains while maintaining existing levels of flood risk management (Figure 1). A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem. The ARBOR reach provides the backbone for restoring significant habitats and reconnecting the River to other vital ecological areas. Expansion of riparian and marsh natural communities along this portion of the River and at the confluences of key tributaries is considered a first step in putting the portions of the once vast riverine ecosystem back together (USACE 2013a).

DESCRIPTION OF PROPOSED PROJECT ALTERNATIVES

Four Project action alternatives in addition to the No Action Alternative compose the array of proposed plans; these proposed alternatives received detailed analysis in the Corps' 2013 Draft EIS/EIR. Under the **No Action Alternative**, human intervention and activities associated with urban development would likely continue to further degrade the ecosystems in the Study Area. Alternative 20 is the Corps preferred alternative and recommended plan (USACE 2014c).

Alternative 10 is described by the Corps as a minimally-acceptable alternative that would increase aquatic community connectivity through riparian corridors and daylighted streams by providing restoration measures on a total of 528 ac. In **Reach 1**, riparian corridors would be restored on both sides of the channel with connections under Highway 134 to the Pollywog Park Area of Griffith Park, which would be restored with riparian vegetation. In **Reach 2**, the restored riparian corridor would continue on both sides with connectivity to Griffith Park and subsequently the Santa Monica Mountains. **Reach 3** would daylight currently confined streams and would restore riparian and freshwater marsh vegetation on the east bank of the River. A single daylighted stream would be restored on the west bank of the River. **Reach 4** would be restored with: a riparian corridor on the east bank of the River, a riparian side channel along the edge of the Griffith Park Golf Course with an inlet and outlet to the River under the I-5 freeway, a riparian side channel through Los Feliz Golf Course, and several daylighted streams. In **Reach 5**, the riparian corridor would continue on the east bank and would include a daylighted stream at the downstream end. In **Reach 6**, the channel would be widened by approximately 80 ft along the Taylor Yard site with a small terraced area in the "Bowtie" parcel. In addition, the channel banks would be vegetated with overhanging vines and implanted vegetation. Restoration would be continued in **Reach 7** with daylighted streams on both sides of the channel. In **Reach 8**, the Piggyback Yard site would be restored with riparian vegetation and a historic wash. The restored site would be artificially hydrologically connected to the River, allowing stream flows from the restored ephemeral wash to enter the River through culverts under the existing railroad tracks. The restoration plan for Alternative 10

would include minimal River widening at Taylor Yard and would exclude restoration at both major confluence areas at the Arroyo Seco and Verdugo Wash.

Alternative 13 would include most of the features in Alternative 10 (restoration of the historic wash at Piggyback Yard, terracing at the Bowtie Parcel, and restoration of side channels, riparian corridors, and daylighted streams) and restoration of the full Taylor Yard site and the Arroyo Seco tributary. Additional restoration would occur in 3 reaches. In **Reach 3**, a riparian side channel would be restored at the Ferraro Fields site. This riparian channel would connect to the River upstream of the Ferraro Fields site and would re-enter the River through a daylighted stream and marsh area at the downstream end of Ferraro Fields. In **Reach 6**, additional widening of over 300 ft at the Taylor Yard site would be implemented (compared to Alternative 10); restoration of the floodplain and freshwater marsh would occur in the widened channel area. In **Reach 7**, restoration of the Arroyo Seco confluence with riparian and wetland vegetation would be implemented, with some nodal connectivity to the Arroyo Seco watershed and San Gabriel Mountains. Restoration would be accomplished through removal of concrete, softening of the River bed and banks, and development of riparian vegetation at the tributary confluence and for 0.5 mi upstream along the Arroyo Seco. This alternative would support regional connectivity through the River from the Santa Monica Mountains (via Griffith Park) to the San Gabriel Mountains. Instead of the daylighted streams included in Reach 7, as in Alternative 10, the banks of the River downstream from the Arroyo Seco would be lined with overhanging vines and implanted vegetation. Alternative 13 would provide restoration measures on an additional 60 ac compared to Alternative 10, for a total restoration of 588 ac, and it would increase regional nodal connectivity for wildlife through restoration measures at the Arroyo Seco confluence.

Alternative 16 would include the features of Alternative 13 and implement additional restoration measures in reaches 5 and 8. It would also remove concrete from portions of the bed of the River. Additionally, the existing concrete bank would be removed between the River and Piggyback Yard. This alternative would widen **Reach 5** along the west bank of the River, modifying the trapezoidal bank to a vertical wall, and would add vegetated terracing on the east bank of the River. In **Reach 8**, additional restoration would be implemented by terracing upstream of Piggyback Yard on the west bank, and through removal of the concrete east bank and the concrete bed in the River adjacent to Piggyback Yard for 0.75 mi. The channel bed would be naturalized to support freshwater marsh in the River and through the restored Piggyback Yard adjacent to the River. The River would be widened in Piggyback Yard by 500 ft on a low terrace and another 1000 ft on a second, higher terrace. Another set of vegetated terraces would be constructed along the east bank of the River downstream of Piggyback Yard. Alternative 16 would provide restored features on an additional 71 ac compared to Alternative 13, for a total restoration of riparian/wetland features on 659 ac, and it would increase local nodal connectivity through removal of concrete between the River and Piggyback Yard.

Alternative 20 would include elements of Alternatives 10 and 13/16, with additional features in reaches 2, 3 and 7. It would include restoration measures in the Verdugo Wash confluence and the Cornfields site. In **Reach 2**, the River channel would be widened on the west bank by modifying the trapezoidal bank to a vertical wall. In **Reach 3**, Alternative 20 would soften the

concrete bed of the Verdugo Wash and widen its mouth at the confluence with the River to support riparian community vegetation and to expand regional connectivity to the Verdugo Hills. In **Reach 7**, daylighted streams that are described in Alternative 10 would be re-established in lieu of the channel bank vegetation features that were described in Alternatives 13 and 16. Also in Reach 7, freshwater marsh would be restored at the Los Angeles State Historic Park (a.k.a. Cornfields site) with a terraced connection to the River. In Alternative 20, some degree of channel naturalization and restoration would be accomplished in nearly all Study Area reaches and both major River confluences (Arroyo Seco and Verdugo Wash). Alternative 20 would restore features on an additional 60 ac compared to Alternative 16, for a total restoration of riparian/wetland features on 719 ac, and it would increase local and regional nodal connectivity through restoration at the Cornfields site and the Verdugo Wash confluence.

Below is a modified version of a table provided to the Service by the Corps for evaluation purposes.

Table 1. Project Alternatives Summary

Project Reach	Proposed Conservation Measures	Proposed Project Alternatives			
		10	13	16	20[6]
1. Pollywog Park area of Griffith Park	Riparian corridors	X	X	X	X
2. Bette Davis Park area of Griffith Park	Restructure top of bank to support vines				X
	Riparian corridors	X	X	X	X
	Modify trap channel to vertical banks				X
3. Ferraro Fields area of Griffith Park	Create pool & riffle system and plant freshwater marsh		X	X	X
	Daylight streams and plant riparian fringe and freshwater marsh	X	X	X	
	Divert flow into side channels with riparian fringe and then return flow to the River		X	X	X
	Riparian corridors		X	X	X
	Open water restoration	X			
	Widen River mainstem				X
	Widen tributaries				X
4. Griffith Park	Create pool & riffle system	X	X	X	X

[6] Alternative 20 is the Corps preferred alternative and recommended plan.

Project Reach	Proposed Conservation Measures	Proposed Project Alternatives			
		10	13	16	20[6]
	and plant freshwater marsh				
	Daylight streams and plant riparian fringe and freshwater marsh	X	X	X	X
	Divert flow into side channels with riparian fringe and then return flow to the River	X	X	x	X
	Riparian corridors	X	X	X	X
5. Riverside Drive	Create pool & riffle system and plant freshwater marsh			X	X
	Daylight streams plant riparian fringe and freshwater marsh	X	X	X	X
	Wildlife access from River to bank (in daylighted streams)			X	X
	Restructure channel walls to support vines			X	X
	Riparian corridors	X	X	X	X
	Terrace banks			X	X
	Modify trap channel to vertical banks			X	X
6. Taylor Yard	Create pool & riffle system and plant freshwater marsh		X	X	X
	Restructure channel walls to support vegetation		X	X	X
	Riparian corridors	X	X	X	X
	Restructure bank to support vines and other vegetation		X	X	X
	Widen channel mainstem	X	X	X	X
	Widen channel sloping or terracing back to overbank levels	X	X	X	X
7. Arroyo Seco/ Los Angeles State Historic Park	Create pool & riffle system and plant freshwater marsh				X
	Daylight streams plant riparian fringe and freshwater marsh	X			X
	Divert flow into side channels with riparian fringe and return flow to				X

Project Reach	Proposed Conservation Measures	Proposed Project Alternatives			
		10	13	16	20[6]
	the River				
	Riparian corridors		X	X	X
	Restructure channel walls to support vegetation, plantings.		X	X	
	Widen channel (Arroyo Seco) sloping or terracing back to overbank levels		X	X	X
8. Piggyback Yard	Create pool & riffle system and plant freshwater marsh			X	X
	Restore historic wash with riparian vegetation	X	X	X	X
	Divert flow into side channels with riparian fringe and return flow to the River			X	X
	Wildlife access from River to bank	X	X	X	X
	Riparian corridors	X	X	X	X
	Widen channel			X	X
	Terrace banks			X	X

Supplemental Proposed Project Commitments and Information (Provided by the Corps in November 2014; USACE 2014c and USACE 2014d)

> *The Corps' intent is that Alternative 20 will provide large restored widened areas (such as Verdugo Wash, Taylor Yard, LATC (a.k.a. Piggyback yard)) to serve as riparian habitat patches with natural hydrology. Vegetation and habitat elements in these widened areas will be restored with the goal to support a large number of territories for various riparian obligate birds, including least Bell's vireo, yellow warbler, and yellow breasted chat, stop over habitat for migrants, as well as habitat and refugia for amphibians, reptiles, and mammals, including larger carnivores such as coyote and possibly bobcat. River channels in widened areas will be designed to support habitat for Santa Ana sucker and Arroyo Chub. These restored widened patches will be connected in part via existing soft bottom reaches 2, 4, 5, and 6 and restored in-channel habitat in Reach 8.*
>
> *In existing hard-bottom reaches 1, 3 and 7, opportunities for connectivity may be possible through use of anchored boulders and a new meandering low flow channel on top of the existing concrete, which would provide pockets of aquatic vegetation to support movement of wildlife and refugia for native fish. Such opportunities will be explored during the detailed design phase, including "speed bumps", perpendicular to flow, that*

can trap sediment and allow small to moderate sized vegetation to grow, as well as a new v-shaped low flow channel with varying widths and depths. These features would be designed to support passage of Santa Ana sucker and Arroyo chub. Installation of these features would entail filling in the existing low flow channel. The remainder of the existing trapezoidal main channel would remain unaltered.

These design ideas, to be further explored during the detailed design phase, will be documented in the Corps' Final Integrated Feasibility Report (IFR).

Wildlife movement on a regional scale is expected to be accommodated to Griffith Park via wildlife use of existing equestrian tunnels in Reaches 1 and 4. Recent studies using wildlife cameras indicate tunnels have been used by coyote and deer, with one bobcat sighting. Other species that could use the tunnels, if presence of appropriate habitat were available surrounding them, include raccoons, skunks, and gray foxes. Future opportunity for movement to further open space areas such as the Verdugo and San Gabriel Mountains is provided via restoration of the confluences of the Verdugo Wash and Arroyo Seco. Restoration upstream on the remainder of these tributaries is needed via additional projects to complete the connection between the River and these mountainous areas.

Text added to the IFR will include the following:

"In widened areas, habitat will be restored for native fish including Arroyo Chub and Santa Ana Sucker. This will include restoration of the necessary constituent elements to support these species including but not limited to water shaded by riparian vegetation, riffle/run/pool/glide sequences and refugia, in channel woody debris, gravel and cobble substrates. In concrete reaches, aquatic connectivity may be achieved by installation of anchored boulder clusters and reconfiguration of the low flow channel. This will restore sinuosity of the low flow channel and provide some refugia for native fish between widened areas. Details of these features will be considered and evaluated during the project's detailed design phase. The Corps will continue to coordinate with the Fish and Wildlife Service during detailed design to ensure these elements are included."

"Design features and directed restoration measures specific to certain species will be added in the detailed design phase and accommodated wherever possible, in coordination with USFWS. It is expected that while these features can be installed artificially during restoration activities, many of these features will also evolve naturally over time as vegetation matures and natural hydrologic forces continue to shape the hydrology widened areas. These features may include, but are not limited to, nest cavities (which could be used by wood duck, barn owl, tree swallow, and western bluebird among other species), large hollow snags (used by swifts), and steep sandy banks (used by northern rough-winged swallow and belted kingfisher)."

1. To demonstrate the Corps' intent for restoration features to be self-sustaining, with minimal O&M and temporary irrigation, the following text will be added to the IFR.

General location for text addition – Chapter 4 on description of alternatives, Chapter 7
"Temporary irrigation will be used to establish restored vegetation in widened and overbank areas, after which vegetation is expected to be self-sustaining, requiring minimal O&M and relying on groundwater and surface flows to persist. Temporary irrigation will also be used to establish vegetation in the concrete channel walls. Detailed design will identify all water sources to support the proposed vegetation in the concrete channel walls, including surface flows and runoff that may be redirected to sustain this vegetation and avoid permanent irrigation. During extreme drought supplemental water may be used to protect the investment in the restored vegetation."

In addition, measure 4a (section 4.4.5) will be revised to delete "permanent irrigation".

2. To demonstrate the Corps' intent to provide wildlife access and facilitate wildlife movement through the project footprint, the following text will be added to the IFR.
General location for text addition - Chapter 6 on connectivity
"Measures for wildlife access are described in Section 4.4.5, measures 3a-c. Specific features for wildlife access will be further defined during the detailed design stage. Movement for bobcats will be the standard for design of access, and such designs will be implemented wherever possible. It is expected that wildlife may use the three existing equestrian tunnels in the project area to access the restored river near Griffith Park, and use restored vegetation and in-channel features to move through the project area.

In the recommended plan, wildlife access/passage within the project footprint will be added in the following areas:
-Reach 1 from Pollywog Park into the river channel (measure 3b),
-Reach 3 from Verdugo Wash confluence to upstream edge of soft bottom Reach 4 (surficial improvements),
-Reach 7 from downstream edge of soft bottom Reach 6 to Arroyo Seco (surficial improvements).
The specific features of this access will be further defined during the detailed design phase. With this access/passage, wildlife may move from Griffith Park using the equestrian tunnel in Reach 4 upstream to Verdugo Wash or downstream to Arroyo Seco. Additional restoration of these tributaries outside the project area would facilitate further regional movement in the future. This restoration may be accomplished by other federal, state, or local stakeholders.

The Corps examined whether additional access could be provided in Reach 7 from the river channel into Elysian Park, however this may not be possible based on the many constraints in this area (freeways, railroad, bridges, topography). The Corps will continue to investigate any opportunities in this area during detailed design, where further analysis will examine alternative methods of providing access."

Note: In Section 4.4.5, measure 3, the Draft IFR describes that the wildlife access is a measure common to all alternatives, to be added where possible and reasonable. For this reason, specific locations for wildlife access were not originally included in the alternative descriptions as part of the Draft IFR.

Note: In Section 4.4.5, measure 3c, the Draft IFR describes that wildlife passage would only be created to connect wildlife to habitat areas, and that it should not connect wildlife to urban areas that would not be beneficial to their survival.

3. To demonstrate the existing use of equestrian tunnels in the project area by wildlife, the following text will be added to the IFR.
General location for text addition - Chapter 6 on connectivity
"Equestrian tunnels near Griffith Park at Reaches 1, 2, and 4 are expected to support movement of wildlife to and from the project area. Recent studies using wildlife cameras indicate tunnels have been used by coyote and deer, with one bobcat sighting. Tunnels are primarily used at night, when human presence is decreased. Other species that could use the tunnels, if presence of appropriate habitat were available surrounding them, include raccoons, skunks, and gray foxes. Use of these tunnels to move to and from the project area supports regional connectivity for wildlife with Griffith Park and the Santa Monica Mountains."

4. To demonstrate connectivity to Griffith Park through Headworks/Sennet Creek tributary, the following text will be added to the IFR.
General location for text addition - Chapter 6 on connectivity
"On-going restoration plans at the Headworks site (Corps/City of LA DWP) adjacent to Reach 1, as well as the outlet of Sennet Creek (FoLAR/North East Trees) upstream of Reach 1, will contribute to connectivity between Griffith Park and the LA River project area. Access to the LA River from these sites will be available through the existing equestrian tunnel downstream of the Headworks site."

5. To demonstrate that in areas where the trapezoidal channel is converted to vertical walls, the Corps is able to allow vegetation to grow with minimal maintenance and not impact conveyance, the following text will be added to the IFR.
General location for text addition - Chapter 7
"Vegetation within the channel has a significant impact on conveyance of the design flood within the ARBOR reach. If allowed to grow unchecked under the With-Project Conditions, such vegetation could eventually create an adverse condition with respect to flood risk. The District plans to adopt a course of action that allows for ecosystem restoration while not significantly changing the current level of flood risk management provided by the channel.

In reaches where the Corps is proposing to construct a vertical wall to replace the trapezoidal side slopes, vegetation will be allowed to grow to the extent that it does not affect the conveyance of the channel. During the detailed design phase, the Corps will identify the methods for measurement to determine impacts on flow conveyance. It is anticipated that limitations to vegetation growth will be modest because of the increased conveyance caused by changing the wall to a vertical orientation. The Corps will develop an Operation, Maintenance, Rehabilitation, Repair and Replacement (OMRRR) Plan in the design phase, in coordination with natural resource agencies. The intent will be to codify in the OMRRR the minimal need for O&M activities in the restored areas. OMRRRs are enacted after project construction in order to keep project features functioning as designed, and it will be important to clarify and specify in the OMRRR under what specific conditions maintenance will be required in restored areas. In general, this will include required annual inspections

and maintenance, periodic repair and/or replacement of project features, management of invasives, and (rarely, only when necessary) provision of irrigation during drought. Annual monitoring will allow the Corps to evaluate growth of vegetation and its impact to flood conveyance, which will help minimize the frequency of O&M activities."

6. To demonstrate the ability of proposed features to support aquatic connectivity in hard bottom reaches 1, 3, and 7, the following text will be added to the IFR.
General location for text addition - Chapter 6 on connectivity
"In the recommended plan, opportunities for aquatic connectivity in certain hard-bottom reaches (1, 3 and 7) may be possible through use of anchored boulders and a new meandering low flow channel on top of the existing concrete, which would support pockets of aquatic vegetation and refugia for native aquatic species moving between larger habitat patches in the project area. Target native fish species include Arroyo Chub and Santa Ana Sucker.

Such opportunities will be explored during the detailed phase, including "speed bumps", perpendicular to flow, that can trap sediment and allow small to moderate sized vegetation to grow, as well as a new v-shaped low flow channel with varying widths and depths. These features would be designed to support passage of Santa Ana sucker and Arroyo chub. Installation of these features would entail filling in the existing low flow channel. The remainder of the existing trapezoidal main channel would remain unaltered."

7. To demonstrate the Corps' intent to conduct non-native fish/aquatic wildlife removal, the following text will be added to the IFR.
General location for text addition - Adaptive Management Plan Appendix H
"Removal of non-native fish and other aquatic invasive wildlife would be performed in the project area during construction of restoration features and for 5-7 years post-construction to support recruitment of native Arroyo chub and Santa Ana sucker. Reintroductions of native fish could be proposed and performed by other agencies or organizations with expertise in this field. Beyond the 5-7 year post-construction period, with successful establishment of restored vegetation and a self-sustaining system, it is expected that the native species will be capable of resisting intrusion by non-natives."

8. To present the Corps' intent to investigate in the detailed design phase the possibility of creating "spring fed" fish refugia, the following text will be added to the IFR.
General location for text addition - Chapter 7
"Considerations for segregation of "spring fed waters" from surface water flows would be made during the detailed design phase. This segregation would be considered to support refugia for fish, where groundwater would feed the refugia while surface flows might bypass such areas. Parameters required for engineering design would include groundwater levels as well as anticipated local fluctuations in groundwater conditions."

9. To demonstrate to other agencies/entities that sites at the perimeter of the project area that support wildlife movement (i.e. equestrian tunnels) should avoid development (i.e. nighttime lighting, increased human activity), the following text will be added to the IFR.
General location for text additions - Chapter 6 on connectivity and Executive Summary

"In areas where wildlife movement into the project area is supported, such as at the three existing equestrian tunnels near Griffith Park, additional development should be avoided in the immediate vicinity so as not to negatively impact the planned restoration and wildlife movement. Such development would likely increase nighttime lighting and human presence, which may deter wildlife from using these access points."

10. To demonstrate that in Reach 6 the turf reinforced mats will not restrict growth of vegetation, the following text will be added to the IFR.
General location for text addition - Chapter 7
"In Reach 6, turf reinforced mats would be used to protect against erosion on the west slope. Vegetation growing through these mats would be allowed to grow as large as possible without impacting conveyance. Vegetation is not expected to compromise the integrity of the mat, and would only require maintenance if flood conveyance is impacted. Modeling during the detailed design phase will inform the size of vegetation that can persist without impeding conveyance. The mat would be monitored for tearing, which may create a local scour problem, and may require maintenance around vegetation. Integrity of the mat would be evaluated regularly, where the density and size of trees growing through the mat would be monitored as part of O&M activities."

11. To demonstrate the constraints of installing a riparian strip in concrete reaches, the following explanation is provided.
In trapezoidal channel reaches with concrete bottoms, it was suggested that the Corps could convert one or both banks (side slopes) to vertical and create a soft-bottom riparian strip either along the wall or in the center of the channel (and keep the remaining section concrete-lined - but with structural enhancements). Kerry Casey put forth at the last meeting with FWS that this may only be possible in Reach 7 and the upper part of Reach 8 because Reaches 1 and 3 were primarily vertical wall reaches already.

For expediency in modeling, we just assumed there were no utility or other constraints and that all sections under bridges could be converted to vertical walls (ignoring any bridge structural constraints). There are no maintenance roads on either side of the channel in Reaches 7 and 8 and there is limited ROW. The channel is concrete-lined trapezoidal with shorter vertical walls on both sides of the upper banks (side slopes). The channel here has a bottom width of 160 ft and is about 30 ft deep. By converting one wall to vertical we could get an additional ~50 ft of width. After some quick model runs, the Corps has concluded this is not a feasible alternative for the following reasons:
1) Even though it may be possible between some of the bridges, it does create adverse conditions at several locations, primarily bridges. Thus it increases flood risks which is a constraint of the study. The Corps would have to leave these sections of the channel unaltered and would have to transition from trapezoidal to vertical and back to trapezoidal sections (using transition ratios of about 10:1). Since some of these bridges are relatively close together, the length of the transitions would eliminate these reaches from channel re-configuration.
2) The design velocities in Reaches 7 and 8 are about 30 fps. When adding a riparian strip, the design velocities would decrease slightly, but would increase water surface and increase flood risk. Additionally, the velocities during moderate to large events with a riparian strip would still be above 20 fps, which is too high to add a soft-bottom strip due to scour

potential. A soft-bottom strip would also compromise the integrity of the remaining concrete channel. Even with a lined bottom there is still concern that the strip would be washed out completely even during moderate flows and the reach would remain unvegetated. Ungrouted riprap placed along the bottom would also move during velocities of that magnitude.

As an alternative to the riparian strip, a proposal to create a new low-flow channel on top of the existing concrete with strategically placed and anchored boulders warrants further analysis. Boulder placement options that we can explore during the detailed design phase include "speed bumps", perpendicular to flow, that can trap sediment and allow small-moderate size vegetation to grow. A new v-shaped low flow channel with varying widths and depths could also be explored, or a combination of these features. These features would entail filling in the existing low flow channel. The rest of the existing trapezoidal main channel would remain un-altered.

12. To demonstrate that design features for certain species will be included during the detailed design phase, the following text will be added to the IFR.
General location for text addition - Chapter 7 and Executive Summary

"Design features and directed restoration measures specific to certain species will be considered in the detailed design phase and accommodated wherever possible, in coordination with USFWS. It is expected that while these features can be installed artificially during restoration activities, many of these features will also evolve naturally over time as vegetation matures and natural hydrologic forces continue to shape they hydrology in widened areas. These features may include, but are not limited to, nest cavities (which could be used by wood duck, barn owl, tree swallow, and western bluebird, among other species), large hollow snags (used by swifts), and creation/maintenance of artificial steep sandy banks (used by northern rough-winged swallow and belted kingfisher."

RELATIONSHIP OF THE PROPOSED PROJECT TO EXISTING MASTER PLAN

In April 2007 the City of Los Angeles published the Los Angeles River Revitalization Master Plan (Master Plan); this Master Plan provides general planning guidance for 32 mi of the River that flow within the City of Los Angeles (City of Los Angeles 2007). It provides planning for the enhancement of aesthetic, recreational, flood risk management, and environmental values by creating a community resource, enriching the quality of life for residents and recognizing the River's primary purpose for flood risk management. This plan and its associated goals, objectives, and design guidelines serves as a guide to the development of subsequent River planning and development efforts. The Master Plan calls for transforming portions of the River for new, multiple-benefit uses, including natural system restoration, treatment of storm water runoff, establishment of a continuous River greenway, and an interconnected network of parks and trails. The Master Plan also calls for the creation of a 64-mile network of trails, parks, and recreation along both sides of the first 32 miles of the River, from the San Fernando Valley to the border of the City of Los Angeles with the City of Vernon, an area home to more than one million people. The goals of the Master Plan are to: a) **Revitalize the River**, including enhance flood storage and water quality, enabling safe public access, and restoring ecosystems; b) **Green the Neighborhoods**, including continuous River greenway and extending open space, recreation,

and water quality features into neighborhoods; c) **Capture Community Opportunities**, including making the River the focus of human activity; d) **Create Value**, including improving the quality of life for human residents. The proposed Project was apparently developed based on the Master Plan and reflects its goals and design concepts.

DESCRIPTION OF BIOLOGICAL RESOURCES

Historically the River covered a major swath of the Los Angeles River Basin (consisting of the Los Angeles, San Gabriel, and Santa Ana river systems) with alluvial washes, forests, woodlands, thickets, and marshes, depending on location (Garrett 1993; Gumprecht 2001). The lowlands along the River were covered by dense floodplain riparian forests dominated by cottonwoods and willows (Garrett 1993). Marshland that supported cattails and bulrushes (coastal and valley freshwater marsh) occurred in extensive areas where River water ponded/slowed and soils were perennially saturated, particularly downstream of what is now downtown Los Angeles (Garrett 1993; Gumprecht 2001; Dark et al. 2011). The River system historically supported badger (*Taxidea taxus neglecta*), mule deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*), mountain lion (*Felis concolor californica*), and California grizzly bear (*Ursus arctos horribilis*) along the lowlands (Bell 1881; Storer 1955; Garrett 1993; Gumprecht 2001; Crespi 2001; USACE 2013a). The last California grizzly bear known in southern California was killed on Big Tujunga Creek, a tributary of the River, in 1916 (Barkley 1993). A wide variety of now rare birds such as California condor (*Gymnogyps californianus*), burrowing owl (*Athene cunicularia*), California gnatcatcher (*Polioptila californica*), yellow-billed cuckoo (*Coccyzus americanus*), bank swallow(*Riparia riparia*), vireo, and willow flycatcher (*Empidonax traillii*) historically utilized the lowland portions of the River and environs (Garrett 1993). At least seven species of native fish historically occurred in the River (Friends of the Los Angeles River 2008). The floodplain forests formerly supported one of the most biologically diverse and abundant ecosystems in southern California (Garrett 1993).

Over 300 species of birds have been recorded on the River (including its estuary) in recent times, and about half of the total recorded birds in Los Angeles County have even been spotted along the channelized portions of the rivers and streams of the County (The River Project 2001). While the list of birds seen on the River is impressive, with the development of the River's floodplain and adjacent uplands and the channelization of the River itself, the alluvial scrub, cottonwood/willow forests, oak woodlands, and freshwater marshlands were almost totally destroyed. Concomitant with the loss of these natural communities was the functional loss of almost all of the native fish and wildlife species that heavily depended on these systems (Garrett 1993). While small natural community remnants are currently supported in certain portions of the River (including soft-bottom portions within the Study Area), the historic natural communities along the River have been almost entirely eliminated (see Figure 11 below) (Garrett 1993).

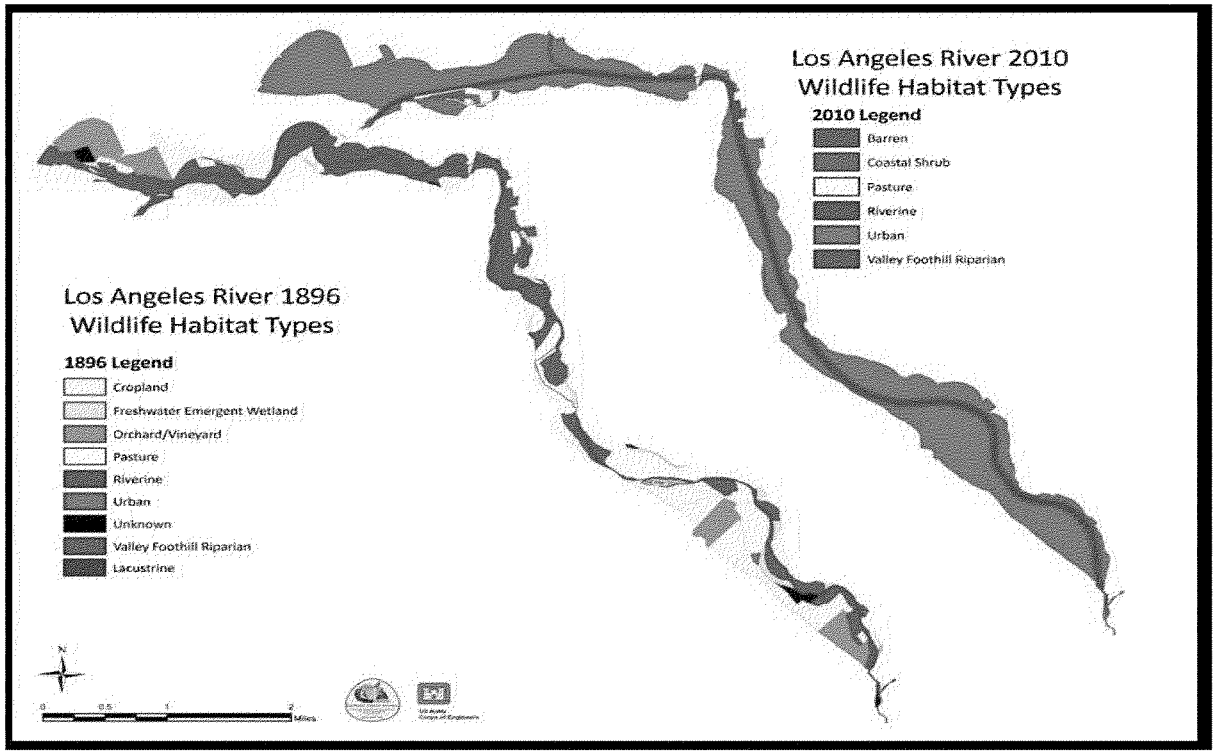


Figure 11. Natural community types along the Los Angeles River, 1896 and 2010 (figure taken from the Los Angeles River Ecosystem Restoration Integrated Feasibility Report/2014 Draft EIS/EIS)

1479

The aquatic animal taxa of the River have likely experienced the greatest change, compared to the River's pre-channelization state, with large-scale replacement of native species (particularly fish and mollusks) with exotic ones (Garrett 1993). Taxa of riparian communities and other wetland associations have also suffered high rates of local extirpation. The vascular plant flora of the lowland portions of the River is highly modified, characterized by Garrett (1993) as 30 percent to 62 percent exotic species. Despite the severe fragmentation of natural communities, the loss of numerous native taxa, and the establishment of many exotic plant and animal species, the River and its tributaries continue to harbor considerable remnant native biota in certain soft-bottom channel areas, flood basins, and unchannelized foothill and montane reaches (Garrett 1993).

The River channel is soft-bottomed in the Glendale Narrows from a point about 600 ft upstream from the Pasadena (110)/Golden State Freeway (I-5) interchange to the vicinity of the Victory Blvd. bridge over the River just west of the Golden State (I-5)/Ventura (134) Freeway interchange (Garrett 1993). The predominant vegetation in the channel in this area is similar over most of this stretch, but is generally sparser upstream from Los Feliz Blvd.

Aquatic Ecosystems

The Mediterranean climate of southern California creates streams that have strong seasonal patterns of water flow: low-flows (or dry at the surface) in the rainless summer and typically high flows in winter and spring in response to rainfall (Moyle and Light 1996). Year to year variability in precipitation in the region is very high, and extended droughts, with low stream flow, are common (Moyle and Light 1996). The native fish fauna of southern California as a consequence is naturally depauperate and highly endemic, with life history adaptations for dealing with extreme conditions (Moyle and Herbold 1987). Today the natural variability in environmental conditions of many southern California streams has been greatly reduced by channelization, dams, and reservoirs; partially as a result, local fish faunas are often dominated by non-native species (Moyle 1976; Herbold and Moyle 1986).

Many invertebrates and fish inhabiting streams in arid regions naturally face conditions that regularly subject subpopulations to local extirpation. In arid southern California, many streams seasonally undergo natural extreme changes in local surface flow, ranging from completely dry during the summer to substantial flooding during the wet winter (Gasith and Resh 1999). These extreme flow fluctuations often have major effects on aquatic invertebrate and fish populations. During the dry season, subpopulations inhabiting intermittent streams either become extirpated, move to other stream sections, or have a resistant stage (such as a diapausing cyst for some invertebrates), while dramatic temporary reductions in population size often result from flooding events (Meffe and Minckley 1987; Gasith and Resh 1999).

Natural extirpation and recolonization cycles of aquatic animals in almost all coastal southern California streams have been altered by human induced changes to natural surface flow regimes and modifications in stream connectivity and refugia. The effects of these changes on ecological (e.g., population) dynamics is poorly explored. For example, many southern California streams that were once intermittent are now perennial, because of agricultural and/or urban runoff and

treated wastewater releases, including what was initially imported water to the watershed. Conversely, water diversions and groundwater pumping have substantially reduced surface low-flows in many (sometime overlapping) areas, with the concomitant conversion of many formerly perennial streams to intermittent. Both diversions/groundwater pumping, and urban/wastewater releases, are substantially occurring or have occurred on the River. Reservoirs/basins created for water storage or flood risk management facilities have altered the natural hydrological and fluvial cycles of most southern California streams; associated dams, artificial open water, and greatly simplified streams through channelization have changed stream connectivity patterns and reduced or eliminated functions for most native riverine species.

Urban runoff is recognized as a major source of contaminants (Characklis and Wiesner 1997; Paul and Meyer 2001), and wetlands can accumulate contaminants over time. Risks to wildlife from contaminant toxicity may be substantial in urban aquatic and wetland environs such as the Study Area portion of the River. Bioaccumulation of contaminants and toxicological effects on wildlife have been documented for wetlands receiving nonpoint source runoff (Ohlendorf et al. 1989; Schuler et al. 1990; Welsh and Maughan 1994; Glenn et al. 1999; Garcia-Hernandez et al. 2001). Impacts can range from increased turbidity to direct toxicity to algae and aquatic plants, wetland fauna including wetland invertebrates, amphibians, reptiles, fish, and birds, resulting in the loss of biodiversity and simplification of the food chain (Wren et al. 1997; Adamus et al. 2001). These impacts have been demonstrated for organophosphates and pyrethroid pesticides (Katznelson et al. 1995; Harris et al. 1998), polyaromatic hydrocarbons (Maltby et al. 1995), polychlorinated biphenyls (Dunier and Siwicki 1993; Wren et al. 1997; Adamus et al. 2001), and heavy and trace metals such as Hg, Pb, Zn, Cu, and Cd (Galli 1988; Yousef et al. 1990, Campbell 1994; Brown and Bay 2006). The presence and relative severity of effects depends on many site-specific factors, such as the wetland type, contaminant loading rates and concentrations, landscape position, hydrology, nature of sediment storage and transport, and structure of the biotic communities (Schueler 2000). In one study, sediment toxicity, chemistry and benthic macroinvertebrate richness were characterized for 21 freshwater urban wetlands and 2 reference sites in southern California; benthic macroinvertebrate species richness was negatively correlated with sediment contamination, suggesting that toxicity may have affected organisms at the base of the food web in some of these wetlands (Brown et al. 2008).

Freshwater Marsh

The planning objectives for the Project include restoring an undetermined acreage of the Study Area to freshwater marsh natural community. For this Project, freshwater marsh is noted by the Corps as equivalent to (USACE 2013b): freshwater marsh (pursuant to Holland 1986); and *Arundo donax* semi-natural herbaceous stands (giant reed breaks), *Typha* (*angustifolia, domingensis, latifolia*) herbaceous alliance (cattail marshes), and *Shoenoplectus californicus* herbaceous alliance (pursuant to Sawyer and Keeler-Wolf 2009).

Freshwater marshes are freshwater wetlands that grow in shallow standing or slow-flowing water, or on perennially saturated ground. The vegetation is adapted to an anaerobic soil environment (Kramer 1988). Restoration variables that can affect freshwater marshes include rate of water flow, fluctuations in water level, water depth, water and air temperatures, pH and dissolved salts, depth and nature of bottom sediments, organic content of the water and past

history of the body of water (Holland and Keil 1995). Freshwater marsh typically occurs along the margins of lakes, ponds, and slow-flowing stream channels (Barbour and Major 1977).

Freshwater marsh historically and currently occurs in the Study Area; it typically is dominated by perennial monocots up to 6 ft in height (Kramer 1988). Freshwater marsh normally includes cattails (*Typha* spp.), bulrush (*Scirpus* spp.), sedges (*Carex* spp.), spike rushes (*Eleocharis* spp.), flatsedges (*Cyperus* spp.), smartweed (*Polygonum* spp.), watercress (*Rorippa* spp.) and yerba mansa (*Anemopsis californica*) (Barbour and Major 1977; Holland and Keil 1995; Sawyer and Keeler-Wolf 1995). Rooted aquatic plant species with floating stems and leaves also may be present, such as pennywort (*Hydrocotyle* spp.), water smartweed (*Polygonum amphibium*), pondweeds (*Potamogeton* spp.) and water-parsley (*Oenanthe sarmentosa*) (Holland and Keil 1995). The non-native invasive plant arundo (*Arundo donax*) also dominates some freshwater marsh areas (USACE 2013b).

Open Water

Open water communities typically are unvegetated due to a lack of light penetration and water depth. However, open water areas may contain suspended organisms such as filamentous green algae, phytoplankton (including diatoms) and desmids (Grenfell 1988). Floating plants such as duckweed *(Lemna* spp.), water buttercup (*Ranunculus aquatilis*) and mosquito fern (*Azolla filiculoides*) also may be present (Holland and Keil 1995). The boundary between open water and emergent wetlands is generally at a depth of about 7 ft (Kramer 1988). Open water areas are often artificial and naturally relatively rare on the River. Open water areas include standing/slow flowing water found in ponds, lakes and reservoirs. The oxygen content of ponded water is usually relatively low due to the small proportion of water that is in contact with the air and because decomposition of organic materials is occurring on the substrates below (Grenfell 1988).

Riparian Ecosystems

Riparian ecosystems border or straddle water bodies including streams, rivers, ponds, lakes, and seeps or springs. As a result, these areas support plants and animals adapted to (at least periodically) wet environments. Riparian vegetation communities grow in strips along rivers in damp soil. These riparian zones link terrestrial and aquatic systems, and play important ecological roles in the landscape for water and nutrient cycling as well as providing habitats for native flora and fauna. Transfers of nutrients, sediment, and coarse organic matter occur between aquatic and riparian zones, affecting both systems. Riparian areas filter out sediments and nutrients, and they usually store water in alluvial soils that may prolong or sustain stream flows later in the summer (Yarnell et al. 2010).

Stream riparian natural communities are formed by the interacting effects of flood frequency and intensity, soil saturation and depth of groundwater table, proximity to the channel, height above low-flow water level, climate (e.g., temperature, humidity, etc.), slope angle, and fluvial processes (e.g., sediment erosion/transport/deposition). In turn, these factors are controlled by low and high water flow levels, sediment availability, channel geomorphology, channel erosion, and channel meandering, which normally produces backwaters, old channels, different flow

gradients and areas of deposition. Where unconstrained, southern California river floodplain riparian zones are resilient, changing shape and extent naturally in response to episodic larger flood flows, as well as in response to natural variations in groundwater levels and surface water flows. However, human modifications of the watershed, floodplain, and/or channel often severely limit this flexibility.

Local factors determining the dominant plant species (and their size and stem density) on a riparian site include duration of soil saturation, soil depth, soil texture, flood frequency/season/duration, water table depth, soil oxygen availability, and fire (Knight 1994; Weixelman et al. 2011). Changes in plant community composition are mostly driven by successional processes in response to disturbance (e.g., natural denudation) and simultaneously by changes in flooding regime and water table, all of which can change the site type and the potential plant communities that can form. Changes in stream gradient, sinuosity, channel width-to-depth ratios, topography and floodplain landform, or soil type (Knight 1994) (as potentially driven by stream narrowing or channelization) produce various riparian landforms and resulting vegetation communities (Friedman et al. 1997). For instance, riparian vegetation composition is altered below dams due to changes in magnitude, duration, and/or frequency of low and high water flow levels below these structures.

Riparian ecosystems are an extremely small component of the landscape (Sands and Howe 1977). Riparian corridors occupy a small proportion of California, but are biologically important far beyond the land area they occupy. As resource-rich "islands" in semi-arid, human-dominated landscapes, they provide ecosystem functions and services related to water quality, microclimate, structural habitats for wildlife and fish, an energy base for the food web, and typically bank stability (Stella et al. 2013). Riparian zones in California naturally show high levels of plant biodiversity, structural complexity, and strong physical controls on plant demographics and community structure (Stella et al. 2013). In the Los Angeles Basin riparian zones historically supported a distinct riparian flora that was adapted to multiple abiotic stressors, including dynamic flooding and sediment regimes, seasonal water shortage, and fire. The most severe human impacts to riparian areas in the Project region are from watershed and floodplain land-use conversion to urban and industrial uses, flood management, streamflow modification and diversion, and exotic species introductions.

More than 225 species of birds, mammals, reptiles, and amphibians depend on California's riparian natural communities (RHJV 2004). Riparian ecosystems harbor the most diverse bird communities in the arid and semiarid portions of the western United States (Knopf et al. 1988, Dobkin 1994, Saab et al. 1995). Riparian vegetation is critical to the natural function of in-stream ecosystems and aids significantly in maintaining aquatic life by providing shade, food, and nutrients that form the basis of the food chain (Jensen et al. 1993). Riparian vegetation also modifies in-stream communities when downed trees form scour pools[7] and debris-jams important for fish, amphibians, and aquatic insects (RHJV 2004). The National Research

[7] Pools: the deepest locations of a stream reach. The water surface slope of pools at below bankfull flows is near zero. Pools are often located at the outside of meander bends.

Council (2002) concluded that riparian areas perform a disproportionate number of biological and physical functions on a unit area basis and that the restoration of riparian ecosystem functions along America's waterbodies should be a national goal.

Riparian natural communities in California make up less than 0.5 percent of the total land area, an estimated 360,000 ac of the state (CDF 2002). Yet, studies of riparian natural communities indicate that these communities are very important or essential to ecosystem integrity and function across landscapes (Sands 1977; Johnson and McCormick 1979; Katibah 1984; Johnson et al. 1985; Faber 2003). Consequently, riparian communities are one of the most important natural communities for wildlife in California, such as land birds (Manley and Davidson 1993). Nevertheless, riparian natural communities in California have been drastically reduced over the past 150 years. Today, depending on region, riparian natural communities only cover 2 to 15 percent of their historical acreages in those regions of California (Katibah 1984; Dawdy 1989).

Due to their biological wealth and severe degradation, riparian areas are extremely important natural communities for wildlife conservation and restoration, including migrant and resident birds in the West (Miller 1951, Gaines 1974, Manley and Davidson 1993, Rich 1998, Donovan et al. 2002). California's riparian communities provide important feeding, breeding, and sheltering areas, as well as over-wintering grounds, migration stopover areas, and corridors for dispersal for many native species. The loss of riparian communities is one of the most important causes of population declines among land bird species in western North America (DeSante and George 1994).

Valley Foothill Riparian

The planning objectives for the Project include restoring an undetermined acreage of the Study Area to what is described as valley foothill riparian strand natural community (CDFG 1988; USACE 2013a). For this Project, valley foothill riparian strand is noted by the Corps as equivalent to (USACE 2013b): southern cottonwood-willow riparian forest and southern willow scrub (pursuant to Holland 1986); and *Salix gooddingii* woodland alliance (black willow thickets), *Salix laevigata* woodland alliance (red willow thickets), and *Populous fremontii* forest alliance (Fremont cottonwood forest) (pursuant to Sawyer and Keeler-Wolf 2009).

Valley foothill riparian is a tree-dominated natural community primarily vegetated by cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*), and willows (*Salix* sp.). Forest understory may consist of shrubby willows and mule fat (*Baccharis salicifolia*) with herbaceous species including sedges, rushes, and mugwort (*Artemisia douglasiana*) (USACE 2013b). Scrub community areas have less vertical structure, with shorter willows dominant (USACE 2013b). The structure of this natural community has a canopy height of up to approximately 100 ft in a mature riparian forest, with a canopy cover of 20 to 80 percent (CDFG 1988). Most trees are winter deciduous. Lianas (often wild grape [*Vitis californica*]) frequently provide 30 to 50 percent of the ground cover (CDFG 1988). Herbaceous vegetation constitutes about 1 percent of the cover, except in openings where tall forbs and shade-tolerant grasses occur (Conard et al. 1977). Generally, the understory is impenetrable and includes fallen limbs and other debris (CDFG 1988).

Cottonwood trees in this community usually grow rapidly and can reach large age class sizes in about 20 to 25 years (typically measured since the last large flood denudation event). Shrubby riparian willow thickets may last 15-20 years before being overtopped and shaded out by cottonwoods and other trees. Valley-foothill riparian natural communities typically provide food, water, migration and dispersal corridors, and escape, nesting, and thermal cover for an abundance of wildlife. Many amphibians and reptiles occur in valley foothill riparian systems; some are permanent residents, while others are transient or temporal visitors (Brode and Bury 1985).

Fish and Wildlife

Historic Fish

The River historically had at least seven species of native fish that were relatively common in the inland portions of the River: Pacific brook lamprey (*Lampetra pacifica*), Pacific lamprey (*Entosphenus tridentata*), unarmored three-spine stickleback (*Gasterosteus aculeatus williamsoni*), southern steelhead trout (*Oncorhynchus mykiss irideus*), arroyo chub (*Gila orcuttii*), Santa Ana sucker, and Santa Ana speckled dace (*Rhinichthys osculus*) (Swift and Seigel 1993; Gumprecht 1999). Two of these species, southern steelhead and Pacific lamprey formerly migrated from the sea in mid-winter to spawn in the main River and in its larger tributaries of Big Tujunga Creek and Arroyo Seco; these species spawned both in the lowlands and the mountains, their young spending one to two years in the streams or coastal lagoons before returning to the sea (Swift and Seigel 1993). Five of these native fish species were permanent residents. Four of the resident taxa were endemic to the larger Los Angeles Basin (this includes the Los Angeles, San Gabriel, and Santa Ana River systems combined) and nearby areas (Swift and Seigel 1993). All seven species originally lived the Study Area or within a few miles (Swift and Seigel 1993). Other native fish species possibly included Chinook salmon (*Oncorhynchus tshawytscha*) and Sacramento pikeminnow (*Ptychocheilus grandis*) (Hall and Litton 2008).

Fish habitats in southern California are naturally challenging, including highly variable water flow regimes and high water temperatures (Bell et al. 2011). The Los Angeles Basin has a small but highly endemic native freshwater fish fauna (Swift and Seigal 1993). In comparison, southern California streams to the north and south of the Basin typically have two to four native freshwater fish species (Swift and Seigel 1993). Pacific brook lamprey, arroyo chub, and unarmored three-spine stickleback were common in the lowlands of the Basin in the original streams, springs, and marshes that were present in the Basin; these species did not penetrate far, if at all, into the mountainous tributaries of the Santa Monica and San Gabriel mountains (Swift and Seigel 1993). Santa Ana sucker and Santa Ana speckled dace occurred most widely in the mountainous portions of the drainage; however speckled dace also occurred in a few spring-fed localities and Santa Ana suckers also occurred in the large main river channels (Swift and Seigel 1993).

As urban development expanded across much of the lower elevations of the River's watershed, populations of native fish declined. For example, steelhead spawning grounds were directly reduced or cut off by dams and road crossings that made fish passage difficult, if not impossible.

Water that is/was diverted or pumped (e.g., groundwater from wells) for agricultural, residential, or commercial use reduces/reduced stream low-flows in the River. In addition, poor water quality from urban runoff likely adversely affects/affected the streams and lagoons necessary for native fish.

All of the native fish species are apparently extirpated from the mainstem (including the Study Area) of River today, although a couple of these native fish species reportedly persist in some of the River's tributaries (noted below). Native fishes were widespread across the lowlands of the Los Angeles Basin before completion of many flood damage reduction projects in the 1940s (Van Wormer 1991; Swift and Seigel 1993). No native fish species of the River apparently remained extant for more than several years following the channelization of the River that occurred in 1938 (Hall and Litton 2008).

Historically, the River supported a seasonal recreational fishery, mainly comprised of an annual winter run of steelhead trout. As noted, following channelization of the River, steelhead trout and other native species of the fishery disappeared, and were eventually replaced by common carp (*Cyprinus carpio*), tilapia (*Oreochromis* sp.), and other non-native species.

Survival, competition, and effective growth and reproduction of fish is highly dependent on metabolic rates as affected by water temperatures, food availability, available cover, and other factors. Water temperature in turn is affected by several key environmental parameters, including instream flows, riparian vegetation condition, groundwater influence, and channel morphology (Bell et al. 2011). As such, the information below, in part, is provided pursuant to the Project general objective of restoring some native fish habitat to the River and to inform restoration and enhancement designs and decisions for the proposed and other future projects, and to assist in the subsequent management of stream characteristics and parameters within and along the River.

Pacific Brook Lamprey

By the time Pacific brook lamprey was a recognized as district from the Pacific lamprey, the former was extirpated and very few specimens had been saved (Swift et al. 1993). Restoration of Pacific brook lamprey to the Study Area is not likely practicable.

Presumably the biology of the Pacific brook lamprey was much like other small species of western nonparasitic lampreys (Swift and Seigel 1993). The Pacific brook lamprey likely lived their entire lives in silty but well-oxygenated sediments, and transformed to adults in the early spring only long enough to spawn (Swift and Seigel 1993). The spawning period in the River probably occurred in late April through early May(Swift and Seigel 1993). It probably was a short lived and possibly an annual species, particularly in southern California (Swift and Seigel 1993). It is also possible that the local form was a distinct species (Hubbs and Porter 1971). It lived primarily, if not exclusively in the lowlands of the Los Angeles Basin and undoubtedly was common in the River (Swift and Seigel 1993).

In the synonymous or likely similar western brook lamprey, spawning adults build nests slightly smaller in diameter than their body lengths in gravel riffles at a water depth of about 5 to 6 in, in

slow (0.7 ft/second) moving water. Median substrate size in western brook lamprey nests is 0.9 in, and most nests are associated with cover (boulder, wood, or vegetation) and found in either pool tail outs or low gradient areas. Upon completion of the nest, adhesive eggs are deposited and covered with sand and gravel. Speckled dace and salmonids (*Oncorhynchus* spp.) feed on the eggs in western brook lamprey nests where they co-occur (Brumo 2006). Once juveniles reach about 10 in in length, they leave the nest and move downstream, usually at night, to burrow into deposits of fine sediments, their mouths towards the substrate surface so that they can filter feed. Ammocoetes (larvae) move further downstream into deeper areas as they grow (Kostow 2002). While they grow they feed on algae (especially diatoms) and organic matter (Wydoski and Whitney 1979).

Pacific brook lamprey in the River probably had similar habitat requirements to that of southern steelhead with which they co-occurred. They likely needed clear, cool water in little disturbed watersheds as well as clean gravel near cover (boulders, riparian vegetation, woody debris, etc.) for spawning. Additionally, they likely needed habitats with slow moving water and fine sediments for rearing. The adults likely avoided areas with deep, fast water and large substrates.

Pacific Lamprey

Shortly after hatching in freshwater streams, Pacific lamprey ammocoetes drift downstream into areas of low velocity and fine substrates where they burrow, and live as filter feeders for up to 7 years. Metamorphosis to macropthalmia (juvenile phase) occurs gradually over several months from July to November before their migration to the ocean in the winter and early spring. During this transformation they develop eyes and teeth. As adults in the ocean, Pacific lamprey are parasitic and feed on the body fluids and blood of marine fishes. After spending 1 to 3 years in the marine environment, Pacific lamprey stop feeding and migrate back to freshwater between February and June. They overwinter in fresh water until they spawn the following year between March and July. After spawning, Pacific lamprey die within days. Restoration of Pacific lamprey to the Study Area and environs would be quite challenging and require substantial riverine, riparian, and watershed restoration along the much of the River inside and outside of the Study Area, including fish passage and water quality parameters similar to those needed for restoration of steelhead trout.

Unarmored Threespine Stickleback

The unarmored threespine stickleback ("stickleback") is a small, scaleless, freshwater fish of up to 2 in standard length inhabiting slow-moving reaches or quiet-water microhabitats in streams and rivers (USFWS 2009). Restoration of stickleback to the Study Area would be challenging and require substantial riverine, riparian, and watershed restoration along the much of the River.

Favorable habitats are usually shaded by dense and abundant vegetation. In more open reaches, algal mats or barriers (e.g., sand bars, floating vegetation) may provide refuge for the species. Stickleback feed primarily on benthic insects, small crustaceans, and snails, and to a lesser degree on flatworms, nematodes, and terrestrial insects. Stickleback reproduce throughout the year, with less breeding activity occurring from October to January. Reproduction occurs in areas with adequate aquatic vegetation and slow-moving water where males can establish and vigorously defend territories. The male builds a nest of fine plant debris and algal strands and

courts all females that enter his territory; a single nest may contain the eggs of several females. Following spawning, the male defends the nest including newly hatched fry. Stickleback are thought to live for only 1 year.

Stickleback are currently restricted to three areas: the upper Santa Clara River and its tributaries in Los Angeles County, San Antonio Creek on Vandenberg Air Force Base in Santa Barbara County, and the Shay Creek vicinity (which includes Shay Pond, Sugarloaf Pond, Juniper Springs, Motorcycle Pond, Shay Creek, Wiebe Pond, and Baldwin Lake) in San Bernardino County. San Felipe Creek in San Diego County is another area that may support the stickleback; however, its current status there is unknown. They were historically found in low-gradient portions of the Los Angeles, San Gabriel, and Santa Ana Rivers, and from a few localities in Santa Barbara County, but have been extirpated from these areas. In 1917, the stickleback was reported to be abundant throughout the Los Angeles Basin (Miller and Hubbs 1969) but by 1942, they were no longer found there and were thought to be extirpated. Stickleback were likely extirpated from River as a result of the effects of urbanization, including flood risk management, channelization, dewatering of streams, habitat alteration, introduction of exotic predators, and pollution.

Santa Ana Sucker

The Santa Ana sucker is federally listed as threatened and occupied the Study Area historically, but is very likely extirpated from the Study Area and along the whole mainstem of the River. The Santa Ana sucker is potentially restorable to the Study Area with considerable riverine and riparian modifications to the River, including substrates and water quality parameters as noted below.

The Santa Ana sucker inhabits streams that are generally shallow, with currents ranging from swift (in canyons) to slow (in the bottomlands). All of these streams are subject to periodic severe flooding (Moyle 1976, Moyle 2002). Santa Ana suckers feed mostly on algae, which they scrape off of rocks and other hard substrates, with aquatic insects making up a small component of their diet. Larger Santa Ana suckers generally feed more on insects than do smaller fish (Greenfield et al. 1970; Moyle 1976).

Santa Ana suckers generally live no more than 3 years (Greenfield et al. 1970). Spawning typically occurs from early April to early July (Moyle 2002). Fecundity appears to be exceptionally high for a small sucker species (Moyle 1976). The combination of early sexual maturity, protracted spawning period, and high fecundity likely allows the Santa Ana sucker to quickly repopulate streams following periodic flood events that temporarily decimate populations (Moyle 1976).

Santa Ana suckers historically occurred in low-elevation streams in the Los Angeles, San Gabriel, and Santa Ana River systems (Swift et al. 1993). They also historically occurred in the upper Santa Ana River (Moyle et al. 1995). Introduced populations are present in the Santa Clara River, Sespe Creek, Piru Creek, and San Francisquito Creek. Although historic records are scarce, Santa Ana suckers presumably ranged from near the Pacific Ocean to the uplands of these river systems (Swift et al. 1993). The species has experienced significant declines throughout

most of its range (Moyle et al. 1995; Swift et al. 1993) and is currently restricted to three noncontiguous populations: (1) lower and middle Santa Ana River; (2) East, West, and North Forks of the San Gabriel River; and (3) lower Big Tujunga Creek (a tributary to the Los Angeles River).

Santa Ana suckers were found in the River and larger tributaries usually in rocky and gravelly areas where they grazed algae and diatoms from rocks. They probably spawned in the River in March or April in runs and the lower ends of pools (Swift and Seigel 1993). They historically were known to occur in the Study Area near Griffith Park (Swift and Seigel 1993). A single fish was taken about 2 mi downstream of the Sepulveda Flood Basin in 1949 (Swift and Seigel 1993). Since that time all records for the River drainage are from upstream of Hansen Dam on Big Tujunga Creek (Swift and Seigel 1993).

Nonnative fish such as green sunfish (*Lepomis cyanellus*) are potential competitors and egg predators that have a deleterious effect on Santa Ana sucker populations. Santa Ana sucker has been extirpated from the upper Santa Ana River drainage, largely because of inadequate flow, poor water quality, and in the lower Santa Ana River likely due to introduced brown trout (*Salmo trutta*) below Prado Dam (USFWS 2000). The San Gabriel River generally contains a higher abundance of Santa Ana suckers and larger individuals than the Santa Ana River, which could be attributed to more suitable habitat characteristics (as compared to the Santa Ana River) such as cooler water temperatures, intermediate water velocities, and commonality of pools and riffles with coarser bottom substrates, all of which may contribute to a better functioning system and a greater abundance of suitable habitat for Santa Ana suckers (Saiki et al. 2007). Santa Ana suckers prefer cool water temperatures but have been found in some life stages in waters between 59 and 82 deg. F in the Santa Ana River (Swift 2001); they typically inhabit small, shallow streams and rivers less than 23 ft wide where water temperature is generally below 72 deg. F, and where currents range from swift to sluggish (USFWS 2000).

Santa Ana suckers appear to be most abundant where the water is cool, unpolluted, and clear, although they can tolerate and survive for a period in seasonally turbid water (Moyle 1976, Moyle and Yoshiyama 1992, Saiki 2000). Santa Ana suckers are often found in pools; juvenile and adult Santa Ana suckers require deeper pools of water for foraging, shelter during storms, and protective cover. The presence of coarse substrates, including gravel, cobble, and a mixture of gravel or cobble with sand, and a combination of shallow riffle[8] areas and deeper runs[9] and pools provide optimal stream conditions (USFWS 2010). Adults show a strong preference for run habitat and a water depth of 16 in and greater. Juveniles prefer riffle and run habitat, depths greater than 12 in and gravel substrate (Haglund and Baskin 2002). In a study conducted in

[8] Riffles: the sections of the streambed with the steepest slopes and shallowest water depths at flows below bankfull. Riffles typically occur at cross over locations and have a poorly-defined thalweg (deepest part of the channel).

[9] Runs: the sections of streambed that often follow riffles and are usually followed by pools. Runs differ from riffles in that the depth of flow is typically greater and slope of the bed is less than that of riffles. Runs will often have a well-defined thalweg.

2002, fry were found exclusively in edgewater habitat over silt at depths of less than 7 in where there was no measurable flow (Haglund and Baskin 2002). Areas of shifting sandy substrates are less suitable for development of algae, an important food source for suckers (Saiki et al. 2007). Gravel beds in shallow, but clear, flowing stream reaches are needed for spawning; Santa Ana suckers spawn over gravel riffles where fertilized eggs adhere to the substrate. As such, an integrated stream system that contains the appropriate quantity of coarse substrates such as gravel, larger cobbles, or boulders that provide the space for reproductive development and growth of algae as a primary food source is important for a viable population of Santa Ana suckers (USFWS 2010).

The systems occupied by these fish undergo flashy, high stream flows that can periodically reduce population abundance and distribution. Natural upstream and downstream movement depends on habitat conditions; flood events often contribute to dispersal of the species (Riverside County Integrated Project 2000).

Native riparian vegetation over water provides cover and shelter from predators, which is normally essential for juvenile and adult Santa Ana suckers (USFWS 2010). Shallow areas with sandy substrates and overhanging vegetation are needed to support larvae and fry. Cooler water temperatures are only maintained in some areas by the upwelling of cooler groundwater, tributary flows, and shade from overhanging vegetation, which reduces water temperature during summer and fall months. Overhanging and instream vegetation are also needed for the development of an aquatic invertebrate community to supply food for adult suckers.

Therefore, in order to support Santa Ana sucker a complex and integrated stream system is needed or restored that:

1. encompasses sand, gravel, cobble, and rock substrates;
2. harbors diverse bed morphologies normally found in canyons and alluvial floodplains;
3. provides cool, clear water of varying depths and velocities, and native riparian vegetation cover;
4. contains tributaries that provide fish with areas of refuge (refugia) from predators and during floods and that can also provide suitable breeding habitat; and
5. harbors sources of coarse sediment for renewal of substrates in occupied areas.

Southern Steelhead Trout

Southern steelhead trout, otherwise known as southern steelhead or steelhead, are a cold water fish and unique form of rainbow trout; southern steelhead are the southernmost native anadromous rainbow trout in North America. Steelhead are federally listed as endangered in Los Angeles, Orange, and San Diego counties (the range of the Southern California Steelhead Distinct Population Segment [Southern California Steelhead DPS] extends to the U.S.-Mexico Border) (NOAA 2012). It is estimated that this Southern California DPS once numbered over 45,000 but has since declined to less than 500 individuals. Steelhead occupied the Study Area historically and are now extirpated from the River and tributaries. Restoration of steelhead trout to the Study Area and environs would be quite challenging and require substantial riverine, riparian, and watershed restoration along the much of the River inside and outside of the Study Area.

Steelhead are one of six Pacific salmon species that are native to the west coast of North America, and are currently the only species of this group that naturally reproduces within the coastal watersheds of southern California. Because steelhead employ several different life-history strategies that exploit all portions of a river system, they serve as a good indicator of the health of southern California watersheds and streams. Southern California Steelhead DPS populations have declined precipitously, largely due to extensive watershed development (NOAA 2012).

Differences between the southern steelhead and those steelhead to the north relate mainly to life history, reflecting the highly variable environment in which these fish evolved (California Trout 2011). Southern steelhead exhibit three basic life-history strategies: fluvial-anadromous (migration between freshwater and saltwater), lagoon-anadromous (migration to and from a brackish lagoon), and freshwater residency (remain in fresh water; resident inland rainbow trout) (NOAA 2012). These three life-history strategies have allowed southern steelhead to take advantage of different habitats and to persist in the highly variable and naturally challenging southern California environment (NOAA 2012). Southern steelhead are dependent on short-duration winter rains to provide passage through estuaries and rivers to the upstream freshwater spawning and rearing habitats of their birth. This results in a restricted and rapid spawning period, so fish are generally mature when they ascend the rivers (California Trout 2011). Because of frequent droughts in southern California, streams may be inaccessible from the ocean during some years, forcing adult steelhead to spend additional years in the ocean (California Trout 2011). During drought years the steelhead in freshwater endure long, hot summers by remaining in pools of deep, cool water (NOAA 2012).

While all steelhead hatch in gravel-bottomed, fast-flowing, well-oxygenated rivers and streams, some individuals (rainbow trout, as indicated above) stay in fresh water all their lives. The steelhead that migrate to the ocean develop a slimmer profile, become more silvery in color, and typically grow much larger than the rainbow trout that remain in fresh water. Some inland trout do migrate for the purpose of spawning or food foraging.

Southern steelhead occasionally attain weights of over 20 pounds (but are usually lighter) (California Trout 2011). They have lifespans up to 11 years and are sexually mature at 2-3 years.

Steelhead eat zooplankton while young; adults feed on aquatic and terrestrial insects, mollusks, crustaceans, fish eggs, minnows, and other small fishes (including other trout). Optimal growth for steelhead occurs at 59 to 64 deg. F, and mortality typically results at 75 to 81 deg. F. Steelhead require near saturation levels of dissolved oxygen to grow, though these fish can survive at levels as low as 1.5-2.0 parts per million (ppm). They do best where dissolved oxygen concentration is at least 7 ppm. In streams, deep, low-velocity pools are important wintering habitats. Steelhead require suitable gravel within stream riffle sections or pool tails, free of excessive silt, to dig nests for spawning. Times spent in freshwater and in the ocean vary according to geography, life history patterns, and effects of natural phenomena.

The female fish digs a redd (nest) and deposits 200 to 12,000 eggs depending upon her body size. After breeding, steelhead rest before moving back out to sea. In 3 to 4 weeks the eggs hatch, and the young trout spend another 2 to 3 weeks under the cover of the gravel before emerging as fry. In some instances the fry of anadromous steelhead will emerge soon after hatching and swim straight to the ocean to avoid dry summer periods. Typically the young steelhead reside in freshwater for 1 to 3 years before smoltification (transition to being able live in salt water). When the smolts finally reach the ocean they begin feeding on invertebrates, krill, and then focus on fish. Steelhead may stay in saltwater for 1 to 2 years before returning to their native streams to spawn. Most anadromous salmonids (e.g., salmon) die after spawning, but steelhead may make numerous trips back and forth between fresh and salt water to breed. Steelhead may spawn up to four times per life span, though the mortality rate between successive cycles is high. Within a stream's freshwater reaches, steelhead have in-stream habitat preferences generally determined by size. The smallest fish are mostly found in riffles, medium sized fish in runs, and larger fish predominantly in pools.

The primary factors impacting southern steelhead populations in southern California region include: (1) alteration of stream flow patterns, (2) physical impediments to fish passage, (3) alteration of floodplains and stream channels, (4) sedimentation, (5) waste discharges, (6) exotic species, (7) loss of estuarine habitat, and (8) stocking of hatchery reared salmonids (California Trout 2011). Southern steelhead have survived in the region despite the extensive modification of much of their habitat.

Many streams of the region have portions of their watersheds that are currently inaccessible to southern steelhead due to man-made barriers, but were historically used by steelhead. Major southern steelhead watersheds include the Santa Maria, Santa Ynez, Ventura, and Santa Clara Rivers, and Malibu and Topanga Creeks to the north of the River, and the San Gabriel, Santa Margarita, San Luis Rey, San Dieguito, and Sweetwater Rivers, and San Juan and San Mateo Creeks to the south.

Arroyo Chub

The arroyo chub is a California Species of Special Concern and has no Federal status. They are found only in the coastal streams of southern California. They probably occupied the Study Area historically, but are likely extirpated. The arroyo chub is likely restorable to the Study Area with considerable riverine and riparian modifications along the River.

Arroyo chub are normally restricted to pools and glides[10] in low gradient stream reaches (2 percent slope maximum), and they are usually associated with emergent vegetation. Arroyo chub are adapted to survive in streams that fluctuate between large winter storm flows and low summer flows, including the low dissolved oxygen and relatively wide temperature fluctuations (50 to 75 deg. F) associated with this flow regime. They are most common in slow flowing or

[10] Glides: the section of streambed located immediately downstream of pools. A glide ends at the upstream end of a riffle or run. The slope of the channel bed through a glide is negative while the slope of the water surface is positive.

backwater stream areas with sand or mud substrate, but may also inhabit areas with velocities in excess of 2.6 ft/second over coarse substrate (University of California 2013). They feed on plants such as algae and water ferns (*Azolla* spp.), and on invertebrates such as insects and mollusks. In a trial study the arroyo chub was found to be a viable alternative to the exotic mosquito fish (*Gambusia affinis*) for integrated mosquito management programs in riverine wetlands and sensitive watersheds of southern California within its former range (Van Dam and Walton 2007).

Arroyo chubs reach a size of 3.1 to 3.5 in by their fourth year and rarely live longer than this. Females can reproduce at age 1. Spawning takes place in pools and edge habitat from February to August with a peak in June and July. Fertilized eggs stick to plants or bottom substrate and hatch in about 4 days. Fry stay on the substrate for a few days, then rise to the surface and stay among plants or other cover for 3 to 4 months.

Like the Santa Ana sucker, the arroyo chub is endemic to the streams and rivers of the Los Angeles plain in southern California, including the Los Angeles, San Gabriel, Santa Ana, San Luis Rey, and Santa Margarita rivers, and Malibu and San Juan creeks. They have been extirpated from much of their native range but have been introduced to streams along the coast as far north as Chorro Creek in San Luis Obispo County, California. They have also been introduced to the Mojave River system where they may have eliminated the Mojave tui chub.

Arroyo chub are still found in Big Tujunga Canyon (tributary to the River), the Santa Ana River, Trabuco Creek, San Juan Creek, and Malibu Creek, and are reportedly now common only in Trabuco Creek, San Juan Creek, and Malibu Creek (Swift et al. 1993; WR Biological Monitoring Program 2011; Wilcox 2012). Re-establishment of the arroyo chub was the focus of a recent habitat restoration effort in the City of Pasadena on a remaining soft-bottom stretch of the Arroyo Seco (tributary to the River).

Speckled Dace

The speckled dace is a California Species of Special Concern. They probably occupied the Study Area historically, but are likely extirpated. The speckled dace is possibly restorable to the Study Area with substantial measures within the Study Area.

Speckled dace are capable of living in an array of habitat types from small springs or streams to large rivers and deep lakes. Speckled dace prefer habitat that includes clear, well oxygenated water, with movement due to a current or waves. In addition, the fish do well in areas with deep cover or overhead protection provided by vegetation or woody debris. Speckled dace predominantly occupy small streams of the second to third order where they feed and forage for aquatic insects. The species is very adaptable and is found in cold alpine lakes such as Lake Tahoe, but it has also been able to survive adversity in temperatures at or above 88 deg. F with a dissolved oxygen concentration of 2 ppm. In streams speckled dace swim along the bottom looking for small invertebrates while in lakes they are opportunistic feeders that may feed on zooplankton, algae, nymphs, or the resulting flying insects. Speckled dace typically have a life span of three years but may live 6 or more years, during which time females typically grow more rapidly than males. The fish become sexually mature in their second year, and during the summer months the dace spawn. Stream dwellers spawn in riffles or gravely areas, while the

lake inhabitants spawn in tributaries or in shallow shoreline regions. The embryos hatch in 6 days, and the larvae remain in the safety of the gravel for 7-8 days. The young fry then spend the early part of their lives in the shallow warm areas of the stream or lake where they hatched.

Speckled dace in the watersheds of the River were found in small to large, often spring-fed, moderate to high gradient rocky to gravelly streams, mostly in the mountainous tributaries farther upstream (Swift and Seigel 1993). The closest recorded population to the Study Area occurred in a small spring-fed stream in North Hollywood last collected in 1939; it was probably never common in the Study Area (Swift and Seigel 1993). It occurred further upstream in Big Tujunga Creek below Tujunga Reservoir until about the mid-1980's and had not been collected since. It is possibly extirpated in the River drainage, but populations still exist in the San Gabriel and Santa Ana drainages (Swift and Seigel 1993).

The native range of the speckled dace is the drainages of the western U.S. and Canada from the Columbia River (British Columbia) to the Colorado River (Arizona and New Mexico) and south into Sonora (Mexico) (Page and Burr 1991).

Current Fish

Fish species currently in the River consist of a variety of non-native species. Of the 1,200 fish caught in a 2008 fish study within the Project area, mosquitofish (*Gambusia affinis*) and tilapia were the most abundant, and common carp, fathead minnow (*Pimephales promelas*), and green sunfish were also common (Friends of the Los Angeles River 2008). The fish caught in this study and one from 1991/1992 (Swift and Seigel 1993) in the Project area were:

- fathead minnow
- common carp
- black bullhead (*Ameiurus melas*)
- Amazon sailfin catfish (*Pteroplichthys pardalis*)
- mosquitofish
- green sunfish
- largemouth bass (*Micropterus salmoides*)
- goldfish (*Carasius auratus*)
- tilapia

Flathead minnow, goldfish, and mosquitofish have been present since the 1950s in southern California drainages, and tilapia have been found in California coastal drainages since the 1990s (Swift and Seigel 1993). Species also known to occur in the River include: bluegill (*Lepomis macrochirus*), brown bullhead (*Ameiurus nebulosus*), and channel catfish (*Ictalurus punctatus*) (Friends of the Los Angeles River 2008).

The only currently approved place to fish on or near the River is at Lake Balboa, within the Sepulveda Basin, which is stocked with rainbow trout, largemouth bass, and other fish species (Los Angeles River Revitalization Corporation 2013). People are reported to fish in the Study Area in accessible River stretches with flowing or standing water.

Black bullheads, green sunfish, and largemouth bass are all currently common in most southern California freshwater streams on the coastal slope, including the Big Tujunga Wash, an upstream tributary of the Project site (Friends of the Los Angeles River 2008). Bullhead catfish (brown and black) are nocturnal predators that prey to some extent on native fish species in other areas of the Project region (Friends of the Los Angeles River 2008). Notably, green sunfish also prey on native fishes and amphibians in places such as Malibu Creek and Big Tujunga Wash (Friends of the Los Angeles River 2008). Green sunfish are probably continually washed down into the Project area from Tujunga Wash and other upstream locations (Friends of the Los Angeles River 2008). During a 2008 fish study a largemouth bass was detected only a single time in the Glendale Narrows portion of the Project area, possibly coming from one of the lakes upstream where they are more common (Friends of the Los Angeles River 2008). Largemouth bass apparently do not do well in strongly flowing streams; they are typically restricted to backwaters and slow moving pools (Friends of the Los Angeles River 2008). Backwaters and slow moving pools are currently quite uncommon in the Project area due to channelization, and this likely restricts largemouth bass and other species with similar life history restrictions in this portion of the River. Notably, largemouth bass also strongly prey on many native fish species in the region (Friends of the Los Angeles River 2008). Many of the exotic fish species detected in the 2008 study are likely better adapted to slower waters than the storm flows that are seasonally present in the Project area, but are nevertheless effectively extant and competitive under current conditions (Friends of the Los Angeles River 2008).

Amphibians & Reptiles

The upper watershed of the River continues to support substantial and intact reptile and amphibian populations. The arroyo toad (*Anaxyrus californicus*) and California red-legged frog (*Rana draytonii*) persist on the upper Tujunga Wash and the upper Arroyo Seco tributaries to the River upstream of the Study area.

A total of 12 species of amphibians and 21 species of reptiles are considered to occur now or have occurred in the 20th century within 1 mi of the present channel of the River from Sepulveda Basin to the River mouth (hereafter considered "the channel area"); these consist of 5 salamanders, 7 frogs, 1 turtle, 7 lizards, and 13 snakes. Only one of these, the bullfrog (*Rana* [*Lithobates*] *catesbeiana*), is exotic; the balance of 32 species are herein considered the native reptile and amphibian fauna of the River (Bezy et al. 1993).

Of the native amphibians of the River, four salamanders are considered as occurring or probably occurring within 1 mi of the channel area: Pacific slender salamander (*Batrachoseps pacificus*) in flatland situations; arboreal salamander (*Aneides lugubris*), black-bellied salamander (*Batrechoseps nigriventris*), and ensatina (*Ensatina escholtzii*) in the foothill area of Griffith Park. Of the 6 frogs/toads of the original native River fauna, only California toad (*Anaxyrus boreas halophilus*) and Baja California treefrog (*Pseudacris hypochondriaca*) (and the exotic bullfrog) persist in the channel area. The California treefrog (*Pseudacris cadaverina*), western spadefoot (*Scaphiopus hammondii*), arroyo toad (federally listed endangered), and red-legged frog (federally listed threatened) formerly occurred but are no longer found in the channel area; none of these are likely to be restored to Study Area.

Only one native turtle occurred in the River, the southwestern pond turtle (*Actinemys marmorata pallida*); it is now extirpated from the River basin and is not likely to be restored to the Study Area. Of the 7 lizards of the original native fauna, 6 are considered to still be present in the channel area. These six are: southern California legless lizard (*Anniella stebbinsi*), coastal whiptail (*Aspidoscellis tigris stejnegeri*), Skilton's skink (*Plestiodon skiltonianus skiltonianus*), western side-blotched lizard (*Uta stansburiana elegans*), San Diego alligator lizard (*Elgaria multicarinata webbii*), and western fence lizard (*Sceloporus occidentalis*). The coast horned lizard (*Phrynosoma coronatum*) is likely extirpated from the channel area and is not likely to be restored to the Study Area. Of the 13 snakes in the original native fauna, six snakes are considered to persist in the channel area. These six are: two-striped garter snake (*Thamnophis hammondii*),ringneck snake (*Diadophis punctatus*), southern Pacific rattlesnake (*Crotalus oreganus helleri*), California kingsnake (*Lampropeltis californiae*), California striped racer (*Coluber lateralis lateralis*), and San Diego gopher snake (*Pituophis catenifer annectens*) (Bezy et al. 1993).

California toad, Baja California treefrog, bullfrog, and two striped garter snake are the only reptiles and amphibians currently expected within the aquatic zone of the River in the Study Area (Bezy et al. 1993). The following are the only reptiles and amphibians currently expected in the riparian zone of the River in the Study Area: Pacific slender salamander, California legless lizard, coastal whiptail, San Diego alligator lizard , western fence lizard , western side-blotched lizard , southern Pacific rattlesnake , ringneck snake, California kingsnake, San Diego gopher snake, and south coast gartersnake (*Thamnophis sirtalis*) (Bezy et al 1993). These aquatic and riparian zone species of the Study Area would likely benefit from the proposed Project restoration measures, based on current occupation of the River degraded channel ecocsystem combined with general increases in carrying capacity for these species expected from the Project. Crayfish (*Procambarus* sp.) and mosquito fish, both exotic species reported from the River, are noted to feed on the larvae of some native amphibians in the River and are thought to contribute to their local decline (The River Project 2001).

Birds

The loss of lowland riparian and riverine ecosystems in coastal southern California has been severe, with a large percentage of dependent natural communities either destroyed or greatly modified over the past century (Garrett 1993). From an avian ecology perspective, even apparently intact riparian and riverine systems typically suffer from the effects of exotic plants, introduced predators, and/or parasitism from artificially high populations of brown-headed cowbirds (Garrett 1993). Comparisons of lowland riparian and riverine bird populations in the River system with those of more natural riparian reaches in other drainages in the region suggest a substantial overall reduction in native breeding species diversity and numbers, and demonstrate a considerable loss of sensitive breeding species in the River (Garrett 1993).

Channelization of the River and its major lowland tributaries was particularly devastating to four natural community types: coastal estuaries, seasonal and permanent freshwater and brackish wetlands, lowland riparian forests and woodlands, and alluvial scrub (Garrett 1993). A number of bird species associated with these communities have either completely disappeared from the Los Angeles River Basin or have suffered considerable population declines. Channelization also

eliminated nearly all the earthen stream bank communities, formerly favored for nesting by such declining species such as the bank swallow. The avifauna of the River drainage has been supplemented with a number of exotic species. All of these exotic species reach peak abundances in urban and suburban habitats, and only a few (e.g., European starling [*Sturnus vulgaris*]) maintain significant populations in native riparian or riverine communities of the River.

Natural community modifications and livestock and agricultural practices in California have allowed for major expansion in range and population sizes of the brown-headed cowbird, an avian brood parasite (Garrett 1993). These inflated cowbird populations have very likely adversely affected several open-nesting passerine bird species in the River drainage over the last century, including willow flycatchers, vireos (*Vireo* sp.), gnatcatchers (*Polioptila* sp.), and warblers (e.g., *Vermiform sp., Oreothlypis* sp. sp., *Setophaga* sp.) (Garrett 1993). Apart from modifications and loss of habitats, the increase in brown-headed cowbirds may have been the greatest factor in the decline of other native passerines in the River basin; the cowbirds increase is, in turn, related to habitat modification (Garrett 1933). The establishment of feral populations of predatory mammals, such as domestic cats (*Felis silvestris* [=*F. catus*]) and red foxes (*Vulpes vulpes*), has reduced ground-nesting throughout much of the lowland and suburban portions of the River drainage (Garrett 1993).

The following were likely breeding species in the Study Area historically that are now extirpated as breeders from the River drainage (Garrett 1993): yellow-billed cuckoo (*Coccyzus americanus*), long-eared owl (*Asio otus*), willow flycatcher, tree swallow (*Tachycineta bicolor*), bank swallow, and Wilson's warbler (*Cardellina pusilla*). Tree swallow could likely be re-established to the Study Area with restoration of nest cavities (such as placed snags and appropriate nest boxes); the other noted species are not expected to be restorable to the Study Area.

The following were likely breeding species in the Study Area historically before substantial modifications to the River, but are now greatly reduced in numbers or extirpated as breeders in the River drainage (Garrett 1993): common gallinule (*Gallinula galeata*), burrowing owl (*Athene cunicularia*), hairy woodpecker (*Picoides villosus*), purple martin (*Progne subis*), Swainson's thrush (*Catharus ustulatus*), loggerhead shrike (*Lanius ludovicianus*), yellow-breasted chat (*Icteria virens*; "chat"), and blue grosbeak (*Passerina caerulea*). Swainson's thrush, chat, and blue grosbeak could likely be re-established in the Study Area with considerable restoration measures, such as any restoration of substantial areas of dense closed-canopy riparian forests, open-canopy riparian thickets adjacent to forest areas, and riparian scrub with low tangled vines/woody shrubs, combined with cowbird control. The other noted species are not expected to be practicably restorable to the Study Area.

A total of 102 native bird species were recorded from the Study Area in 1991/1992 (Garrett 1993).[11] Several native riparian and wetland bird species have been able to maintain current populations in the soft-bottomed channelized portions of the River in the Study Area in the last few decades. These include pied-billed grebe (*Podilymbus podiceps*), cinnamon teal (*Anas cyanoptera*), American coot (*Fulica Americana*), killdeer (*Charadrius vociferous*), black phoebe (*Sayornis nigricans*), northern rough-winged swallow (*Stelgidopteryx serripennis*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), and red-winged blackbird (*Agelaius phoeniceus*) (Garrett 1993). Many other wetland birds are relatively common non-breeding visitors to the Study Area, including great-blue heron (*Ardea herodias*), green heron (*Butorides virescens*), black-crowned night heron (*Nycticorax nycticorax*), great egret (*Ardea alba*), bufflehead (*Bucephala albeola*), spotted sandpiper (*Actitis macularius*), least sandpiper (*Calidris minutilla*), Wilson's snipe (*Gallinago delicata*), and marsh wren (*Cistothorus palustris*) (Garrett 1993). Almost all of these species would likely increase in number and possibly distribution within the Study Area with implementation of the proposed Project. This would most likely occur associated with any restoration of open shallow water areas, larger open stream areas surrounded by dense riparian cover with minimal human disturbance, large forked canopy trees near water, stream edges with thick vegetation at the margins, and freshwater marsh areas with dense cattails, reeds and/or bulrushes.

An additional select group of relatively uncommon to somewhat common native birds could be substantially re-established or increased in the Study Area with directed restoration or artificial enhancement measures, based on recorded past or currently limited use of the Study Area and environs. These include (Garrett 1993): wood duck (*Aix sponsa*), common merganser (*Mergus merganser*), osprey (*Pandion haliaetus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), peregrine falcon (*Falco peregrinus*), barn owl (*Tyto alba*), great-horned owl (*Bubo virginianus*), chimney swift (*Chaetura pelagica*), Vaux's swift (*Chaetura vauxi*), white-throated swift (*Aeronautes saxatalis*), belted kingfisher (*Ceryle alcyon*), cliff swallow (*Hirundo pyrrhonota*), barn swallow (*Hirundo rustica*), Bewick's wren (*Thryomanes bewickii*), ruby-crowned kinglet (*Regulus calendula*), western bluebird (*Sialia mexicana*), vireo, orange-crowned warbler (*Vermivora celata*), Nashville warbler (*Vermivora ruficapilla*), yellow warbler (*Setophaga petechia*), Lincoln's sparrow (*Melospiza lincolnii*), lesser goldfinch (*Carduelis psaltria*), and American goldfinch (*Carduelis tristis*). Potential effective restoration and control measures would overlap for many of these species, such as any development of extensive acreages of dense multi-story riparian scrub, woodland, and forest; restoration of wooded stream areas, larger native nest trees, and open woodlands; expansion of mud flats; and cowbird control. Artificial enhancement measures would have less overlap between species, but could practicably be developed in otherwise heavily constrained channel areas, including provision and maintenance of a wide variety of nest cavities (including

[11] Comprehensive bird surveys of the Study Area have apparently not been performed since 1992. A large percentage of the noted 102 species were rarely reported in the surveys of 1991/1992, and were represented by only a few individuals. For these species the River currently represents marginal or poor habitat, or the species are uncommon migrants or vagrants in the region (Garrett 1993).

nest boxes), platforms, and placed large hollow snags; and creation and maintenance of artificial sandy cut banks with openings

Mammals
The Los Angeles River basin historically consisted of a variety of natural community types which supported a diverse mammal fauna. Today, coastal sage scrub, alluvial scrub, riparian, and chaparral communities can still be found along the River's tributaries, but are fragmented and in poor or altered (disturbed) conditions. In these fragmented areas, mammal species composition is fairly consistent with similar communities outside the basin. The mammal fauna that now exists in the channelized portion of the River, such as the Study Area, has changed considerably. The lowland portions of the River have little remaining habitats suitable for native mammal species (Barkley 1993).

Changes compared to the historic diversity and numbers on the River (including the Study Area) are most evident in the paucity of native carnivores (e.g., foxes, weasels, bear, mountain lion); large predators and those requiring relatively pristine or undisturbed habitats (e.g., weasels, grey fox) are particularly reduced (Barkley 1993). The California grizzly and pronghorn that historically utilized the River are now respectively extinct and extirpated, and it is quite unlikely that mountain lion, badger, or long tailed weasels still maintain ranges in the lower River drainage including the Study Area (Barkley 1993). Grassland dwellers (e.g., voles, gophers, moles, shrews) also have apparently declined substantially along the River. Southern grasshopper mouse (*Onychomys torridus ramona*) and California vole (*Microtus californicus*), known from the River drainage previously, are probably rare or nonexistent in most of the basin today (Barkley 1993).

Major resources for all mammal species presently living in or visiting the River basin are water and cover; cover is generally sparse or unavailable in the Study Area (Barkley 1993). Corridors or linkages for many of the original native mammal fauna are also currently not functional to or through the Study Area. The open water occurring in the Project area is a major resource for all mammals, as all mammal species that potentially occur in the area need free water to drink (Barkley 1993). Those areas that also have native vegetation nearby are especially attractive to mammals as this provides cover and possible feeding grounds. Fully channelized portions of the River (concrete bottom and slopes) offer little or no cover (thus little food and high susceptibility to predation) and reportedly are inhabited mainly by exotic rats (*Rattus* sp.), house mice (*Mus musculus*) feral cats, and dogs (*Canis familiaris*). Feral dogs and cats often prey on small rodents and these feral populations are reportedly significant enough in some portions of the River that even where habitats appear suitable such animals likely inhibit native rodent recolonization (Barkely 1993).

Six bat species have detected along the Los Angeles River - Yuma myotis (*Myotis yumanensis*), Mexican freetailed bat (*Tadarida brasiliensis*), hoary bat (*Lasiurus cinereus*), western red bat (*Lasiurus blossevillii*), big brown bat (*Eptesicus fuscus*), western pipistrelle (*Pipistrellus hesperus*) (Barkley 1993; Remington and Cooper 2009). Yuma myotis and Mexican freetailed bat are the two most commonly-observed species in urban southern California (Remington and Cooper 2009). Both are often detected near water sources, where the Yuma myotis specializes in

the capture of emergent aquatic insects, and Mexican free-tailed bat forages opportunistically (Remington and Cooper 2009). The Los Angeles River is likely a feature that funnels activity of both species. Riparian growth in the River and local streams attracts insects and provides the best source of food for insectivorous bats which typically forage above riparian tree tops (Barkely 1993). The major factor affecting influencing bat occurrence and abundance in the Study Area is likely roost availability (Barkley 1993).

The western red bat is a California Species of Special Concern. The hoary bat is a migratory species in southern California that relies on woodland and riparian natural communities, similar to those of the western red bat (Barbour and Davis 1969). Both the hoary bat and western red bat are foliage-roosting species and tend to move the location of their day roost daily from tree to tree; therefore a range of tree options is important for this group of bats (Remington and Cooper 2009). The distribution of Yuma myotis is highly correlated with the presence of permanent water sources such as the River. Yuma myotis, western red bat, big brown bat, and Mexican free-tailed bat appear to be currently roosting within Griffith Park or nearby (Remington and Cooper 2009).

Raccoons (*Procyon lotor*) and coyotes (*Canis latrans*) likely make steady use of the Study Area. Other native mammals that rely on riparian or riverine growth are likely not currently present or are rare in the Study Area. Major restoration efforts in the Study Area would be needed to in order encourage species such as bobcat (*Lynx rufus californicus*), long-tailed weasel (*Mustela frenata*), Merriam's chipmunk (*Eutamias merriami merriami*), desert woodrat (*Neotoma lepida intermedia*), and mastiff bat (*Eumops perotis californicus*) to recolonize and reside in the River portion ofStudy Area (Barkley 1993). Nevertheless, we consider the bobcat to be good umbrella planning species for evaluating potential vertebrate movement and corridors through the the Study Area.

Vertebrate Use of Aquatic and Riparian Zones

Riparian and riverine zones of southern California (such as the Study Area historically) are typically resource-rich ecosystems within water-limited, larger landscapes (Stella et al. 2013). Riparian ecosystems normally serve as movement and dispersal corridors for wildlife, particularly for larger vertebrates. Higher riparian plant richness, diversity, and structure provide important resources used by most larger vertebrates, notably resting sites, cover, and food. Additionally, riverine and riparian areas normally have higher water availability, allowing many species to withstand water loss and thermal gradients in the high summer temperatures of the region. Riparian ecosystems also generally have diverse and heterogeneous plant communities. Most carnivore species respond to water channel type and standing water availability in all seasons; use of riparian and riverine ecosystems by carnivores is typically linked to water availability that provides for hydration, foraging, and external temperature regulation (Santos et al. 2010).

Umbrella Planning Species for Riparian Areas

Vireo, chat, and yellow warbler are uncommon sensitive birds that currently make some limited use of the riparian zones within the Study Area. All of these species were likely much more common and made extensive use of the former riparian scrub/woodland/forest areas of the Study

Area historically (Garrett 1993). Birds are generally valuable indicators of ecological integrity (Carignan and Villard 2002). These three species are typically good umbrella planning or surrogate[12] species for southern California riparian restoration projects on the coastal slope, including the Study Area, due to the range of riparian types and classes used by these species.

Least Bell's Vireo

In response to a substantial decline of the vireo population and widespread loss of its riparian habitat, the vireo was listed as endangered in 1986 (51 ***FR*** 16474). Critical habitat was designated in 1994 (59 ***FR*** 4845). A draft recovery plan was published in March 1998 (Service 1998); a final plan has not been issued.

Vireos are an obligate riparian species during the breeding season, and prefer diverse early and mid-successional (e.g., woody riparian vegetation about 3 to 15 years old since the last flood denudation event) riparian thickets. Vireos use a number of riparian natural community types, including cottonwood-willow woodlands/forests, and mule fat scrub. Occupied breeding habitats include dense cover within 3 to 6 ft of the ground, where nests are typically placed, and a dense, stratified canopy for foraging. Plant species composition does not appear as important a determinant in nesting site selection as habitat structure. For more information on habitat requirements during breeding and migration, see the draft recovery plan for the species (Service 1998).

The vireo historically occupied willow riparian habitats from Tehama County in northern California, southward to northwestern Baja California, Mexico (Grinnell and Miller 1944, Service 1998). About 99 percent of the vireos currently occur in southern California south of the Tehachapi Mountains (Service 2006). Thus, despite a significant increase in overall population numbers, and a slight shift northward in the species overall distribution, the population remains restricted to the southern portion of its historic range (Service 2006). Abundance of vireos rangewide has been relatively constant in the last decade (Lynn and Kus 2010, Pike et al. 2010, Jorgensen 2010, McDonald et al. in litt. 2011).

From 1977 to 2005 Los Angeles County supported 2 percent or less of the overall rangewide vireo population (Service 2006). The vireo was formerly a regular breeding summer resident on the River "in the willow lowlands, and along streams up to the foothills" (Grinnel 1898). Grinnel and Miller (1944) alluded to the vireo's decline beginning in the late 1920s as caused by

[12] The surrogate/umbrella species approach is typically used where conservation actions targeted for one or a small group of species should benefit a broader community of target species and are expected to provide an effective framework to guide ecological restoration efforts. Surrogate or umbrella species are often used as proxies for broader sets of species when the number of species of concern is practicably too great to allow each to be considered individually. We expect that these species would be generally representative of a much larger set of target species and provide a reasonable surrogate for the other species in each group. The logistical constraints of available data and resources often necessitate this approach. Our suggested approach would use multiple species as surrogates for community types/classes instead of the typical single species approach. See Seavy et al. 2012.

cowbird brood parasitism. Little successful nesting by vireos has been documented recently in the River drainage, outside of the area behind Hansen Dam and the Sepulveda Basin; cowbirds are reportedly common at all potential nesting sites along the River and their abundance would make successful nesting by vireos unlikely in most areas (Garrett 1993). The vireo was nearly eliminated as a breeding species in the River (Garrett 1993). An undetermined (but likely small) number of vireos was reported in 2009 and 2013 from within the Study Area near Taylor Yard (USACE 2013a).

Additional information on the vireo can be found in the Service's 5-year review (Service 2006) and draft recovery plan (Service 1998) for the species.

Yellow-Breasted Chat

The chat is a California Species of Special Concern that breeds from British Columbia, Ontario, and (rarely) Massachusetts south to California, the Gulf Coast, and Florida. They winter in the tropics.

Chats are foliage gleaners and consume insects and berries about equally (Ehrlich et al. 1988). Nestlings are typically fed a diet of soft-bodied orthopterans (e.g., grasshoppers) and larval lepidopterans (Petrides 1938).

In California, chats require dense riparian vegetation associated with streams, swampy ground and the borders of small ponds (Small 1994). Some taller trees (i.e., cottonwoods and alders) are required for song perches (Dunn and Garrett 1997). Blackberry (*Rubus* spp.), wild grape (*Vitis* spp.), willow, and other plants that form dense thickets and tangles are frequently selected as nesting strata (Grinnell and Miller 1944). The nest is a bulky cup that is normally a well-hidden structure, commonly placed about 3 ft above ground (Petrides 1938, Dunn and Garrett 1997). Nesting chats occupy riparian habitats with a well-developed shrub layer and an open canopy. Vegetation structure, however, more than age appears to be the important factor in nest-site selection (Eckerle and Thompson 2001). Nesting habitat is usually restricted to the narrow border of streams, creeks, sloughs, and rivers. Garrett and Dunn (1981) described the chat as having "greatly declined as a breeder in recent years" in southern California.

Chats are relatively rare and localized in Los Angeles County (Shufurd and Gardali 2008). Chats were formerly a "common summer resident in the willow regions of the lowlands" (Grinnel 1898) of the River, but are now rare breeding summer residents or scarce transients (Garrett 1993). Two territorial chats were reported from the Study Area near the Taylor Yard in 2010 (Hall 2010).

Yellow Warbler

The yellow warbler is a California Species of Special Concern. Yellow warblers breed across central and northern North America and spend winters in Central America and northern South America. They occur principally in California as a migrant and summer resident from late March through early October, breeding from April to late July (Dunn and Garrett 1997). Grinnell and Miller (1944) formerly described the yellow warbler as a "common" to "locally abundant" breeder throughout California, except for most of the Mojave Desert.

Yellow warblers were nearly extirpated from the coastal lowlands of Orange County by 1990 (Garrett and Dunn 1981, Gallagher 1997, Unitt 2004). Yellow warblers have increased greatly on the coastal slope in San Diego County since the late 1980s, apparently in response to habitat restoration and cowbird trapping to aid vireos (Unitt 2004).

Yellow warblers generally occupy structurally diverse riparian vegetation in close proximity to water along streams and in wet meadows (Lowther et al. 1999; Strusis-Timmer 2009). In California they are found in willows and cottonwoods and other species of riparian shrubs or trees, varying by biogeographic region. Yellow warblers are a shrub nesting species in California, often utilizing early successional patches (Strusis-Timmer 2009). Coastal California yellow warblers often utilize areas with a short, sparse riparian deciduous canopy and extensive willow shrub cover (Strusis-Timmer 2009).

Yellow warblers were formerly common breeders along the River, and were "particularly numerous and well distributed over the mesas and lowlands" along the River (Grinnel 1898). The decline of this species on the River can probably be attributed to loss of riparian habitat and, in part, to cowbird parasitism (Garrett 1993). It is currently a common spring and fall transient throughout the River drainage and an uncommon breeding summer resident in cottonwoods and other riparian habitats of foothill canyons, including along the Arroyo Seco, Santa Anita Canyon, and the Rio Hondo. (Garrett 1993). As of 2005, 6 to 10 pairs of yellow warblers were reported nesting along the River in the Study Area just northwest of downtown Los Angeles (Shufurd and Gardali 2008). Nine territorial yellow warblers and evidence of young were reported from the Study Area near Taylor Yard in 2010 (Hall 2010).

Environmental Heterogeneity

Natural ecosystems have long been thought of as complex systems, wherein the conditions for sustaining biodiversity are optimized (Nicolis and Prigogine 1977; Fath et al. 2004). Generally complex structures and dynamics are distinct attributes of natural ecosystems, which can be empirically tested and measured (Parrott 2010). Complexity has been defined as a balance between the two extremes of order and disorder (Langton 1992; Levin 1992; Parrott 2010). Environmental heterogeneity is the spatial or temporal variation of a given resource, structure, or biota in a given area. The Study Area has low environmental heterogeneity: it is ecologically extensively homogenous and modified compared to its natural state. The pattern of resources, biota, and natural structures in the River ecosystem has been modified over the last century to become rather uniform, and native biodiversity has largely collapsed.

Ecological Connectivity of Channels

An important design component and strategy of conservation planning is the retention or restoration of ecological networks. An ecological network is a nature conservation system where large reserves are connected to each other via ecological linkages or corridors across broad landscapes to facilitate recolonization and persistence of wildlife populations, particularly those threatened with extinction or local extirpation (Jongman, 2004; Noss, O'Connell and Murphey 1997). Some European countries have used rivers as an organizing principle for national ecological networks (Jongman 1998). Hydrologic networks are inherently a hierarchically connected system and logically meet the need for connectivity of many species in nature reserve

systems. However, hydrological networks alone are insufficient to meet the functional connectivity needs of all important organisms (Huber, Shilling, Thorne, and Greco 2012; Jongman 1998). Nonetheless, where river and stream systems can contribute to ecological conservation and connectivity, conventionally designed flood control channels often offer limited or no value because they commonly lack many of the important ecological attributes, such as contiguous vegetated cover, functional ingress/egress routes, or appropriate substrates. It is vitally important to the integrity and viability of river and stream systems that ecological conservation functions be incorporated into the planning and design process of multifunctional open channel flood control structures, to the extent practicable.

EFFECTS OF THE PROPOSED PROJECT ON BIOLOGICAL RESOURCES

Implementation of the proposed Project would likely result in direct and indirect effects to biological resources during demolition, clearing, grading, structure construction, operations, and maintenance. Most of these impacts would likely be temporary and relatively minor to moderate in extent. Proposed restoration measures would likely more than offset these impacts, and would improve riverine and riparian ecological functions of the Project following Project construction activities.

Potential construction-related impacts include increased stream turbidity, clearing of extant riparian or riverine natural communities, noise, night-time lighting, and contaminant introduction or release into stream waters, wetland, or upland areas. Most of these impacts would occur during the relatively short construction period of the Project and would likely be temporary. The resources that would be affected, notably riparian and riverine natural community remnants along the River, are already heavily degraded by past actions (particularly channelization and development) within and along the River channel and former floodplain.

While the proposed Project would provide substantial ecological enhancement and partial restoration to the portions of the highly degraded River, the designs currently proposed would nevertheless still provide largely unnatural biological conditions as compared historic conditions and to other southern California coastal streams in urban areas (Mazor et al. 2011). For example, the proposed Project would likely provide/retain mostly rock and concrete substrates, low natural community/habitat complexity within riverine and riparian systems, relatively high ongoing human disturbance near or in most restoration areas , high levels of open water and exotic species, simple channel geomorphology with many hard structures, high water temperatures, and low levels of riparian vegetation acreage and age/cover/species diversity.

Habitats for vireo, chat, and yellow warbler would likely be temporarily disturbed by Project construction and then subsequently restored and expanded, with an undetermined acreage of created riparian habitats, and an associated undetermined level of likely increase in use by these species. Native fish are currently extirpated within the Study Area; some potential exists for re-establishment of habitats for Santa Ana sucker and arroyo chub as part of Project restoration, depending on how riverine and riparian restoration would be designed and performed.

The ecological functions of riverine and riparian areas/fragments normally depend not only on their size and internal features, but also on their configuration relative to one another and the characteristics of the surrounding landscape (Andren 1992 & 1994; Sisk et al. 1997; Saab 1999; Tewksbury et al. 2002). As such, additional projects would need to be implemented outside of the Project area in order to partially restore many important basic riparian and riverine ecosystem functions within the Project footprint. For instance, substantial modifications to the watershed and River upstream would be needed in order to restore natural stream sediment supplies that are key to the River's natural fluvial processes in the Study Area and areas downstream. Similarly, downstream channel modifications and enhancement would likely be needed to restore effective fish passage and conditions/linkages in order for some native fish to become established and make considerable use of the Project reach proposed to be restored. Nevertheless, substantial restoration potential exists within the Study Area, and the Project would have individual and incremental biological benefits.

Ecological Benefits of the Proposed Project[13]

From an environmental heterogeneity standpoint, the proposed Project would substantially improve portions of the Study Area (particularly Taylor Yard and Piggyback Yard) from a highly modified/uniform ecosystem to semi-natural/disordered ecosystem (Seiferling et al. 2014). The environmental heterogeneity/biodiversity relationships in the currently homogenized ecosystem would be increased, since the Project would add naturalistic heterogeneity and complexity through increases in habitats, channel/floodplain forms, vegetation structures, and resource opportunities, which should promote niche partitioning and some improved native species coexistence.

Within the Study Area the riverine and riparian natural communities are currently greatly reduced, degraded, and isolated remnants of their former extents. Following implementation of any of the Project alternatives, both riverine and riparian natural communities would be enhanced and expanded. Considerable creation of wetlands would occur. Nevertheless, with Project implementation these areas would remain relatively fragmented and isolated; this is to be expected considering the many constraints to restoration of ecological connectivity due to the heavy urban context of the Study Area. Some improvements in ecological connectivity, such as enhanced movement corridors for some small vertebrates, would occur due to Project restoration/enhancement measures, with the level of improvement varying by Project alternative. The Project would provide moderate long-term benefits to the same native biological resources that would be temporarily adversely affected by construction through creation (re-establishment) or enhancement of many stream and riparian natural community features in portions of the Project footprint, particularly through channel widening and re-establishment of some areas of

[13] In a comment letter to us dated May 14, 2014, the Corps commented that proposed Project "[b]enefits may include potential re-introduction of fish (Santa Ana sucker (SAS), arroyo chub), benefits to least Bell's vireo (LBVI) and other threatened and endangered (T&E) species, contributions to restored connectivity for wildlife movement, and contributions to potential future connectivity to significant regional habitat areas."

former floodplain and associated riverine and riparian natural communities, such as semi-natural aquatic soft-bottom channel and valley foothill riparian areas. Actual enhancement and partial restoration levels that would likely be attained by the Project are difficult to ascertain, due to the general or vague descriptions in the 2013 EIS/EIR, such as "Approximately 60 acres of riparian habitat corridors would be restored along the overbanks of both sides of the river. Overbanks are those areas adjacent to the river where overland flow in flood events could occur in a natural river environment" (Section 7.1.1).

The Project as proposed would provide ecological enhancement and partial riverine and riparian restoration to a highly degraded stretch of the River. The Project would likely provide modest ecological net gains, particularly for native species that are somewhat tolerant of urban or degraded environments, such as certain migratory and resident birds that currently utilize riverine and riparian natural communities (as noted above). Increased function and occupation by native small mammals, reptiles, and amphibians would likely be low to moderate. Pursuant to the objective of restoring biological diversity to the Study Area, we do not expect re-establishment of any extirpated reptiles, amphibians, or large mammals with implementation of the proposed Project. Increased or restored function and occupation by large mammals would likely be quite low, outside of coyotes.

The Project would provide considerable riparian corridor management; this one of five key high priority action items identified for the River for re-establishment of Southern California Steelhead DPS (NOAA 2009). The proposed Project would provide general ecological improvement of aquatic natural communities in the Study Area. The Project objectives include "Restore...native fish habitats...throughout the Project period of analysis..." On the other hand, the 2013 Draft EIS/EIR does not specify which of the seven potential native fish species formerly found in the River would be the subject of the restoration objectives of Project, nor did the document provide basic design parameters or concepts that would lead us expect restoration of functional habitats for native fish. In our opinion, the current Project description and designs do not appear sufficient to provide restoration that would support any of the native fish outside of the short-term. For example, the proposed Project design drawings show substantial areas of unnatural open water (unshaded, relatively still areas of surface water mostly free of emergent vegetation, etc.) that, if implemented, would likely give substantial competitive advantage to the exotic fish and invertebrates in the Study Area over potential native fish such as Santa Ana sucker or arroyo chub. With modifications to the proposed Project designs and implementation, the Study Area could likely support some native fish, as noted in our Recommendations below.

The carrying capacities of the Study Area would likely be improved and enhanced for a few sensitive species, such as vireo; it is difficult to estimate the acreage or numbers of pairs of vireo that would likely be restored and enhanced by the Project, based on the relatively vague information provided. Native riparian and riverine plant diversity and function would substantially increase, but remain relatively low compared to some reaches of similar rivers, such as the Santa Ana River or San Luis Rey River, in an urban context. The Proposed Project would

provide considerable areas of native landscaping[14] along the River, with some benefits to connectivity and function along the River, mostly for non-sensitive native birds. Overall numbers of native wildlife, particularly birds, is expected to substantially increase. Local opportunities for observing native birds and invertebrates, aquatic and riparian natural communities, and native plants would be drastically improved.

Alternative 13 would provide approximately 588 ac of partial general restoration, including (with undefined proportions of) valley foothill riparian, freshwater marsh, and open water natural communities, and other wetland areas. Alternative 20 would boost this same basic acreage, and provide an overall total about 719 ac of partial restoration, with undefined portions of those same natural community types.

Additional information on potential Project effects is described in the 2013 Draft EIS/EIR.

CUMULATIVE EFFECTS

Compared to the subject proposed Project, a smaller scale recreation and "greening" open space project on the River is proposed approximately 6 mi upstream, along a reach of the River between Coldwater Canyon Ave. and Whitsett Ave. This proposed project is named the "Los Angeles River Greenway Trail, Coldwater Canyon Ave to Whitsett Ave, San Fernando Valley." This project would create an access trail and native landscaping along about a 0.5 mi stretch of the existing River concrete flood channel (Community Conservation Solutions 2014). While stating that it would "Restore a native ecosystem of oak woodland, chaparral and mixed scrub," this project would only provide minor ecological enhancement on an existing strip of exotic landscaping in this same area along the flood channel; the River itself would remain a concrete flood channel facility.

A proposed project named The Los Angeles River Natural Park is envisioned as a "Green Solution" river-oriented park on a 16-ac project site in Studio City, also about 6 mi upstream of the subject proposed Project. The proposed L.A. River Natural Park would create a wetlands complex to capture and improve runoff water quality from a 200-ac surrounding area, and provide human access to the L.A. River Trail. The Park would create a public access hub for pedestrians and bicyclists and include a public parking garage, pedestrian bridges, and improvements to the L.A. River Trail (Community Conservation Solutions 2013).

Please see the 2013 Draft EIS/EIR for additional cumulative effects information regarding biological resources in the Study Area.

[14] Landscaping: using living, natural, and human elements in the art and craft of growing plants with a goal of creating a beautiful and naturalistic environment within the landscape.

RECOMMENDATIONS

The FWCA states that "...wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs through the effectual and harmonious planning, development, maintenance, and coordination of wildlife conservation." With the following recommendations we are suggesting "...measures that should be adopted to prevent the loss of or damage to ...wildlife resources, as well as to provide concurrently for the development and improvement of such resources."

Available funding for fish and wildlife conservation is sparse and usually competitive, normally limiting related actions. Expending conservation resources in areas of high human density is quite costly and often considered less likely to succeed. Yet, coastal southern California contains a large fraction of endemic at-risk species and (now) rare ecosystems, as well as the state's three largest metropolitan regions. As such, understanding the context and capacity to enhance, restore, conserve, and access ecosystems and native fish and wildlife species within this highly urbanized coastal region is a conservation/societal priority. The values of partially restoring and enhancing the ecosystems of the River are greater than the potential biological conservation benefits alone.

As outlined below, we generally suggest that the designs for proposed Project be developed with a stronger focus on principles of restoration of stream natural communities and processes. We understand that the Study Area is within a heavily populated urban area, and we acknowledge that the varied constraints to ecological restoration of the River are tremendous; we are also well aware that the Project design selected can not increase flood risks.

Based on our Project discussions, the Corps appears to define partial ecological restoration as improvements in habitats or ecological functions. As we have noted above, we expect that full or partial restoration also includes a self-sustaining component as essential to the definition of restoration, even in highly constrained project areas. This is more than semantics, due to the considerable number of restoration projects continuing to be developed and reviewed by our agencies; it is important that we understand each of our respective definitions. While ecological improvements and benefits such as artificial enhancements are highly important and valuable in many areas, we continue to stress the essential long-term importance of at least partial recovery of self-sustaining ecological functions for restoration projects. For example, this would mean evaluating whether proposed native vegetation in some plating areas would not only survive in the long-term without permanent irrigation, but would it also effectively reproduce and replace itself (or naturally succeed) both over time and following expected disturbances such as periodic flooding events.

In part, the current proposed Project designs (all alternatives) appearsubstantially compromised by proposed recreational, and aesthetic features, often at the expense of otherwise practicable ecological restoration potential (e.g., restoration of relatively natural complexities of processes, substrates, channel/floodplain forms, and natural communities/habitats in some areas). The current designs in many locations are also heavily compromised by the lack of channel widening; this is understandable given the consistent need to maintain channel flood flow capacity and the

surrounding constraints. It is understood that widening the channel and floodplain cannot be practicably accomplished throughout the whole Study Area with the subject Project. The resultant potential for partial restoration of ecological functions in these areas of unwidened channel is quite low. Our specific recommendations below reflect these combined issues.

1. We promote the restoration and enhancement of fully functioning and self-sustaining ecosystems, where and to the extent practicable. As we have noted otherwise herein, the River is not restorable to a self-sustaining, full function stream system, even within the proposed widened floodplain areas of the Project, due to the constraints of the Study Area and watershed (e.g., reduced fluvial sediment supply from upstream, modified hydrograph, water quality and temperature, etc.). On the other hand, substantial enhancement and partial restoration of the River is practicable in respective portions of the Study Area. The proposed Project has good basic goals and objectives in relation to general fish and wildlife resources, though they (combined with the Project description and figures) are currently too vague for us to assess the fundamental ecological functions and values of restoration and enhancement that would be implemented. Pursuant to the current Project goals and objectives (to the extent practicable), we suggest the Project designs be modified to more clearly focus on restoration of substantially more natural function of riverine and riparian natural communities in the Project. . The proposed channel/streamside ecological structures and natural communities within the River reaches to be partially restored/widened (e.g., former rail yards) should be designed to be more like similarly situated southern California River reference sites (e.g., less open/slow moving water areas), including designing in greater channel/aquatic and riparian area complexity and utilizing natural community compositions and substrates that support higher sensitive taxa richness. The current proposed designs and descriptions for restoration areas read more like landscaping plans than restoration plans. The objectives, designs, and Project description should indicate enough specificity to allow evaluation of the rough elemental ecological gains that would be made (for example, specify the individual minimum acreage of valley foothill riparian strand, freshwater marsh, etc., that would be created or enhanced in each reach, instead of consistently lumping this information); these data are currently lacking. We commend the integrated multi-project, step-wise approach planned for partial restoration and enhancement of the River that would be hopefully continued with future projects.

2. Of the Project alternatives currently proposed, we recommend Alternative 20, with modifications (as noted below). Alternative 20 has the highest potential of the proposed alternatives to restore considerable ecological functions of the River. In order to perform any substantial riverine and riparian restoration or enhancement on the River (and maintain current flood flow capacities for flood risk management), the right-of-way (ROW) and floodplain currently utilized by the River will need to be re-widened in considerable River reaches (as noted in the 2013 EIS/EIR). This is because effective restoration cannot be performed within the confines of the existing channelized River without reducing flood carrying capacity of that same channelized reach (e.g., due to channel "roughness" associated with mature woody vegetation) unless a wider/larger area

to carry the same flood flows is provided. As such, truly effective ecological restoration of the River (partial restoration) can only occur in areas of widened River ROW.

We recommend substantive modification of any approved Project alternative to increase the focus of proposed Project resources on practicable levels of restoration of River hydrology and geomorphology.We expect that the current proposed designs (all proposed alternatives), if implemented, would result in improvements, but relatively small native fish and wildlife resource net gains and overall low ecological integrity and function for these species within Project restoration and enhancement areas, due to very important remaining stressors such as: a) resultant low complexities of substrates/geomorphology/hydrology/natural communities; b) large areas of artificial (slow moving low flow) open water and channel; c) high human disturbance near stream banks; d) low cover levels, structure, and diversity (e.g., age classes) of native riparian and riverine vegetation; and e) substantial use of proposed hard structures. These stressors can be reduced with potential Project designs, such as maintenance of relatively natural lotic (flowing water; we suggest less area of still, open water) conditions over the length of the Study Area, but some of these stressor would remain with all practicable designs. Considering the constraints involved, we nevertheless suggest that it is practicable for the designs for Project restoration areas (areas of widened floodplain) to be more "wild" and less "naturalistic"[15]/ordered (such as by hard structures and slope protection) than as shown within Project concept drawings and designs.[16]

We suggest that riverine and riparian ecological (partial) restoration be more clearly the primary goal within the specific River reaches to be widened. For instance, most widened floodplain areas should be designed for riparian scrub-woodland-forest communities relatively similar to those that existed historically in the Project reaches, including providing for cyclical and episodic succession of riparian natural community age classes over time following denudation events (floods). Proposed Project designs shouldrely on utilization of existing groundwater (e.g., less than 6 to 8 ft from the ground surface for riparian natural communities) and natural surface water flows for native vegetation needs (e.g., see Stromberg et al. 1996; Stromberg 1998). Restoration of

[15] Naturalistic: looking similar to what appears in nature; not looking artificial or man-made. Not necessarily retaining the functional characteristics of natural ecosystems, such as self-sustainability, functional food webs/native species interactions, etc.

[16] In email attachment to us dated 25 November 2014, the Corp noted: "The Corps' intent is that the stressors described will be addressed in widened areas, where increased flood capacity will allow for varied substrates and natural hydrology, high vegetative cover and structural diversity, and very limited and well-buried hard structures. Open water areas will be designed to support native fish such as Santa Ana sucker and Arroyo chub, including riffle/pool/glide sequences. Human disturbance is expected to be minimal in widened areas, where recreational dirt trails will be designated. In widened areas, it is expected that the active channel will migrate and change form and that sediments will be redistributed with storm events. Vegetation is expected to be denuded with natural higher flows and velocities, and be re-established naturally. Any grade stabilizers in these areas will be well buried, and not visible from the surface."

widened floodplain areas should also be designed with the expectation of some channel form changes over time: large flood events should be allowed to provide some channel re-setting (geomorphic change) action within the necessary outside flood risk management sideboards of widened River reaches.

3. Project recreation/access features involving hard structures should be limited to the outside periphery of widened/restored River stretches (such as Taylor Yard and Piggyback Yard). Many of the design drawings show substantial "hard-scaped" recreational features well within widened-reach restoration areas. Limiting recreational structures within the interior of restoration areas would both reduce potential for flood damage/maintenance of expensive structures, and would likely increase the biological function in these widened reaches for native species. The proposed construction of instream and floodplain hard structures that are out of context with naturally functioning systems (e.g., retaining walls, curbs, formal paved or heavily compacted or surfaced paths, boardwalks, grade control structures, etc.) should be minimized within restored areas in widened reaches (Kauffman et al. 1993). Also, such hard structures typically reduce the actual and perceived "wild" nature of areas, reducing the effective nature experience for people (Louv 2012, Cookson 2013).[17] We recognize that recreation enhancement projects within the River should inspire new River "stewards," who would be fundamental in the protection of these natural systems in the future. As such, we suggest designing "organic" recreation enhancement features that instill "adventure" and "challenge," in part through subtle engineering solutions that accommodate River recreation without degrading development of natural River ecosystem features and functions (e.g., see Borgman 1995). Pursuant to our Connecting People with Nature policies, we suggest that Project designs be modified with a greater emphasis on restoration of (and access to) the "wildness" of the River within these widened reaches, to the fullest extent practicable. Compared to current designs, such restoration would likely result in higher abundance of native fish and wildlife and greater levels of native biodiversity, with resultant enhanced opportunities for uncommon wildlife observation and nature experiences.[18]

4. Similar to our suggestions regarding Project recreation structures above, we suggest that the potential ecological interactions between the riparian and aquatic ecosystems be

[17] In email attachment to us dated 25 November 2014, the Corp noted: "As required, the Recreation Plan was developed after restoration features were planned. Recreation features include passive activities such as hiking, walking, and wildlife viewing. Widened areas supporting restoration of more natural hydrology such as Taylor Yard and LATC (a.k.a. Piggyback Yard) will support a limited length of dirt/gravel trails that will not impede hydrologic and ecologic functioning. Recreation structures such as restrooms and parking lots will be limited to the outside edges of widened areas and along overbank recreation trails. New trails throughout the project area will be unpaved, and certain currently paved access roads will be converted to dirt/gravel."

[18] Please see additional information at: http://www.fws.gov/home/fwn/pdf/NewsSuFall07.pdf, https://www.facebook.com/USFWSPacificCPWN, and http://www.fws.gov/letsgooutside/families.html

reflected more fully in the Project restoration and flood damage reduction features proposed. We suggest minimization of instream flow-control hard structures and unburied hard streambank slope protection in widened reaches, particularly along the riverine-riparian interface. These features often result in severed linkages between aquatic and riparian ecosystems (Kauffman et al. 1997). Any new essential instream and riparian hard-structure features (e.g., flow control and retaining walls, culverts, etc.) should be naturally complex (e.g., buried rock instead of surface concrete where practicable), accelerate riparian recovery, and imitate natural processes and functions (Kauffman et al. 1997). While acknowledging the context of the Study Area, the hydrology designs for widened River reaches to be restored (such as Taylor Yard and Piggyback Yard) should accommodate, to the maximum extent practicable, the dynamic and episodic nature of surface low and high River flows and the fluvial processes that were natural to the River, including water inlet and outlet structures that provide for a relatively natural high-flow hydrograph to newly created riparian areas. Restoration designs for low-flow channel paths and water inlet/outlet structures for widened reaches should emulate the full range of natural flow events and groundwater levels that original riverine and riparian terrace natural communities were subjected to before development. Restoration designs should reflect and emulate the fact that the natural River channel and riparian zones were (historically) dynamic both spatially and temporally, and that episodic denudation flood flows are natural and necessary to riparian integrity (e.g., cycling of seral stages) in the Study Area.

While we understand the major design constraints of the Project area, we suggest that the current proposed Project designs (even though an improvement over existing conditions) would retain many of the existing rather simplified ("naturalistic") features of the River in widened/restored areas. These reaches of low natural heterogeneity, as designed, would have continuing negative influences on local channel hydrodynamics, channel morphology, and native streambank surface cover and function for native species. As such, these features would likely have long-term detrimental influences on important riparian/aquatic interactions by reducing shade over water, stream nutrient inputs, and woody debris inputs, and ecosystem productivity would not meet its full potential.

The riverine and riparian ecosystems that are expected to be at least partially restored by the proposed Project are episodic disturbance oriented/dependent ecosystems. As such, in areas where the River would be substantially widened, we suggest that Project designs should not intend to fully "lock" the low-flow channel in one place, but instead should allow for some limited amount of channel migration over time between the "sideboards" otherwise necessary for flood damage reduction capacities (in the heavily constrained context of the Project area). Almost all restored floodplain terrace ground surfaces should be well within the distances to groundwater that can be utilized naturally by the expected native riparian vegetation and designed for appropriate episodic succession-setting flooding events necessary to sustain the target natural communities (e.g., willow-

cottonwood woodland) and habitats (e.g., vireo habitat) in the long-term, with no reliance on periodic replanting for replacement recruitment.[19]

5. Within the Project portions of the River that would not be widened by the proposed Project, we suggest that ecological enhancement, native landscaping, recreation, buffer, and/or stream water shading be the stated goals for and focus of Project activities in most of these areas.. While providing some ecological improvement , we suggest that these features be treated as ecological enhancement because the substantial constraints in these reaches preclude self-sustaining full or partial restoration of most of the important riverine or riparian ecological functions of the River. Expectations of substantial occupation or connectivity use by typical target native species in portions of the River that would not be widened should be low, with the exceptions of any implementation of specific artificial enhancements (such as developed artificial snags, nesting cavities and shelves, and riverine hardscape pools and riffles). . Establishment of native trees on the south side of the River where water shading can be accomplished would enhance stream water temperature reductions thatmay help provide for limited use of other Project areas by native fish. . We find this distinction between restoration and enhancement to be important due to the precedent this could set for ecological restoration within other projects.[20]

6. We suggest that the Project ecological guidelines and designs for restoration be based on typical restoration ecology[21] science and terminology, and less on landscape

[19] In email attachment to us dated 25 November 2014, the Corp noted: "...the Corps' intent is that that widened areas will support high levels of heterogeneity. The active channel will migrate and change form and terraces and sediments will be redistributed with storm events. Initial grading during construction of widened areas will be heterogeneous and diverse topography will be created. The dynamic and episodic nature of the River flows will be accommodated in these areas, allowing the River to carve new channel configurations over time. Vegetation is expected to be denuded with natural higher flows and velocities, and be re-established naturally. Any grade stabilizers in these areas will be well buried perpendicular to flows, and not visible from the surface. Once initially planted and a seed bank established, passive recovery will be the method for re-vegetation after flood events. Such natural hydrologic functions would support riparian/aquatic interactions by providing habitat elements including shade over water, and stream nutrient and woody debris inputs."

[20] In email attachment to us dated 25 November 2014, the Corp noted: "The Corps disagrees that individual project features should be parsed out as "restoration" vs. "landscaping" vs. "greening". While the definition of "restoration" as provided by USFWS is not achievable in every portion of the project area, the project as a whole meets the Corps' criteria for ecosystem restoration, in that all features collectively contribute to habitat and connectivity creation and improvement throughout the project area. In this way, wildlife is provided new large areas (e.g. 35+ acre sites such as Verdugo Wash, Taylor Yard, and LATC (a.k.a. Piggyback Yard)) of restored habitat with a means to move between them, as well as into other surrounding natural areas."

[21] Restoration ecology: the scientific study of repairing disturbed ecosystems through human intervention. Ecological restoration implementation aims to recreate, initiate, or accelerate the recovery of an ecosystem that has been disturbed.

architecture[22] science and terminology. Baseline and post-Project implementation surveys/assessments for fish, amphibians, reptiles, and the associated parameters of potential habitats for target species should be performed in the Study Area. Non-native species with considerable potential to adversely affect Project restoration success should also be assessed, including potential source populations in the watershed.

The following water quality parameters of specific Project reaches should be evaluated and mapped as part of Project planning and implementation: water temperature, dissolved oxygen, pH, conductivity, turbidity, substrates, water velocities, channel forms (e.g., deep or exotic predator-free pools), flood refugia and back-channel areas, woody debris and leaf litter. These parameters and natural community mapping should be analyzed relative to current non-native fish, amphibian, and reptile occupation of the Study Area. These parameters should then be compared to known ideal (and minimum) necessary natural parameters and conditions of habitats normally utilized by species such as Santa Ana sucker, arroyo chub, two-striped garter snake, California toad, Baja California treefrog, and other appropriate restoration indicator and surrogate/umbrella species. This survey information should be used to inform basic Project design development (e.g., to provide functional habitats for specific native fish and aquatic wildlife species), as well as post-construction adaptive management decisions, and future restoration projects in the watershed.[23]

7. In relation to the needs of any of the seven native fish that could potentially be re-established in the River (such as arroyo chub), the proposed Project as currently designed would appear to: a) lack necessary complexity of habitats; b) lack necessary substrates and channel forms, including refugia; c) provide low food availability; d) be subject to excessive water temperatures; e) have an overabundance of large areas of open water; and f) provide/retain competitive advantage for exotic fish species over native species. The Project ecological restoration designs should provide higher priority to creating the natural parameters and conditions needed for the restoration of at least one specific native

[22] Landscape architecture: the art and practice of designing the outdoor environment, especially designing parks or gardens together with buildings and roads.

[23] In email attachment to us dated 25 November 2014, the Corp commented: "The Monitoring and Adaptive Management Plan (MAMP) to be included in the Final IFR document includes pre- and post-restoration monitoring to evaluate the performance of restoration actions. Habitat evaluations will be performed as restoration progresses to assess habitat values of restored features and inform adaptive management decisions. These evaluations require an inventory of wildlife species based on observations of wildlife and signs of usage, mapping of habitat, as well as inventory of habitat elements present within the project footprint. Monitoring of riparian, marsh, and fish habitat is outlined in the MAMP, which evaluates various habitat parameters including, but not limited to, invasive plants, hydrology, soils, sedimentation, water quality, in-stream structure, and also includes bird, fish, and amphibian species surveys. These habitat parameters can be compared to ideal reference conditions to inform adaptive management decisions and direct restoration actions. The MAMP will be revised to include a list of target species in order to direct restoration of habitat elements in ways that would benefit the life history requirements of those species."

fish species, to the extent practicable, so as to both support their basic survival and to give them competitive advantages over exotic species that would likely continue to occupy the Study Area following Project implementation (e.g., see Moyle and Light 1996). Assessments of whether proposed Project designs would likely provide these specific natural conditions for target species, including expectations of associated non-native species competition, should be provided before Project designs are developed further.[24]

8. In our opinion, the various alternatives proposed would provide limited restored functions for typical stream restoration target species. Considering the heavy constraints of the Study Area, some excellent opportunities exist for artificial enhancement measures, particularly where restoration is not practicable. Additionally, these types of features (e.g., large hollow snags, tall steep river banks) are not likely to otherwise develop in the short-term or over time in significant number/area within the Study Area due to the limited floodplain widths and modified hydrology in even the widest proposed restoration sites of the Project. The directed artificial measures suggested below would likely be substantially and quickly utilized by some uncommon or sensitive bird and bat species and could provide very attractive and important watchable wildlife opportunities along the River for residents and visitors. These features could be effectively incorporated into many otherwise heavily constrained channel reaches and off-channel adjacent areas that otherwise lack the space to support aquatic or riparian restoration features (such as artificial features added to walls, bridges, and other hard structures). These include: provision of various nest cavities and structures (e.g., for wood duck, barn owl, osprey, tree swallow, white throated swifts, and western bluebird) such as nest holes/crevices created in/on new and existing hard structures, and nest platforms/shelves/boxes; placed/erected large hollow snags and suitable vertical shafts with heavy inside texture (e.g., swifts); and creation of artificial large steep sandy/earth banks (e.g., northern rough-winged swallow and belted kingfisher; note that these supported banks could functionally occur along channel tops in some areas, without affecting flood conveyance). Directed artificial enhancement measures for some local bat species (e.g., Yuma myotis, western pipistrelle, Mexican free-tailed bat, and big brown bat) should include increasing availability of roosts in the Project area by providing large hollow vertical snags and shafts, rock outcrops, bat boxes, and artificial roost cavities designed

[24] In email attachment to us dated 25 November 2014, the Corp commented: "The design drawings at the feasibility level are conceptual, and will be revised and refined during the detailed design stage to include the necessary parameters that would support native fish habitat in widened areas and in overbank areas during the detailed design phase. In concrete reaches, where features are more limited by maintenance of flood capacity, designs will focus on providing refugia and passage. As discussed with USFWS, designs will focus on providing the hydrology, substrates, and habitat elements required by Arroyo chub and Santa Ana sucker. In the Draft IFR, in Section 4.2.2, Santa Ana sucker are identified as a target for restoration of native fish habitat. Other target fish species for restoration as well as their general requirements will be clarified in the Final IFR document."

into new hard structures.. Almost all of these artificial features would require some limited periodic maintenance or replacement.

9. Brown-headed cowbird occupation of the Study Area should be assessed during Project planning, including potential source populations in the region within several miles. Cowbird feeding areas (e.g., outdoor human feeding areas, stables and other equestrian facilities, and some turf zones) should be reduced or modified in the Project general region, to the extent practicable. If brown-headed cowbird parasitism levels are still likely to be problematic for sensitive birds potentially occurring within the Project area, then management of cowbird numbers should be performed by the Project for the life of the Project, such as through trapping at local horse stables and other cowbird source or breeding areas, with standard cowbird traps. We recommend a long-term management strategy for cowbirds be developed by the City and Corps for the lowland region of the River.

10. Restoration of basic natural stream features is a highly important first design step in the re-establishment of any of the native fish to the River (e.g., channel substrates, water quality/flow, channel configuration/complexity). Nevertheless, many of the factors affecting the current extirpation of most native fish in the River extend well beyond the riparian/stream ecotone. We suggest that riparian and riverine native fish restoration designs within the Project's widened reaches include specific measures (where practicable) for development of: a) water shaded by riparian woody vegetation; b) sediment and leaf-fall inputs to aquatic areas; c) channels with steep native-soil streambanks and in-channel woody debris; d) substantial channel diversity including riffle-run-pool-glide sequences, point bars; e) back channel refugia that utilizes upwelling groundwater (low temperature water of higher quality) and provides protected waters during larger flood flow events; f) appropriate channel substrates, including sand, gravel and cobble; g) potential for some channel movement/meander over time in widened channel areas; h) minimal areas of wide ponded or open water; i) riparian hiding cover for native fish (e.g., herbaceous plants and woody shrubs providing overhanging vegetation on stream banks for hiding cover); and j) target fish species passage and appropriate water temperatures and oxygenation levels, including shading of water surfaces through native tree landscaping on the south side of non-widened channel reaches, where practicable and appropriate. Periodic artificial substrate import (e.g., sand and gravel) into the upper end of the Study Area during the Project life will likely be necessary to maintain some important fluvial processes and conditions for native fish through the Study Area, considering the artificial fluvial conditions of the watershed and upstream channel. The Project should initiate an aquatic exotic species control program for the Study Area: complementary to the level of competitive advantages to native target species provided by the Project (e.g., through channel morphology, riparian cover, etc., as outlined above), periodic direct control of the problematic exotic aquatic species should be implemented in the Study Area, including mosquitofish, tilapia, common carp, green sunfish, fathead minnow, bullfrog, red swamp crayfish (*Procambarus clarkii*), and other species, as appropriate. The closer the River is restored to natural conditions, the greater the competitive advantage for native species over exotic species, with

concomitantly less control of exotic species needed. Considering the conditions of the watershed and the constraints of the Study Area, it is very likely that periodic control of some exotic aquatic species would be needed in perpetuity in order to maintain native fish and their habitats in the Study Area.

11. Feral mammal populations should be controlled in Project restoration areas, as practicable and appropriate. As part of restoration designs, competitive advantage over exotic mammals should be provided to native species to the extent practicable.

12. Project designs and objectives should include greater specificity regarding minimum levels of ecological functions and values to be created or enhanced. As currently written, the designs, objectives, and criteria are difficult to assess as to the basic or minimum ecological functions that would be gained. We suggest the use of appropriate umbrella species to help briefly outline/translate minimum ecological functions to be restored in meaningful ways, and for planning, design, and implementation purposes.

    As such, we suggest that the Project include restoration of specified minimum acreages of functional habitats in the long-term for typical restoration planning species for southern California riparian areas, including vireo, chat, and yellow warbler.[25] These species are excellent umbrella planning species that guide restoration for a variety of currently uncommon or extirpated native riparian wildlife species in the Project area by targeting the necessary components of relatively high-function riparian natural communities with a variety of vegetation structures, densities, and seral stages. For example, vireo, yellow warbler, and chat typically utilize different forms, configurations, and seral stages of riparian scrub/woodland/forests.

13. Any federally listed species occupying the Project footprint should be the subject of consultation under the Endangered Species Act, as appropriate. An unknown number of vireo likely occupy the Project direct activity footprint and would likely be positively affected by the beneficial aspects of the Project and temporarily adversely affected (through loss of habitat and function) by the action's construction activity of riparian vegetation clearing within seasonally occupied habitat in the River. As such, the action would likely warrant consultation. Appropriate surveys should be performed to determine occupation and usage areas (protocol surveys of the Study Area for vireo have apparently not been performed in the last decade; recent surveys of all appropriate vireo habitat should have been performed and reported during development of the 2013 EIS/EIR). Any listed species expected to be attracted to the Project area that would subsequently be potentially adversely affected by Project operations or maintenance

[25] The 2013 EIS/EIR provides a proposed target objective to restore a "minimum of one habitat node with a minimum width of 250 meters (820 feet) to support high frequencies" of vireo. In our opinion this and the other related objectives remain too vague to effectively evaluate the minimum that would be accomplished for target species from an ecological restoration perspective.

should also be monitored and addressed through consultation (for instance, potential translocation and establishment of Santa Ana sucker).[26]

14. A table describing the various acreages of all of the existing conditions in the Project alternatives' direct activity footprints should be developed. Only portions of this information were available in the 2013 EIS/EIR in any form. This table (and related map) should describe land uses, wetlands, and natural communities acreages (pre- and post-Project alternative), and should clearly demonstrate the specific biological impacts and gains that would be provided by the proposed Project alternatives, by acreage and natural community/land use type. In this way the Project can be evaluated for what resources would be lost and gained with implementation. We suggest that this be standard practice for most Corps projects.

The Service offers the following related suggestion that is much larger in scope than (and not specific to) the proposed Project:

With the goal of partially restoring greater ecological functions and nature access to the River, the Corps, City of Los Angeles, other local cities, County of Los Angeles, and resource agencies should continue to develop and implement restoration projects along the lengths of the River and its major tributaries. The focus of these projects should be on:

- Re-establishing some substantial areas of former floodplain with partial restoration of riparian natural communities;
- Channel widening and partial restoration of riverine natural communities and natural channel geomorphology and substrates;
- Partial restoration of fluvial and hydrological processes;
- Partial restoration and enhancement of target native species (e.g., arroyo chub) and their various habitats, including linkages and corridors for appropriate indicator/umbrella species (e.g., bobcat);
- Improving water quality, water temperatures, and native fish passage/linkages;
- Improving watershed processes related to contaminants and the natural "spreading out" of stream flow peaks during storm events; and
- Providing unstructured recreation opportunities for people in nature (e.g., see Louv 2011).

[26] In email attachment to us dated 25 November 2014, the Corp commented: "Section 5.5.1 of the Draft IFR outlines that Section 7 of the ESA requires consultation with USFWS if adverse impacts to listed species are anticipated. Under Section 10.1 of the Draft IFR, the Corps determined that the proposed project would have no effect on federally listed threatened or endangered species. The Corps will continue to review conditions to determine if endangered species may be present, and coordinate or consult with USFWS as necessary through the design and construction of each project phase/feature. Endangered species surveys will be conducted during the detailed design phase and in the nesting season(s) immediately prior to construction within any potentially suitable areas to confirm presence or absence of federally and state listed threatened and endangered species. The Corps will continue to coordinate with the USFWS throughout the design and construction period, and consult under ESA if necessary."

LITERATURE CITED

Adamus, P., T.J. Danielson and A. Gonyaw. 2001. Indicators for monitoring biological integrity of inland freshwater wetlands: A survey of North American literature (1990-2000). US Environmental Protection Agency, Office of Water, Wetlands Division. Washington, DC.

Andren, H. 1992. Corvid density and nest predation in relation to forest fragmentation: a landscape perspective. *Ecology* 73:794-804.

Andren, H. 1994. Effects of habitat fragmentation on birds and mammals in landscapes with different proportions of suitable habitat: a review. *Oikos* 71:355-366.

Arnett, R.H. 1985. American Insects: A Handbook of the Insects of America North of Mexico. Van Nostrand Reinhold, New York.

Barbour, R.W., and W.H. Davis. 1969. Bats of America. Univ. of Kentucky Press, Lexington. 286 pp.

Barbour, M.J. and J. Major. 1977. Terrestrial Vegetation of California. Wiley Press. New York, New York. 1002 pp.

Barkley, L.J. 1993. Mammals of the Los Angeles River. ***In***: K.L. Garrett (ed.). 1993. The Biota of the Los Angeles River. Natural History Museum of Los Angeles County and the Foundation for the California Department of Fish and Game, Contract # FG 0541.

Bell, H. 1881. Reminiscences of a Ranger: Early Times in Southern California. Reprint Services Corporation.

Bell, J.F., J.S. Wilson, and G.C. Liu. 2008. Neighborhood Greenness and Two-Year Changes in Children's Body Mass Index. *American Journal of Preventive Medicine* 35(6):547-553.

Bell, E., S.M. Albers, J.M. Krug, R. Dagit. 2011. Juvenile growth in a population of southern California steelhead (*Oncorhynchus mykiss*). *California Fish and Game* 97(1):25-35.

Bezy, R.L., C.A. Weber, and J.W. Wright. Reptiles and Amphibians of the Los Angeles Basin. ***In***: K.L. Garrett (ed.). 1993. The Biota of the Los Angeles River. Natural History Museum of Los Angeles County and the Foundation for the California Department of Fish and Game, Contract # FG 0541.

Brode, J., and R.B. Bury. 1984. The importance of riparian systems to amphibians and reptiles. Pp. 30-36 ***in***: R.E. Warner and K. Hendrix (eds.). California riparian systems: ecology, conservation, and productive management. Univ. of California Press, Berkeley.

Bond, C.E. and T.T. Kan. 1973. *Lampetra* (*Entosphenus*) *minima* n. sp., a dwarfed parasitic lamprey from Oregon. *Copeia* 3: 568-574.

Borgman, A. 1995. The Nature of Reality and the Reality of Nature. ***In***: M.E. Soule and G. Lease (eds.). Reinventing Nature: Responses to Postmodern Deconstruction. Island Press.

Brown, J. and S. Bay. 2004. Organophosphorus pesticides in the Malibu Creek watershed. Pp. 94-102 ***in***: S.B. Weisberg and D. Elmore (eds.). Southern California Coastal Water Research Project 2003- 2004 Biennial Report. Westminster, CA.

Brown, J.S., M. Sutula, C. Stransky and J. Rudolph. 2008. Sediment contaminant chemistry and toxicity of freshwater urban wetlands. Pp. 271-287 ***in***: S. Weisberg and K. Miller (eds.). Southern California Coastal Water Research Project Annual Report 2008. Costa Mesa, CA.

Bunch, R. 2007. Research increasing on child-nature dynamics. *National Conservation Training Center Journal*, Spring/Summer. USFWS.

California Department of Fish and Game (CDFG). 1988. California Wildlife Habitat Relationships System: Valley Foothill Riparian Vegetation. California Department of Fish and Game California Interagency Wildlife Task Group.

California Department of Forestry and Fire Protection (CDF). 2002. Multi-source Land Cover Data (2002 V2). http://www.fire.ca.gov/php/

California Department of Water Resources. 2013. California Irrigation Management Information System. Sacramento, CA: State of California Department of Water Resources. http://www.water.ca.gov/

California Trout. 2011. Southern Steelhead *Oncorhynchus mykiss*. California Trout. http://caltrout.org/pdf/Southern%20Steelhead.pdf

Calsbeek, R., J.N. Thompson, and J.E. Richardson. 2003. Patterns of molecular evolution and diversification in a biodiversity hotspot: the California Floristic Province. *Molecular Ecology* 12:1021-1029.

Campbell, K.R. 1994. Concentrations of heavy metals associated with urban runoff in fish living in stormwater treatment ponds. *Archives of Environmental Contamination and Toxicology* 27:352-356.

Cargnan, V., and M.A. Villard. 2002. Selecting indicator species to monitor ecological integrity: a review. *Environmental Monitoring and Assessment* 78(1):45-61.

Characklis, G.W., and M.R. Wiesner. 1997. Particles, metals, and water quality in runoff from large urban watershed. *Journal of Environmental Engineering* 123:753-759.

Community Conservation Solutions. 2013. Los Angeles River Natural Park, Studio City, San Fernando Valley. http://www.conservationsolutions.org/pdf/LARiver/CCS_LARNP_2011.pdf

Community Conservation Solutions. 2014. Los Angeles River Greenway Trail Coldwater Canyon Ave to Whitsett Ave, San Fernando Valley; Creating Public Access and Restoring Natural Habitat. Community Conservation Solutions. http://www.conservationsolutions.org/pdf/LARiver/CCS_LAR-Greenway_2014.pdf

Conard, S., R. McDonald, and R.F. Holland. 1977. Riparian vegetation and flora of the Sacramento Valley. Pp. 47-55 ***in***: A. Sands (ed.). Riparian forests in California: their ecology and conservation. *Univ. of California, Davis, Institute of Ecology* Publication 15.

Cookson, L. 2013. Wildness, the Forgotten Partner of Evolution. *Journal of the Community of Ecopsychologists*. http://www.ecopsychology.org/journal/ezine/wildness.html#top

Crespí, J. 2001. A Description of Distant Roads: Original Journals of the First Expedition into California, 1769-1770, translated and edited by A.K. Brown. San Diego State University Press.

Dahl, T.E. 1990. Wetland Losses in the United States 1780's to 1980's. USFWS. Washington, DC.

Dark, S., D. Bram, J. Osuna, J. Monteferante, T. Longcore, R. Grossinger, E. Beller. 2011. Historical ecology of the Southern California Coastal Water Research Project: technical report #671. Ballona Creek Watershed. ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/671_BallonaHistoricalEcology.pdf

Dawdy, D.R. 1989. Feasibility of mapping riparian forests under natural conditions in California. Pp. 63-68 ***in:*** Proceedings of the California Riparian Systems Conference. GTR PSW-110, Davis, CA.

DeSante, D.F., and T.L George. 1994. Population trends in the landbirds of western North America. ***In***: J.R. Jehl, Jr. and N.K. Johnson (eds.). A Century of Avifaunal Change in Western North America. *Studies in Avian Biology* 15:173-190.

Dobkin, D.S. 1994. Conservation and management of neotropical migrant landbirds in the Northern Rockies and Great Plains. University of Idaho Press, Moscow.

Dunier, M. and A.K. Siwicki. 1993. Effects of pesticides and other organic pollutants in the aquatic environment on immunity of fish: a review. *Fish and Shellfish Immunology* 3:423-438.

Dunn, J.L., and K.L. Garrett. 1997. A field guide to warblers of North America. Houghton Mifflin Company, Boston, Massachusetts.

Faber, P.M. (ed.). 2003. California Riparian Systems: Processes and Floodplain Management, Ecology and Restoration. 2001 Riparian Habitat and Floodplain Conference. Riparian Habitat Joint Venture, Sacramento, CA.

Fath, B. D., S. E. Jørgensen, B. C. Patten, and M. Straškraba. 2004. Ecosystem growth and development. *BioSystems* 77:213–228.

Friends of the Los Angeles River. 2008. State of the River 2: The Fish Study (FoLAR's 2008 Los Angeles River Fish Study). September. http://folar.org/education/rainfall/

Friedman, J.M., M.L. Scott, and G.T. Auble. 1997. Water management in cottonwood forest dynamics along prairie systems. Ecology and conservation of the Great Plains. Springer-Verlag, New York, NY.

Gallagher, S.R. (ed.). 1997. Atlas of Breeding Birds, Orange County, California. Sea and Sage Audubon Press, Irvine, CA.

Galli, F.J. 1988. A Limnological Study of an Urban Stream Stormwater Management Pond and Stream Ecosystem. George Mason University. Fairfax, VA.

Garcia-Hernandez, J., K.A. King, A.L. Velasco, E. Shumilin, M.A. Mora, and E.P. Glenn. 2001. Selenium, selected inorganic elements, and organochlorine pesticides in bottom material and sediment contaminant chemistry and toxicity in freshwater urban wetlands biota from the Colorado River Delta. *Journal of Arid Environments* 49:65-89.

Garrett, K.L. (ed.). 1993. The Biota of the Los Angeles River. Natural History Museum of Los Angeles County and the Foundation for the California Department of Fish and Game, Contract # FG 0541.

Garrett, K., and J. Dunn. 1981. Birds of Southern California: Status and Distribution. Los Angeles Audubon Soc., Los Angeles.

Glenn, E.P., J. Garcia, R. Tanner, C. Congdon, and D. Luecke. 1999. Status of wetlands supported by agricultural drainage water in the Colorado River Delta, Mexico. *Hortscience* 34:39-45.

Greco, S.E., and E.W. Larsen. 2014. Ecological design of multifunctional open channels for flood control and conservation planning. *Lanscape and Urban Planning* 13:14-26.

Greenfield, D.W., S.T. Ross, and G.D. Deckert. 1970. Some aspects of the life history of the Santa Ana sucker, *Catostomus* (*Pantosteus*) *santaanae* (Snyder). *California Department of Fish and Game* 56(3):166-179.

Grenfell, W.E. 1988. A Guide to Wildlife Habitats of California; Lacustrine. California Department of Forestry and Fire Protection. 166 pp.

Grinnel, J. 1898. Birds of the Pacific Slope of Los Angeles County. Pasadena Academy of Sciences, Publication No. 11.

Grinnel, J. and A.H. Miller. 1944. The distribution of the birds of California. *Pacific Coast Avifauna* No. 27. Berkely, CA.

Gumprecht, B. 1999. The Los Angeles River: Its Life, Death, and Possible Re-Birth. Johns Hopkins University Press, Baltimore.

Hall, J. 2010. LA Creek Freak: Chirps of praise for LA River willows and floodplains (excerpted message from Kimball Garrett). http://lacreekfreak.wordpress.com/2010/06/28/chirps-of-praise-for-la-river-willows-and-floodplains/

Hall, J., and J. Litton. 2008. LA Creek Freak: Fish in the Los Angeles River. http://lacreekfreak.wordpress.com/2008/10/28/fish-in-the-los-angeles-river/

Harris, M.L., C.A. Bishop, J. Struger, M.R. Van Den Heuvel, G.J. Van Der Kraak, D.G. Dixon, B. Ripley, and J.P. Bogart. 1998. The functional integrity of Northern Leopard Frog (*Rana pipiens*) and Green Frog (*Rana clamitans*) populations in orchard wetlands. *Environmental Toxicology and Chemistry* 17:1338-1350.

Hearing on Coordination Act Amendments. 1958. Before the Subcommittee on Fisheries and Wildlife Conservation of the Committee on Merchant Marine and Fisheries, House of Representatives, 85th Congress, 2nd Session, June 27, 1958

Herbold, B., and P.B. Moyle. 1986. Introduced species and vacant niches. *American Naturalist* 128:751-760.

Holland, R.F. 1988. Preliminary descriptions of the terrestrial natural communities of California. California Wildlife Habitat Relationships System, State of California, The Resources Agency.

Holland, C.C., J.E. Honea, S.E. Gwin and M.E. Kentula. 1995. Wetland degradation and loss in the rapidly urbanizing area of Portland, Oregon. *Wetlands* 15:336-345.

Holland, V.L. and D.J. Keil. 1995. California Vegetation. Kendall/Hunt Publishing Company, Dubuque, Iowa. 516 pp.

Hubbs, C.L., and L.C. Porter. 1971. Distribution, phylogeny, and taxonomy. Pp. 1-65 ***in***: M.W. Haridsty and I.C. Potter (eds.). The Biology of Lampreys. Academic Press, London.

Jensen, D., S. Torn, and J. Harte. 1993. In our hands: a strategy for conserving California's biological diversity. University of California Press. Berkeley, California.

Johnson, J., and F. McCormick. 1979. Strategies for protection and management of floodplain wetlands and other riparian ecosystems. General Tech. Report WO12. U.S. Forest Service.

Johnson, R.R., C.D. Ziebell, D.R. Patton, P.F. Ffolliot, and R.H. Hamre. 1985. Riparian ecosystems and their management: reconciling conflicting uses. General Tech. Report GM-120. U.S. Forest Service. Fort Collins, CO.

Katibah, E.F. 1984. A brief history of riparian forests in the Central Valley of California. ***In:*** R.E. Warner and K.M. Hendrix (eds). California Riparian Systems: Ecology, Conservation, and Productive Management. University of California Press Ltd., London.

Katznelson, R., W.T. Jewell, and S.L. Anderson. 1995. Spatial and temporal variations in toxicity in an urban-runoff treatment marsh. *Environmental Toxicology and Chemistry* 14:471-482.

Kauffman, J.B., R.L Beschta, N. Otting, & D. Lytjen. 1997. An ecological perspective of riparian and stream restoration in the western United States. *Fisheries* 22:12–24.

Kauffman, J. B., R.L. Beschta, and W.S. Platts. 1993. Fish habitat improvement projects in the Fifteenmile Creek and Trout Creek Basins of Central Oregon: field review and management recommendations. U.S. Department of Energy, Bonneville Power Administration.

Knight, D. 1994. Mountains and Plains: The Ecology of Wyoming Landscapes. New Haven: Yale University Press. 338 p.

Knopf, F.L., R.R. Johnson, T. Rich, F.B. Samson, and R.C. Szaro. 1988. Conservation of riparian ecosystems in the United States. *Wilson Bulletin* 100:272-284.

Kramer, G. 1988. Fresh Emergent Wetland in A Guide to Wildlife Habitats of California. California Department of Forestry and Fire Protection. 166 pp.

Kwan J.L., S. Kluh, M.B. Madon, W.K. Reisen. 2010. West Nile virus emergence and persistence in Los Angeles, California, 2003–2008. *American Journal of Tropical Medical Hygiene* 83:400–412.

Langton, C.G. 1992. Life at the edge of chaos. *Artificial Life* II 10:41–91.

Levin, S.A. 1992. The problem of pattern and scale in ecology: the Robert H. MacArthur award lecture. *Ecology* 73:1943–1967.

Los Angeles Almanac. 2013. Total Seasonal Rainfall (Precipitation) Los Angeles Civic Center, 1877-2012. http://www.laalmanac.com/weather/we13.htm

Los Angeles, City of. 2007. Los Angeles River Revitalization Master Plan. City of Los Angeles, Department of Public Works. http://www.lariver.org/index.htm

Los Angeles, County of. 2013. LA County.gov. http://portal.lacounty.gov/wps/portal/lac/residents/

Los Angeles River Revitalization Corporation (LARRC). 2011. Los Angeles River: Water Quality. http://thelariver.com/about/water-quality/

Louv, R. 2005. Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder. Workman Publishing.

Louv, R. 2011. The Nature Principle: Reconnecting with Life in a Virtual Age. Algoquin.

Lowther, P. E., C. Celada, N.K. Klein, C.C. Rimmer, and D.A. Spector. 1999. Yellow Warbler (*Dendroica petechia*). ***In:*** A. Poole and F. Gill (eds.). The Birds of North America. No. 454. Philadelphia.

Maltby, L., D.M. Forrow, A.B.A. Boxall, P. Calow, and C.I. Betton. 1995. The effects of motorway runoff on freshwater ecosystems. *Environmental Toxicology and Chemistry 14:1079-1101.*

Manley, P. and C. Davidson. 1993. A risk analysis of Neotropical migrant birds in California; U.S. Forest Service report. USFS Region 5. San Francisco, CA.

Mazor, R.D., D.J. Gillett, K. Schiff. 2011. Ecological Condition of Watersheds in Coastal Southern California: Summary of the Stormwater Monitoring Coalition's Stream Monitoring Program First Year (2009).

McBroom, J.T. 1958. Meaning and Promise of the New Fish and Wildlife Coordination Act. Prepared for presentation by J.T. McBroom, Chief, Branch of River Basin Studies, USFWS, Department of the Interior, at the Annual Meeting of the International Association of Game, Fish and Conservation Commissioners, Philadelphia, Pennsylvania. September 11, 1958. River Basins Manual, Part A-11, Legal References, Exhibit 2, Fish and Wildlife Coordination Act, A-11.2.2A.

Messick, T. 1997. California Floristic Province: California and Oregon USA and Baja California, Mexico. Pp. 63-73 ***in***: S.D. Davis, V.H. Heywood and A.C. Hamilton (eds.). Centers of Plant Diversity: a Guide and Strategy for their Conservation. Vol. 3, The Americas. The World Wildlife Fund (WWF) and IUCN - The World Conservation Union. IUCN Publications Unit, Cambridge (U.K.).

Miller, R., and C.L. Hubbs. 1969. Systematics of *Gasterosteus aculeatus*, with particular reference to intergradation and introgression along the Pacific Coast of North America: a commentary on a recent contribution. *Copeia* 52-69.

Moyle, P.B. 1976. Inland fishes of California. University of California Press, Berkeley, California.

Moyle, P.B. 2002. Inland Fishes of California. University of California Press, Berkeley, California.

Moyle, P.B., and B. Herbold. 1987. Life-history patterns and community structure in stream fishes of western North America: Comparisons with eastern North America and Europe. Pp. 25-32 ***in***: W.J. Matthews and D.C. Heins (eds.). Community and Evolutionary Ecology of North American Stream Fishes. University of Oklahoma Press, Norman, Oklahoma.

Moyle, P.B and T. Light. 1996. Fish invasions in California: do abiotic factors determine success? *Ecology* 77(6): 1666-1670.

Moyle, P.B., and R.M. Yoshiyama. 1992. Fishes, aquatic diversity management areas and endangered species: A plan to protect California's native aquatic biota. California Policy Seminar, Berkeley. 222 pp.

Moyle, P.B., R.M. Yoshiyama, E.D. Wikramanayake, and J.E. Williams. 1995. Fish species of special concern, 2nd edition. Report to the California Department of Fish and Game. Sacramento, California.

Myers, N, R.A. Mittermeier, C.G. Mittermeier, G.A.B. da Fonseca, J. Kent. 1999. Biodiversity hotspots for conservation priorities. *Nature* 403:853-858.

Mittermeier, R.A., N. Myers, J.B. Thomsenda, G.A.B Fonseca, and S. Olivieri. 1998. Biodiversity hotspots and major tropical wilderness areas: Approaches to setting conservation priorities. *Conservation Biology* 12:516-520.

Mittermeier R.A., N. Myers, G.P. Robles, G.C. Mittermeier. 1999. Hotspots: Earth's Biologically Richest and Most Endangered Terrestrial Ecoregions. CEMEX Conservation International, Mexico City.

National Oceanic and Atmospheric Administration (NOAA). 2001. Coastal Change Analysis Program (C-CAP): Guidance for Regional Implementation. Technical Report NMFS 123. Department of Commerce. http://www.csc.noaa.gov/crs/lca/pdf/protocol.pdf.

National Research Council. 2002. Riparian areas: functions and strategies for management. Committee on Riparian Zone Functioning and Strategies for Management, Water Science and Technology Board, Board on Environmental Studies and Toxicology, Division on Earth and Life Studies, National Research Council. Washington, D.C., 428 pp.

Nicolis, G., and I. Prigogine. 1977. Self-organization in nonequilibrium systems. Wiley, New York, New York, USA.

NOAA. 2009. Southern California Steelhead Recovery Planning Under the ESA: Headwaters to the Ocean. National Marine Fisheries Service, Long Beach, CA; Presentation by M.H. Capeli, October 27. http://www.coastalconference.org/h20_2009/pdf/2009presentations/2009-10-27-Tuesday/Session%202A-Steelhead%20Recovery/Capelli_Recovering_Southern_California_Steelhead_Under_the_ESA.pdf

NOAA. 2012. Southern California Steelhead Recovery Plan Summary. National Marine Fisheries Service, Southwest Regional Office Long Beach, CA.

Ohlendorf, H.M., R.L. Hothem, and D. Welsh. 1989. Nest sucess, cause-specific nest failure, and hatchability of aquatic birds at selenium-contaminated Kesterson Reservoir and a reference site. *Condor* 91:787-796

Page, L.M. and B.M. Burr. 1991. A field guide to freshwater fishes: North America north of Mexico. Houghton Mifflin Company, Boston, Massachusetts.

Palmer, M.A., E.S. Bernhardt, J.D. Allan, P.S. Lake, G. Alexander, S. Brooks, J. Carr, S. Clayton, C.N. Dahm, J.F. Shah, D.L. Galat, S.G. Loss, P. Goodwin, D.D. Hart, B. Hassett, R. Jenkinson, G.M. Kondolf, R. Lave, J.L. Meyer, T.K. O'Donnell, L. Pagano, E. Sudduth. 2005. Standards for ecologically successful river restoration. *Journal of Applied Ecology* 42:208-217.

Parrott, L. 2010. Measuring ecological complexity. *Ecological Indicators* 10:1069–1076.

Paul, M.J., and J.L. Meyer. 2001. Streams in the urban landscape. *Annual Review of Ecological Systems* 32:333-365.

Raven, P.H. 1988. The California flora. ***In***: M.G. Barbour and J. Major (eds.). Terrestrial Vegetation of California. California Native Plant Society, Sacramento, California. Pp 109-137.

Raven, P.H, and D.I. Axelrod. 1978. Origin and Relationships of the California Flora. University of California Press, Berkeley.

Remington, S. and D. Cooper. 2009. Bat Survey of Griffith Park, Los Angeles, California: Draft Report. Prepared for: Los Angeles Department of Recreation and Parks. 20 February.

Renaud, C.B. 1997. Conservation status of northern hemisphere lampreys (Petromyzontidae). *Journal of Applied Ichthyology* 13:143-148.

Riverside County. 2003. Western Riverside County Multiple Species Habitat Conservation Plan. Riverside Integrated Project. http://www.rcip.org/conservation.htm

Riparian Habitat Joint Venture (RHJV). 2004. The Riparian Bird Conservation Plan: A strategy for reversing the decline of riparian associated birds in California. California Partners in Flight.

River Project, The. 2001. Habitat/Wildlife. *http://www.theriverproject.org/learn/habitat/wildlife*

Robins, C.R., R.M. Bailey, C.E. Bond, J.R. Brooker, E.A. Lachner, R.N. Lea, and W.B. Scott. 1991. A list of common and scientific names of fishes from the United States and Canada, 5th edition. American Fisheries Society, Special Publication 20, Bethesda, Maryland.

Saab, V.A. 1999. Importance of spatial scale to habitat use by breeding birds in riparian forests: a hierarchical analysis. *Ecological Applications* 9:135-151.

Saab, V.A., C.E. Bock, T.D. Rich, and D.S. Dobkin. 1995. Livestock grazing effects on migratory landbirds in western North America. Pp 311-353 ***in:*** T.E. Martin and D.M. Finch (eds.). Ecology and Management of Neotropical Migratory Birds: a synthesis and review of critical issues. Oxford University Press, New York.

Saiki, M.K. 2000. Water quality and other environmental variables associated with variations in population densities of the Santa Ana sucker. Report to SAWPA from USGS/BRD, Western Fisheries Research Center. 117p.

Saiki, M.K., B.A. Martin, G.W. Knowles, and P.W. Tennant. 2007. Life history and ecological characteristics of the Santa Ana sucker, *Catostomus santaanae*. *California Department of Fish Game* 93:87-101.

Sands, A. (ed.). 1977. Riparian forests in California: their ecology and conservation. Institute of Ecology Publication 15. University of California. Davis.

Sands, A., and G. Howe. 1977. An overview of riparian forests in California: their ecology and conservation. ***In***: R.R. Johnson and D.A. Jones (eds.). Importance, Preservation, and Management of Riparian Habitat, a symposium. U.S. Department of Agriculture, Forest Service General Technical Report RM-43, pp. 98-115.

Santos, M.J., H.M. Matos, F. Palomares & M. Santos-Reis. 2010. Factors affecting mammalian carnivore use of riparian ecosystems in Mediterranean climates. *Journal of Mammalogy* 92:1060–1069.

Sawyer, J.O., and T. Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento, California. 471 pp.

Schoenherr, A.A. 1992. A natural history of California. University of California Press, Berkeley.

Schuler, C.A., R.G. Anthony, and H.M. Ohlendorf. 1990. Selenium in wetlands and waterfowl foods at Kesterson Reservoir, California, 1984. *Archives of Environmental Contamination and Toxicology* 19:845-853.

Schueler, T.R. 2000. Environmental Impact of Stormwater Ponds. Article 79 ***in***: T. Schueler and H. Holland (eds.). The Practice of Watershed Protection. Center for Watershed Protection. Ellicott City, MD.

Seavy, N.E., T. Gardali, G.H. Golet, D. Jongsomjit. 2012. Integrating Avian Habitat Distribution Models into a Conservation Planning Framework for the San Joaquin River, California, USA. *Natural Areas Journal* 32(4):420-426.

Seiferling, I., R. Proulx, and C. Wirth. 2014. Disentangling the environmental-heterogeneity–species-diversity relationship along a gradient of human footprint. *Ecology* 95:8.

Sisk, T.D., N.M. Haddad, and P.R. Ehrlich. 1997. Bird assemblages in patchy woodlands: modeling the effects of edge and matrix habitats. *Ecological Applications* 7:1170-1180.

Society for Ecological Restoration. 2004. SER International Primer on Ecological Restoration. Society for Ecological Restoration International Science & Policy Working Group. http://www.ser.org/resources/resources-detail-view/ser-international-primer-on-ecological-restoration

Smith, D. 2013. Perspective: Angelenos' vision of their river is created from a made-up memory. Los Angeles Times. http://www.latimes.com/news/local/la-me-smith-river-20130816,0,6866286.story?page=1#axzz2mXEPTGr5

Stella, J.C., P.M. Rodriguez-Gonzalez, S. Dufour, and J. Bendix. 2013. Riparian vegetation research in Mediterranean-climate regions: common patterns, ecological processes, and considerations for management. *Hydrobiologia* 719:291–315.

Stromberg, J.C., R. Tiller, and B. Richter. 1996. Effects of groundwater decline on riparian vegetation of semiarid regions: the San Pedro, Arizona. *Ecological Applications* 6(1):113-131.

Stromberg, J.C. 1998. Dynamics of Fremont cottonwood (*Populus fremontii*) and saltcedar (*Tamarix chinesis*) populations along the San Pedro River, Arizona. *Journal of Arid Environments* 40 (40):133–155.

Strusis-Timmer, M. 2009. Habitat associations and nest survival of Yellow Warblers in California. Master's Theses. Paper 3682.

Swift, C.C. 2001. The Santa Ana sucker in the Santa Ana River: distribution, relative abundance, spawning areas, and the impact of exotic predators. Report to SAWPA from Larry Munsey International.

Swift, C.C., and J. Seigel. 1993. The Past and Present Freshwater Fish Fauna of the Los Angeles river, Southern Califonria with the Particular Reference to the Area of Griffith Park. ***In***: K.L. Garrett (ed.). 1993. The Biota of the Los Angeles River. Natural History Museum of Los Angeles County and the Foundation for the California Department of Fish and Game, Contract # FG 0541.

Swift, C.C., T.R. Haglund, and M. Ruiz. 1993. The status and distribution of the freshwater fishes of southern California. *Bulletin of the Southern California Academy of Sciences* 92(3):101-167.

Tewksbury, J.J., A.E. Black, N. Nur, V.A. Saab, B.D. Logan, and D.S. Dobkin. 2002. Effects of anthropogenic fragmentation and livestock grazing on western riparian bird communities. *Studies in Avian Biology* 25:158-202.

Unitt, P. 2004. San Diego County Bird Atlas. Proceedings of the San Diego Society of Natural History 39.

University of California. 2013. California Fish Website: California Fish Species. University of California, Agriculture and Natural Resources. http://calfish.ucdavis.edu/location/?uid=5&ds=241

U.S. Army Corps of Engineers (USACE). 2013a. Los Angeles River Ecosystem Restoration Integrated Feasibility Report; Draft Feasibility Study and Environmental Impact Statement/Environmental Impact Report. USACE. September.

USACE. 2013b. Los Angeles River Ecosystem Restoration Feasibility Study: Draft- Appendix G; Habitat Evaluation (CHAP). USACE. September.

USACE. 2014a. Scope of Work, Fish and Wildlife Coordination for Prado Basin Feasibility Study, FY 2014 (Draft). USACE Los Angeles District, Planning Division.

USACE. 2014b. Prado Basin CHAP Wildlife Habitat Assessment Existing and Future Without Project Conditions Report. Northwest Habitat Institute for the Los Angeles Districtict, USACE.

USACE. 2014c. Fish and Wildlife Coordination Act LA River CAR Responses, 11-25-14. Email attachment from Erin Jones, Army Corps, to Mendel Stewart, USFWS, dated November 25, 2014.

USACE. 2014d. LA River CAR Supplemental Info, 11-25-14. Email attachment from Erin Jones, Army Corps, to Mendel Stewart, USFWS, dated November 25, 2014.

U.S. Fish and Wildlife Service (USFWS). 1998. Draft Recovery Plan for the Least Bell's vireo. USFWS Carlsbad Fish and Wildlife Office. http://ecos.fws.gov/docs/recovery_plan/980506.pdf

USFWS. 2001. Biological and conference opinions on the continued implementation of Land and Resource Management Plans for the four southern California National Forests, as modified by new interim management direction and conservation measures (1-6-00-F-773.2). USFWS Carlsbad Fish and Wildlife Office, California.

USFWS. 2006. Least Bell's vireo 5-Year Review: Summary and Evaluation. USFWS Carlsbad Fish and Wildlife Office. http://ecos.fws.gov/docs/five_year_review/doc781.pdf

USFWS. 2009. Unarmored Threespine Stickleback (*Gasterosteus aculeatus williamsoni*) 5-Year Review: Summary and Evaluation. USFWS Ventura Fish and Wildlife Office, California.

USFWS. 2010. Final Rule: Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for Santa Ana Sucker. 75 ***FR*** 77962.

Van Dam, A.R., and W.E. Walton. 2007. Comparison of mosquito control provided by the arroyo chub (*Gila orcutti*) and the mosquitofish (*Gambusia affinis*). *Journal of the American Mosqito Control Association* 23(4):430-41.

Van Wormer, S.R. 1991. A history of flood control in the Los Angeles County Drainage Area. *Southern California Quarterly* 73:55-94.

Welsh, D. and O.E. Maughan. 1994. Concentrations of selenium in biota, sediments, and water at Cibola National Wildlife Refuge. *Archives of Environmental Contamination and Toxicology* 26:452-458.

Western Riverside Biological Monitoring Program (WR Biological Monitoring Program). 2011. Western Riverside Western Riverside County Multiple Species Habitat Conservation

Plan (MSHCP) Biological Monitoring Program Arroyo chub (*Gila orcutti*) Survey Report 2011.

Williams, P.B. and M.L. Swanson. 1989. A new approach to flood protection design and riparian management. USDA Forest Service Gen. Tech. Rep. PSW-110. 1989.

Wren, C.D., C.A. Bishop, D.L. Stewart and G.C. Barrett. 1997. Wildlife and contaminants in constructed wetlands and stormwater ponds: current state of knowledge and protocols for monitoring contaminant levels and effects in wildlife. Technical Report 269. Canadian Wildlife Service. Ontario, Canada.

Wilcox, J. 2012. Assessment of Southern California Steelhead Trout on the Cleveland National Forest. California Trout. http://caltrout.org/wp-content/uploads/2013/05/Assessment-of-Southern-Steelhead-Recovery-Potential_9.21.12.pdf

Yarnell, S.M., J.H Viers, and J.F.Mount. 2010. Ecology and management of the spring snowmelt recession. *Bioscience* 60(2):114-127.

Yousef, Y.M., M. Wanielista, J. Dietz, L. Yin, and M. Brabham. 1990. Final Report-Efficiency Optimization of Wet Detention Ponds for Urban Stormwater Management. University of Central Florida, Florida Department of Environmental Regulation. Orlando, FL.

US Army Corps
Of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX O
Cultural Resources

Part 1 – Programmatic Agreement

Part 2 – Consultation Letters

September 2015

US Army Corps
Of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX O
Cultural Resources Part 1
Programmatic Agreement

September 2015

STATE OF CALIFORNIA – THE NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov

July 3, 2015 In reply refer to: COE_2014_0912_001

Eduardo T. De Mesa
Acting Chief, Planning Division
Department of the Army
Los Angeles District, Army Corps of Engineers
915 Wilshire Boulevard, Suite 930
Los Angeles, CA 90017

RE: Executed Programmatic Agreement, Los Angeles River Ecosystem Restoration

Dear Mr. De Mesa:

Please find enclosed two copies of the executed *Programmatic Agreement Between the U.S Army Corps of Engineers and the California State Historic Preservation Officer Regarding the Los Angeles River Ecosystem Restoration Project, Los Angeles County, California* (PA).

Thank you for seeking my comments and considering historic properties as part of your project planning. If you have any questions, please contact Jessica Tudor, Associate Archaeologist, of my staff at 916-445-7016 or jessica.tudor@parks.ca.gov, or Kathleen Forrest, Historian, at 916-445-7022 or kathleen.forrest@parks.ca.gov.

Sincerely,

Jenan Saunders
Deputy State Historic Preservation Officer

PROGRAMMATIC AGREEMENT
BETWEEN
THE U.S. ARMY CORPS OF ENGINEERS
AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
LOS ANGELES RIVER ECOSYSTEM RESTORATION PROJECT
LOS ANGELES COUNTY, CALIFORNIA

WHEREAS, the U. S. Army Corps of Engineers, Los Angeles District (Corps), in cooperation with the City of Los Angeles (City), is currently conducting the Los Angeles River Ecosystem Restoration feasibility study to evaluate opportunities for ecosystem restoration within the Los Angeles River Basin under the Corps' General Investigation Program; and

WHEREAS, the feasibility study includes an Environmental Impact Statement/Environmental Impact Report prepared jointly by the Corps and City; and

WHEREAS, the Corps has identified Alternative 20 as the preferred alternative, and determined that Alternative 20 constitutes an undertaking as defined in the regulations implementing the National Historic Preservation Act (NHPA) found at 36 C.F.R. § 800.16(y) (hereinafter, the "Undertaking"); and

WHEREAS, the Undertaking involves the restoration of approximately 11 miles in and along the Los Angeles River (River) from Griffith Park to Downtown Los Angeles and generally includes excavation and planting of enclosed drainages, creation of side channels, installation of pre-seeded turf reinforcement mats, planting riparian habitat along channel overbanks, modifying trapezoidal channels, restructuring the confluence at Verdugo Wash, terracing and restructuring banks, widening the River into the historic floodplain at the Taylor Yard and Los Angeles Trailer and Container intermodal yard with softening of some beds and banks stabilized with bank protection, softening the bed and bank of the lower Arroyo Seco, and establishing riparian, wetland and marsh habitat. The Undertaking is described in greater detail in Appendix A, attached hereto and incorporated by reference; and

WHEREAS, the Corps has determined that the Undertaking has the potential to cause effects to properties that are either included on or are eligible for inclusion on the National Register of Historic Places (NRHP); and

WHEREAS, under the Corps' General Investigation Program, the Undertaking would be authorized by Congress at the end of the feasibility stage but prior to the development of project level designs or acquisition of project lands and this authorization would constitute an approval of the Undertaking under Section 106 of the NHPA (54 U.S.C. § 306108; hereafter, "Section 106"); and

WHEREAS, the Undertaking, if approved, may be constructed in phases that correspond to the eight (8) reaches described in Appendix A and consequently Section 106 responsibilities may be conducted and concluded at different times for each phase of the Undertaking; and

WHEREAS, the Corps has consulted with the California State Historic Preservation Officer (SHPO), pursuant to Section 106 and its implementing regulations at 36 C.F.R. § 800.14(b)(3) about this Undertaking, and the signatories have determined that a phased approach for compliance with Section 106 is reasonable for this Undertaking because not all of the potential effects of the Undertaking on historic properties within the Area of Potential Effects (APE) can be known prior to the approval of the Undertaking (36 C.F.R. § 800.14(b)(1)(ii)); and

WHEREAS, the Corps has notified and invited the Advisory Council on Historic Preservation (ACHP) per 36 C.F.R. § 800.6(a)(1)(i)(C) to consult on this Undertaking and this Programmatic Agreement (PA), and as per their letter to the Corps dated October 7, 2014, the ACHP has elected not to participate in this PA; and

WHEREAS, pursuant to the special relationship between the Federal government and Indian tribes, and Section 101(d)(6)(B) of the NHPA, 36 C.F.R. § 800.2(c)(2)(ii), the Corps is responsible for government-to-government consultation with federally-recognized Indian tribes; and

WHEREAS, no federally recognized Indian tribes have been identified as Consulting Parties (defined in Stipulation I.C hereof) to this PA; and

WHEREAS, the non-federally recognized Indian tribes of the Gabrieleno Band of Mission Indians, Fernandeño Tataviam Band of Mission Indians, Gabrielino Tongva Indians of California, Gabrielino –Tongva Tribe, Gabrielino Tongva Nation, Los Angeles City and County Native American Indian Commission, Ti'At Society/Inter-Tribal Council of Pima, and San Gabriel Band of Mission Indians (collectively, "Tribal Organizations") have been invited to consult on this Undertaking and this PA, have been afforded Consulting Party status pursuant to 36 C.F.R. § 800.3(f)(2), and have been invited to be Concurring Parties to this PA; and

WHEREAS, the Corps shall continue to consult with the Tribal Organizations throughout the implementation of this PA regarding effects to historic properties to which they may attach religious and cultural significance, notwithstanding any decision by these Tribal Organizations to decline to be a Concurring Party; and

WHEREAS, the City and California Department of Parks and Recreation (Department) have been invited to consult on this Undertaking and this PA, have been afforded Consulting Party status pursuant to 36 C.F.R. § 800.3(f)(1), and have been invited to be Concurring Parties to this PA; and

WHEREAS, the Corps will continue to consult with any Consulting Party throughout the implementation of this PA regarding effects to historic properties, notwithstanding any decision by a Consulting Party to decline to be Concurring Party.

NOW, THEREFORE, the Corps and the SHPO (individually a "Signatory" and collectively "Signatories") agree that the proposed Undertaking shall be implemented in accordance with the following Stipulations in order to take into account the effects of the Undertaking on historic properties and to satisfy the Corps' Section 106 responsibilities for all individual aspects of the Undertaking.

STIPULATIONS

To the extent of its legal authority and in cooperation with SHPO and other Consulting Parties to this PA, the Corps shall ensure that the following Stipulations are carried out, as indicated:

I. DEFINITIONS

A. The definitions provided in 36 C.F.R. § 800.16 are applicable throughout this PA.

B. ***Concurring Parties***. For purposes of this PA, the Concurring Parties are the City, Department, and Tribal Organizations that have decided to concur by signing this PA.

C. ***Consulting Parties***. Parties that have a consulting role in the Section 106 process. For this PA, Consulting Parties are the Signatories, Concurring Parties, Tribal Organizations and any additional individuals and organizations with a demonstrated interest in the Undertaking.

II. AREA OF POTENTIAL EFFECTS

A. The Corps has determined and documented the APE for the Undertaking in consultation with SHPO. A map of the APE is attached in Appendix B. Modifications of the APE will be made in accordance with Stipulations II.B, II.C, and XI.B.

B. The APE encompasses an area sufficient to accommodate all of the proposed components under consideration as of the date of execution of this PA. If it is determined in the future that the Undertaking may directly or indirectly affect historic properties located outside the currently defined APE, then the Corps, in coordination with SHPO and Concurring Parties, shall modify the APE using the following process:

i) The Corps shall notify the SHPO and Concurring Parties of any change in the APE with a map and description of the change. The SHPO and Concurring Parties shall then have fifteen (15) calendar days or as extended by the Signatories to comment on the modified APE.

ii) If the Signatories agree to the proposal, or if no comments are received within the allotted review time, then the Corps will notify all Concurring Parties of the modification to the APE. The Corps will keep copies of the description and the map on file for its administrative record and distribute copies of each to SHPO and Concurring Parties within thirty (30) days of the day upon which agreement to the modification was reached or as extended by the Signatories.

iii) If the Signatories cannot agree to a proposal for the modification of the APE, then they will resolve the dispute in accordance with Stipulation XII below.

C. Any Concurring Party to this PA may propose that the APE established herein be modified at any time. Any Concurring Party wishing to modify the APE must provide the Corps a map of the proposed modification and a reason for the modification. The Corps will then notify the SHPO and the Concurring Parties that it has received a request for modification within seven (7) days. If the Corps and SHPO agree with the proposal they will follow the steps outlined in Stipulation II.B.ii. hereof. If the SHPO and Corps cannot come to agreement on the modification they will resolve the dispute in accordance with Stipulation XII below.

D. Upon agreeing to a modification to the APE that alters the geographic area, the Corps shall follow the processes set forth in Stipulation III (below) to identify and evaluate historic properties in the revised APE, assess the effects of the Undertaking on any historic properties in the revised APE, and provide for resolution of any adverse effects to such properties, known or subsequently discovered, per Stipulations IV and V below.

III. IDENTIFICATION AND EVALUATION

A. Identification

i) During subsequent planning stages for construction of the Undertaking but prior to any ground disturbing activity, the Corps shall re-evaluate the APE to ensure that it includes all refined elements including access routes, staging areas, and visual and auditory effects to historic properties. If needed, the Corps shall follow the process in Stipulation II (above) to amend the APE of the Undertaking.

ii) The Corps shall seek to identify any additional interested persons pursuant to 36 C.F.R § 800.4(a)(3) and involve them, as appropriate, in consultation and coordination associated with the Undertaking.

iii) The Corps shall continue to consult with interested Tribal Organizations or tribal individuals that attach religious or cultural significance to potential historic properties within the APE and shall respond to any additional request to consult with Tribal Organizations or tribal individuals.

iv) If the Undertaking has the potential to affect historic properties on lands that have not been inventoried for historic properties in excess of five (5) years to date, the Corps will ensure that a cultural resources assessment is conducted within the APE. This will typically consist of a cultural resources inventory by a professional meeting the Secretary of the Interior's Professional Qualifications Standards in the appropriate discipline, as defined in Stipulation VIII. The cultural resource assessment is the Corps' "good faith" effort to identify historic properties in the APE and as such should take into account geomorphological processes that would influence site location and depositional rates; historical and ethnographic sources; and previous archaeological or historical work in the APE.

(1) Field inventory strategies shall be tailored to each of the eight (8) reaches of the Undertaking, as described in Appendix A of this PA. The level of effort and field methods used will be appropriate for the number and kinds of cultural resources known or expected to occur in such reaches, and should be suited to the area's environmental conditions.

(a) If the Corps proposes to deviate from a traditional pedestrian cultural resources survey of the entire APE in order to identify potential historic properties, then the Corps will notify SHPO in writing not less than thirty (30) days prior to commencing fieldwork of its intention to deviate from a standard survey. SHPO shall have 30 calendar days from the date of receipt to respond to this intention with comments. The Corps shall consider and incorporate the comments received by SHPO into their identification plan, or continue to consult in order to resolve any objections pursuant to Stipulation XII below.

(2) A data review/records search is required for all inventories. The record search shall include the General Land Office (GLO) cadastral survey plats, local historic maps, a records search request at the appropriate California Historical Resources Information Center (CHRIS), and any other relevant archive. Historic structures such as roads, flood control features and railroad grades must be identified. Furthermore, a review of previous inventories and sites recorded within a half mile of the APE will be completed.

(3) An attempt to relocate any previously recorded sites within the APE will be performed, and the respective site form shall be updated for those that are relocated if more than five (5) years has passed since the site form was prepared or updated or if the site has been visibly altered. If a site cannot be found, a discussion of the relocation efforts will be included in the cultural resources assessment.

(4) Linear resources (railroad, road, trail, ditch, etc) that appear on historic maps or are known from other archival data to be historic or which have associated features or dateable artifacts will be recorded on the appropriate California Department of Parks and Recreation (DPR) 523 series form or successor form. Linear resources that cannot be verified as historic either through archival research or associated artifacts will be treated as isolated road segments and will be recorded in tabular form and included in the cultural resources assessment.

(5) Non-linear sites that extend outside of the APE will be recorded in their entirety unless access to the land outside the APE is prohibited.

(a) In the event that access cannot be gained, the Corps shall notify SHPO in writing of its proposed means of evaluating the site. SHPO shall have thirty (30) calendar days from the date of receipt to respond to this proposal with comments. The Corps shall consider and incorporate the comments received by SHPO into its identification plan, or continue to consult in order to resolve any objections pursuant to Stipulation XII below.

(6) The Corps shall report the results of the identification efforts in a cultural resource assessment that is consistent with the Secretary of Interior's Standards and Guidelines for Identification (48 FR 44720-23). The Corps shall distribute any draft cultural resource assessments to all Consulting Parties for a thirty (30)-day review and comment period. A

Consulting Party may provide its comments directly to the SHPO with a copy to the Corps within the thirty (30) day comment period. The Corps will forward to the SHPO all comments received during the thirty (30) day comment period. The Corps will consider and attempt to resolve all comments when finalizing its cultural resource assessments. After the thirty (30) day comment period, the Corps will distribute its final cultural resources assessments to Consulting Parties concurrently with the evaluation in Stipulation II.B.i.

B. Evaluation

i) The Corps, in consultation with SHPO, shall evaluate resources identified through the cultural resource assessment pursuant to 36 C.F.R. § 800.4(c) and in accordance with the criteria set forth in 36 C.F.R. Part 60 early in the planning phase and prior to the initiation of activities that may affect historic properties. The SHPO shall have thirty (30) days from the date of receipt to review and comment on evaluations.

(1) The Corps shall seek the views and comments of Tribal Organizations and individual tribal members regarding the eligibility of cultural resources to which they may attach religious or cultural significance in order to accurately apply the NRHP eligibility criteria. The Corps will consider this information when making its determinations of eligibility.

(2) Resources that intersect with any part of the APE shall be incorporated into the APE as a whole and evaluated in their entirety. Linear resources shall only be recorded to the edge of the APE; however, evaluation of eligibility for linear resources will be based on the significance of the whole resource.

ii) Concurring and other Consulting Parties may provide comments directly to the SHPO with a copy to the Corps within the thirty (30) day comment period. The Corps will forward to the SHPO all comments received during the thirty (30) day comment period. If a Concurring Party objects to the determination, the Corps will notify the SHPO of the objection and will seek to resolve the objection pursuant to Stipulation XII.E below.

iii) If the Corps determines any of the National Register criteria are met and SHPO concurs, the property shall be considered eligible for the National Register for Section 106 purposes. If the Corps and SHPO do not agree, the Corps shall consult to resolve objections pursuant to Stipulation XII below, and if that is not successful they will obtain a determination from the Secretary of the Interior in accordance with 36 C.F.R. § 800.4(c)(2).

iv) If adverse effects to a historic property can and shall be avoided, the Corps may propose to assume eligibility of that resource.

IV. ASSESSMENT OF EFFECTS

A. The Corps shall make determinations of effect consistent with 36 C.F.R. § 800.4(d) and identify the type of adverse effect for each affected property in accordance with the criteria established in 36 C.F.R. § 800.5(a)(1) and (2)(i)-(vii) early in the design phase and prior to the initiation of activities that may affect historic properties within the APE.

B. The Corps shall issue its assessment of effects, and make the assessment available to the SHPO and the other Consulting Parties for a thirty (30) day review and comment period, from the date of receipt.

C. The Corps will forward to the SHPO all comments received during the thirty (30) day comment period regarding its assessment of effects.

D. The Corps will consider all comments when making its findings of effect. The Corps shall attempt to make its findings to the extent possible in a single consolidated decision and may submit findings of effect to the SHPO concurrently with its determinations of eligibility.

E. After the comment period, the Corps may request SHPO concurrence on its findings of effect.

i) SHPO will have thirty (30) days from the date of receipt in which to comment.

ii) Should SHPO not comment, the Corps may document that SHPO has elected not to comment and may proceed in accordance with its proposed finding.

iii) Should SHPO disagree with Corps' finding, they shall resolve the dispute in accordance with Stipulation XII below.

F. Where a Concurring Party or other Consulting Party objects to the Corps' findings, the Corps shall consult with the objecting party and the SHPO regarding the nature of the objection and reconsider its findings.

i) If the objection is not resolved, the Corps shall further consult with the SHPO and follow the processes provided at Stipulation XII.E below.

G. The Corps may prepare the analysis required above in phases that correspond to the proposed sequence of construction for the Undertaking, provided that analyses are ultimately prepared for the entirety of the APE.

H. If adverse effects to such cultural resources will not be avoided, the Corps must resolve the adverse effect through the development and implementation of a Historic Properties Treatment Plan (HPTP).

V. TREATMENT AND MANAGEMENT OF HISTORIC PROPERTIES

When historic properties cannot be avoided, the Corps will ensure that one or more HPTPs are prepared, executed, and field work associated with the HPTPs completed prior to the issuance of a notice to proceed for construction. All finalized HPTPs will be included in Appendix C hereof.

A. The Corps may authorize the phased implementation of the HPTPs, or if appropriate, the development of HPTPs for individual historic properties, or HPTPs that are related to specific issues or geography.

B. In developing the HPTPs, treatment efforts will be tailored to the types and degree of anticipated project effects. Treatments shall address the loss of location, design, setting, materials, feeling, association and workmanship. Example treatments may include, but are not limited to: public outreach and interpretation, exhibits, publications, educational materials, oral histories, and off-site investigations.

C. Where an HPTP specifically addresses treatment for adverse effects to historic properties to which Tribal Organizations attach religious or cultural significance, the Corps shall submit the HPTP to the Tribal Organization(s) and seek their views and comments through consultation, regardless of the absence of a Tribal Organization as a Concurring Party to this PA. The Corps shall consult with involved Tribal Organization(s) on the distribution to other Consulting Parties of any HPTPs that specifically addresses treatment for adverse effects to historic properties to which the Tribal Organizations attach religious or cultural significance.

D. The Corps shall distribute the draft HPTPs to the SHPO and other Consulting Parties for a thirty (30)-day review period or as extended by the Signatories. The Corps will consider timely comments when finalizing the HPTPs. A Consulting Party may provide its comments directly to the SHPO with a copy to the Corps within thirty (30) days of receipt, or as extended by the Signatories, of the draft HPTP. The Corps will forward to the SHPO all comments regarding the HPTPs received during the comment period.

E. The Corps shall have sixty (60) days to address comments received from the Consulting Parties and shall revise the HPTPs as appropriate. The Corps shall note proposed changes that it does not believe should be included in the HPTPs and shall discuss these changes in a written reply to the Consulting Parties.

F. The Corps shall resubmit the revised HPTPs to the SHPO and other Consulting Parties for a fifteen (15)-day review period, or as extended by the Signatories. The Corps will consider any comments sent within fifteen (15) days of receipt in finalizing the HPTPs.

G. The Corps will submit the finalized HPTPs to the SHPO for concurrence. If the SHPO does not concur, the Corps will consult directly with the SHPO to address issues or concerns with the HPTPs. When the Signatories agree on the final HPTPs, a copy of the final HPTPs will be submitted to the other Consulting Parties. If the Signatories cannot come to agreement, they will resolve the dispute in accordance with Stipulation XII below.

H. Modifications of HPTPs will be made in accordance with this paragraph and Stipulation XI.B. If it is determined an HPTP should be modified, the Corps, in coordination with SHPO and Concurring Parties, shall use the following process:

i) The Corps shall notify the SHPO and Concurring Parties of any proposed change in the HPTP with a description of the proposed change. The SHPO and Concurring Parties shall

then have fifteen (15) calendar days from receipt, or as extended by the Signatories, to comment on the modified HPTP.

ii) If the Signatories agree to the proposal, or if no comments are received within the allotted review time, then the Corps will notify all Concurring Parties of the modification to the HPTP. The Corps will keep copies of the description on file for its administrative record and distribute copies of each to SHPO and Concurring Parties within thirty (30) days of the day upon which agreement to the modification was reached or as extended by the Signatories.

iii) If the Signatories cannot agree to a proposal for the modification of the HPTP, then they will resolve the dispute in accordance with Stipulation XII below.

VI. DISCOVERIES AND UNANTICIPATED EFFECTS

A. The Corps, in consultation with the Consulting Parties, will seek to develop a monitoring and discovery plan for the Undertaking pursuant to 36 C.F.R. § 800.13(a)(1). A finalized monitoring and discovery plan will be included as part of the HPTPs found in Appendix C hereof.

B. If the Corps determines that implementation of the Undertaking will affect a previously unidentified property that may be eligible for the NRHP, or affect a known historic property in an unanticipated manner, and a monitoring and discovery plan has not been finalized, the Corps will address the discovery or unanticipated effect by following the procedures at 36 C.F.R. § 800.13(b)(3), where a process has not been yet been agreed to pursuant to 36 C.F.R. § 800.13(a)(1).

C. The Corps at its discretion may assume any post-review discovery to be eligible for inclusion in the NRHP and treat it accordingly. The Corps' compliance with this Stipulation shall satisfy the requirements of 36 C.F.R. § 800.13(a)(1).

VII. TREATMENT OF HUMAN REMAINS OF NATIVE AMERICAN ORIGIN AND RELATED CULTURAL ITEMS

To the extent not inconsistent with Federal law, the Corps shall ensure that Native American burials and related cultural items are treated in accordance with the applicable requirements of the California Public Resources Code at Sections 5097.98 and 5097.991, and of the California Health and Human Safety Code at Section 7050.5(c).

VIII. STANDARDS AND QUALIFICATIONS

A. PROFESSIONAL QUALIFICATIONS. All actions prescribed by this PA that involve the identification, evaluation, analysis, recordation, treatment, monitoring, and disposition of historic properties and that involve the reporting and documentation of such actions in the form of reports, forms or other records, shall be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the Secretary of the Interior's Professional Qualifications Standards (PQS), for the appropriate discipline (48 Fed. Reg. 44739 dated September 29, 1983). However, nothing in this Stipulation may be interpreted to preclude any party qualified under the terms of this Section from using the services of persons who do not

meet the PQS, so long as the work of such persons is supervised by someone who meets the PQS. Tribal consultants who are available to perform monitoring duties are assigned and approved of by each Tribe.

B. DOCUMENTATION STANDARDS. Reporting on and documenting the actions cited in this PA shall conform to every reasonable extent with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Fed Reg. 44716-40 dated September 29, 1983), as well as, the Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports.

C. CURATION STANDARDS. The Corps shall ensure that cultural materials and records resulting from excavations or surface collections on non-federal land are curated in accordance with the Secretary of the Interior's Standards for Archaeological Documentation. The permanent disposition of Native American human remains and associated items shall be addressed in consultation with the most likely descendent(s) designated by California's Native American Heritage Commission pursuant to California Public Resources Code section 5097.98.

IX. REPORTING REQUIREMENTS

A. Within twelve (12) months after the Corps has determined that all fieldwork required by Stipulations III through V has been completed, the Corps will ensure preparation and concurrent distribution to the Consulting Parties of a draft report that documents the results of implementing the requirements of each Stipulation. The Consulting Parties will be afforded thirty (30) days, or as extended by the Signatories, after receipt to review and to submit any written comments to the Corps. The Corps will consider all timely comments when making revisions to the draft report. A revised draft will be provided for review within fifteen (15) days of receipt or as extended by the Signatories. The Corps will consider all timely comments in making final changes to the report. Thereafter, the Corps may issue the reports in final form and distribute these documents in accordance with Stipulation IX.B. hereof.

B. Unless otherwise requested, the Corps will distribute one copy of final reports documenting the results of implementing the requirements of Stipulations III through V to each Consulting Party, and to the appropriate CHRIS Regional Information Center.

C. The Corps shall ensure that any draft document that communicates, in lay terms, the results of implementing Stipulations III through V to members of the interested public is distributed for review and comment concurrently with and in the same manner as that prescribed for the draft technical report prescribed by Stipulation IX.A. If the draft document prescribed is a publication, such as a report or brochure, the Corps shall distribute the publication upon completion to the Consulting Parties and to other entities that said parties may deem appropriate. Archaeological and sensitive Native American site locations and maps and the nature of sensitive historic properties shall not be included in copies of reports for general distribution.

X. IMPLEMENTATION OF THE UNDERTAKING

The Corps may authorize construction activities to proceed in specific geographic areas of the APE where there are no historic properties; where there will be no adverse effect to historic properties; or where an HPTP has been approved, initiated, and fieldwork completed.

XI. AMENDMENTS TO THE PROGRAMMATIC AGREEMENT

A. This PA may be amended only upon written agreement of the Signatories.

i) Upon receipt of a written request to amend this PA, the Corps will immediately notify the other Consulting Parties and initiate a thirty (30) day period from the date of receipt to consult on the proposed amendment, or as extended by the Signatories, whereupon all Signatories and Consulting Parties shall consult to consider such amendments.

ii) If agreement to the amendment cannot be reached by the Signatories within the thirty (30) day period, or as extended by the Signatories, resolution of the issue may proceed by following the dispute resolution process in Stipulation XII below.

B. Each Appendix to this PA may be individually revised or updated through consultation and agreement in writing of the Signatories without requiring amendment of the PA, unless the Signatories through such consultation decide otherwise. Upon revising any Appendix, the Corps shall append any revised document to this PA and share the final revised document with SHPO and other Consulting Parties.

XII. DISPUTE RESOLUTION

A. Should SHPO object in writing at any time to the manner in which the terms of this PA are implemented, the Corps will consult with SHPO to resolve the objection for a period of thirty (30) days upon receipt of the notification.

B. If the objection is resolved and agreed to by the Signatories within the thirty (30) day period, the Corps may authorize the disputed action to proceed in accordance with the terms of such resolution.

C. If the objection cannot be resolved through such consultation, the Corps will forward all documentation relevant to the objection to the ACHP and follow the process outlined at 36 C.F.R. § 800.7(c). Any comments provided by the ACHP within forty-five (45) days after its receipt of all relevant documentation will be taken into account by the Corps in reaching a final decision regarding the objection. The Corps will notify SHPO and Concurring Parties in writing of its final decision within fourteen (14) days after it is rendered or as extended by the Signatories.

D. The Corps' responsibility to carry out all other actions under this PA that are not the subject of the objection will remain unchanged.

E. At any time during implementation of the terms of this PA, should an objection pertaining to the PA be raised by a Concurring Party or a member of the interested public, the

Corps shall notify the SHPO and other Concurring Parties within forty-eight (48) hours, consult with the SHPO about the objection, and take the objection into account. The other Consulting Parties may comment on the objection to the Corps. The Corps shall consult with the objecting party/parties for no more than thirty (30) days following receipt of the objection. Within fourteen (14) days following closure of consultation, the Corps will render a final decision regarding the objection and proceed accordingly after notifying all Consulting Parties of its decision in writing. In reaching its final decision, the Corps will take into account all comments from the Consulting Parties regarding the objection.

XIII. CONFIDENTIALITY

All parties to this PA acknowledge that information about historic properties, prospective historic properties, or properties considered historic for purposes of this PA are or may be subject to the provisions of NHPA Section 304, 36 C.F.R. § 800.11(c), relating to the disclosure of sensitive information, and having so acknowledged, will ensure that all actions and documentation prescribed by this PA are, where necessary, consistent with the requirements of NHPA Section 304, 36 C.F.R. § 800.11(c).

XIV. TERMINATION

A. If any Signatory to this PA determines that its terms will not or cannot be carried out, that party shall immediately notify the other Signatory in writing and consult with the other Signatory to attempt to develop an amendment per Stipulation XI above. If within sixty (60) days of receipt of the notification, or as extended by the Signatories, an amendment cannot be reached, a Signatory may terminate the PA upon written notification to the other Signatory.

B. If the PA is terminated, and prior to work continuing on the Undertaking, the Corps shall continue to follow the process provided at 36 C.F.R. § 800.4 – 6 until (a) a new agreement is executed pursuant to 36 C.F.R. § 800.6 or (b) the agency requests, takes into account, and responds to the comments of the ACHP under 36 C.F.R. § 800.7. The Corps shall notify SHPO as to the course of action it will pursue.

XV. DURATION OF THIS PROGRAMMATIC AGREEMENT

A. Unless amended or modified pursuant to Stipulation XI.A, this PA shall remain in force until whichever of these events occurs first: 1) ten (10) years after the effective date; or 2) the PA is terminated pursuant to Stipulation XIV.

B. Sixty (60) days prior to expiration of the PA, the Signatories will consult to determine whether the terms of the PA have been met, whether revisions are needed, and whether the duration of the PA should be extended.

XVI. EFFECTIVE DATE OF THIS PROGRAMMATIC AGREEMENT AND AMENDMENTS

This PA and any amendments shall take effect on the date that it has been fully executed by the Signatories.

[Remainder Left Intentionally Blank]

EXECUTION of this PA by the Corps and SHPO, and its transmittal to the ACHP, and subsequent implementation of its terms evidence that the Corps has afforded the ACHP an opportunity to comment on the Undertaking and its effects on historic properties, that the Corps has taken into account the effects of the Undertaking on historic properties, and that the Corps has satisfied its responsibilities under Section 106 of the NHPA and applicable implementing regulations for all aspects of the Undertaking.

U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT

BY: _____ DATE: 7/2/15

Kimberly M. Colloton, PMP
Colonel, U.S. Army
Commander and District Engineer

CALIFORNIA STATE HISTORIC PRESERVATION OFFICE

BY: _____ DATE: 7/2/15

Jenan Saunders
Deputy State Historic Preservation Officer

CONCURRING PARTIES

CITY OF LOS ANGELES, a Municipal Corporation

BY: _____ DATE: _____
NAME:
TITLE:

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

BY: _____ DATE: _____
NAME:
TITLE:

GABRIELENO BAND OF MISSION INDIANS

BY:_____ DATE:_____
NAME:
TITLE:

FERNANDEÑO TATAVIAM BAND OF MISSION INDIANS

BY:_____ DATE:_____
NAME:
TITLE:

GABRIELINO TONGVA INDIANS OF CALIFORNIA

BY:_____ DATE:_____
NAME:
TITLE:

GABRIELINO- TONGVA TRIBE

BY:_____ DATE:_____
NAME:
TITLE:

GABRIELINO TONGVA NATION

BY:_____ DATE:_____
NAME:
TITLE:

LOS ANGELES CITY AND COUNTY NATTIVE AMERICA INDIAN COMMISSION

BY:_____ DATE:_____
NAME:
TITLE:

TI'AT SOCIETY/ INTER-TRIBAL COUNCIL OF PIMA

BY:_____ DATE:_____
NAME:
TITLE:

SAN GABRIEL BAND OF MISSION INDIANS

BY:_____ DATE:_____
NAME:
TITLE:

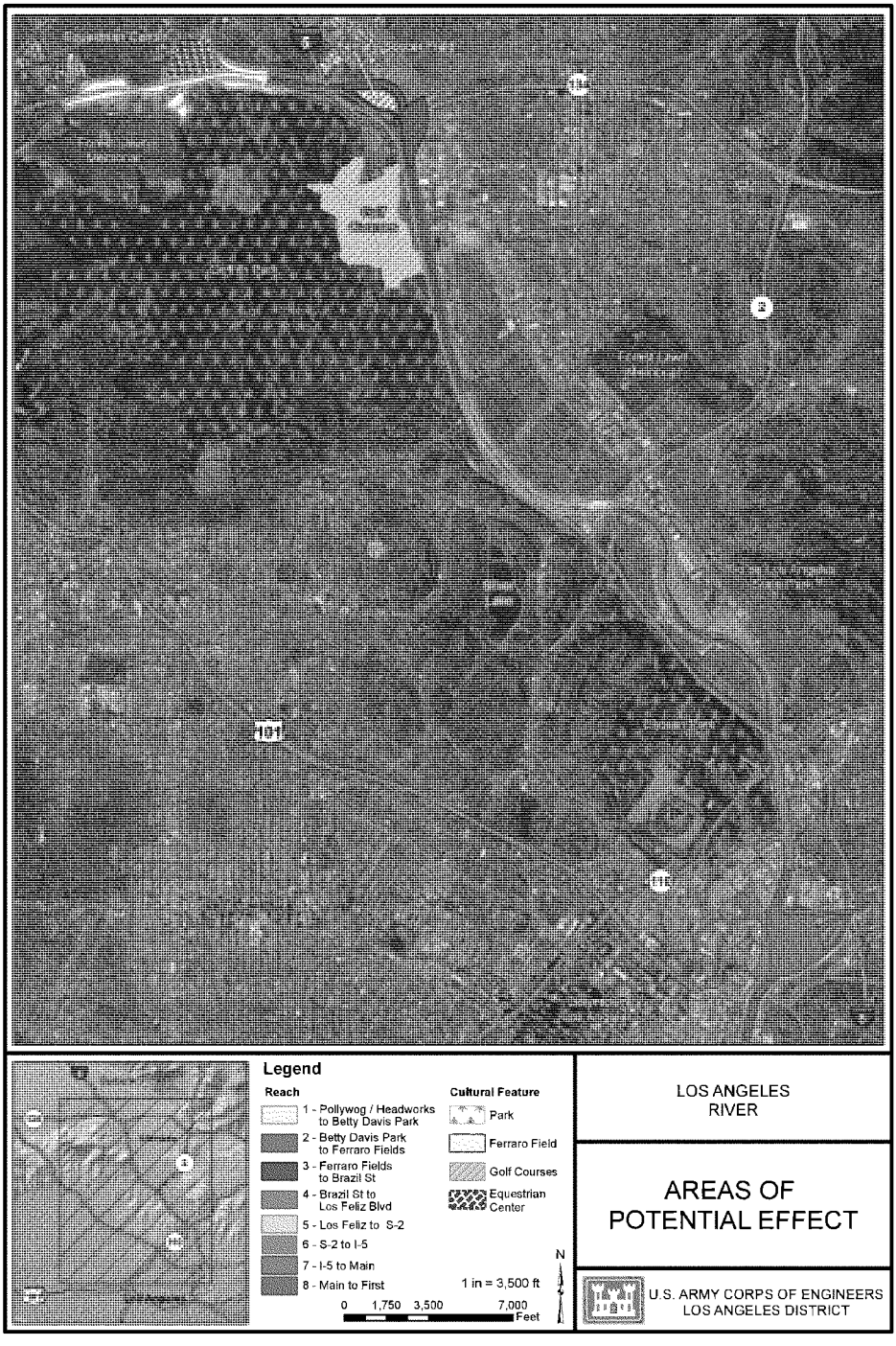
APPENDIX A: PROJECT DESCRIPTION FOR ALTERNATIVE 20

Alternative 20 Project Description

The plan consists of the following major restoration features within the eight reaches of the study area, in addition to removal of invasive vegetation throughout the project area:

- Reach 1 (Pollywog Park to Bette Davis Park, 1.5 miles) – Restoration of riparian habitat corridors along overbanks on both sides of the river, along the Burbank Western Channel tributary, and in the Pollywog Park area of Griffith Park.
- Reach 2 (Bette Davis Park to Ferraro Fields, 0.75 miles) – Restoration of riparian and soft bottom habitat through establishment of riparian corridors along the left and right overbanks of the river and modification of the right river bank from trapezoidal to a vertical wall with overhanging vines, increasing the channel bottom width by 80 feet.
- Reach 3 (Ferraro Fields to Upstream Glendale Narrows, 1 mile) – Restoration of riparian and wetland habitat in and along the channel, including restoration of wetland and riparian habitat at the confluence of the river and the Verdugo Wash tributary, where concrete in the tributary channel's bottom and sides would be removed and the confluence area expanded; restoration of a riparian corridor on the right river overbank; daylighting of a small stream currently encased in a culvert; and creation of a side channel around Ferraro Fields that reenters the river through the daylighted stream.
- Reach 4 (Upstream Glendale Narrows to Los Feliz, 1.75 miles) – Restoration of riparian and wetland habitat through establishment of a riparian corridor on the left river overbank, creation of a side channel diverting river flows through the Griffith Park (Harding) Golf Course on the right side of the river, lowering of the Los Feliz Golf Course on the left side of the river to allow seasonal flooding through existing culverts, and daylighting of eight streams currently encased in culverts.
- Reach 5 (Los Feliz to Bowtie Parcel, 1.55 miles) – Restoration of riparian and wetland habitat through modification of the right river bank from a trapezoidal bank to a vertical wall with overhanging vines, widening the soft-bottom riverbed by over 100 feet; terracing of the left river bank to support riparian planting; widening of the left bank at the downstream end of the reach; and daylighting of one stream currently confined in a culvert.
- Reach 6 (Bowtie Parcel to Downstream Glendale Narrows/Arroyo Seco, 2.34 miles) – Restoration of riparian corridor and freshwater marsh through creation of a backwater wetland in the channel at the upstream end of the reach, terracing the left river bank to transition to a softened channel bank for widening of the channel by 300 feet at Taylor Yard, and modifying the right bank to support implanted vegetation.
- Reach 7 (Downstream Glendale Narrows/Arroyo Seco to Main Street, 1 mile) – Restoration of riparian and wetland habitat including restoration of 0.5 miles of the Arroyo Seco tributary upstream from the river, softening its banks and bed and establishing a backwater wetland at its confluence with the river; restoration of wetlands at the Los Angeles State Historic Park with a connection to the river through terracing and planting of the right river bank, accommodated with trestling of a railroad line; and daylighting three streams currently encased in culverts.
- Reach 8 (Main Street to 1st Street, 1 mile) – Restoration of riparian and wetland habitat, including removal of the concrete lining and naturalization of approximately 0.75 miles of the river to support open channel, and freshwater marsh; reconnection of the river to the historic floodplain at the LATC site, accommodated with trestling of a railroad line, with restoration of riparian and wetland habitat including a meandering historic wash and small channels; and terracing of river banks upstream and downstream of the LATC site.

APPENDIX B: MAP OF THE AREA OF POTENTIAL EFFECTS


Legend
Reach
1 - Pollywog / Headworks to Betty Davis Park
2 - Betty Davis Park to Ferraro Fields
3 - Ferraro Fields to Brazil St
4 - Brazil St to Los Feliz Blvd
5 - Los Feliz to S-2
6 - S-2 to I-5
7 - I-5 to Main
8 - Main to First
Cultural Feature
Park
Ferraro Field
Golf Courses
Equestrian Center
1 in = 3,500 ft
0 1,750 3,500 7,000
Feet
N
LOS ANGELES RIVER
AREAS OF POTENTIAL EFFECT
U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

APPENDIX C: HISTORIC PROPERTIES TREATMENT PLAN(S)

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX O
Cultural Resources Part 2
Consultation Letters

April 2015

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
915 Wilshire Boulevard, Suite 930
LOS ANGELES, CALIFORNIA 90017-3401

REPLY TO ATTENTION OF

Office of the Chief
Planning Division

September 5, 2014

Carol Roland-Nawi, PhD
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816

Dear Dr. Roland-Nawi:

The U.S. Army Corps of Engineers (Corps), Los Angeles District, is preparing environmental and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project (LARER), along and within the Los Angeles River, Los Angeles County, California. The LARER is an ecosystem restoration project that would create ground and visual disturbance along the River near downtown Los Angeles (enclosure 1).

Prior to publishing the Draft Integrated Feasibility Report (IFR) for the proposed project, we discussed the project with Ms. Susan Stratton and Mr. Brendon Greenaway of your office in June 2013. Ms. Stratton indicated that your office might review the Draft IFR (which also served as the Environmental Impact Statement/Environmental Impact Report), although we understand that review is not always possible because of workload constraints. We did not receive any comments on the Draft IFR, which was available for public review from September 13, 2013 through November 18, 2013. However, we will proceed to obtain your comments and guidance as we move through the Section 106 process in accordance with 36 CFR 800. A CD containing the Draft IFR is enclosed for reference (enclosure 2).

The Draft IFR identified Alternative 13 as the Tentatively Selected Plan. Subsequently, the Corps and the non-federal sponsor (City of Los Angeles) have identified a more comprehensive restoration plan, Alternative 20, as the Locally Preferred Plan. Alternative 20 will be the Recommended Plan in the Final IFR.

The proposed project is to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. A more detailed project description is included as enclosure 6.

Based on the current proposed project description, we have delineated an Area of Potential Effects (APE). The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The enclosed APE map designates the portions of the project that would experience direct ground-disturbing activities. In addition, the APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects. Ground disturbance will occur mostly in areas that were previously disturbed by construction of the original concrete lined flood control channel. There are virtually no undisturbed ground surfaces in this highly urbanized environment through the

entire reach of the project. Some undisturbed and intact subsurface deposits are still present. As construction would disturb these areas we would include the possibility for encountering buried cultural remains within the vertical APE. The vertical APE varies greatly from a few inches to several feet. Horizontally we are proposing a one-eighth mile buffer around each depicted feature for noise and visual impacts. For clarity we have depicted the APE (without the one-eighth mile buffer) on both the USGS topographic map, and an aerial view (enclosures 4 and 5). Each measure and project feature is detailed in the legend.

The Corps requested a Sacred Lands File search and a Native American contact list from the Native American Heritage Commission (NAHC) dated July 16, 2012. The NAHC responded by indicating that there are cultural resources within the general area of the proposed APE. (Enclosure 4). In addition to this information, we corresponded with the Gabrielino/Tongva prior to publishing the Draft IFR, and they were also sent copies of the document to obtain their concerns during the public review period. No responses were received. We will send this proposed APE map to the list of organizations and individuals provided by the NAHC for their review and comment. Communication with the Gabrielino/Tongva Tribal contacts will continue throughout the life of the project.

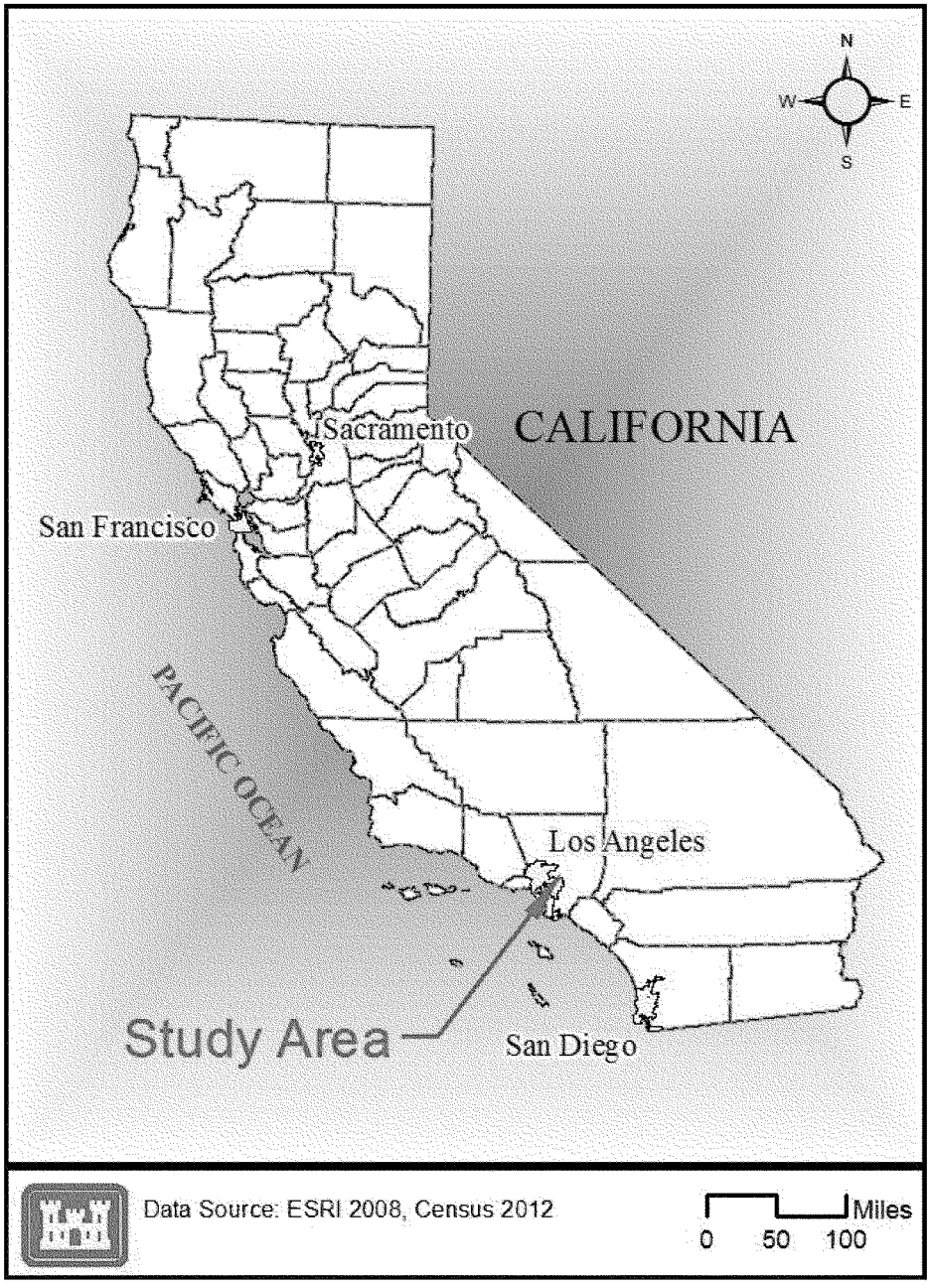
By this letter the Corps requests your comments on the appropriateness of the APE for the proposed undertaking (pursuant to §800.4[a][1]).

Please review the enclosed information, and respond within thirty days of your receipt of this letter. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at David.S.Dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)


N
W
E
S
CALIFORNIA
Sacramento
San Francisco
PACIFIC OCEAN
Los Angeles
Study Area
San Diego
Data Source: ESRI 2008, Census 2012
Miles
0
50
100

ENCLOSURE #1

Enclosure #3

Alternative 20 ARBOR Riparian Integration via Varied Ecological Reintroduction (RIVER)

This alternative provides the most extensive restoration and includes measures in all eight reaches with channel widening at Verdugo Wash, Arroyo Seco, Cornfield/LA State Historic Park, and Piggyback Yard. Features of Alterative 20 are similar to those included in Alternative 13, but are more extensive in scope. Sub-measures under this alternative would be implemented in all reaches (1-8) throughout the study area and include:

- Riparian planting of habitat corridors (reaches 1,2,3,4,5,6,7,8)
- Bioengineer channel walls (reach 5)
- Trapezoidal to vertical walls (reaches 2,5)
- Create/rebuild channel geomorphology (reaches 3,4,5,7,8)
- Divert flow into channels (reaches 3,4,7,8)
- Widen channel (reach 3,8)
- Widen tributaries (reach 3)
- Expose/daylight stormdrain outlets (reaches 4,5,7)
- Channel bed deepening (reach 5)
- Terrace banks (reaches 5,6,7, 8)
- Elevate railroad (reaches 7,8)

Reach 1 – Reach 1 for all alternatives in the final array would implement the habitat corridor with riparian planting on the overbanks. This would restore approximately 60 acres of riparian habitat corridors along the overbanks of both sides of the river. Overbanks are those areas adjacent to the river where overland flow in flood events could occur in a natural river environment. Areas of restoration include Pollywog Park, the bank between Headworks and the River with a connection under SR-134 to Headworks, the open area directly downstream of Headworks with a connection under Forest Lawn Drive on the same side of SR-134 with Headworks, and on the left bank of Burbank Western Channel (tributary from the north/west).

This would involve planting a riparian community of cottonwood/willow, sycamore, mugwort, mulefat, and scarlet monkeyflower with a buffer of sagebrush, buckwheat, and native herbaceous plants. It would include irrigation for establishment and water harvesting features to sustain plants, including micro-grading and/or swales to capture and infiltrate water. Water sources could include reclaimed water, harvesting of stormwater and street runoff (with small wetland features at the end of adjacent streets), and/or highway runoff. Where stormwater or street runoff is excessive during storm events, a connection to the River would allow it to overflow into the

channel, creating a hydrologic connection. Soil amendments would be required. Establishment and drought management for this vegetation would utilize irrigation, either through flood irrigation (simulating a natural riparian regime) or drip irrigation, dependent upon the availability of water. There would be no channel modifications within this reach. While there is a levee at the downstream end of this reach, any planting in that area would comply with all levee regulations.

Reach 2 – Like Alternatives 10, 13, and 16, implementation of the habitat corridors/riparian planting measure would result in restoration of approximately 26 acres of riparian habitat corridors along the overbanks of both sides of the river as described for Reach 1. This includes restoration of riparian habitat in the Bette Davis Park area of Griffith Park on the left bank and the area between Zoo Drive and SR-134 with connections under the highway to a restored linear riparian planting along the River extending into Reach 3. This reach is soft bottom and would include invasives management in the existing vegetation in the channel and on the overbank. Unlike the other alternatives, Alternative 20 would add additional modification in Reach 2. The right bank would be modified from trapezoidal to a vertical bank creating 80 feet of additional soft bottom width in the channel with overhanging vines.

Reach 3 – In this reach a side channel would divert water from the river into a side channel flowing on the west side of Ferraro Fields and would daylight a stream currently confined in a large culvert just downstream of Ferraro Fields on the right bank in the Zoo Drive area. The side channel would support a riparian fringe, and open water and freshwater marsh will be located in the daylighted area outside of the mainstem of the River channel. Two additional smaller streams would be daylighted on the left bank. These would include a riparian fringe with freshwater marsh at the confluence. Riparian areas are located on the right or west bank along Zoo Drive, on the River's edge of Ferraro Fields, and between the daylighted streams on the left or east bank. There would be no modifications to the channel itself. In the Verdugo Wash confluence, the channel mouth will be widened and the south slope would be sloped back to the existing overbank elevation. One potential design would use riparian vegetation to stabilize the south bank and a combined riparian and marsh community in the widened channel. Levee protection would be tied-in to the bank, and other levee protection will remain. Levee vegetation policy will be followed. Modifications at the Verdugo Wash confluence are not expected to impact the tracks along San Fernando Road under the 134 Freeway or affect ongoing railroad operations. Modifications at the confluence may affect grade separation proposals for Doran Street. Details for the confluence area will be determined during the detailed design phase of the study. Acquisition of several parcels at the confluence area is anticipated if this feature is included.

Reach 4 – Restoration in Reach 4 (via implementation of measures to daylight and restore stream geomorphology and habitat in seven areas, a side channel through both the Griffith Park Golf Course on the west and the Los Feliz Golf Course on the east bank, and a riparian habitat corridor) would include approximately 30 acres of restored riparian and wetland habitat. This would be accomplished through a diversion of river flow into a side channel up to 10 feet deep with a riparian fringe through Griffith Park on the right bank, lining the left river bank with a riparian corridor within levee regulation requirements, and daylighting approximately seven small streams.

The riparian corridor measure would involve planting a riparian strip of mugwort and scarlet monkeyflower with a buffer of native herbaceous plants. It would include irrigation for

establishment and water harvesting features to sustain plants, including micro-grading and/or swales to capture and infiltrate water. Water sources could include reclaimed water, harvesting of stormwater and street runoff (with small wetland features at the end of adjacent streets), and/or highway runoff. Where stormwater or street runoff is excessive during storm events, a connection to the river would allow it to overflow into the channel, creating a hydrologic connection. Soil amendments would be required. Establishment and drought management for this vegetation would utilize irrigation, which would be either through flood irrigation (simulating a natural riparian regime) or drip irrigation, dependent upon the availability of water. This would be implemented as continuously as possible within the requirements of levee regulations. There would be no channel modifications within this reach.

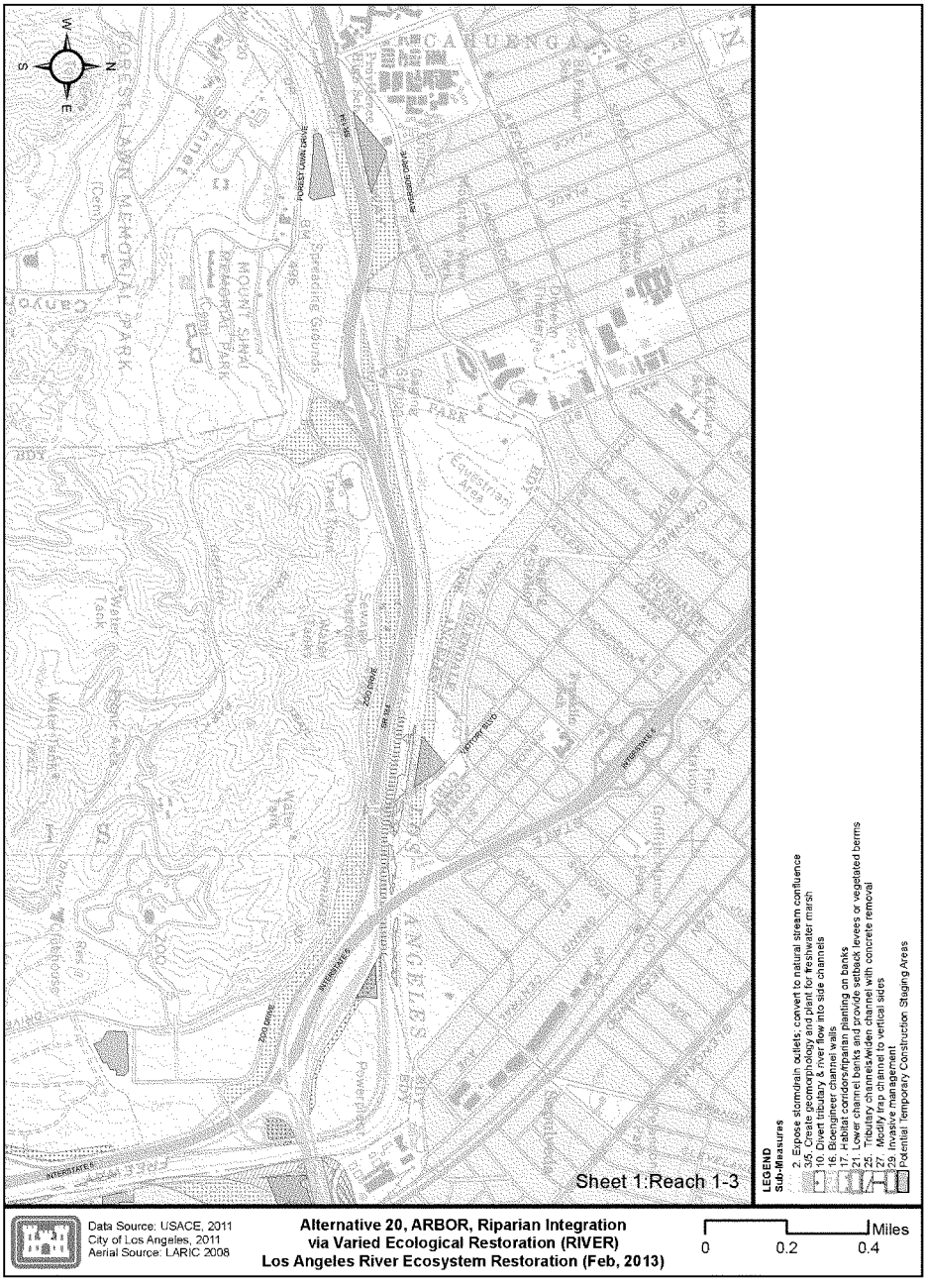
The storm drains would be opened and naturalized as tributaries as far upstream as possible (at a minimum opening up the stream within the River right-of-way). Depending upon the length of the daylighted stream, it would be planted with riparian vegetation and end at the confluence with the river in a small freshwater marsh. If it is not possible to design an efficient confluence, the connection to the River would remain gated. Freshwater marsh vegetation would include clustered field sedge, fragrant flatsedge, Parish's spikerush and common rush, scarlet monkey flower, California bulrush, narrow leaved cattail, and common cattail.

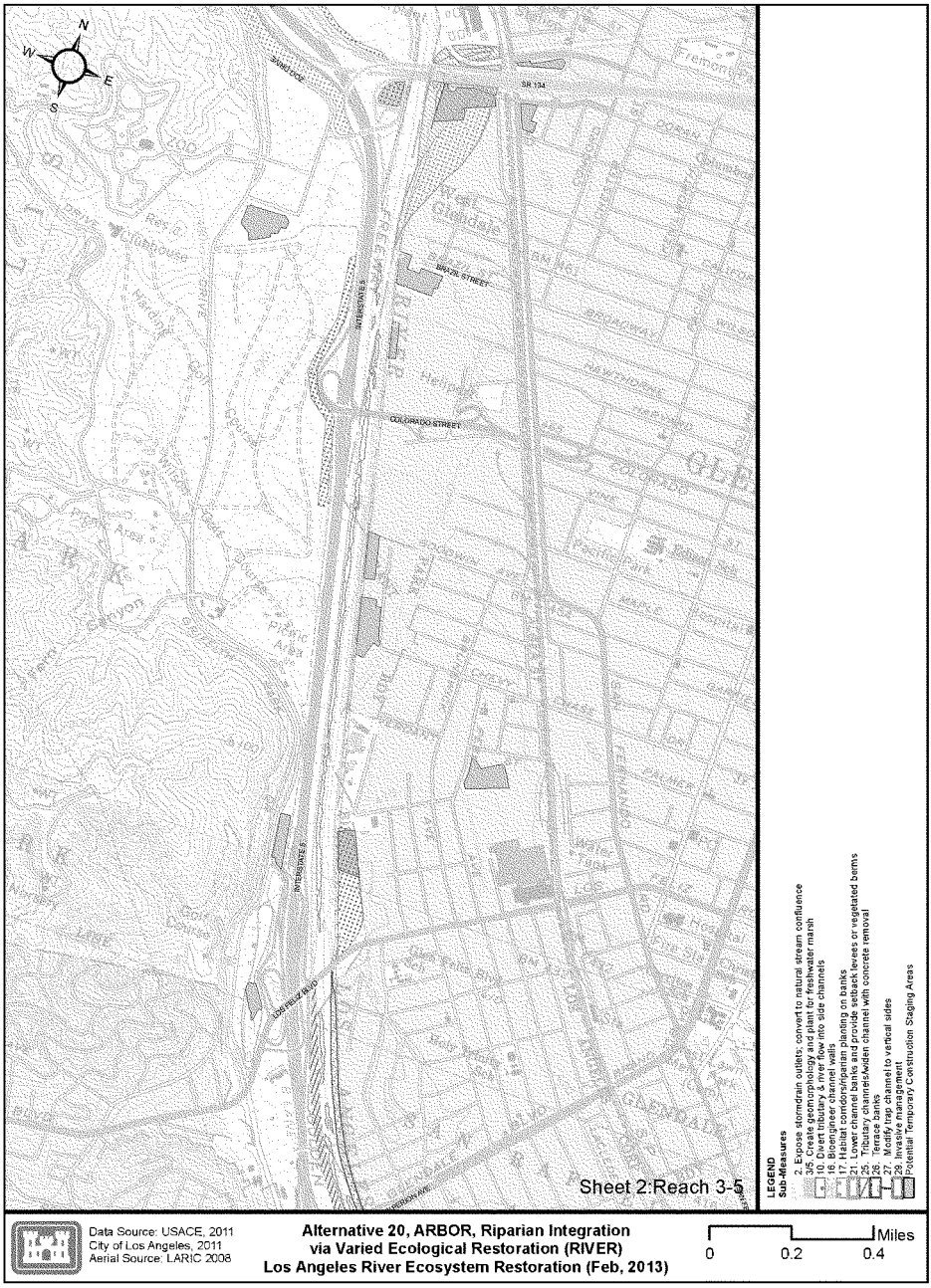
Reach 5 – In Reach 5, the right bank would be modified from a trapezoidal bank to a vertical bank. This would increase the width of the soft bottom river bed by over 100 feet. The top of the bank would be notched and planted with overhanging vines. The left bank would be modified with terraces planted with herbaceous vegetation and necessary erosion measures, which would consist of concrete-lined beds. The inland bank would be planted with riparian vegetation. At the downstream end of this reach, the river will also be widened on the left bank with appropriate erosion control measures in place. This would further increase the natural river bottom area. All of these measures would comply with levee vegetation regulations.

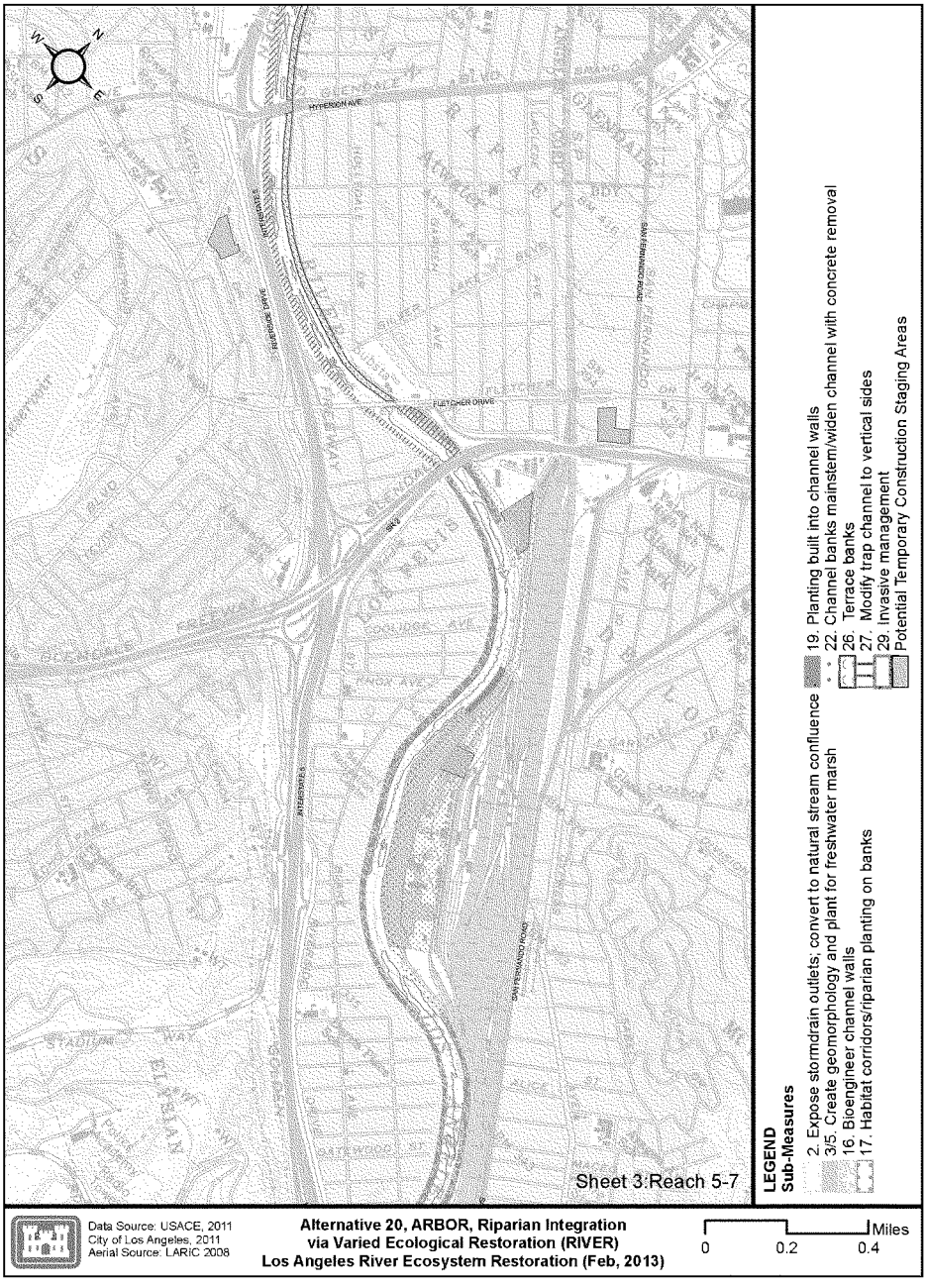
Reach 6 – Reach 6 in this alternative includes riparian corridors and widening of the soft bottom river bed by over 300 feet with additional slope back to the overbank elevation along the reach length approximately 1,000 feet. At the upstream end of the reach, a back water wetland would be developed on a setback bench and there would be a small terraced area at the downstream end of the Bowtie parcel. Freshwater marsh would dominate the new river bed. The banks of the river would be restructured to support overhanging vines and other vegetation. Restructuring the banks may impact the existing roadway used for maintenance access along the east bank of the River. A new road would be provided for SCRRA maintenance crews to allow access to the facilities.

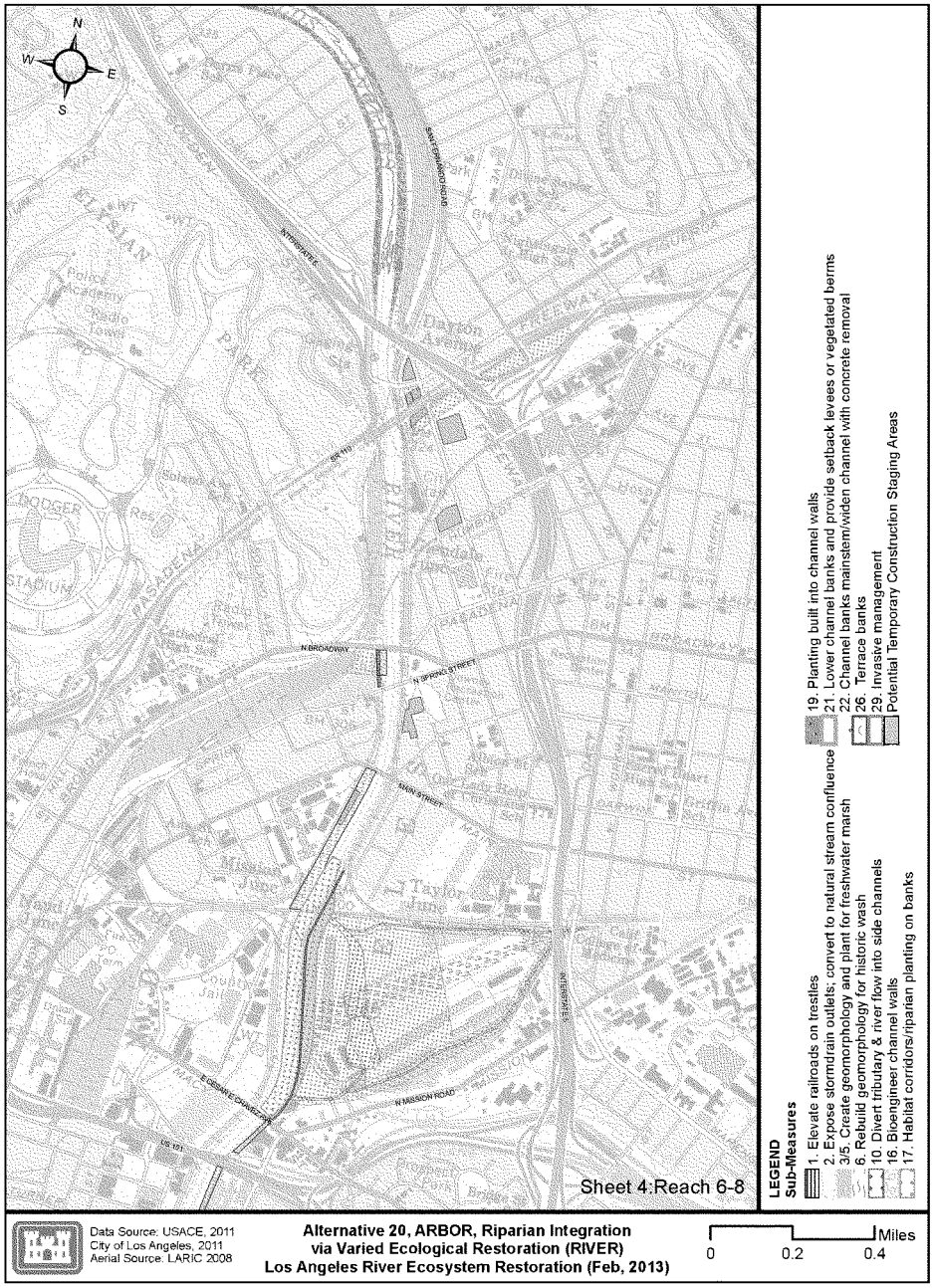
Reach 7 – In Reach 7, the Arroyo Seco tributary would be restored with riparian habitat. This ephemeral stream would have the banks and bed softened for approximately one half mile upstream and would be stabilized with erosion control elements to maintain the existing protection. At the confluence on the upstream edge of the Los Angeles River, a backwater riparian wetland and marsh would be established. Within the River channel itself, the banks would be restructured to support vegetation on the banks. Downstream, freshwater marsh would be restored and connected under a railroad trestle with the right bank of the river channel terraced.

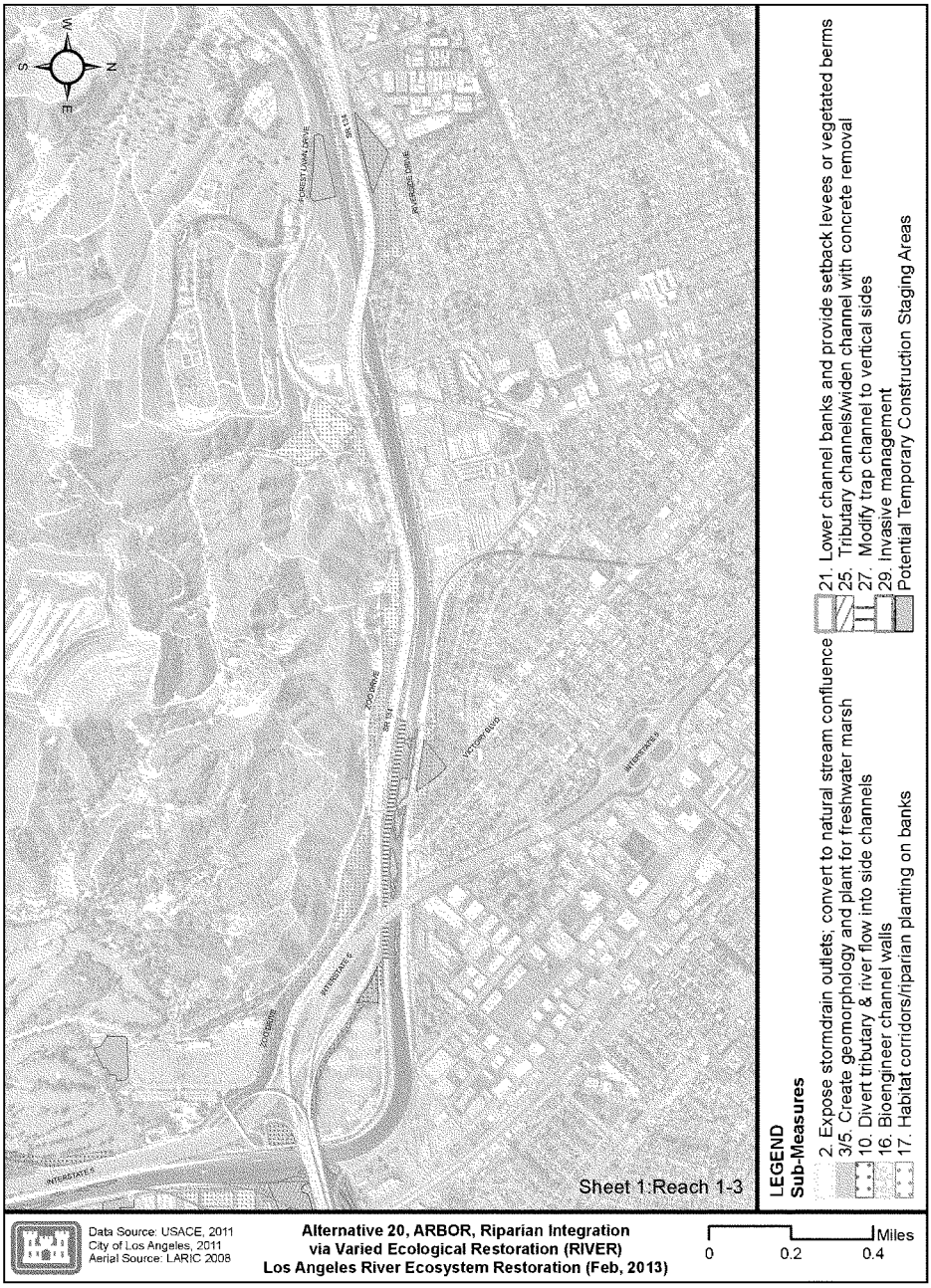
Reach 8 – Reach 8 would be modified with terracing on the right bank upstream of Piggyback Yard and on the left bank downstream of Piggyback Yard. This terracing would be planted with riparian vegetation. The channel would be changed from concrete to soft bottom to support freshwater marsh, and the reach would be widened. The marsh would extend into the Piggyback Yard 500 feet, with riparian area extending another 1,000 feet into Piggyback Yard, gradually sloping up to existing bank elevations. The historical wash would be restored through the property with a riparian fringe as well as other side channels, and river flows would be diverted out of the River into Piggyback Yard creating a large wetland area. A railroad trestle would be included with this alternative to allow the described restoration to occur and allowing for the connection of the river channel and the adjacent restored areas

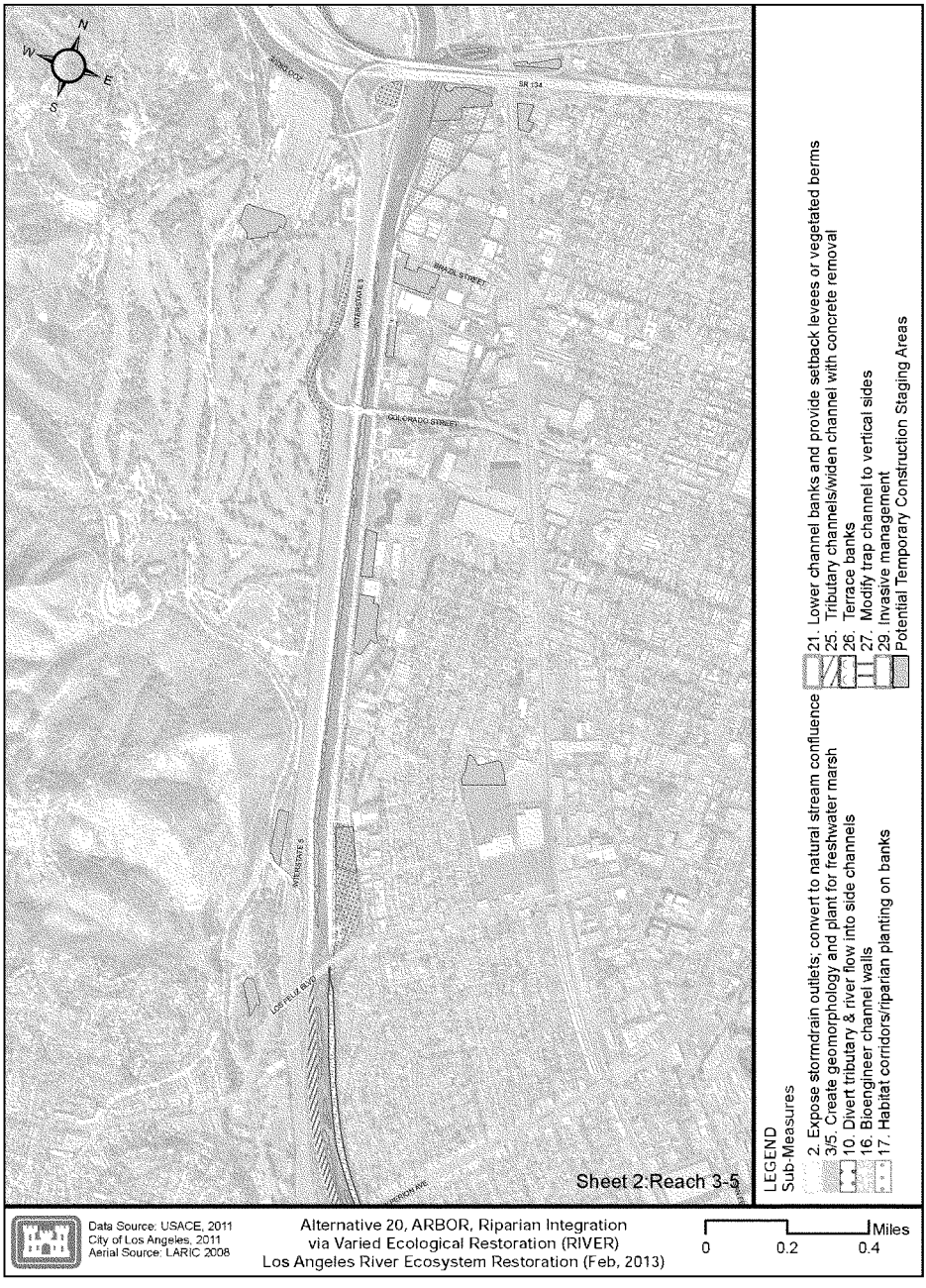

Sheet 1:Reach 1-3
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
35. Create geomorphology and plant for freshwater marsh
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
21. Lower channel banks and provide setback levees or vegetated berms
22. Tributary channels/widen channel with concrete removal
25. Modify channel bed to vertical slots
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles

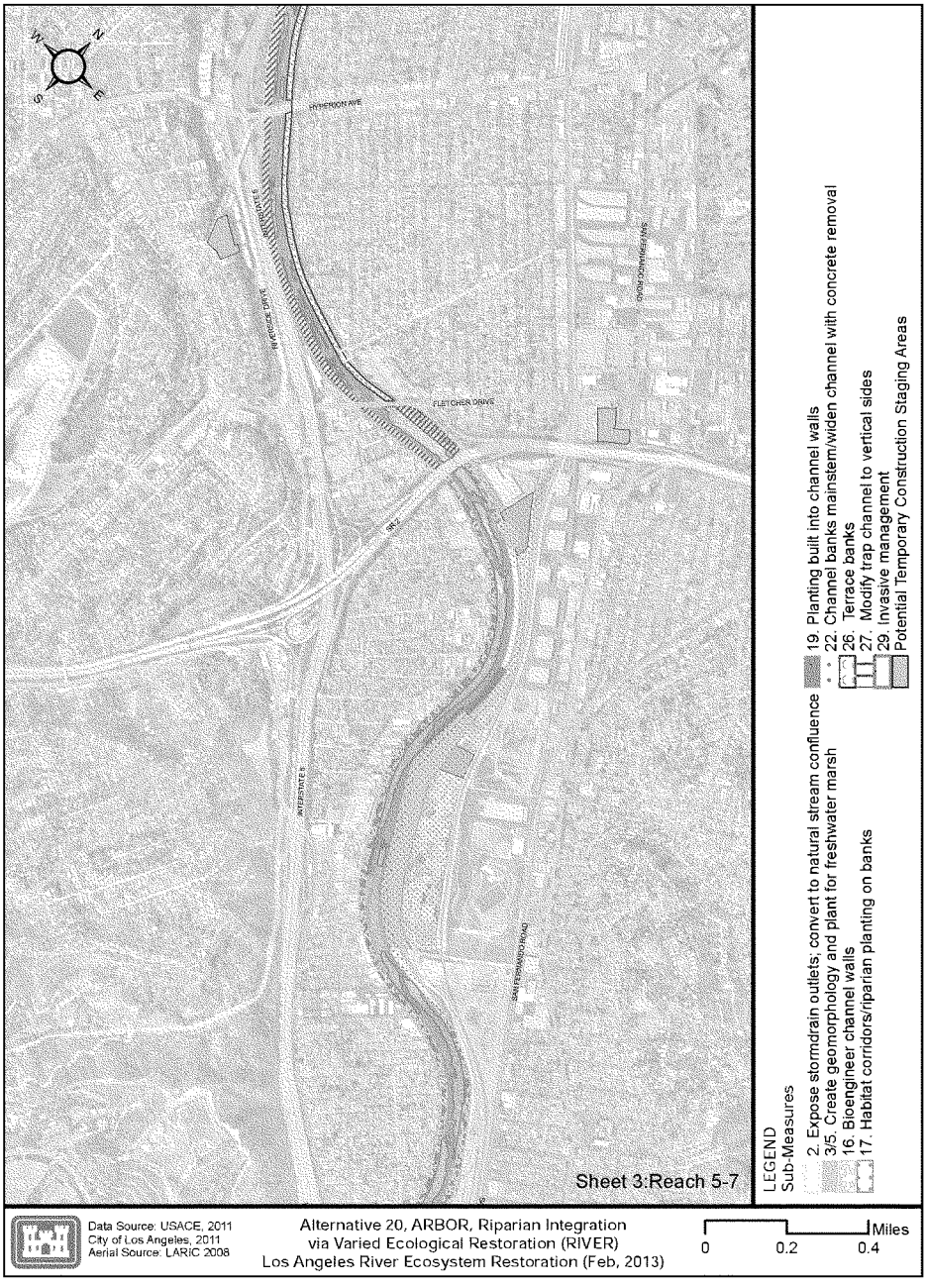

N
W
E
S
Sheet 2:Reach 3-5
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
10. Divert tributary & river flow into side channels
16. Remove concrete; create habitat
17. Habitat corridors/riparian planting on banks
21. Lower channel banks and provide setback levees or vegetated berms
25. Tributary channels/widen channel with concrete removal
26. Terrace banks
27. Notch one channel to vertical sides
28. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles

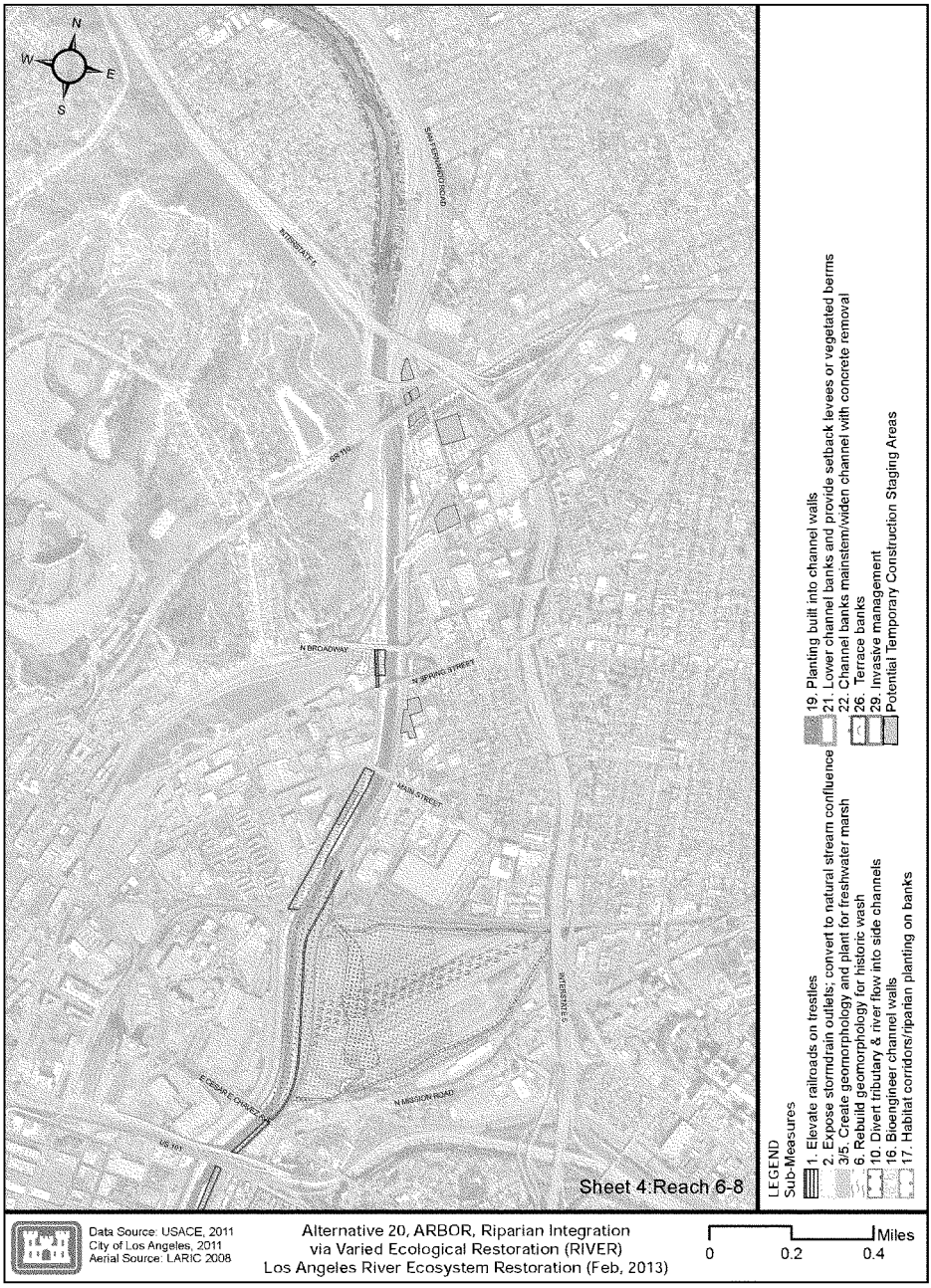

Sheet 3:Reach 5-7
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
19. Planting built into channel walls
22. Channel banks mainstem/widen channel with concrete removal
26. Terrace banks
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


N
W
E
S
Sheet 4:Reach 6-8
LEGEND
Sub-Measures
1. Elevate railroads on trestles
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
6. Rebuild geomorphology for historic wash
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
19. Planting built into channel walls
21. Lower channel banks and provide setback levees or vegetated berms
22. Channel banks mainstem/widen channel with concrete removal
26. Terrace banks
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


Sheet 1 Reach 1-3
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
21. Lower channel banks and provide setback levees or vegetated berms
25. Tributary channels/widen channel with concrete removal
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


N
W
E
S
ARROYO DR
SR 134
BRAZIL STREET
INTERSTATE 5
COLORADO STREET
LOS FELIZ BLVD
Sheet 2:Reach 3-5
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
21. Lower channel banks and provide setback levees or vegetated berms
25. Tributary channels/widen channel with concrete removal
26. Terrace banks
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


Sheet 3:Reach 5-7
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
19. Planting built into channel walls
22. Channel banks mainstem/widen channel with concrete removal
26. Terrace banks
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


N
W
E
S
SAN FERNANDO ROAD
INTERSTATE 5
5 FWY
N BROADWAY
W SPRING STREET
MAIN STREET
N MISSION ROAD
SUNSET BLVD
CESAR E CHAVEZ AVE
US 101
Sheet 4:Reach 6-8
LEGEND
Sub-Measures
1. Elevate railroads on trestles
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
6. Rebuild geomorphology for historic wash
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
19. Planting built into channel walls
21. Lower channel banks and provide setback levees or vegetated berms
22. Channel banks mainstem/widen channel with concrete removal
26. Terrace banks
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

July 16, 2012

Mr. Stephen Dibble, Archaeologist
United States Army Corps of Engineers
Los Angeles District Office
915 Wilshire Boulevard
Los Angeles, CA 90017

Sent by FAX to: (213) 452-4204 and (213) 452-4219
No. of Pages: 4

Re: Request of Sacred Lands File & Native American Contacts List , pursuant to 36 CFR Part 800, Protection of Historic Properties (NHPA Section 106; 16 U.S.C. 470 *et* seq) for the **"Los Angeles River Ecosystem Restoration Project;"** located on the Los Angeles River near Downtown Los Angeles; Los Angeles County, California.

Dear Mr. Dibble:

The Native American Heritage Commission (NAHC) is the California State 'Trustee Agency' pursuant to Public Resources Code §21070 for the protection of California's Native American Cultural Resources. The NAHC is also a 'reviewing agency' for environmental documents prepared under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq*), 36 CFR Part 800.3, .5 and are subject to the Tribal and interested Native American consultation as required by the National Historic Preservation Act, as amended (Section 106) (16 U.S.C. 470; Section 106, [4f], 110 [f] [k], 304). The provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013) and its implementation (43 CFR Part 10.2), and California Government Code §27491 may apply to this project if Native American human remains are inadvertently discovered.

The NAHC is of the opinion that the federal standards, pursuant to the above-referenced Acts and the Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) are similar to and in many cases more stringent with regard to the 'significance' of historic, including Native American items, and archaeological, including Native American items at least equal to the California Environmental Quality Act (CEQA.). In most cases, federal environmental policy require that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Statement (EIS).

The NAHC did conduct a Sacred Lands File (SLF) search of its Inventory and Native American cultural resources **were identified** in the area you specified. Early and quality consultation with the Native American representatives on the attached list may provide detailed information of sites with which they are aware. Also note that the absence of archaeological resources does not preclude their existence, particularly at the subsurface level.

The NAHC Sacred Lands File Inventory of the Native American Heritage Commission is established by the California Legislature pursuant to California Public Resources Code §§5097.94(a) and 5097.96. The NAHC Sacred Lands Inventory is populated by submission to

the data by Native American tribes and Native American elders. In this way it differs from the California and National Register of Historic Places under the jurisdiction of the U.S. Secretary of the Interior.

The NAHC, pursuant to Appendix B of the Guidelines to the California Environmental Quality Act (CEQA) is designated as the agency with expertise in the areas of issues of cultural significance to California Native American communities. Also, in the 1985 California Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

Culturally affiliated tribes are to be consulted to determine possible project impacts pursuant to the National Historic Preservation Act, as amended. Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. The NAHC recommends as part of 'due diligence', that you also contact the nearest Information Center of the California Historical Resources Information System (CHRIS) of the State Historic Preservation Office (SHPO) for other possible recorded sites in or near the APE (contact the Office of Historic Preservation at 916-445-7000).

Attached is a list of Native American contacts is attached to assist you pursuanat to Section 800.2(c)(1)(i) and Section 800.2(c)(2); they may have knowledge of cultural resources in the project area. It is advisable to contact the persons listed and seek to establish a 'trust' relationship with them; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area.

Lead agencies should consider avoidance, in the case of cultural resources that are discovered. A tribe or Native American individual may be the only source of information about a cultural resource; this is consistent with the NHPA (16 U.S.C. 470 *et seq* Sections. 106, 110, and 304) Section 106 Guidelines amended in 2009. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful

NEPA regulations provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Even though a discovery may be in federal property, California Government Code §27460 should be followed in the event of an accidental discovery of human remains during any groundbreaking activity; in such cases California Government Code §27491 and California Health & Safety Code §7050.5 will apply and construction cease in the affected area.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton

Cc: State Clearinghouse

Native American Contact
Los Angeles County
July 16, 2012

Fernandeno Tataviam Band of Mission Indians
Ronnie Salas, Cultural Preservation Department
1019 - 2nd Street, Suite #1 Fernandeno
San Fernando CA 91340 Tataviam
rsalas@tataviam-nsn.gov
(818) 837-0794 Office

(818) 837-0796 Fax

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th St, Rm. 403
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Ti'At Society/Inter-Tribal Council of Pimu
Cindi M. Alvitre, Chairwoman-Manisar
3094 Mace Avenue, Apt. B Gabrielino
Costa Mesa, , CA 92626
calvitre@yahoo.com
(714) 504-2468 Cell

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address Gabrielino Tongva
,
tattnlaw@gmail.com
310-570-6567

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

Gabrielino Tongva Nation
Sam Dunlap, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Gabrielino-Tongva Tribe
Bernie Acuna
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
(619) 294-6660-work
(310) 428-5690 - cell
(310) 587-0170 - FAX
bacuna1@gabrieinotribe.org

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Los Angeles River Ecosystem Restoration Project; located near Downtown Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contact
Los Angeles County
July 16, 2012

Gabrielino-Tongva Tribe
Linda Candelaria, Chairwoman
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
lcandelaria1@gabrielinoTribe.org
626-676-1184- cell
(310) 587-0170 - FAX

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
(626) 926-4131
gabrielenoindians@yahoo.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Los Angeles River Ecosystem Restoration Project; located near Downtown Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

STATE OF CALIFORNIA – THE NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov

October 3, 2014

In reply refer to: COE_2014_0912_001

Dr. Josephine R. Axt, Ph.D.
Chief, Planning Division
Department of the Army
Los Angeles District Corps of Engineers
915 Wilshire Blvd., Suite 930
Los Angeles, CA 900017-3401

Re: Section 106 Consultation for the Los Angeles River Ecosystem Restoration Project in Los Angeles County, California.

Dear Dr. Axt:

Thank you for your letter dated September 5, 2014, requesting my review and comment with regard to the proposed Los Angeles River Ecosystem Restoration (LARER) Project. The Army Corps of Engineers (COE) is consulting with me Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act. Along with your consultation letter, you also provided the following document:

- *Los Angeles River Ecosystem Restoration Integrated Feasibility Report, Los Angeles County, California (U.S. Army Corps of Engineers 2013)*

The COE is proposing to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities while maintaining existing levels of flood risk management. A secondary purpose of this project is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile stretch of the river.

Based upon the current proposed project description, the COE has delineated an Area of Potential Effects (APE) that intends to be inclusive of both direct and indirect effects that may result from implementation of the proposed undertaking. The APE identified by the COE is inclusive of the proposed project footprint and physical disturbance areas for river channel and bank alterations, storm drain outlet conversions to natural stream confluences, creation of freshwater marshes, diversions of river flow into side channels, riparian planting, invasive management, re-vegetation, construction of elevated railroad trestles, and all potential temporary construction staging areas. Additionally, to consider potential indirect effects the COE is proposing a 1/8-mile (660-foot) buffer around all identified project features subject to direct ground-disturbing activities.

The COE requested a Sacred Lands File search and a Native American contact list from the Native American Heritage Commission (NAHC) dated July 16, 2012. The NAHC responded by indicating that there are cultural resources within the general area of the proposed APE and the

COE has indicated that they will consult with the organizations and individuals identified on the contact list provided by the NAHC with regard to the proposed APE for this undertaking. Furthermore, the COE has stated that they corresponded with Gabrielino/Tongva representatives prior to publishing the Draft Integrated Feasibility Report and have expressed their commitment to continuing communication with the tribal representatives throughout the life of the LARER Project.

The COE is requesting my comments on the appropriateness of the APE for the proposed undertaking.

- Pursuant to 36 CFR 800.4(a)(1) I have no objection to your definition of the APE for the proposed undertaking as it includes a reasonable and good-faith effort to capture the potential for both direct physical and indirect effects. Please note that the APE should be revised, as necessary, to reflect changes to the project design, should they occur.

Thank you for seeking my comments and considering historic properties as part of your project planning. I look forward to our continued consultation regarding the LARER Project. Be advised that under certain circumstances, such as a change in project description, the COE may have additional future responsibilities for this undertaking under 36 CFR Part 800. If you have any questions, please contact Patrick Riordan of my staff at (916) 445-7017 or Patrick.Riordan@parks.ca.gov.

Sincerely,

Carol Roland-Nawi, Ph.D.

Carol Roland-Nawi, PhD
State Historic Preservation Officer

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
915 Wilshire Boulevard, Suite 930
LOS ANGELES, CALIFORNIA 90017-3401

REPLY TO
ATTENTION OF

September 15, 2014

Office of the Chief
Planning Division

Mr. John M. Fowler
Executive Director
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001-2637

Dear Mr. Fowler:

The U.S. Army Corps of Engineers (Corps), Los Angeles District, is preparing environmental and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project (LARER), along and within the Los Angeles River, Los Angeles County, California. The LARER is an ecosystem restoration project that would create ground and visual disturbance along the River near downtown Los Angeles (enclosure 1).

The Draft Integrated Feasibility Report (IFR) for the proposed project, (which also serves as the Environmental Impact Statement/Environmental Impact Report), was available for public review from September 13, 2013 through November 18, 2013. A CD containing the Draft IFR is enclosed for reference (enclosure 2).

The Draft IFR identified Alternative 13 as the Tentatively Selected Plan. Subsequently, the Corps and the non-federal sponsor (City of Los Angeles) have identified a more comprehensive restoration plan, Alternative 20, as the Locally Preferred Plan. Alternative 20 will be the Recommended Plan in the Final IFR.

The proposed project is to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. A more detailed project description is included as enclosure (enclosure 3)

Based on the current proposed project description, we have delineated an Area of Potential Effects (APE). The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The enclosed APE map designates the portions of the project that would experience direct ground-disturbing activities. In addition, the APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects. Ground disturbance will occur mostly in areas that were previously disturbed by construction of the original concrete lined flood control channel. There are virtually no undisturbed ground surfaces in this highly urbanized environment through the entire reach of the project. Some undisturbed and intact subsurface deposits are still present. As construction would disturb these areas we would include the possibility for encountering buried cultural remains within the vertical APE. The vertical APE varies greatly from a few inches to several feet.

Horizontally we are proposing a one-eighth mile buffer around each depicted feature for noise and visual impacts. For clarity we have depicted the APE (without the one-eighth mile buffer) on both the USGS topographic map, and an aerial view (enclosures 4 and 5). Each measure and project feature is detailed in the legend. In a letter dater September 5, 2014 we initiated the Section 106 process with the California State Historic Preservation Officer (SHPO) by requesting their comments on the appropriateness of the APE for the proposed undertaking (pursuant to §800.4[a][1]). We are awaiting a response.

The Corps requested a Sacred Lands File search and a Native American contact list from the Native American Heritage Commission (NAHC) dated July 16, 2012. The NAHC responded by indicating that there are cultural resources within the general area of the proposed APE (enclosure 6). In addition to this information, we corresponded with the Gabrielino/Tongva prior to publishing the Draft IFR, and they were also sent copies of the document to obtain their concerns during the public review period. No responses were received. Although not Federally Recognized, communication with the Gabrielino/Tongva Tribal contacts will continue throughout the life of the project.

We have decided to pursue a Programmatic Agreement (PA) as the path to Section 106 compliance in accordance with 36 CFR 800.14(b)(ii). This project will be constructed over a number of years, and at this time the information we have is based on a records and literature search. Based on the information we do have, we do not anticipate there will be any Tribal or public controversy. The draft NEPA document that the public reviewed did not generate any significant concerns.

By this letter we are making the notification to ACHP required under 36 CFR 800.6 (a)(1), and giving your office the opportunity to participate. After reviewing Appendix A the 36 CFR 800 we believe that the Council's participation is not necessary at this time.

Please review the enclosed information, and respond within fifteen days of your receipt of this letter. If we do not hear from you within that period we will assume you do not choose to participate in the PA. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at David.S.Dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

Preserving America's Heritage

October 7, 2014

Josephine R. Axt, Ph.D.
Chief, Planning Division
Los Angeles District, Corps of Engineers
915 Wilshire Boulevard, Suite 930
Los Angeles, CA 90017-3401

Ref: ***Proposed Los Angeles River Ecosystem Restoration Project***
Los Angeles County, California

Dear Dr. Axt:

On September 22, 2014, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on properties listed on and eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases,* of our regulations, "Protection of Historic Properties" (36 CFR Part 800) does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or another party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR 800.6(b)(1)(iv), you will need to file the final Programmatic Agreement (PA), developed in consultation with the California State Historic Preservation Officer (SHPO) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the Agreement and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Brian Lusher at 202-517-0221, or via email at blusher@achp.gov.

Sincerely,

Raymond V. Wallace

Raymond V. Wallace
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
401 F Street, Suite 308 • Washington, DC 20001-2637
Phone: 202-517-0200 • Fax: 202-517-6381 • achp@achp.gov • www.achp.gov

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

September 26, 2014

Office of the Chief
Planning Division

Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816

Dear Dr. Roland-Nawi:

The United States Army Corps of Engineers (Corps), Los Angeles District, is preparing environmental and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project (LARER), along and within the Los Angeles River, Los Angeles County, California. The LARER is an ecosystem restoration project that would create ground and visual disturbance along the Los Angeles River near downtown Los Angeles (COE_2014_0912_001).

In a letter dated September 5, 2014 we initiated consultation on this project by submitting our proposed area of potential effects for your review and comment. Subsequent to that submittal we decided to pursue a programmatic agreement (PA) as our compliance instrument. The draft PA was submitted to Ms. Jessica Tudor by e-mail on September 17, 2014. Ms. Tudor also requested that we formally submit a hard copy by mail. The draft PA is attached for your review and comment. This particular project is a very high priority undertaking for the Corps and we appreciate your assistance.

Please review the draft PA, and respond at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at David.S.Dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure

State of California • Natural Resources Agency
Edmund G. Brown Jr., *Governor*
DEPARTMENT OF PARKS AND RECREATION
Major General Anthony L. Jackson, USMC (Ret), *Director*
Angeles District
1925 Las Virgenes
Calabasas, Ca. 91302

November 18, 2013

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Cory of Engineers, Los Angeles District
PO Box 532711
ATTN: Ms. Erin Jones, CES-PD-RN
Los Angeles, CA 90053-2325

RE: Draft Los Angeles Ecosystem Restoration Integrated Feasibility Report (DIFR) for the Los Angeles River Ecosystem Restoration Feasibility Study, Los Angeles County, California

Dear Dr. Axt:

The California Department of Parks and Recreation (California State Parks) has reviewed the above-referenced "Los Angeles River Project" DIFR and appreciates the opportunity to comment.

California State Parks stands with our partner park agencies, the National Park Service and the Santa Monica Mountains Conservancy, in its strong support for Alternative 20. The Los Angeles River Project presents a historic opportunity to reconnect the City of Los Angeles with its natural heritage by linking existing public open spaces, by providing habitat connectivity between the mountains and the river floodplain, and by promoting opportunities for passive outdoor recreation in the most park-poor metropolis in the United States. The community consensus-building and momentum that have resulted from the feasibility study and from other planning efforts over many years call for a bold vision to begin the restoration of what was once a vibrant ecosystem of mountains, rivers and coastal lowlands of almost unequalled biodiversity.

Over the past 12 years, California State Parks has invested over $150 million dollars to bring nature to the city by acquiring and developing three parks in urban Los Angeles: Rio de Los Angeles State Park, Los Angeles State Historic Park and the Baldwin Hills Scenic Overlook. Los Angeles State Historic Park and Rio de Los Angeles State Park were designated by Proposition 12 as Los Angeles River parkway projects.

In partnership with local communities, we have succeeded in preserving over one hundred acres of open space in the most park-poor region of the most park-poor city in the nation. These parks have not only attracted thousands of visitors every year, but have contributed to the economic revitalization of the surrounding communities. California State Parks' investment in these properties indicates that they rise to the level of statewide significance. We further recognize the Los Angeles River as a resource of statewide and national significance due to its cultural and historic role in the

transformation of Los Angeles from a frontier town to the second largest metropolis in the United States. We believe in the river's potential to transform the city once more through positive economic and environmental impacts that would benefit the entire Los Angeles region.

Los Angeles State Historic Park and Rio de Los Angeles State Park are innovative urban parks that serve low-income, park-poor communities that fought for equal access to parks and green space that are more available to more affluent Los Angeles neighborhoods. As reported by the City Project in *Dreams of Fields: Soccer, Community, and Equal Justice,* the community within a five mile radius of Los Angeles State Historic Park is 68% Latino, 14% Asian, 11% non-Hispanic white, and 4% African American. The population surrounding the park is disproportionally low income, with 30% of the residents living in poverty compared to 14% for the State of California as a whole. The community within a five mile radius of Rio de Los Angeles State Park reflects a similar socio-economic demographic with a 56% Latino, 17% Asian, 20% non-Hispanic white, and 4% African American population. Twenty seven percent of that population lives in poverty, with a median annual household income at just 69% of that for the State.

Los Angeles State Historic Park revives the forgotten history of Los Angeles from Native American times to the present, providing passive and active recreational opportunities in this rare swath of open space in the heart of the city. Rio de Los Angeles State Park features cutting edge wetlands restoration, much-needed athletic fields and community activities. Both of these parks are included as part of the National Park Service Rim of the Valley (ROTV) Corridor Special Resource Study, along with significant acreage in the Verdugo Mountains, also under the stewardship of California State Parks. During the public scoping process for the study, the national significance of the Los Angeles River and adjoining parklands, as well as the wildlife and habitat linkages they provide, was highlighted as a top concern by participants. Public comments received on the preliminary alternative concepts for the ROTV study strongly supported Alternative C (Connecting Urban Parks – SMNRA Boundary Adjustment), particularly in regard to the inclusion of the Los Angeles River and Arroyo Seco Corridors.

Alternative C of the ROTV Study complements existing Los Angeles River revitalization efforts and river parkway projects, of which Los Angeles State Historic Park and Rio De Los Angeles State Park are primary examples. National Park Service technical assistance and leadership in cooperative conservation efforts, coupled with acquisition and management capabilities, would be beneficial as a variety of city, county, state, joint powers, and local non-profit agencies currently work to leverage resources and connect open space along the river. The parcel G-2, currently held by Union Pacific, has long been considered the "crown jewel" in the emerald necklace of Los Angeles River parkway projects. Federal assistance could prove invaluable in the acquisition

and protection of this critical Los Angeles River connection. Alternative 20 is fully consistent with the concerns demonstrated by a large portion of the public in the ROTV study, and there is a tremendous opportunity for the Corps to build on this momentum and offer leadership in this comprehensive restoration effort.

After 12 years of extensive planning and public participation, California State Parks is ready to deliver on its commitment to the community and construct the full 32 acres at Los Angeles State Historic Park, beginning in early 2014. The park construction will happen in tandem with the development of the La Noria Water Wheel project, funded by the Annenberg Foundation, adjacent to the park. Echoing the historic waterwheel once located on North Broadway Street, the La Noria project will pump water from the Los Angeles River to the seasonal wetland portion of Los Angeles State Historic Park. The project will re-establish the site's physical connection to the historic Los Angeles River flood plain, and this hydrological connection to the river fulfills the vision laid out in the park's general plan, as stated in the *Declaration of Purpose*:

> "*The purpose of Los Angeles State Historic Park is to provide the public with a place to learn and to celebrate the ethnically diverse history and cultural heritage of Los Angeles, with an emphasis on its evolution to an economic and industrial metropolis of the 21st Century with extraordinary influence throughout the world. The park will contribute to the emerging Los Angeles River Greenway, stretching from the San Gabriel Mountains to the Pacific Ocean. The park will bring a wide range of visitors together to examine and experience the complete story of Los Angeles. It will be a sanctuary from the dense, urban environment that surrounds it. The park will connect abstract historical and social patterns to the personal experiences of Angelenos and visitors from the city, the state, the nation, and the world.*"

California State Parks is working in partnership with the City of Los Angeles and the Department of Toxic Substances Control on clean-up of the Bowtie parcel of Rio de Los Angeles State Park to park standard, which has already been identified by the Army Corps through the Los Angeles River Ecosystem Restoration Feasibility Study as the primary location for a demonstration project. The 18.5 acre parcel is large enough to achieve substantial restoration benefits and offers the potential to incorporate riparian bank-to-bank hydrological and habitat connections. The parcel's use for naturalized open space is consistent with the general plan for Rio de Los Angeles and consistent with the Los Angeles River Revitalization Master Plan's designation of the parcel as habitat/open space within the "Taylor Yard Opportunity Area." These projects present a tremendous opportunity for leveraging resources through extended partnerships with the Army Corps and project components offered in Alternative 20. Accordingly, we fully support the funding and implementation of Alternative 20, specifically the direct connection of Los Angeles State Historic Park and a portion of Rio de Los Angeles to the Los Angeles River.

Biological Resources

Riparian and wetland habitats are among those most impacted, due to damage and conversion associated with transportation, agriculture, water infrastructure and other development. Water quality degradation is also typical as the pollution from upgradient areas collects in these habitats. Yet, riparian and wetlands habitats are vital for the health of local fish and wildlife populations, and provide important resources for feeding, breeding, and resting. They also provide key corridors to local and large-scale animal movement that are necessary to avoid inbreeding depression and local extinctions.

Many unique special status species are associated with riparian and wetland habitats and would benefit from restoration of the Los Angeles River. Alternative 20 is preferable because it provides an additional 131 acres of restored and higher quality habitat compared to Alternative 13.

The long-term health of many fish and wildlife populations is dependent upon their ability to access both local and regional resources for food, mates, and sanctuary. Equally important is access to refuges where animal subpopulations can replenish their numbers and genetic diversity after bouts of disease, extreme weather, and decreased resource availability. These resources are even more crucial in intensely developed areas like Los Angeles, where the isolated patch of open space has even more value due to its relative rarity and the convoluted path to reach it. Adjacent development impacts, also known as edge effects, put greater pressures on native species through increased disturbance, disease, exposure to toxins, invasive species impacts and general habitat degradation. Restoration of the Los Angeles River would restore a key artery to the historic system of animal movement in the region and would not only provide increased options for existing wildlife, but vastly improve the future health and expansion of these populations.

The importance of the Los Angeles River for animal movement is supported by National Park Service's ongoing research tracking carnivores through the Santa Monica Mountains. The Park Service has identified the Los Angeles River as an important corridor for animal movement. Mountain Lion P22, among others, would benefit by having access to the Verdugo Hills via the restoration of the Verdugo Wash proposed only by Alternative 20. We believe that Alternative 20 is clearly the preferred alternative for maximizing animal movement and habitat connectivity. Alternative 20 adds 205% connectedness in the Study Area over Alternative 13. It provides the greatest range of connectivity by providing links to the Verdugo Mountains and associated property managed by California State Parks, Santa Monica Mountains Conservancy and the City of Glendale. It also ensures that the Elysian Hills would be connected to the Los Angeles River via Los Angeles State Historic Park. These benefits are not provided by other project alternatives. Alternative 20 therefore provides the best opportunity to protect and enhance existing animal populations at a regional level in both the short and long term.

The DIFR clearly underlines the importance of maximizing habitat linkages (Appendix G, Section 7.1.2):

> *"In order to benefit the biological integrity of a landscape, corridors should be restored to allow for dispersal between habitat areas. More corridors equal more routes to suitable habitat, creating more opportunities for dispersal. A complex network of nodes and corridors is therefore critical to restoration in an urban environment, as suitable habitat often remains unused if isolated (Hanski & Thomas 1994)."*

In *Sections 3.5.4* and *5*, the DIFR does not adequately discuss plant and animal species and unique habitats considered sensitive by the State of California, as required by the California Environmental Quality Act (CEQA). These include California Species of Special Concern, California Fully Protected, and species considered local endemics, among other designations. Just one example of this oversight is the silvery legless lizard (*Anniella pulchra pulchra*). This species is identified as potentially present, and it is a California Species of Concern, yet there is no discussion of how potential impacts to this species could occur during ground disturbing activities, nor is there discussion of how potential impacts be avoided.

We recommend inclusion of the following measures in the section on Best Managment Practies for Biological Resources:

- Conduct standard preconstruction surveys for special-status plants at the time of year when they are most likely to be in bloom or most visible to determine presence
- Conduct special-status animal clearance surveys just prior to construction to relocate animals out of harm's way.

The CHAP scoring and CE/ICA does not capture the regional importance of the project. We are concerned that it appears that total cost is the primary reason Alternative 20 has not been selected. This appears to be in part due to consideration of the relationship of cost to total acres restored or Habitat Units created, rather than the ecological *value* of the restored acres or resource areas made accessible. Alternative 20 not only significantly increases the *quantity* of habitat restored compared to Alternative 13, 719 vs. 588 acres, respectively, but creates *and* provides greater access to more higher *quality* habitat. We would like to reference and reiterate Santa Monica Mountains Conservancy's November 5, 2013 comment letter which clearly outlines these concerns. (See the *Importance of Biodiversity, Cost Effectiveness* and *Plan Selection* sections).

Specifically:

- Alternative 13 and 20 give the same credit for 113 acres of restoration associated with the Piggyback Yard, yet the restoration and associated ecological benefits are significantly greater under Alternative 20.
- At the Los Angeles State Historic Park ("Cornfield") location, Alternative 20 has significant ecological improvements over Alternative 13.
- Alternative 20 is identified as a "Best-Buy" in the CE/ICA, and is the only alternative that provides linkages to the Verdugo Mountains and Elysian Hills.
- Alternative 20 is efficient, the most complete, the most effective, and the best alternative at recreating natural processes that are needed to facilitate a self-sustaining system within the project area and throughout the region over the *long term.*
- Alternative 20 best complies with the goal of the Water Resources Development Act of 2007 to develop a plan *"consistent with the goals of the Los Angeles River Revitalization Master Plan published by the city of Los Angeles..."*
- As discussed in *Appendix G, Section 7*, three key project benefits have been excluded from the CHAP analysis: habitat connectivity, hydrologic and hydraulic connectivity of the Los Angeles River to its floodplain and human benefit.

Since the basis for the tentative selection of Alternative 13 is the relation of the total Habitat Units resulting from each alternative divided by the total cost, it is unacceptable to exclude habitat and hydraulic and hydrological connectivity from the equation. Incorporation of these factors must occur to provide clarity on the true cost/benefit relationship of the four project alternatives. Potential approaches to modifying the calculation of HUs could include:

- Differentiation of the relative ecological benefits of the restored habitat via modifiers to determine the value of the final restored area.
- Quantification of acres of significant habitat made available via corridor connections.
- Quantification of cumulative length of corridors connected or created or percent increase of corridors provided as an HU input.
- Weighting of HU outputs to consider direct human benefits. Specifically, building upon past investments in the project area, better connecting existing open space areas to the project area, quantified by acres or annual visitors, and direct economic benefits as calculated in the DIFR.

Cultural Resources

Los Angeles State Historic Park is designated as Los Angeles Historical Cultural Landmark (HCM) No. 82 River Station Area/Southern Pacific Railroad. Throughout the DIFR document, the property is referred to as the "Cornfields." Although we understand

that this was a previous nickname for the property, the origins of the name can only be traced back to the 1980's definitively, and thus does not represent the true historical designation. Instead, the study should refer to this area by the current name, Los Angeles State Historic Park, or the historical name, River Station. We believe that these are more appropriate terms and better connect the property to the origins of Los Angeles and the association with the Los Angeles River.

The site is historically significant with known significant archaeological resources. Archaeological features in the park, along with adjacent historical properties, are indicative of the importance of this site with regard to the industrial development and the rapid urban expansion of Los Angeles. Cultural resource identification efforts are preliminary at this point, and it is unclear in the DIFR document at what point additional background research, field survey and evaluation are to be undertaken. As a result, it is nearly impossible to provide comment on resource identification level of effort and potential for adverse effects. There should be additional opportunities made available for public comment through the Section 106 process to ensure that project effects on historic properties are being accounted for.

We recommend that additional background research efforts include analysis of ethnographic village locations in order to access the potential for encountering buried archaeological deposits within a region that experienced development early in time. This was an issue encountered during construction of the nearby Metropolitan Water District building where both Native American and historic-period archaeological materials were both anticipated and found based on previous research. As well, more detailed sources of historic map data, such as Sanborn fire insurance maps readily available at the City of LA Public Library, should be consulted, in addition to the historic topographic maps thus far consulted. Geomorphic studies of the historic configuration of the riverbed would also assist in determining the potential for encountering subsurface archaeological resources.

Additional archaeological testing has been conducted at Los Angeles State Historic Park in recent years in association with planning efforts for the next phase of park development. All of these data can be made available to the cultural resources consultant conducting additional identification efforts for the Los Angeles River restoration project. Additionally, geophysical survey methods, including ground-penetrating radar, magnetometer, gradiometer and resistivity, have proven to be quite successful in identifying subsurface historic-period features at the park, and we encourage the use of these methods in resource identification efforts throughout the developed Los Angeles River project restoration area where historic map data suggest the possibility for encountering features.

We believe it is preliminary to make any determinations on the level of potential for encountering cultural resources within all of the analyzed study reaches based on the limited background research conducted to date. As noted in the comments above, and

acknowledged in Section 5.6.4 in the DIFR, substantial additional research, testing, and evaluation will have to be conducted prior to any determination of effects from the proposed alternatives on historic properties with the study Area of Potential Effect (APE). We concur that development of a Programmatic Agreement will help to address some of our concerns noted above.

Thank you for the opportunity to comment on this project. Please contact Jamie King, Environmental Scientist at Jamie.King@parks.ca.gov or 818.880.0373, if clarifications are required.

Sincerely,

Craig Sap
State Parks
Angeles District Superintendent

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

Office of the Chief
Planning Division

September 21, 2012

Mr. Ronnie Salas
Fernandeno Tataviam Band of Mission Indians
Cultural Preservation Department
1019 2nd Street, Suite #1
San Fernando, California 91340

Dear Mr. Salas:

The Los Angeles District, Corps of Engineers (Corps) is preparing an Environmental Impact Statement (EIS) and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project located within the City of Los Angeles, in Los Angeles County (enclosure 1). The proposed project would provide restoration of riparian and aquatic habitat along portions of the Los Angeles River.

The purpose of this letter is to request your initial input by providing us with information on traditional cultural properties or other resources of concern that might be present within or near the project area. Any other comments or concerns are appreciated. This will not be your only opportunity to comment on the proposed project. A draft EIS detailing all considered alternatives is being prepared and a copy will be sent to you for further comment. This request is being sent to all names provided by the Native American Heritage Commission (enclosure 2).

Please review the enclosed map, and respond with comments at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at david.s.dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

Office of the Chief
Planning Division

September 21, 2012

Mr. Ron Andrade, Director
LA City/County Native American Indian Commission
3175 West 6th Street, Room, 403
Los Angeles, California 90020

Dear Mr. Andrade:

The Los Angeles District, Corps of Engineers (Corps) is preparing an Environmental Impact Statement (EIS) and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project located within the City of Los Angeles, in Los Angeles County (enclosure 1). The proposed project would provide restoration of riparian and aquatic habitat along portions of the Los Angeles River.

The purpose of this letter is to request your initial input by providing us with information on traditional cultural properties or other resources of concern that might be present within or near the project area. Any other comments or concerns are appreciated. This will not be your only opportunity to comment on the proposed project. A draft EIS detailing all considered alternatives is being prepared and a copy will be sent to you for further comment. This request is being sent to all names provided by the Native American Heritage Commission (enclosure 2).

Please review the enclosed map, and respond with comments at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at david.s.dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

Office of the Chief
Planning Division

September 21, 2012

Mr. Robert Dorame, Tribal Chair
Gabrielino Tongva Indians of California
P.O.Box 490
Bellflower, California 90707

Dear Mr. Dorame:

The Los Angeles District, Corps of Engineers (Corps) is preparing an Environmental Impact Statement (EIS) and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project located within the City of Los Angeles, in Los Angeles County (enclosure 1). The proposed project would provide restoration of riparian and aquatic habitat along portions of the Los Angeles River.

The purpose of this letter is to request your initial input by providing us with information on traditional cultural properties or other resources of concern that might be present within or near the project area. Any other comments or concerns are appreciated. This will not be your only opportunity to comment on the proposed project. A draft EIS detailing all considered alternatives is being prepared and a copy will be sent to you for further comment. This request is being sent to all names provided by the Native American Heritage Commission (enclosure 2).

Please review the enclosed map, and respond with comments at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at david.s.dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

Office of the Chief
Planning Division

September 21, 2012

Mr. Bernie Acuna
Gabrielino-Tongva Tribe
1875 Century Park East, #1500
Los Angeles, California 90067

Dear Mr. Acuna:

The Los Angeles District, Corps of Engineers (Corps) is preparing an Environmental Impact Statement (EIS) and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project located within the City of Los Angeles, in Los Angeles County (enclosure 1). The proposed project would provide restoration of riparian and aquatic habitat along portions of the Los Angeles River.

The purpose of this letter is to request your initial input by providing us with information on traditional cultural properties or other resources of concern that might be present within or near the project area. Any other comments or concerns are appreciated. This will not be your only opportunity to comment on the proposed project. A draft EIS detailing all considered alternatives is being prepared and a copy will be sent to you for further comment. This request is being sent to all names provided by the Native American Heritage Commission (enclosure 2).

Please review the enclosed map, and respond with comments at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at david.s.dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

September 21, 2012

Office of the Chief
Planning Division

Mr. Sam Dunlap, Chairperson
Gabrielino Tongva Nation
P.O. Box 86908
Los Angeles, California 90086

Dear Mr. Dunlap:

The Los Angeles District, Corps of Engineers (Corps) is preparing an Environmental Impact Statement (EIS) and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project located within the City of Los Angeles, in Los Angeles County (enclosure 1). The proposed project would provide restoration of riparian and aquatic habitat along portions of the Los Angeles River.

The purpose of this letter is to request your initial input by providing us with information on traditional cultural properties or other resources of concern that might be present within or near the project area. Any other comments or concerns are appreciated. This will not be your only opportunity to comment on the proposed project. A draft EIS detailing all considered alternatives is being prepared and a copy will be sent to you for further comment. This request is being sent to all names provided by the Native American Heritage Commission (enclosure 2).

Please review the enclosed map, and respond with comments at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at david.s.dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

Office of the Chief
Planning Division

September 21, 2012

Ms. Cindi M. Alvitre, Chairwoman
Ti'At Society/Inter-Tribal Council of Pimu
3094 Mace Avenue, Apt. B
Costa Mesa, California 92626

Dear Ms. Alvitre:

The Los Angeles District, Corps of Engineers (Corps) is preparing an Environmental Impact Statement (EIS) and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project located within the City of Los Angeles, in Los Angeles County (enclosure 1). The proposed project would provide restoration of riparian and aquatic habitat along portions of the Los Angeles River.

The purpose of this letter is to request your initial input by providing us with information on traditional cultural properties or other resources of concern that might be present within or near the project area. Any other comments or concerns are appreciated. This will not be your only opportunity to comment on the proposed project. A draft EIS detailing all considered alternatives is being prepared and a copy will be sent to you for further comment. This request is being sent to all names provided by the Native American Heritage Commission (enclosure 2).

Please review the enclosed map, and respond with comments at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at david.s.dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

Office of the Chief
Planning Division

September 21, 2012

Mr. Anthony Morales, Chairperson
San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, California 91778

Dear Mr. Morales:

The Los Angeles District, Corps of Engineers (Corps) is preparing an Environmental Impact Statement (EIS) and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project located within the City of Los Angeles, in Los Angeles County (enclosure 1). The proposed project would provide restoration of riparian and aquatic habitat along portions of the Los Angeles River.

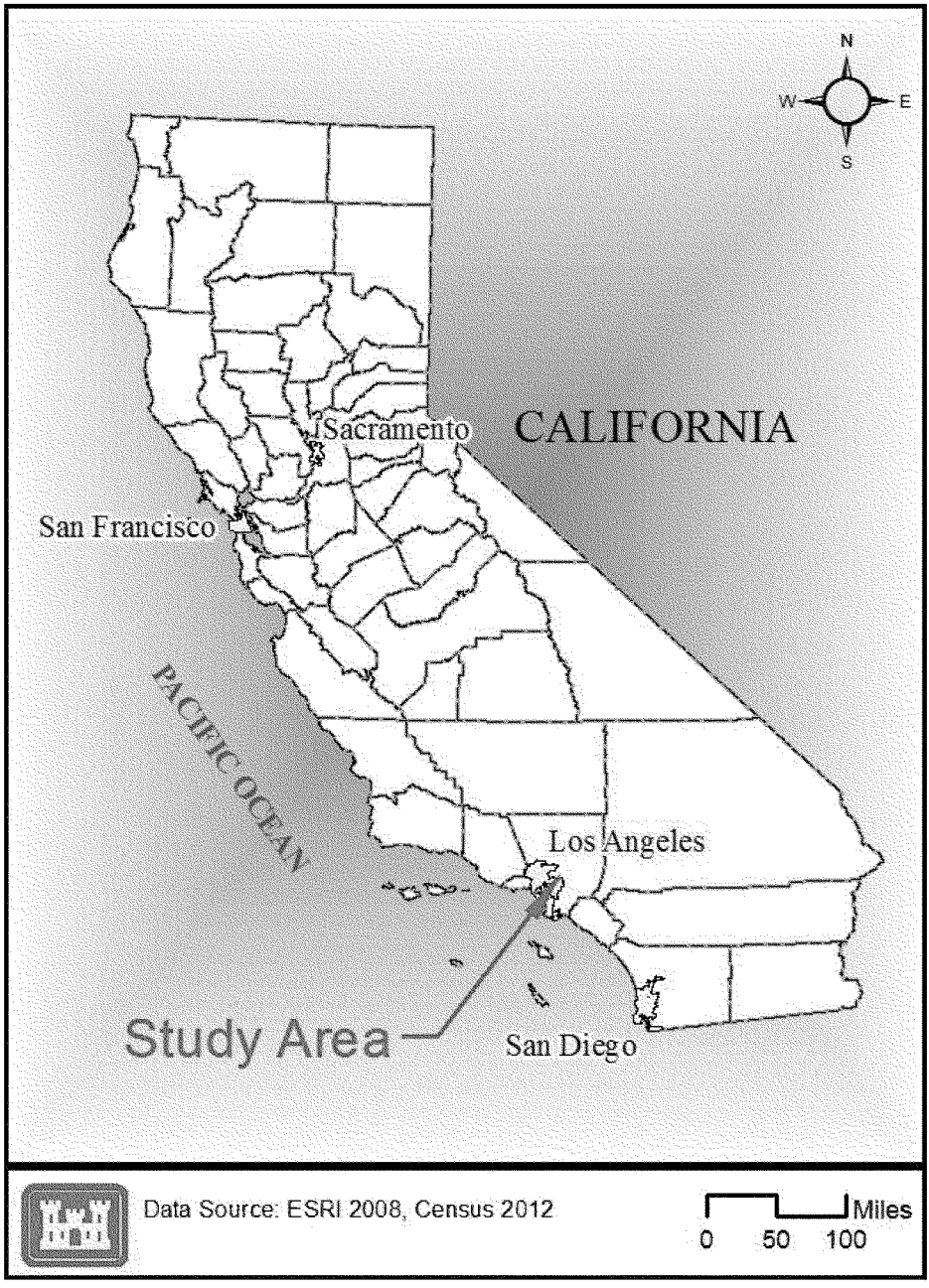
The purpose of this letter is to request your initial input by providing us with information on traditional cultural properties or other resources of concern that might be present within or near the project area. Any other comments or concerns are appreciated. This will not be your only opportunity to comment on the proposed project. A draft EIS detailing all considered alternatives is being prepared and a copy will be sent to you for further comment. This request is being sent to all names provided by the Native American Heritage Commission (enclosure 2).

Please review the enclosed map, and respond with comments at your earliest convenience. If you have any further questions on this project please call Mr. Stephen Dibble, Senior Archeologist, at (213) 452-3849. He may also be reached by e-mail at david.s.dibble@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)


N
W
E
S
CALIFORNIA
Sacramento
San Francisco
PACIFIC OCEAN
Los Angeles
Study Area
San Diego
Data Source: ESRI 2008, Census 2012
Miles
0
50
100

ENCLOSURE #1

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

July 16, 2012

Mr. Stephen Dibble, Archaeologist
United States Army Corps of Engineers
Los Angeles District Office
915 Wilshire Boulevard
Los Angeles, CA 90017

Sent by FAX to: (213) 452-4204 and (213) 452-4219
No. of Pages: 4

Re: Request of Sacred Lands File & Native American Contacts List , pursuant to 36 CFR Part 800, Protection of Historic Properties (NHPA Section 106; 16 U.S.C. 470 *et* seq) for the **"Los Angeles River Ecosystem Restoration Project;"** located on the Los Angeles River near Downtown Los Angeles; Los Angeles County, California.

Dear Mr. Dibble:

The Native American Heritage Commission (NAHC) is the California State 'Trustee Agency' pursuant to Public Resources Code §21070 for the protection of California's Native American Cultural Resources. The NAHC is also a 'reviewing agency' for environmental documents prepared under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq*), 36 CFR Part 800.3, .5 and are subject to the Tribal and interested Native American consultation as required by the National Historic Preservation Act, as amended (Section 106) (16 U.S.C. 470; Section 106, [4f], 110 [f] [k], 304). The provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013) and its implementation (43 CFR Part 10.2), and California Government Code §27491 may apply to this project if Native American human remains are inadvertently discovered.

The NAHC is of the opinion that the federal standards, pursuant to the above-referenced Acts and the Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) are similar to and in many cases more stringent with regard to the 'significance' of historic, including Native American items, and archaeological, including Native American items at least equal to the California Environmental Quality Act (CEQA.). In most cases, federal environmental policy require that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Statement (EIS).

The NAHC did conduct a Sacred Lands File (SLF) search of its Inventory and Native American cultural resources **were identified** in the area you specified. Early and quality consultation with the Native American representatives on the attached list may provide detailed information of sites with which they are aware. Also note that the absence of archaeological resources does not preclude their existence, particularly at the subsurface level.

The NAHC Sacred Lands File Inventory of the Native American Heritage Commission is established by the California Legislature pursuant to California Public Resources Code §§5097.94(a) and 5097.96. The NAHC Sacred Lands Inventory is populated by submission to

the data by Native American tribes and Native American elders. In this way it differs from the California and National Register of Historic Places under the jurisdiction of the U.S. Secretary of the Interior.

The NAHC, pursuant to Appendix B of the Guidelines to the California Environmental Quality Act (CEQA) is designated as the agency with expertise in the areas of issues of cultural significance to California Native American communities. Also, in the 1985 California Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

Culturally affiliated tribes are to be consulted to determine possible project impacts pursuant to the National Historic Preservation Act, as amended. Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. The NAHC recommends as part of 'due diligence', that you also contact the nearest Information Center of the California Historical Resources Information System (CHRIS) of the State Historic Preservation Office (SHPO) for other possible recorded sites in or near the APE (contact the Office of Historic Preservation at 916-445-7000).

Attached is a list of Native American contacts is attached to assist you pursuanat to Section 800.2(c)(1)(i) and Section 800.2(c)(2); they may have knowledge of cultural resources in the project area. It is advisable to contact the persons listed and seek to establish a 'trust' relationship with them; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area.

Lead agencies should consider avoidance, in the case of cultural resources that are discovered. A tribe or Native American individual may be the only source of information about a cultural resource; this is consistent with the NHPA (16 U.S.C. 470 *et seq* Sections. 106, 110, and 304) Section 106 Guidelines amended in 2009. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful

NEPA regulations provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Even though a discovery may be in federal property, California Government Code §27460 should be followed in the event of an accidental discovery of human remains during any groundbreaking activity; in such cases California Government Code §27491 and California Health & Safety Code §7050.5 will apply and construction cease in the affected area.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton

Cc: State Clearinghouse

Native American Contact
Los Angeles County
July 16, 2012

Fernandeno Tataviam Band of Mission Indians
Ronnie Salas, Cultural Preservation Department
1019 - 2nd Street, Suite #1 Fernandeno
San Fernando CA 91340 Tataviam
rsalas@tataviam-nsn.gov
(818) 837-0794 Office

(818) 837-0796 Fax

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th St, Rm. 403
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Ti'At Society/Inter-Tribal Council of Pimu
Cindi M. Alvitre, Chairwoman-Manisar
3094 Mace Avenue, Apt. B Gabrielino
Costa Mesa, , CA 92626
calvitre@yahoo.com
(714) 504-2468 Cell

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address Gabrielino Tongva
,
tattnlaw@gmail.com
310-570-6567

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

Gabrielino Tongva Nation
Sam Dunlap, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Gabrielino-Tongva Tribe
Bernie Acuna
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
(619) 294-6660-work
(310) 428-5690 - cell
(310) 587-0170 - FAX
bacuna1@gabrieinotribe.org

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Los Angeles River Ecosystem Restoration Project; located near Downtown Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contact
Los Angeles County
July 16, 2012

Gabrielino-Tongva Tribe
Linda Candelaria, Chairwoman
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
lcandelaria1@gabrielinoTribe.org
626-676-1184- cell
(310) 587-0170 - FAX

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
(626) 926-4131
gabrielenoindians@yahoo.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Los Angeles River Ecosystem Restoration Project; located near Downtown Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
915 Wilshire Boulevard, Suite 930
LOS ANGELES, CALIFORNIA 90017-3401

REPLY TO
ATTENTION OF

December 12, 2014

Office of the Chief
Planning Division

Mr. Andrew Salas
Chairperson
Gabrieleno Band of Mission Indians
P.O. Box 393
Covina, California 91723

Dear Mr. Salas:

The U.S. Army Corps of Engineers (Corps), Los Angeles District, is preparing environmental and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project (LARER), along and within the Los Angeles River, Los Angeles County, California. The LARER is an ecosystem restoration project that would create ground and visual disturbance along the River near downtown Los Angeles (enclosure 1).

The Draft Integrated Feasibility Report (IFR) for the proposed project, (which also serves as the Environmental Impact Statement/Environmental Impact Report), was available for public review from September 13, 2013 through November 18, 2013. A CD containing the Draft IFR is enclosed for reference (enclosure 2).

The Draft IFR identified Alternative 13 as the Tentatively Selected Plan. Subsequently, the Corps and the non-federal sponsor (City of Los Angeles) have identified a more comprehensive restoration plan, Alternative 20, as the Locally Preferred Plan. Alternative 20 will be the Recommended Plan in the Final IFR.

The proposed project is to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. A more detailed project description is included in enclosure 3.

Based on the current proposed project description, we have delineated an Area of Potential Effects (APE). The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The enclosed APE map designates the portions of the project that would experience direct ground-disturbing activities. In addition, the APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects. Ground disturbance will occur mostly in areas that were previously disturbed by construction of the original concrete lined flood control channel. There are virtually no undisturbed ground surfaces in this highly urbanized environment through the entire reach of the

project. Some undisturbed and intact subsurface deposits may still be present. As construction may disturb these areas we would include the possibility for encountering buried cultural remains within the vertical APE. The vertical APE varies greatly from a few inches to several feet. Horizontally we are proposing a one-eighth mile buffer around each depicted feature for noise and visual impacts. For clarity we have depicted the APE (without the one-eighth mile buffer) on both the USGS topographic map, and an aerial view (enclosures 4 and 5). Each measure and project feature is detailed in the legend. In a letter dater September 5, 2014 we initiated the Section 106 process with the California State Historic Preservation Officer (SHPO) by requesting their comments on the appropriateness of the APE for the proposed undertaking (pursuant to §800.4[a][1]). SHPO has not responded as of the date of this letter.

The Corps requested a Sacred Lands File search and a Native American contact list from the Native American Heritage Commission (NAHC) dated July 16, 2012. The NAHC responded by indicating that there are cultural resources within the general area of the proposed APE (Enclosure 6). In addition to this information, we corresponded with the Gabrielino/Tongva prior to publishing the Draft IFR, and they were also sent copies of the document to obtain their concerns during the public review period. No responses were received. Although not Federally Recognized, communication with the Gabrielino/Tongva Tribal contacts will continue throughout the life of the project.

We have decided to pursue a Programmatic Agreement as the path to Section 106 compliance in accordance with 36 CFR 800.14(b)(ii). This project will be constructed over a number of years, and at this time the information we have is based on a records and literature search.

With this letter we are requesting your comments on the APE and draft PA (enclosure 7).

Please review the enclosed information, and respond at your earliest convenience. Preferably we would appreciate a response within thirty days. However, we will consider and respond to your comments throughout the life of the project. If you have any further questions on this project please call John J. Killeen, R.P.A. at (213) 452-3861. He may also be reached by e-mail at john.j.killeen@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
915 Wilshire Boulevard, Suite 930
LOS ANGELES, CALIFORNIA 90017-3401

REPLY TO
ATTENTION OF

December 12, 2014

Office of the Chief
Planning Division

Mr. Ronnie Salas
Cultural Preservation Department
Fernadeno Taraviam Band of Mission Indians
1019 - 2nd Street

Dear Mr. Salas:

The U.S. Army Corps of Engineers (Corps), Los Angeles District, is preparing environmental and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project (LARER), along and within the Los Angeles River, Los Angeles County, California. The LARER is an ecosystem restoration project that would create ground and visual disturbance along the River near downtown Los Angeles (enclosure 1).

The Draft Integrated Feasibility Report (IFR) for the proposed project, (which also serves as the Environmental Impact Statement/Environmental Impact Report), was available for public review from September 13, 2013 through November 18, 2013. A CD containing the Draft IFR is enclosed for reference (enclosure 2).

The Draft IFR identified Alternative 13 as the Tentatively Selected Plan. Subsequently, the Corps and the non-federal sponsor (City of Los Angeles) have identified a more comprehensive restoration plan, Alternative 20, as the Locally Preferred Plan. Alternative 20 will be the Recommended Plan in the Final IFR.

The proposed project is to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. A more detailed project description is included in enclosure 3.

Based on the current proposed project description, we have delineated an Area of Potential Effects (APE). The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The enclosed APE map designates the portions of the project that would experience direct ground-disturbing activities. In addition, the APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects. Ground disturbance will occur mostly in areas that were previously disturbed by construction of the original concrete lined flood control channel. There are virtually no undisturbed ground surfaces in this highly urbanized environment through the entire reach of the

project. Some undisturbed and intact subsurface deposits may still be present. As construction may disturb these areas we would include the possibility for encountering buried cultural remains within the vertical APE. The vertical APE varies greatly from a few inches to several feet. Horizontally we are proposing a one-eighth mile buffer around each depicted feature for noise and visual impacts. For clarity we have depicted the APE (without the one-eighth mile buffer) on both the USGS topographic map, and an aerial view (enclosures 4 and 5). Each measure and project feature is detailed in the legend. In a letter dater September 5, 2014 we initiated the Section 106 process with the California State Historic Preservation Officer (SHPO) by requesting their comments on the appropriateness of the APE for the proposed undertaking (pursuant to §800.4[a][1]). SHPO has not responded as of the date of this letter.

The Corps requested a Sacred Lands File search and a Native American contact list from the Native American Heritage Commission (NAHC) dated July 16, 2012. The NAHC responded by indicating that there are cultural resources within the general area of the proposed APE (Enclosure 6). In addition to this information, we corresponded with the Gabrielino/Tongva prior to publishing the Draft IFR, and they were also sent copies of the document to obtain their concerns during the public review period. No responses were received. Although not Federally Recognized, communication with the Gabrielino/Tongva Tribal contacts will continue throughout the life of the project.

We have decided to pursue a Programmatic Agreement as the path to Section 106 compliance in accordance with 36 CFR 800.14(b)(ii). This project will be constructed over a number of years, and at this time the information we have is based on a records and literature search.

With this letter we are requesting your comments on the APE and draft PA (enclosure 7).

Please review the enclosed information, and respond at your earliest convenience. Preferably we would appreciate a response within thirty days. However, we will consider and respond to your comments throughout the life of the project. If you have any further questions on this project please call John J. Killeen, R.P.A. at (213) 452-3861. He may also be reached by e-mail at john.j.killeen@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
915 Wilshire Boulevard, Suite 930
LOS ANGELES, CALIFORNIA 90017-3401

REPLY TO
ATTENTION OF

December 12, 2014

Office of the Chief
Planning Division

Mr. Ron Andrade
Director
Los Angeles City
and County Native American Indian Commission
3175 West 6th Street, Room 403
Los Angeles, California 90020

Dear Mr. Andrade:

The U.S. Army Corps of Engineers (Corps), Los Angeles District, is preparing environmental and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project (LARER), along and within the Los Angeles River, Los Angeles County, California. The LARER is an ecosystem restoration project that would create ground and visual disturbance along the River near downtown Los Angeles (enclosure 1).

The Draft Integrated Feasibility Report (IFR) for the proposed project, (which also serves as the Environmental Impact Statement/Environmental Impact Report), was available for public review from September 13, 2013 through November 18, 2013. A CD containing the Draft IFR is enclosed for reference (enclosure 2).

The Draft IFR identified Alternative 13 as the Tentatively Selected Plan. Subsequently, the Corps and the non-federal sponsor (City of Los Angeles) have identified a more comprehensive restoration plan, Alternative 20, as the Locally Preferred Plan. Alternative 20 will be the Recommended Plan in the Final IFR.

The proposed project is to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. A more detailed project description is included in enclosure 3.

Based on the current proposed project description, we have delineated an Area of Potential Effects (APE). The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The enclosed APE map designates the portions of the project that would experience direct ground-disturbing activities. In addition, the APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects. Ground disturbance will occur mostly in areas that were previously disturbed by

construction of the original concrete lined flood control channel. There are virtually no undisturbed ground surfaces in this highly urbanized environment through the entire reach of the project. Some undisturbed and intact subsurface deposits may still be present. As construction may disturb these areas we would include the possibility for encountering buried cultural remains within the vertical APE. The vertical APE varies greatly from a few inches to several feet. Horizontally we are proposing a one-eighth mile buffer around each depicted feature for noise and visual impacts. For clarity we have depicted the APE (without the one-eighth mile buffer) on both the USGS topographic map, and an aerial view (enclosures 4 and 5). Each measure and project feature is detailed in the legend. In a letter dater September 5, 2014 we initiated the Section 106 process with the California State Historic Preservation Officer (SHPO) by requesting their comments on the appropriateness of the APE for the proposed undertaking (pursuant to §800.4[a][1]). SHPO has not responded as of the date of this letter.

The Corps requested a Sacred Lands File search and a Native American contact list from the Native American Heritage Commission (NAHC) dated July 16, 2012. The NAHC responded by indicating that there are cultural resources within the general area of the proposed APE (Enclosure 6). In addition to this information, we corresponded with the Gabrielino/Tongva prior to publishing the Draft IFR, and they were also sent copies of the document to obtain their concerns during the public review period. No responses were received. Although not Federally Recognized, communication with the Gabrielino/Tongva Tribal contacts will continue throughout the life of the project.

We have decided to pursue a Programmatic Agreement as the path to Section 106 compliance in accordance with 36 CFR 800.14(b)(ii). This project will be constructed over a number of years, and at this time the information we have is based on a records and literature search.

With this letter we are requesting your comments on the APE and draft PA (enclosure 7).

Please review the enclosed information, and respond at your earliest convenience. Preferably we would appreciate a response within thirty days. However, we will consider and respond to your comments throughout the life of the project. If you have any further questions on this project please call John J. Killeen, R.P.A. at (213) 452-3861. He may also be reached by e-mail at john.j.killeen@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
915 Wilshire Boulevard, Suite 930
LOS ANGELES, CALIFORNIA 90017-3401

REPLY TO
ATTENTION OF

December 12, 2014

Office of the Chief
Planning Division

Mr. Craig Sap
District Superintendent
Angeles and Channel Coast Districts
California State Parks
1925 Las Virgenes Road
Calabasas, California 91302

Dear Mr. Sap:

The U.S. Army Corps of Engineers (Corps), Los Angeles District, is preparing environmental and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project (LARER), along and within the Los Angeles River, Los Angeles County, California. The LARER is an ecosystem restoration project that would create ground and visual disturbance along the River near downtown Los Angeles (enclosure 1).

The Draft Integrated Feasibility Report (IFR) for the proposed project, (which also serves as the Environmental Impact Statement/Environmental Impact Report), was available for public review from September 13, 2013 through November 18, 2013. A CD containing the Draft IFR is enclosed for reference (enclosure 2).

The Draft IFR identified Alternative 13 as the Tentatively Selected Plan. Subsequently, the Corps and the non-federal sponsor (City of Los Angeles) have identified a more comprehensive restoration plan, Alternative 20, as the Locally Preferred Plan. Alternative 20 will be the Recommended Plan in the Final IFR.

The proposed project is to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. A more detailed project description is included in enclosure 3.

Based on the current proposed project description, we have delineated an Area of Potential Effects (APE). The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The enclosed APE map designates the portions of the project that would experience direct ground-disturbing activities. In addition, the APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects. Ground disturbance will occur mostly in areas that were previously disturbed by

construction of the original concrete lined flood control channel. There are virtually no undisturbed ground surfaces in this highly urbanized environment through the entire reach of the project. Some undisturbed and intact subsurface deposits may still be present. As construction may disturb these areas we would include the possibility for encountering buried cultural remains within the vertical APE. The vertical APE varies greatly from a few inches to several feet. Horizontally we are proposing a one-eighth mile buffer around each depicted feature for noise and visual impacts. For clarity we have depicted the APE (without the one-eighth mile buffer) on both the USGS topographic map, and an aerial view (enclosures 4 and 5). Each measure and project feature is detailed in the legend. In a letter dater September 5, 2014 we initiated the Section 106 process with the California State Historic Preservation Officer (SHPO) by requesting their comments on the appropriateness of the APE for the proposed undertaking (pursuant to §800.4[a][1]). SHPO has not responded as of the date of this letter.

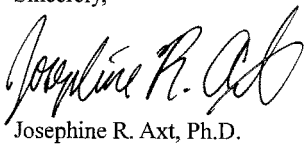
The Corps requested a Sacred Lands File search and a Native American contact list from the Native American Heritage Commission (NAHC) dated July 16, 2012. The NAHC responded by indicating that there are cultural resources within the general area of the proposed APE (Enclosure 6). In addition to this information, we corresponded with the Gabrielino/Tongva prior to publishing the Draft IFR, and they were also sent copies of the document to obtain their concerns during the public review period. No responses were received. Although not Federally Recognized, communication with the Gabrielino/Tongva Tribal contacts will continue throughout the life of the project.

We have decided to pursue a Programmatic Agreement as the path to Section 106 compliance in accordance with 36 CFR 800.14(b)(ii). This project will be constructed over a number of years, and at this time the information we have is based on a records and literature search.

With this letter we are requesting your comments on the APE and draft PA (enclosure 7).

Please review the enclosed information, and respond at your earliest convenience. Preferably we would appreciate a response within thirty days. However, we will consider and respond to your comments throughout the life of the project. If you have any further questions on this project please call John J. Killeen, R.P.A. at (213) 452-3861. He may also be reached by e-mail at john.j.killeen@usace.army.mil.

Sincerely,



Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
915 Wilshire Boulevard, Suite 930
LOS ANGELES, CALIFORNIA 90017-3401

REPLY TO
ATTENTION OF

December 12, 2014

Office of the Chief
Planning Division

Ms. Cindi M. Alvitre
Chairwoman-Manisar
Ti'At Society/Inter-Tribal Council of Pimu
3094 Mace Avenue, Apartment B
Costa Mesa, California 92626

Dear Ms. Alvitre:

The U.S. Army Corps of Engineers (Corps), Los Angeles District, is preparing environmental and cultural resources documentation for the proposed Los Angeles River Ecosystem Restoration Project (LARER), along and within the Los Angeles River, Los Angeles County, California. The LARER is an ecosystem restoration project that would create ground and visual disturbance along the River near downtown Los Angeles (enclosure 1).

The Draft Integrated Feasibility Report (IFR) for the proposed project, (which also serves as the Environmental Impact Statement/Environmental Impact Report), was available for public review from September 13, 2013 through November 18, 2013. A CD containing the Draft IFR is enclosed for reference (enclosure 2).

The Draft IFR identified Alternative 13 as the Tentatively Selected Plan. Subsequently, the Corps and the non-federal sponsor (City of Los Angeles) have identified a more comprehensive restoration plan, Alternative 20, as the Locally Preferred Plan. Alternative 20 will be the Recommended Plan in the Final IFR.

The proposed project is to restore approximately 11 miles of the Los Angeles River from Griffith Park to downtown Los Angeles by reestablishing riparian strand, freshwater marsh, and aquatic habitat communities while maintaining existing levels of flood risk management. A secondary purpose is to provide recreational opportunities consistent with the restored ecosystem within this 11-mile reach of the river. A more detailed project description is included in enclosure 3.

Based on the current proposed project description, we have delineated an Area of Potential Effects (APE). The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The enclosed APE map designates the portions of the project that would experience direct ground-disturbing activities. In addition, the APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects. Ground disturbance will occur mostly in areas that were previously disturbed by construction of the original concrete lined flood control channel. There are virtually no

undisturbed ground surfaces in this highly urbanized environment through the entire reach of the project. Some undisturbed and intact subsurface deposits may still be present. As construction may disturb these areas we would include the possibility for encountering buried cultural remains within the vertical APE. The vertical APE varies greatly from a few inches to several feet. Horizontally we are proposing a one-eighth mile buffer around each depicted feature for noise and visual impacts. For clarity we have depicted the APE (without the one-eighth mile buffer) on both the USGS topographic map, and an aerial view (enclosures 4 and 5). Each measure and project feature is detailed in the legend. In a letter dater September 5, 2014 we initiated the Section 106 process with the California State Historic Preservation Officer (SHPO) by requesting their comments on the appropriateness of the APE for the proposed undertaking (pursuant to §800.4[a][1]). SHPO has not responded as of the date of this letter.

The Corps requested a Sacred Lands File search and a Native American contact list from the Native American Heritage Commission (NAHC) dated July 16, 2012. The NAHC responded by indicating that there are cultural resources within the general area of the proposed APE (Enclosure 6). In addition to this information, we corresponded with the Gabrielino/Tongva prior to publishing the Draft IFR, and they were also sent copies of the document to obtain their concerns during the public review period. No responses were received. Although not Federally Recognized, communication with the Gabrielino/Tongva Tribal contacts will continue throughout the life of the project.

We have decided to pursue a Programmatic Agreement as the path to Section 106 compliance in accordance with 36 CFR 800.14(b)(ii). This project will be constructed over a number of years, and at this time the information we have is based on a records and literature search.

With this letter we are requesting your comments on the APE and draft PA (enclosure 7).

Please review the enclosed information, and respond at your earliest convenience. Preferably we would appreciate a response within thirty days. However, we will consider and respond to your comments throughout the life of the project. If you have any further questions on this project please call John J. Killeen, R.P.A. at (213) 452-3861. He may also be reached by e-mail at john.j.killeen@usace.army.mil.

Sincerely,

Josephine R. Axt, Ph.D.
Chief, Planning Division

Enclosure(s)

N
W
E
S
CALIFORNIA
Sacramento
San Francisco
PACIFIC OCEAN
Los Angeles
Study Area
San Diego
Data Source: ESRI 2008, Census 2012
Miles
0
50
100

ENCLOSURE #1

Enclosure #3

Alternative 20 ARBOR Riparian Integration via Varied Ecological Reintroduction (RIVER)

This alternative provides the most extensive restoration and includes measures in all eight reaches with channel widening at Verdugo Wash, Arroyo Seco, Cornfield/LA State Historic Park, and Piggyback Yard. Features of Alterative 20 are similar to those included in Alternative 13, but are more extensive in scope. Sub-measures under this alternative would be implemented in all reaches (1-8) throughout the study area and include:

- Riparian planting of habitat corridors (reaches 1,2,3,4,5,6,7,8)
- Bioengineer channel walls (reach 5)
- Trapezoidal to vertical walls (reaches 2,5)
- Create/rebuild channel geomorphology (reaches 3,4,5,7,8)
- Divert flow into channels (reaches 3,4,7,8)
- Widen channel (reach 3,8)
- Widen tributaries (reach 3)
- Expose/daylight stormdrain outlets (reaches 4,5,7)
- Channel bed deepening (reach 5)
- Terrace banks (reaches 5,6,7, 8)
- Elevate railroad (reaches 7,8)

Reach 1 – Reach 1 for all alternatives in the final array would implement the habitat corridor with riparian planting on the overbanks. This would restore approximately 60 acres of riparian habitat corridors along the overbanks of both sides of the river. Overbanks are those areas adjacent to the river where overland flow in flood events could occur in a natural river environment. Areas of restoration include Pollywog Park, the bank between Headworks and the River with a connection under SR-134 to Headworks, the open area directly downstream of Headworks with a connection under Forest Lawn Drive on the same side of SR-134 with Headworks, and on the left bank of Burbank Western Channel (tributary from the north/west).

This would involve planting a riparian community of cottonwood/willow, sycamore, mugwort, mulefat, and scarlet monkeyflower with a buffer of sagebrush, buckwheat, and native herbaceous plants. It would include irrigation for establishment and water harvesting features to sustain plants, including micro-grading and/or swales to capture and infiltrate water. Water sources could include reclaimed water, harvesting of stormwater and street runoff (with small wetland features at the end of adjacent streets), and/or highway runoff. Where stormwater or street runoff is excessive during storm events, a connection to the River would allow it to overflow into the

channel, creating a hydrologic connection. Soil amendments would be required. Establishment and drought management for this vegetation would utilize irrigation, either through flood irrigation (simulating a natural riparian regime) or drip irrigation, dependent upon the availability of water. There would be no channel modifications within this reach. While there is a levee at the downstream end of this reach, any planting in that area would comply with all levee regulations.

Reach 2 – Like Alternatives 10, 13, and 16, implementation of the habitat corridors/riparian planting measure would result in restoration of approximately 26 acres of riparian habitat corridors along the overbanks of both sides of the river as described for Reach 1. This includes restoration of riparian habitat in the Bette Davis Park area of Griffith Park on the left bank and the area between Zoo Drive and SR-134 with connections under the highway to a restored linear riparian planting along the River extending into Reach 3. This reach is soft bottom and would include invasives management in the existing vegetation in the channel and on the overbank. Unlike the other alternatives, Alternative 20 would add additional modification in Reach 2. The right bank would be modified from trapezoidal to a vertical bank creating 80 feet of additional soft bottom width in the channel with overhanging vines.

Reach 3 – In this reach a side channel would divert water from the river into a side channel flowing on the west side of Ferraro Fields and would daylight a stream currently confined in a large culvert just downstream of Ferraro Fields on the right bank in the Zoo Drive area. The side channel would support a riparian fringe, and open water and freshwater marsh will be located in the daylighted area outside of the mainstem of the River channel. Two additional smaller streams would be daylighted on the left bank. These would include a riparian fringe with freshwater marsh at the confluence. Riparian areas are located on the right or west bank along Zoo Drive, on the River's edge of Ferraro Fields, and between the daylighted streams on the left or east bank. There would be no modifications to the channel itself. In the Verdugo Wash confluence, the channel mouth will be widened and the south slope would be sloped back to the existing overbank elevation. One potential design would use riparian vegetation to stabilize the south bank and a combined riparian and marsh community in the widened channel. Levee protection would be tied-in to the bank, and other levee protection will remain. Levee vegetation policy will be followed. Modifications at the Verdugo Wash confluence are not expected to impact the tracks along San Fernando Road under the 134 Freeway or affect ongoing railroad operations. Modifications at the confluence may affect grade separation proposals for Doran Street. Details for the confluence area will be determined during the detailed design phase of the study. Acquisition of several parcels at the confluence area is anticipated if this feature is included.

Reach 4 – Restoration in Reach 4 (via implementation of measures to daylight and restore stream geomorphology and habitat in seven areas, a side channel through both the Griffith Park Golf Course on the west and the Los Feliz Golf Course on the east bank, and a riparian habitat corridor) would include approximately 30 acres of restored riparian and wetland habitat. This would be accomplished through a diversion of river flow into a side channel up to 10 feet deep with a riparian fringe through Griffith Park on the right bank, lining the left river bank with a riparian corridor within levee regulation requirements, and daylighting approximately seven small streams.

The riparian corridor measure would involve planting a riparian strip of mugwort and scarlet monkeyflower with a buffer of native herbaceous plants. It would include irrigation for

establishment and water harvesting features to sustain plants, including micro-grading and/or swales to capture and infiltrate water. Water sources could include reclaimed water, harvesting of stormwater and street runoff (with small wetland features at the end of adjacent streets), and/or highway runoff. Where stormwater or street runoff is excessive during storm events, a connection to the river would allow it to overflow into the channel, creating a hydrologic connection. Soil amendments would be required. Establishment and drought management for this vegetation would utilize irrigation, which would be either through flood irrigation (simulating a natural riparian regime) or drip irrigation, dependent upon the availability of water. This would be implemented as continuously as possible within the requirements of levee regulations. There would be no channel modifications within this reach.

The storm drains would be opened and naturalized as tributaries as far upstream as possible (at a minimum opening up the stream within the River right-of-way). Depending upon the length of the daylighted stream, it would be planted with riparian vegetation and end at the confluence with the river in a small freshwater marsh. If it is not possible to design an efficient confluence, the connection to the River would remain gated. Freshwater marsh vegetation would include clustered field sedge, fragrant flatsedge, Parish's spikerush and common rush, scarlet monkey flower, California bulrush, narrow leaved cattail, and common cattail.

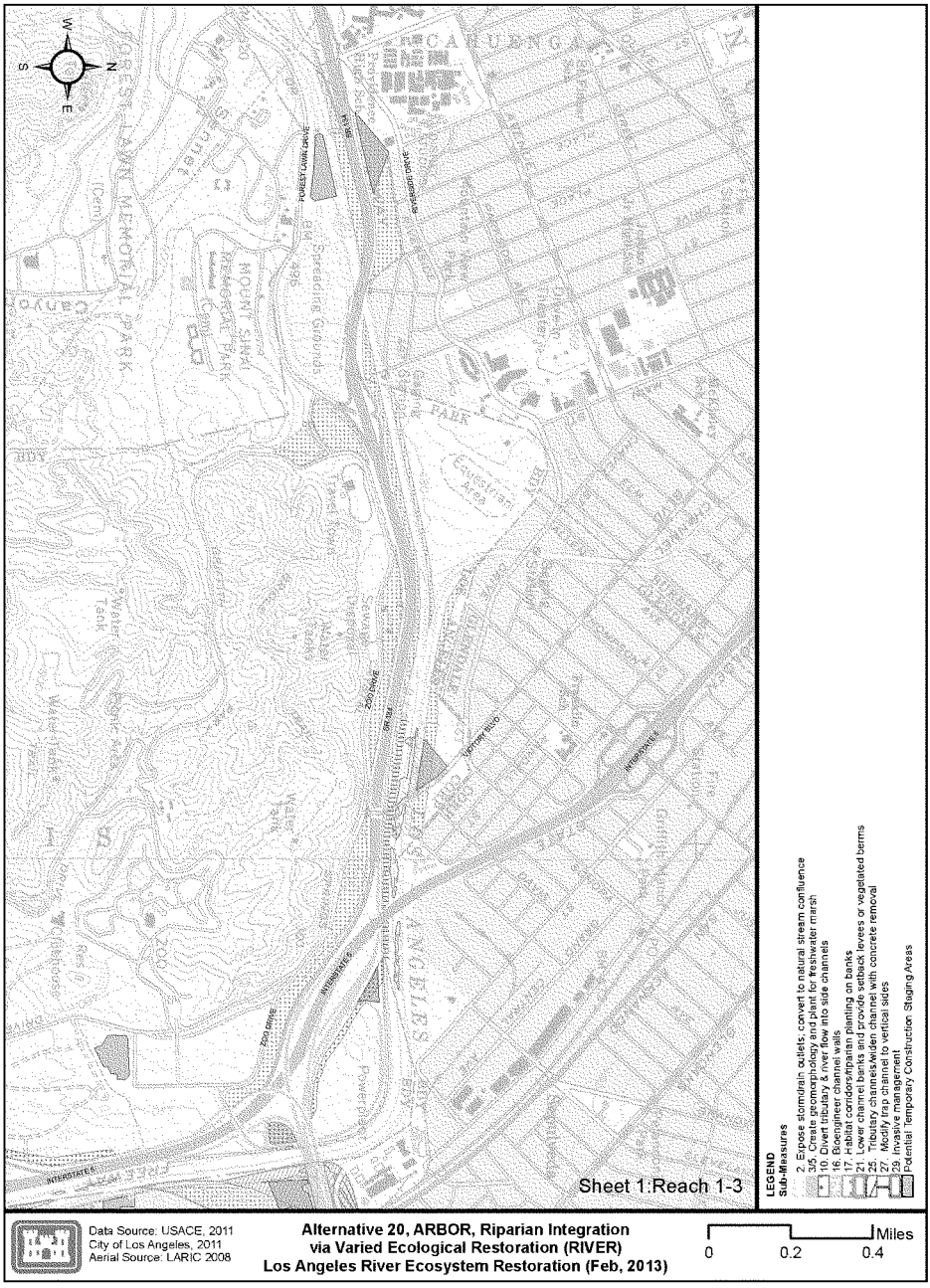
Reach 5 – In Reach 5, the right bank would be modified from a trapezoidal bank to a vertical bank. This would increase the width of the soft bottom river bed by over 100 feet. The top of the bank would be notched and planted with overhanging vines. The left bank would be modified with terraces planted with herbaceous vegetation and necessary erosion measures, which would consist of concrete-lined beds. The inland bank would be planted with riparian vegetation. At the downstream end of this reach, the river will also be widened on the left bank with appropriate erosion control measures in place. This would further increase the natural river bottom area. All of these measures would comply with levee vegetation regulations.

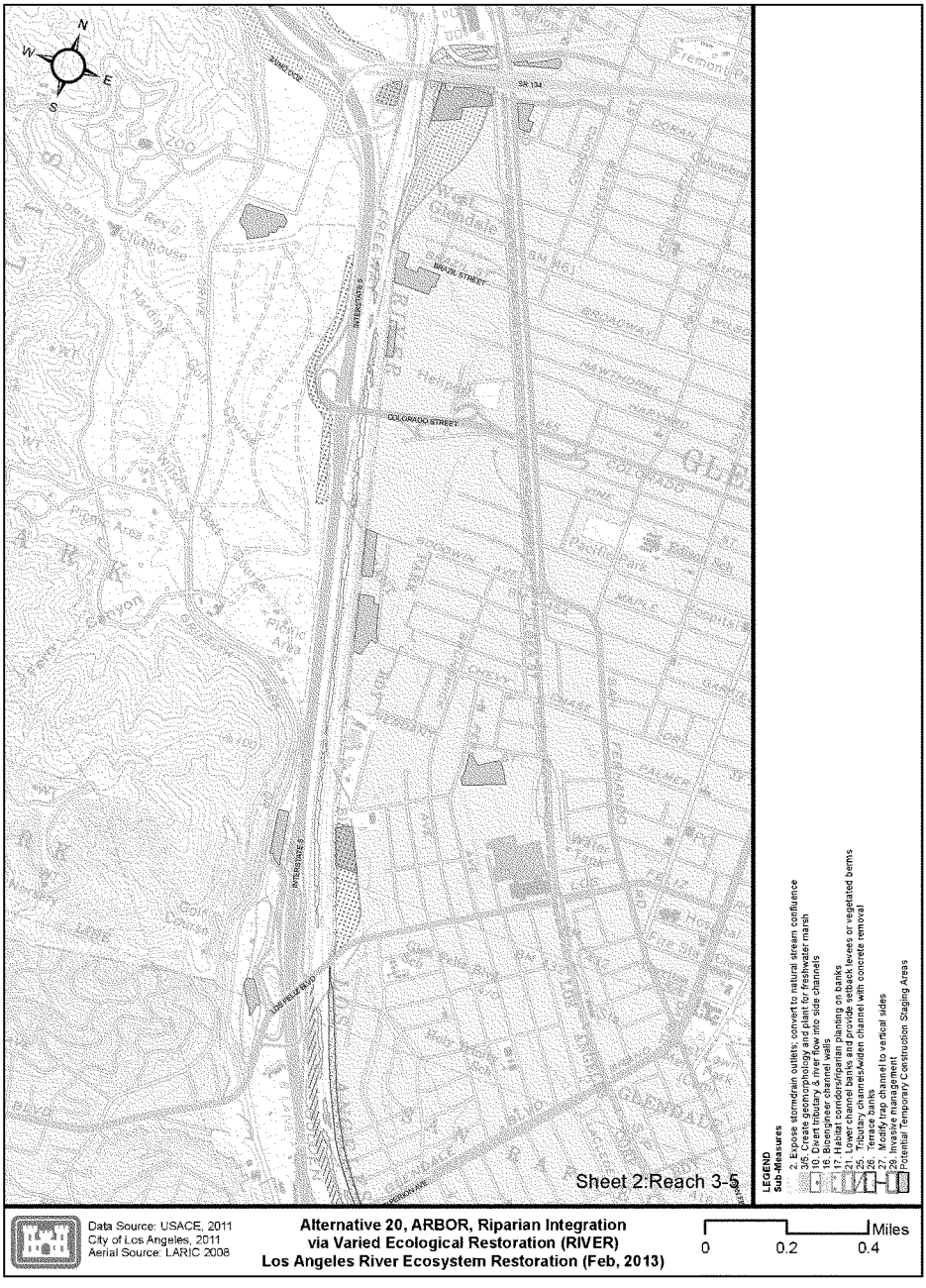
Reach 6 – Reach 6 in this alternative includes riparian corridors and widening of the soft bottom river bed by over 300 feet with additional slope back to the overbank elevation along the reach length approximately 1,000 feet. At the upstream end of the reach, a back water wetland would be developed on a setback bench and there would be a small terraced area at the downstream end of the Bowtie parcel. Freshwater marsh would dominate the new river bed. The banks of the river would be restructured to support overhanging vines and other vegetation. Restructuring the banks may impact the existing roadway used for maintenance access along the east bank of the River. A new road would be provided for SCRRA maintenance crews to allow access to the facilities.

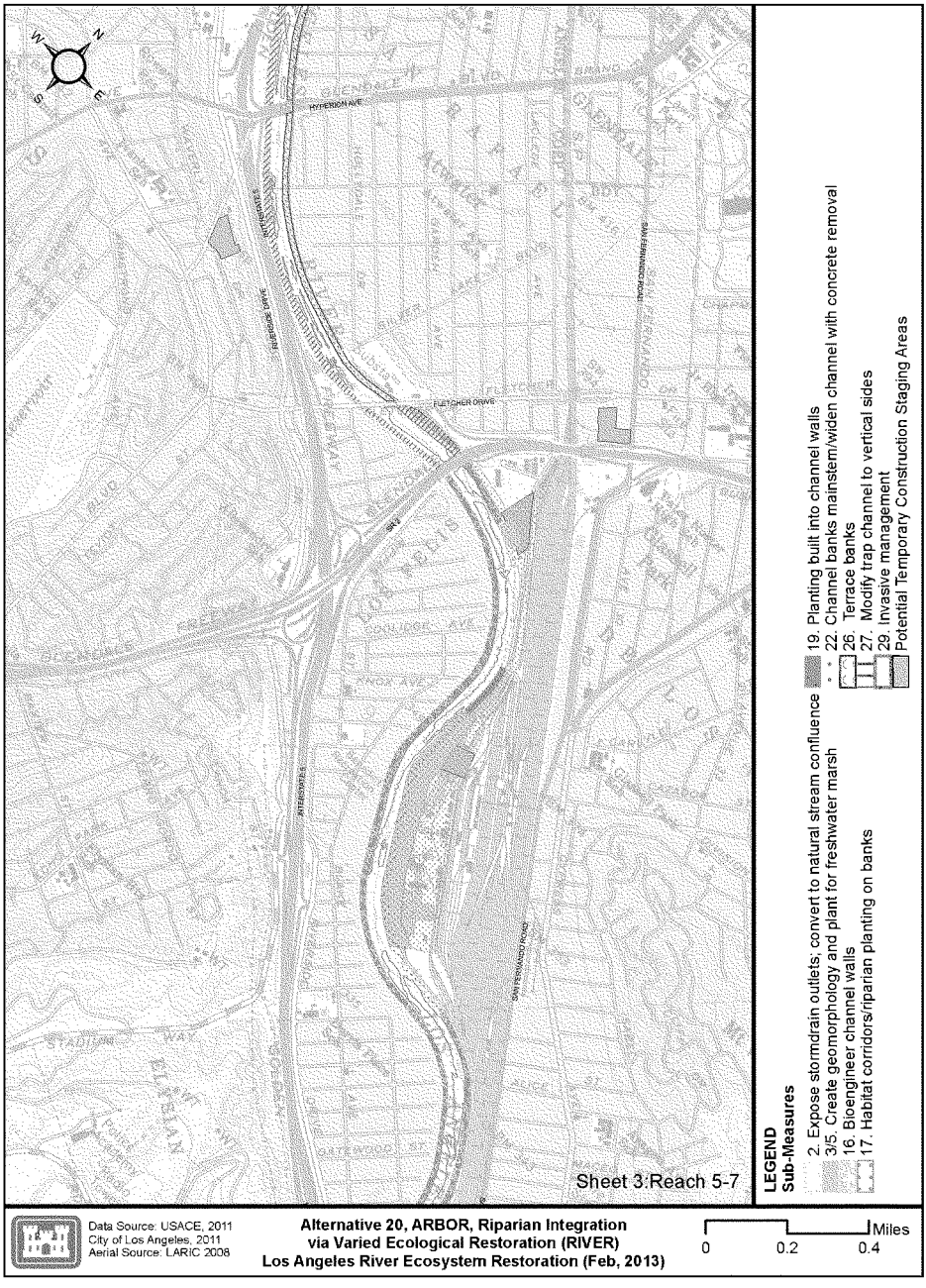
Reach 7 – In Reach 7, the Arroyo Seco tributary would be restored with riparian habitat. This ephemeral stream would have the banks and bed softened for approximately one half mile upstream and would be stabilized with erosion control elements to maintain the existing protection. At the confluence on the upstream edge of the Los Angeles River, a backwater riparian wetland and marsh would be established. Within the River channel itself, the banks would be restructured to support vegetation on the banks. Downstream, freshwater marsh would be restored and connected under a railroad trestle with the right bank of the river channel terraced.

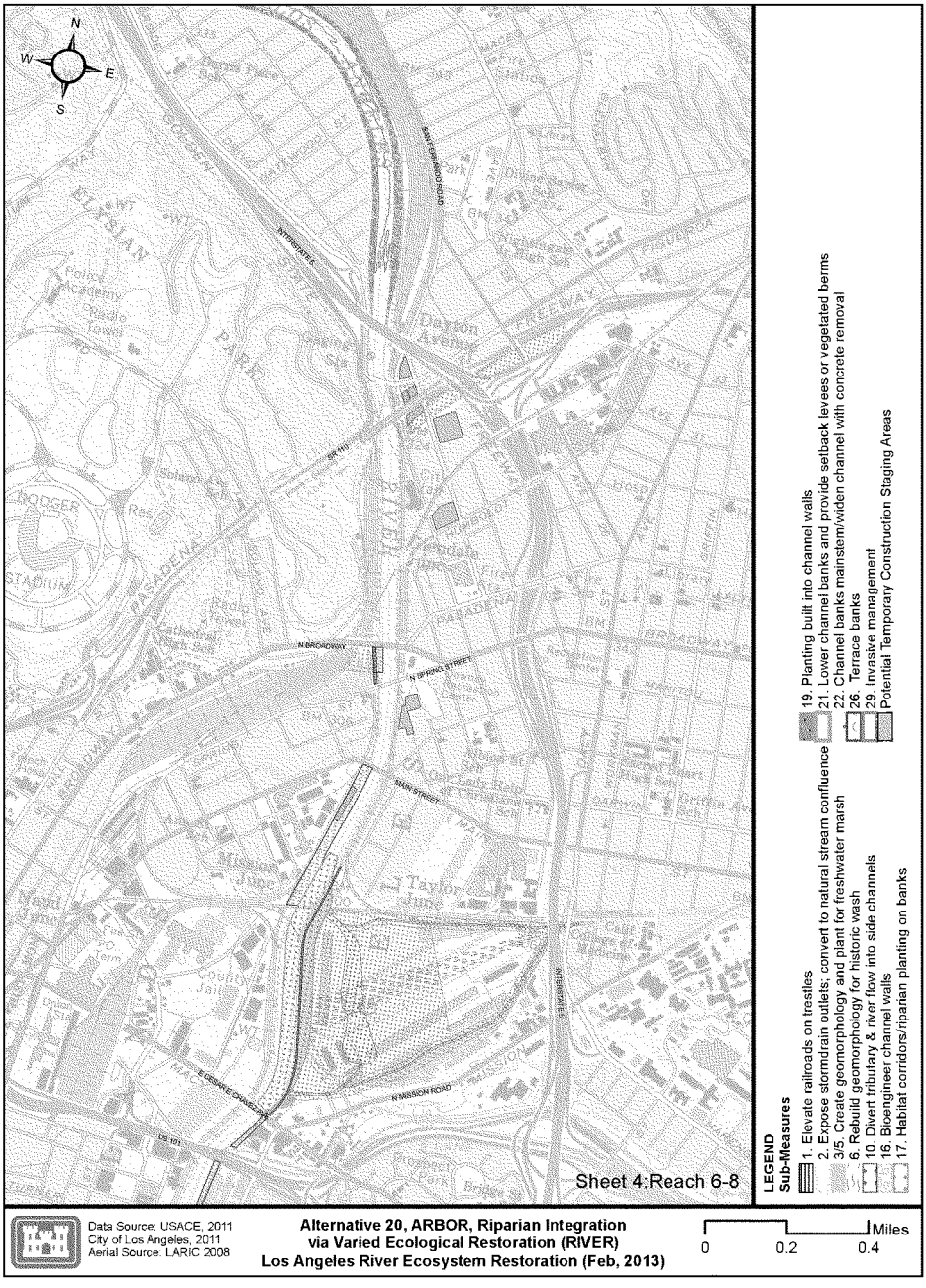
Reach 8 – Reach 8 would be modified with terracing on the right bank upstream of Piggyback Yard and on the left bank downstream of Piggyback Yard. This terracing would be planted with riparian vegetation. The channel would be changed from concrete to soft bottom to support freshwater marsh, and the reach would be widened. The marsh would extend into the Piggyback Yard 500 feet, with riparian area extending another 1,000 feet into Piggyback Yard, gradually sloping up to existing bank elevations. The historical wash would be restored through the property with a riparian fringe as well as other side channels, and river flows would be diverted out of the River into Piggyback Yard creating a large wetland area. A railroad trestle would be included with this alternative to allow the described restoration to occur and allowing for the connection of the river channel and the adjacent restored areas

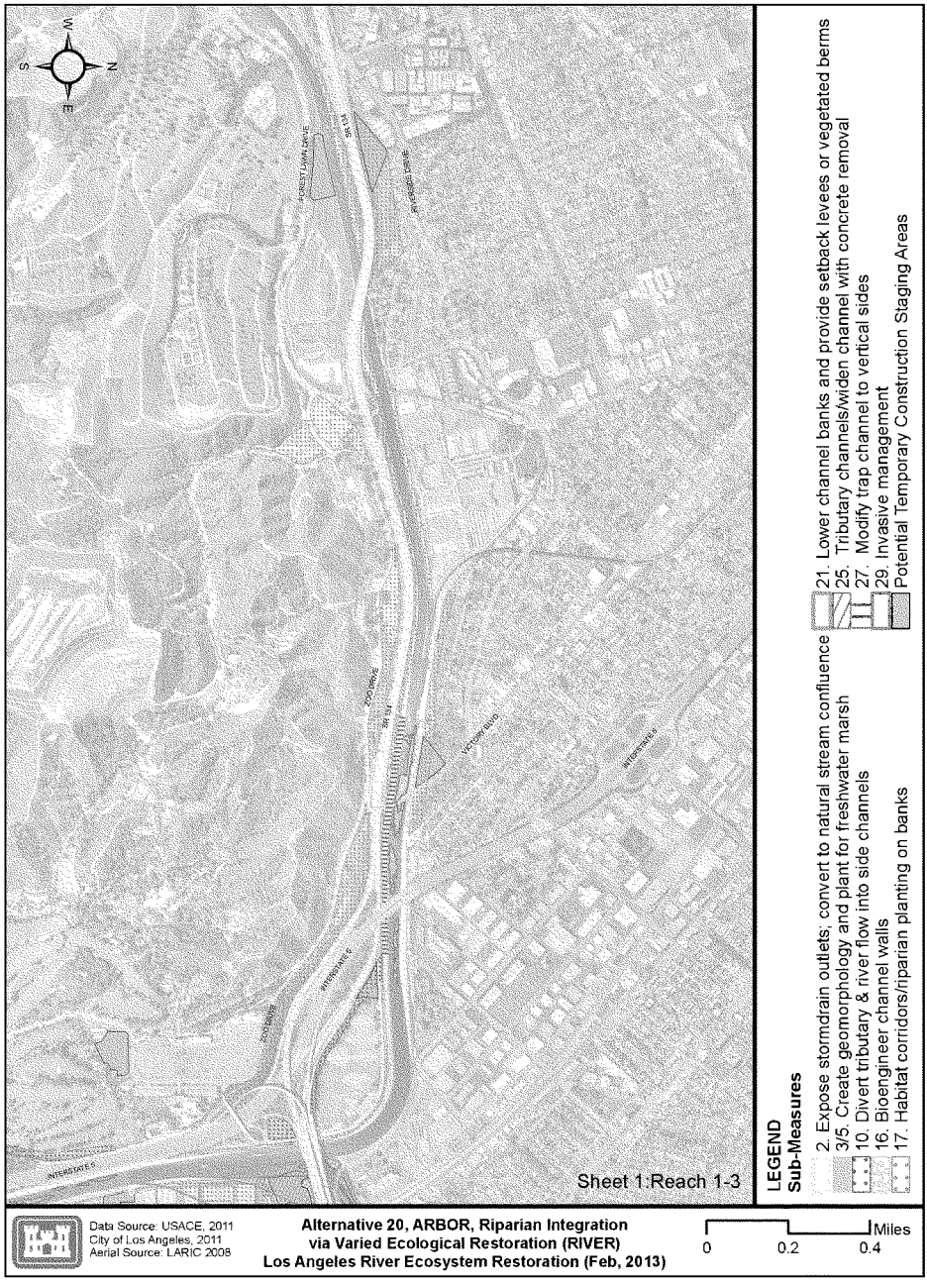
.

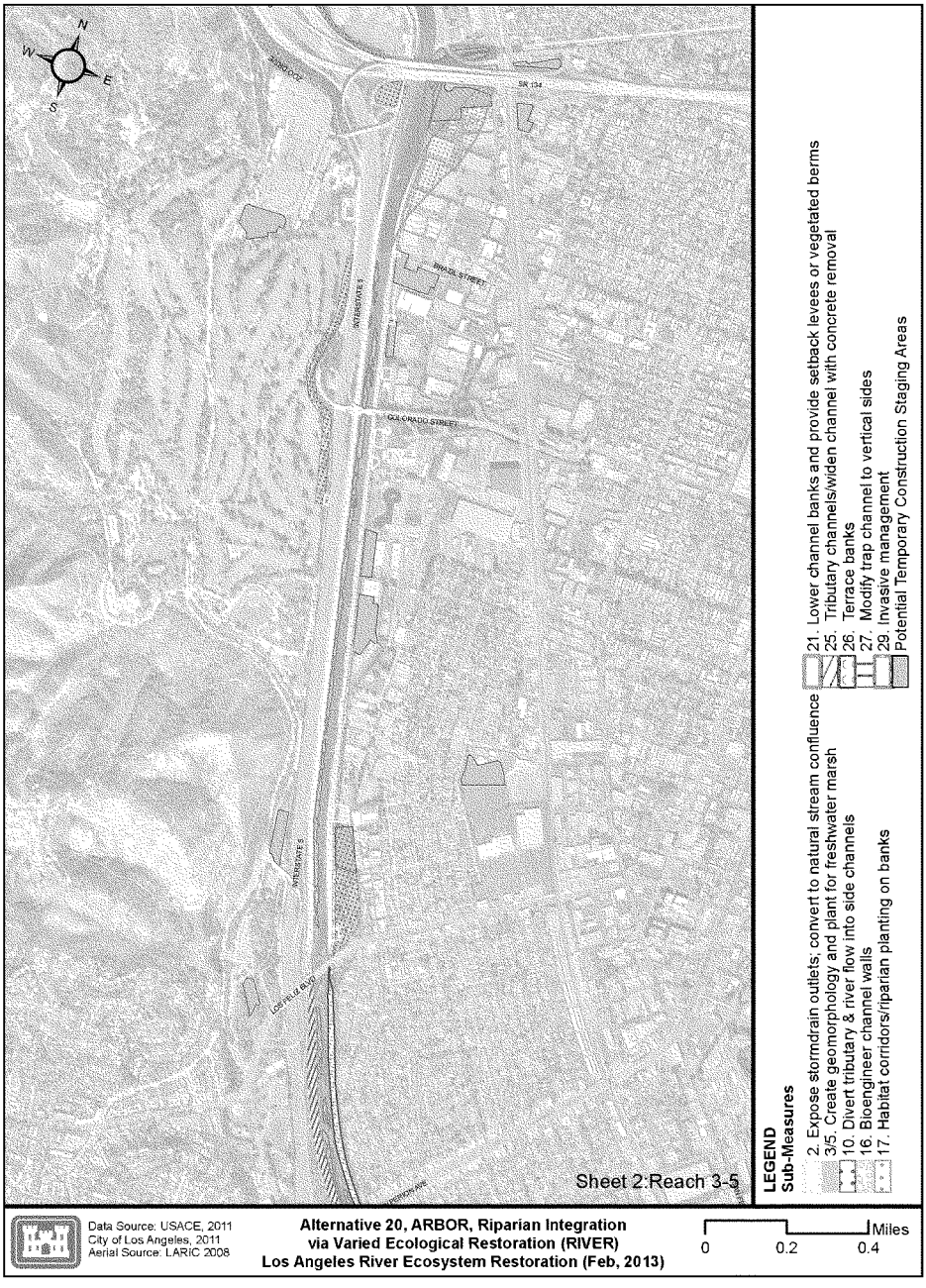

Sheet 1 Reach 1-3
LEGEND
Sub-Measures
2. Expose stormdrain outlets, convert to natural stream confluence
35. Create geomorphology and plant for freshwater marsh
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
21. Lower channel banks and provide setback levees or vegetated berms
26. Modify channel bottom, create low flow channel with concrete removal
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles

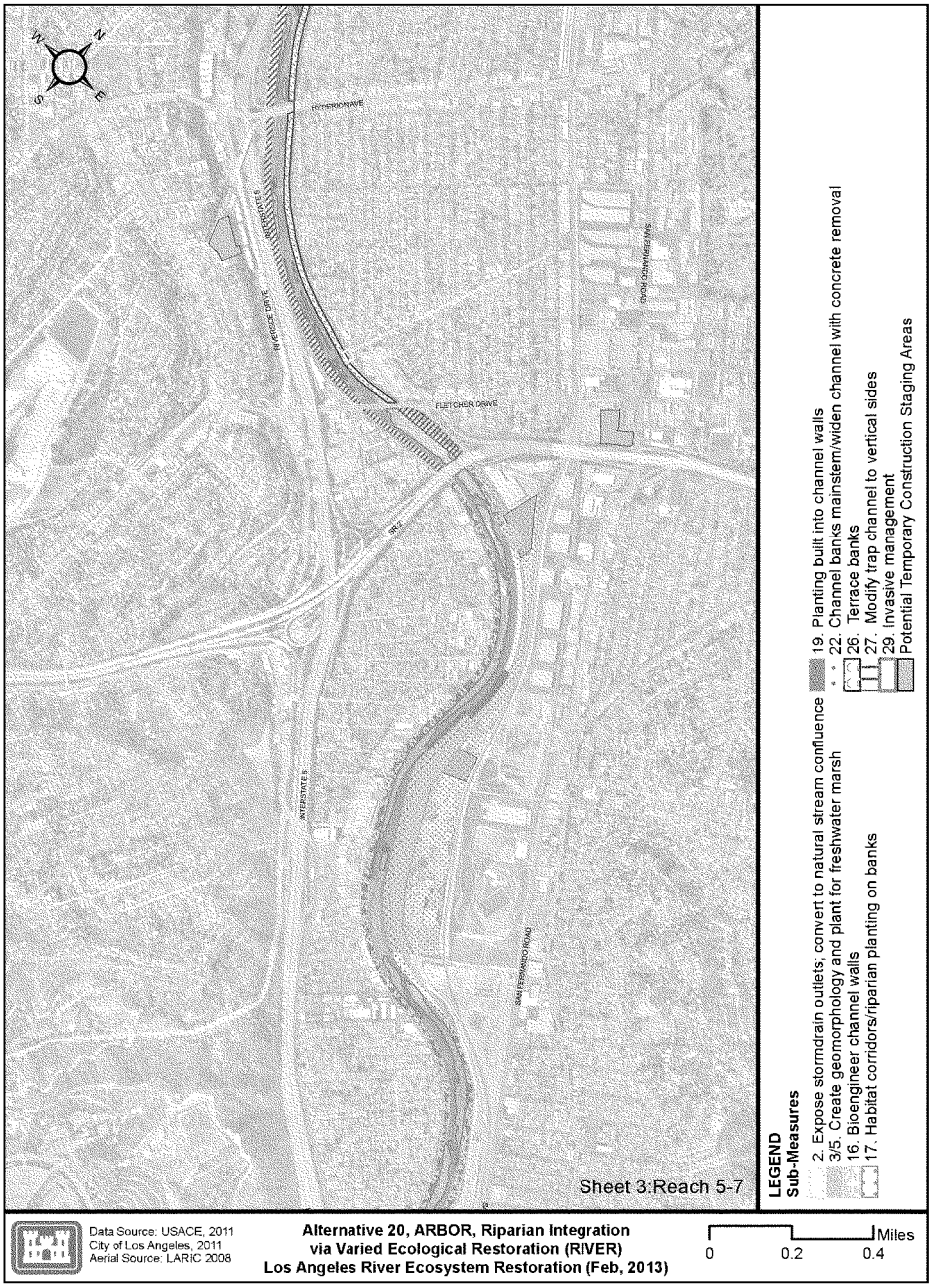

N
W
E
S
Sheet 2:Reach 3-5
LEGEND
Sub-Measures
2, Expose stormdrain outlets; convert to natural stream confluence
3/5, Create geomorphology and plant for freshwater marsh
10 Divert tributary & river flow into side channels
18, Bioengineer channel walls
19, Habitat construction: planting on banks
21, Lower channel banks and provide setback levees or vegetated berms
25, Tributary channels/widen channel with concrete removal
26, Terrace banks
27, Modify trap channel to vertical sides
28, Invasive species control
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles

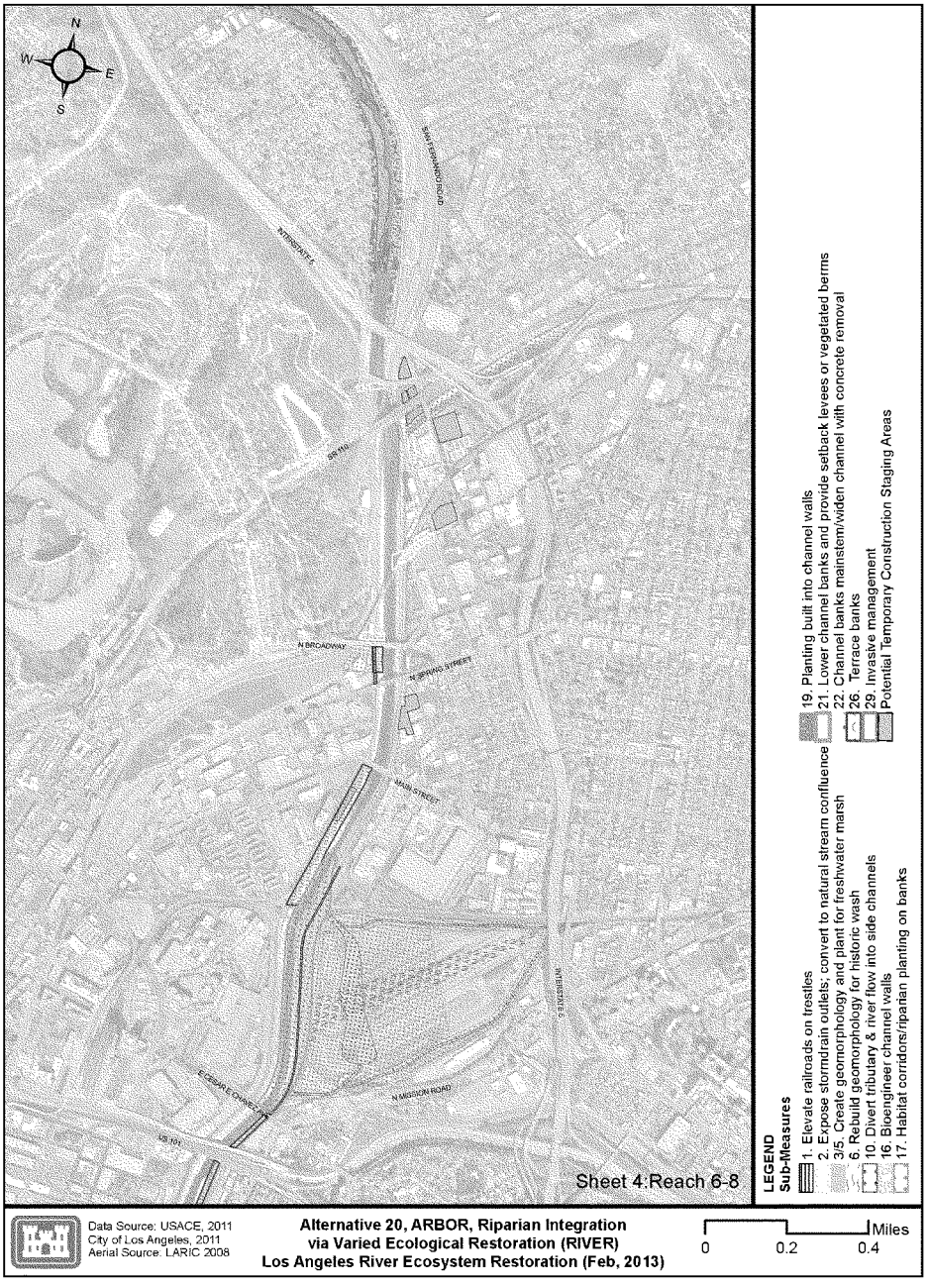

Sheet 3:Reach 5-7
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
19. Planting built into channel walls
22. Channel banks mainstem/widen channel with concrete removal
26. Terrace banks
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


N
W
E
S
Sheet 4:Reach 6-8
LEGEND
Sub-Measures
1. Elevate railroads on trestles
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
6. Rebuild geomorphology for historic wash
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
19. Planting built into channel walls
21. Lower channel banks and provide setback levees or vegetated berms
22. Channel banks mainstem/widen channel with concrete removal
26. Terrace banks
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


Sheet 1 Reach 1-3
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
21. Lower channel banks and provide setback levees or vegetated berms
25. Tributary channels/widen channel with concrete removal
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


N
W
E
S
SR 134
BRAZIL STREET
COLORADO STREET
INTERSTATE 5
LOS FELIZ BLVD
Sheet 2:Reach 3-5
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
21. Lower channel banks and provide setback levees or vegetated berms
25. Tributary channels/widen channel with concrete removal
26. Terrace banks
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


RIVERSIDE DRIVE
FLETCHER DRIVE
SAN FERNANDO ROAD
INTERSTATE 5
Sheet 3:Reach 5-7
LEGEND
Sub-Measures
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
19. Planting built into channel walls
22. Channel banks mainstem/widen channel with concrete removal
26. Terrace banks
27. Modify trap channel to vertical sides
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles


N
W
E
S
SAN FERNANDO RD
INTERSTATE 5
SR 110
N BROADWAY
N SPRING STREET
MAIN STREET
N MISSION ROAD
US 101
Sheet 4 Reach 6-8
LEGEND
Sub-Measures
1. Elevate railroads on trestles
2. Expose stormdrain outlets; convert to natural stream confluence
3/5. Create geomorphology and plant for freshwater marsh
6. Rebuild geomorphology for historic wash
10. Divert tributary & river flow into side channels
16. Bioengineer channel walls
17. Habitat corridors/riparian planting on banks
19. Planting built into channel walls
21. Lower channel banks and provide setback levees or vegetated berms
22. Channel banks mainstem/widen channel with concrete removal
26. Terrace banks
29. Invasive management
Potential Temporary Construction Staging Areas
Data Source: USACE, 2011
City of Los Angeles, 2011
Aerial Source: LARIC 2008
Alternative 20, ARBOR, Riparian Integration
via Varied Ecological Restoration (RIVER)
Los Angeles River Ecosystem Restoration (Feb, 2013)
0
0.2
0.4
Miles

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

July 16, 2012

Mr. Stephen Dibble, Archaeologist
United States Army Corps of Engineers
Los Angeles District Office
915 Wilshire Boulevard
Los Angeles, CA 90017

Sent by FAX to: (213) 452-4204 and (213) 452-4219
No. of Pages: 4

Re: Request of Sacred Lands File & Native American Contacts List , pursuant to 36 CFR Part 800, Protection of Historic Properties (NHPA Section 106; 16 U.S.C. 470 *et* seq) for the **"Los Angeles River Ecosystem Restoration Project;"** located on the Los Angeles River near Downtown Los Angeles; Los Angeles County, California.

Dear Mr. Dibble:

The Native American Heritage Commission (NAHC) is the California State 'Trustee Agency' pursuant to Public Resources Code §21070 for the protection of California's Native American Cultural Resources. The NAHC is also a 'reviewing agency' for environmental documents prepared under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq*), 36 CFR Part 800.3, .5 and are subject to the Tribal and interested Native American consultation as required by the National Historic Preservation Act, as amended (Section 106) (16 U.S.C. 470; Section 106, [4f], 110 [f] [k], 304). The provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013) and its implementation (43 CFR Part 10.2), and California Government Code §27491 may apply to this project if Native American human remains are inadvertently discovered.

The NAHC is of the opinion that the federal standards, pursuant to the above-referenced Acts and the Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) are similar to and in many cases more stringent with regard to the 'significance' of historic, including Native American items, and archaeological, including Native American items at least equal to the California Environmental Quality Act (CEQA.). In most cases, federal environmental policy require that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Statement (EIS).

The NAHC did conduct a Sacred Lands File (SLF) search of its Inventory and Native American cultural resources **were identified** in the area you specified. Early and quality consultation with the Native American representatives on the attached list may provide detailed information of sites with which they are aware. Also note that the absence of archaeological resources does not preclude their existence, particularly at the subsurface level.

The NAHC Sacred Lands File Inventory of the Native American Heritage Commission is established by the California Legislature pursuant to California Public Resources Code §§5097.94(a) and 5097.96. The NAHC Sacred Lands Inventory is populated by submission to

the data by Native American tribes and Native American elders. In this way it differs from the California and National Register of Historic Places under the jurisdiction of the U.S. Secretary of the Interior.

The NAHC, pursuant to Appendix B of the Guidelines to the California Environmental Quality Act (CEQA) is designated as the agency with expertise in the areas of issues of cultural significance to California Native American communities. Also, in the 1985 California Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

Culturally affiliated tribes are to be consulted to determine possible project impacts pursuant to the National Historic Preservation Act, as amended. Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. The NAHC recommends as part of 'due diligence', that you also contact the nearest Information Center of the California Historical Resources Information System (CHRIS) of the State Historic Preservation Office (SHPO) for other possible recorded sites in or near the APE (contact the Office of Historic Preservation at 916-445-7000).

Attached is a list of Native American contacts is attached to assist you pursuanat to Section 800.2(c)(1)(i) and Section 800.2(c)(2); they may have knowledge of cultural resources in the project area. It is advisable to contact the persons listed and seek to establish a 'trust' relationship with them; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area.

Lead agencies should consider avoidance, in the case of cultural resources that are discovered. A tribe or Native American individual may be the only source of information about a cultural resource; this is consistent with the NHPA (16 U.S.C. 470 *et seq* Sections. 106, 110, and 304) Section 106 Guidelines amended in 2009. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful

NEPA regulations provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Even though a discovery may be in federal property, California Government Code §27460 should be followed in the event of an accidental discovery of human remains during any groundbreaking activity; in such cases California Government Code §27491 and California Health & Safety Code §7050.5 will apply and construction cease in the affected area.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton

Cc: State Clearinghouse

Native American Contact
Los Angeles County
July 16, 2012

Fernandeno Tataviam Band of Mission Indians
Ronnie Salas, Cultural Preservation Department
1019 - 2nd Street, Suite #1 Fernandeno
San Fernando CA 91340 Tataviam
rsalas@tataviam-nsn.gov
(818) 837-0794 Office

(818) 837-0796 Fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th St, Rm. 403
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Gabrielino Tongva Nation
Sam Dunlap, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

Ti'At Society/Inter-Tribal Council of Pimu
Cindi M. Alvitre, Chairwoman-Manisar
3094 Mace Avenue, Apt. B Gabrielino
Costa Mesa, , CA 92626
calvitre@yahoo.com
(714) 504-2468 Cell

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address Gabrielino Tongva
,
tattnlaw@gmail.com
310-570-6567

Gabrielino-Tongva Tribe
Bernie Acuna
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
(619) 294-6660-work
(310) 428-5690 - cell
(310) 587-0170 - FAX
bacuna1@gabrieinotribe.org

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Los Angeles River Ecosystem Restoration Project; located near Downtown Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contact
Los Angeles County
July 16, 2012

Gabrielino-Tongva Tribe
Linda Candelaria, Chairwoman
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
lcandelaria1@gabrielinoTribe.org
626-676-1184- cell
(310) 587-0170 - FAX

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
(626) 926-4131
gabrielenoindians@yahoo.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Los Angeles River Ecosystem Restoration Project; located near Downtown Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts list were requested.

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

APPENDIX P
Letters and Guidance Memoranda

September 2015

Table of Contents

1. City of Los Angeles, Mayor's Office to District Commander Colonel Mark R. Toy, USACE Los Angeles District, Memorandum Subject: Request for Real Estate Policy waiver, 22 March 2013

2. ASA(CW) to USACE Headquarters, Director of Civil Works, Memorandum Subject: Granting Real Estate Waiver, 8 August 2013

3. City of Los Angeles, Mayor's Office to District Commander Colonel Kimberly M. Colloton, Memorandum Subject: Seeking Approval to Proceed with Alternative 20, 10 April 2014

4. ASA(CW) to USACE Headquarters, Deputy Commanding General for Civil and Emergency Operations, Memorandum Subject: Cost Sharing and the Locally Preferred Plan (LPP), 27 May 2014

ANTONIO R. VILLARAIGOSA
MAYOR

March 22, 2013

Colonel R. Mark Toy
Los Angeles District Commander
United States Army Corps of Engineers
915 Wilshire Boulevard, Suite 1100
Los Angeles, CA 90017

Dear Colonel Toy:

I write to inform you that the City of Los Angeles, as local sponsor of the Corps' Los Angeles River Ecosystem Restoration Feasibility Study (River Study), is supportive of the Los Angeles District's request for a real estate policy waiver for the River Study. The waiver will enable the recommended project to be built and the City of Los Angeles will forego the reimbursement for real estate-related costs above the thirty-five percent to support the project.

As you know, the River Study has advanced to a stage that has identified a set of viable alternatives. Cost estimates for the alternatives are indicative of the challenges we face in urban areas. Large cities such as Los Angeles with high land value may be stretched to meet the corps criteria for local match. In this particular case the City of Los Angeles believes that our best approach is to mirror the approach that Chicago took in 2011(Upper Des Plaines River and Tributaries, Illinois and Wisconsin Feasibility Study). In that case the City of Chicago whose land value was also high was willing to forego reimbursement above the 35%. The City of Los Angeles is prepared to do the same.

Although prevailing Corps policy indicates that projects with land costs exceeding 25% of the total project cost are not likely to be given a high priority for budgetary purposes, we are hopeful that our demonstrated commitment to the Los Angeles River and our productive partnership with the Corps will enable us to transform urban rivers like the LA River into a valuable economic, environmental and recreational asset for the region.

Very truly yours,

ANTONIO R. VILLARAIGOSA
Mayor

200 NORTH SPRING STREET • LOS ANGELES, CALIFORNIA 90012
PHONE: (213) 978-0600 • FAX: (213) 978-0750
EMAIL: MAYOR@LACITY.ORG

ARV:dg

cc: Nancy Sutley Chair, Council on Environmental Quality, Executive Office of the President
Jeffrey Zients, Acting Director, Office of Management and Budget, Executive Office of the President
Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works
Ed P. Reyes, Los Angeles City Councilmember, District One
Sally Ericsson, Associate Director, Natural Resources Programs, Office of Management and Budget
Gary Lee Moore, P.E., City Engineer

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

AUG - 8 2013

MEMORANDUM FOR DIRECTOR OF CIVIL WORKS

SUBJECT: Los Angeles River Ecosystem Restoration Feasibility Study, California – Real Estate Waiver

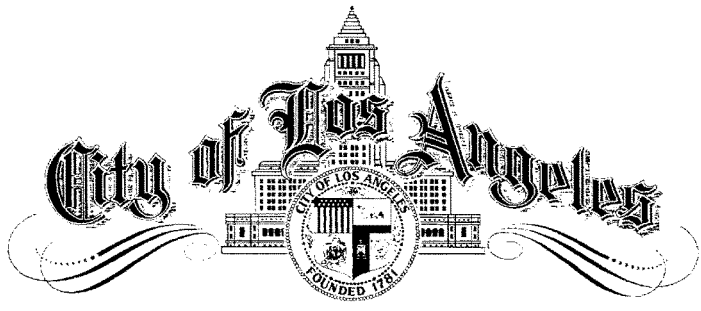
In response to a July 11, 2013 memorandum from the Chief, Planning and Policy Division, I have evaluated the Corps request for me to grant an exemption to the Army policy in order to allow the city of Los Angeles to forego reimbursement for real estate acquisition which may exceed the legislated 35 percent non-federal share of a Los Angeles River ecosystem restoration project. In a March 22, 2013 letter to the District Engineer, the Mayor of Los Angeles stated that the city would forego reimbursement for real estate costs in excess of the 35 percent non-federal share. The city indicated that they believe that their action would enable a project to be built to restore fish and wildlife habitat in the Los Angeles River corridor.

According to the Corps, the final array of alternatives includes four plans with total costs that range between about $350 million, to over $1 billion. Real Estate costs could range from 45 percent to as much as 85 percent of the project costs. Additionally, the city would be responsible for providing clean lands for the project that are consistent with guidance for hazardous, toxic, and radiological waste.

While I cannot support the city's conclusion that foregoing reimbursement would automatically enable the project to be built, I am granting this requested exception. The feasibility report should clearly state that the city of Los Angeles has voluntarily agreed to waive reimbursement for the value of real estate above the 35 percent share and explicitly document the estimated real estate costs as well as an estimate of the reimbursement waived. I am withholding my evaluation of whatever plan the Chief of Engineers may ultimately recommend until he provides his report for my review.

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Printed on Recycled Paper



ERIC GARCETTI
MAYOR

April 10, 2014

Colonel Kimberly M. Colloton, PMP
Commander and District Engineer
United States Army Corps of Engineers
Los Angeles District
915 Wilshire Boulevard
Los Angeles, CA 90053

Dear Colonel Colloton:

I am writing to continue our discussion that started at the White House on October 28, 2013. I was encouraged by your acknowledgment of the importance of our Los Angeles River Ecosystem Restoration Feasibility Study (Study) and understanding that its completion requires an unprecedented kind of collaboration to explore options that will successfully reflect the Administration's *America's Great Outdoors* and *Urban Waters Federal Partnership* initiatives, which have already prioritized the Los Angeles River.

The City of Los Angeles has been a fully-engaged local sponsor of the Study for 8 years, has committed to its 50% share of the more than $10 million cost, and has attracted funding from a long-standing community partner—Friends of the Los Angeles River—of almost $1 million. The City has also expressed a willingness to assume more than the traditional 35% of the cost of the Study's recommended project.

Although I was informed by representatives from the U.S. Army Corps of Engineers (Corps) South Pacific Division (SPD) and Los Angeles District (SPL) that the Corps has thus far sustained its recommendation for Alternative 13 as the National Ecosystem Restoration (NER) and Tentatively Selected Plan (TSP), the overwhelming response from the public was for the more ambitious Alternative 20. During the Study's public review (from September to November 2013), at a public rally on September 28, and at the official hearing on October 17, the clear majority of comments were in favor of Alternative 20. Among these, the Los Angeles and Glendale City Councils, Los Angeles County Board of Supervisors, Los Angeles Unified School District, State legislators, U.S. Environmental Protection Agency, U.S. Department of the Interior, U.S. Congressional delegation representing the Los Angeles region, every major environmental organization, and more than 8,000 petitioners all endorsed Alternative 20.

Given this, I believe that the Corps' "public acceptability" criterion cannot be met with Alternative 13. The public responses also underscored that our Study is the only large urban project of its

kind in the nation's only Mediterranean-type climate, which is a globally-scarce resource. While habitat connectivity was repeatedly referenced as undervalued in the Study analysis, I believe that other factors that were emphasized, including an opportunity to redress historic environmental injustices, are as critical. Moreover, while I understand that the Study cost may be considerable when compared to other ecosystem restoration efforts, the national ecosystem investment is more than worthwhile when understood as a dollar-per-person investment, not just a dollar-per-acre investment.

Specifically, we must include restoration at the Verdugo Wash confluence because it is the only connection between our largest open space, Griffith Park, and the Verdugo Hills and because it is the only major restoration area that would also benefit our neighboring cities of Burbank and Glendale. We must also make connections between the large restoration areas at the Los Angeles State Historic Park and in the river channel between the William Mead public housing complex and César Chávez Avenue. These benefits are only in Alternative 20 and, without Corps leadership, are unlikely to happen.

On August 23, 2013, the elected representatives of the Los Angeles City Council adopted a resolution supporting the most comprehensive Study alternative—with elements that are only included in Alternative 20—as the NER/TSP. As outlined in the Study, Alternative 20 would require a Federal cost-share of 54% to a Non-Federal cost-share of 46%. Consistent with your August 8, 2013 approval of the City's request to waive Federal reimbursement above the typical 35% cost-share commitment of local sponsors, I am now offering to advance Alternative 20 at a more equitable 50% to 50% cost-share whereby the City will provide approximately $44 million more for its match. This results in more than $160 million in savings to the Federal government beyond the traditional cost-share relationship.

I am hereby seeking your approval to proceed with this plan. The City acknowledges its commitment to acquire the necessary real estate interests and its responsibility for the costs of 50% of the project's planning, engineering, design, and construction. Upon your approval, I therefore request that this plan be identified in the Final Integrated Feasibility Report/Environmental Impact Statement/Report as the recommended plan and, because this path forward may extend our completion date beyond December 2014, I am also hereby requesting your assistance in obtaining an exemption from the "3x3x3 Rule" as per CECW-P PB No. 2012-04, reissued January 11, 2013. Given the time-sensitive nature of our case, your swift response would be much appreciated.

I am grateful for your and the Corps' championing of our Study and am eager to work with you in crafting this new kind of project in the Federal interest that will reflect long-standing local priorities and the principles of your new planning paradigm while honoring our Nation's urban future.

Sincerely,

ERIC GARCETTI
Mayor

Cc:
Hon. Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works)

Attachment:
Combined file including real estate waiver, Los Angeles City Council resolution and key support letters

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

MAY 27 2014

MEMORANDUM FOR DEPUTY COMMANDING GENERAL FOR CIVIL AND EMERGENCY OPERATIONS

SUBJECT: Los Angeles River Aquatic Ecosystem Restoration Feasibility Study, California – Request for Policy Exceptions

I am responding to the May 12, 2014 memorandum from the Director of Civil Works (DCW) which requested an exception to Army policy requiring decision documents to recommend the national environmental restoration (NER) plan. The exception would allow the Chief of Engineers to recommend Alternative 20 as the locally preferred plan (LPP) for the Los Angeles River Aquatic Ecosystem Restoration project. The DCW indicated that the City of Los Angeles, as the non-Federal sponsor, supports the LPP in lieu of the NER plan in order to provide additional restoration that is vital to local interests. The DCW also provided a copy of an April 14, 2014 letter from the City of Los Angeles which requested that the LPP be cost shared equally between the Federal government and City of Los Angeles.

Based on the information from the Corps, the LPP would include additional restoration benefits above that identified for the NER plan at Verdugo Wash, the Los Angeles State Historic Park (Cornfields), and at the Los Angeles Trailer and Container Intermodal Facility (LATC) site. These additional restoration benefits include direct restoration of an additional 131 acres, nearly twice the acreage of local and hydrologic connectivity (298 acres total), and provision of a direct connection to the significant habitat areas of the Verdugo Mountains. Nearly unanimous support for the LPP was expressed by the public through review of the Draft Feasibility report and public meetings. Further, the LPP is consistent with the goals of the Los Angeles River Revitalization Master Plan published in 2007 by the City of Los Angeles. After reviewing the materials provided, I believe implementation of the LPP best addresses the public's expressed desire for increased habitat and hydrologic connectivity, regional economic development and recreation, as well as restored community cohesion. I therefore have decided to grant the requested LPP exception and permit the Corps to recommend the LPP in the final feasibility report and the report of the Chief of Engineers. The LPP estimated cost would be $1.08 billion.

Over the last 150 years, the Los Angeles River has been degraded by development, flooding and channelization, including the Corps construction of the Los Angeles County Drainage Area flood risk management project that modified most of the Los Angeles River, with concrete banks and a mostly concrete bed to protect the city and surrounding areas from catastrophic flooding. The Flood Control Act of 1944

Printed on Recycled Paper

(Public Law 78-534) directed the Corps to construct the Los Angeles County Drainage Area project which ultimately involved construction of 5 dams and over 240 miles of channels to protect communities from significant and recurring flood damages. Restoration of 11 miles of the Los Angeles River that was the focus of the Corps' Los Angeles River Aquatic Ecosystem Restoration Feasibility Study of September, 2013, is within the footprint of the existing flood risk management project. The ecosystem project would in part, reverse a portion of the degradation associated with the existing Los Angeles County Drainage Area project, and concurrently advance a number of important Administration efforts, including the Climate Action Plan, America's Great Outdoors initiative, and the Urban Waters Federal Partnership. The Climate Action Plan would be advanced through improved drought resilience as a consequence of restoration activities and the America's Great Outdoors initiative would be advanced through the provision of increased access to lands and waters for recreation, as well as providing linkages among a variety of recreational facilities including urban parks and habitat corridors. Finally, the Los Angeles River is one of 7 original pilot locations for the Urban Waters Federal Partnership and the proposed restoration activities would advance the goals of restoring the ecosystem and balancing revitalization with flood avoidance to ensure public safety for 11 miles of 51 miles of the Los Angeles River that is the focus of the partnership work.

Quantifications of the connections among restored areas demonstrate the significant benefits to be realized through implementation of the LPP in lieu of the NER plan. Restoration of such connections will involve modifications to the urban river channel by removing concrete and reconfiguring channel walls and widening the channel to restore hydrologic connectivity and additional wetland habitat. The LPP would also provide significantly greater regional economic benefits, including nearly 13,000 more jobs and nearly $3.5 billion in labor income, as well as substantive opportunities for redevelopment in both the Verdugo Wash confluence and Chinatown/Confields areas. Environmental justice benefits would also be realized through restored community cohesion for communities previously separated by the existing Los Angeles County Drainage Area flood risk management project through provision of new public access to restored natural areas with associated recreational amenities. I appreciate the complexities of restoration within the nation's second largest urban region while also continuing to provide important flood risk reduction to an economically challenged community and that such complex projects represent a significant financial investment on the part of both the Federal government and the non-Federal sponsor.

Having fully reviewed and taken into consideration the unique aspects of the project as detailed by the Los Angeles District, the concurrence by other Federal agencies in the plan, the city's willingness to limit the Federal government's exposure to real estate costs beyond 35 percent of project cost as approved in my August 8, 2013 memorandum, and the non-Federal Sponsor's offer to share equally in the costs of the LPP, I have concluded there is substantial Federal interest in the LPP. Equal cost sharing of the LPP between the Federal government and the non-Federal sponsor, as

requested by the City of Los Angeles, would total $540 million each. I have decided to permit the Corps to recommend equal cost sharing of the LPP plan.

These decisions are subject to the Corps incorporating the information discussed above into the final decision documents and subject to the non-Federal sponsor's continued agreement to forgo reimbursement or credit for real estate which may exceed 35 percent of the LPP cost. All other requirements of local cooperation remain the same, including the non-Federal sponsor's requirement to operate, maintain, repair, replace, and rehabilitate (OMRR&R) the project after construction in accordance with Section 103(j) of the WRDA of 1986.

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

US Army Corps
of Engineers®
Los Angeles District

Los Angeles River Ecosystem Restoration Feasibility Study

Final
Mailing List Appendix Q

September 2015

Bradd Schwichtenberg
U.S. Army Corps of Engineers, Headquarters
441 G Street, CEMP-SPD-RIT
Washington, DC 20314

Paul Bowers
U.S. Army Corps of Engineers
South Pacific Division
1455 Market St., 2045A
San Francisco, CA 94103

Jon Avery
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

Mendel Stewart
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

U.S. EPA, EIS Filing Section
Ariel Rios Bldg, Rm 7220
1200 Pennsylvania Avenue, NW
Washington, DC 20004

U.S. EPA, Region 9 Environmental Review Section
Mail Code ENF-4-2, 75 Hawthorne Street
San Francisco, CA 94105

Regional Administrator, Region 9
U.S. Environmental Protection Agency
ATTN: Kathleen Goforth
Environmental Review Coordinator
17 Hawthorne Street
San Francisco, CA 94105

U.S. EPA, NEPA Compliance Division
Ariel Rios Bldg, MC 2251-A
1200 Pennsylvania Avenue, NW
Washington, DC 20004

U.S. EPA, Region 9 Wetlands Regulatory Office
Mail Code WTR-8, 75 Hawthorne Street
San Francisco, CA 94105

Surabhbi Shah
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 4101M
Washington, DC 20460

Jared Blumenfeld
US EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105-3901

Sarvy Mahdavi
U.S. EPA, Region 9 Wetlands Office
SoCal Field Office
600 Wilshire Blvd. Suite 1460
Los Angeles, CA 90017

John Kemmerer
U.S. EPA, Region 9 Wetlands Office
SoCal Field Office
600 Wilshire Blvd. Suite 1460
Los Angeles, CA 90017

Office of Environmental Policy and Compliance
U.S. Department of Interior
Main Interior Building, MS 2342
1849 C Street, NW
Washington, DC 20240

Patricia Sanderson Port
U.S. Department of the Interior
Pacific Southwest Region
333 Bush Street, Suite 515
San Francisco, CA 94104

U.S. Department of Commerce
1401 Constitution Ave., NW
Washington, DC 20230

Regional Director Melissa Stafford Jones
U.S. Dept of Health & Human Services, Region 9
90 Seventh Street, Federal Building, Suite 5-100
San Francisco, CA 94103

Ray Brewer, Field Office Director
U.S. Department of Housing and Urban Development
Los Angeles Field Office
611 W. 6th Street, Snite 801
Los Angeles, CA 90017

Michael Boots
U.S. Council on Environmental Quality
722 Jackson Place, NW
Washington, DC 20503

Michael Land
U.S. Geological Survey
4165 Spruance Road; Ste 200
San Diego, CA 92101

Erin Boydston
U.S. Geological Survey
401 W. Hillcrest Dr.
Thousaud Oaks, CA 91360

Robert Fischer
U.S. Geological Survey
4165 Spruance Road; Ste 200
San Diego, CA 92101

Jack Simes
U.S. Bureau of Reclamation
27708 Jefferson Ave., Suite 202
Temecula CA 92590

U.S. Department Of Transportation
400 7th Street SW, MAR-830 ROOM 7201C
Washington, DC 20590

Division Administrator Vincent Mammano
Federal Highway Administration
California Division
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

Federal Highway Administration
1200 New Jersey Ave., SE
Washington, DC 20590

Regional Administrator
Federal Railroad Administration, Region 7
801 I Street, Suite 466
Sacramento, CA 95814

Federal Railroad Administration
1200 New Jersey Ave., SE
Washington, DC 20590

Acting Regional Administrator, Region IX
Federal Emergency Management Agency
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

Honorable Barbara Boxer, U.S. Senator
112 Hart Senate Office Building
Washington, DC 20510

Honorable Dianne Feinstein, U.S. Senator
331 Hart Senate Office Building
Washington, DC 20510

Congresswoman Lucille Roybal-Allard
500 Citadel Drive, Suite 320
Commerce, CA 90040

Congresswoman Lucille Roybal-Allard
2330 Rayburn House Office Building
Washiugton, DC 20515

Congresswoman Linda Sanchez
2329 Rayburn HOB
Washington, DC 20515

Congresswoman Linda Sanchez
17906 Crusader Ave., Suite 100
Cerritos, CA 90703

Congresswoman Karen Bass
4929 Wilshire Blvd #650
Los Angeles, CA 90010

Xavier Becerra
U.S. House of Representatives
350 South Bixel St., Suite 120
Los Angeles, CA 90017

Adam Schiff
U.S. House of Representatives
5500 Hollywood Blvd. Suite 416
Los Angeles, CA 90028

Adam Schiff
U.S. House of Representatives
245 E. Olive Avenue, #200
Burbank, CA 91502

Honorable Edmund Brown, Jr.
Governor of California
State Capitol, Ste. 1173
Sacramento, CA 95814

Mr. Scott Morgan
Deputy Director of Administration and State
Clearinghouse Director
Governor's Office of Planning and Research
P.O. Box 3044
Sacramento, CA 95812-3044

Regional Manager Ed Pert
California Department of Fish and Wildlife
South Coast Region
3883 Ruffin Road
San Diego, CA 92123

Scott Harris
California Department of Fish and Wildlife
3883 Ruffiu Road
San Diego, CA 92123

Deborah J. Smith
Chief Deputy Executive Officer
Regional Water Quality Control Board
Los Angeles Region 4
320 W. 4th St, Suite 200
Los Angeles, CA 90013

Shirley Birosik
RWQCB – Los Angeles Region 4
320 W. 4th St, Suite 200
Los Angeles, CA 90013

California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

Ian MacMillan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Jessy Fierro
Department of Toxic Substances Control
9211 Oakdale Avenue
Chatsworth, CA 91311-6505

California Public Utilities Commission
Los Angeles Office
320 West 4th Street, Ste. 500
Los Angeles, CA 90013

John Laird
California Natural Resources Agency
1416 9th Street, Ste 1311
Sacramento, CA 95814

State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812

Department of Housing and Community Development
2020 West El Camino Avenue
Sacramento, CA 95833

California Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296

Office of Environmental Health and Hazards (OEHHA)
P.O. Box 4010
Sacramento, CA 95812-4010

California State Lands Commission
100 Howe Avenue, Suite 100-S
Sacramento, CA 95825-8202

Michael Miles
CA Dept of Transportation, District 7
100 S. Main Street
Los Angeles, CA 90012

California Department of Conservation
801 K Street, MS 24-01
Sacramento, CA 95814

Craig Sap
California State Parks
1925 Las Virgenes Road
Calabasas, CA 91302

Sean Woods
California State Parks
1925 Las Virgenes Road
Calabasas, CA 91302-1909

California Department of Water Resources
P.O. Box 942836
Sacramento, CA 95236

Fran Pavley
California State Legislature
Senate District 27 Fran Pavley
State Capitol, Room 5108
Sacramento, CA 95814

Carol Liu
California State Legislature
Senate District 25 Carol Liu
1000 N. Central Avenue, Suite 240
Glendale, CA 91202

Kevin de León
California State Legislature
Senate District 24 Kevin de León
Senate President Pro Tempore
1808 W. Sunset Blvd.
Los Angeles, CA 90026

Senator Lou Correa
CA State Senate; District 34
P.O. Box 1107
Anaheim, CA 92815-1107

Senator Ted Lieu
CA Senate State; District 28
5055 Wilshire Boulevard, Suite 310
Los Angeles, CA 90036

Anthony Rendon
California State Assembly; District 63
12132 South Garfield Avenue
South Gate, CA 90280

Anthony Rendon
California State Assembly District 63
Attn: Ronald Lawrence
P.O. Box 942849
Sacramento, CA 94249-0063

Richard Bloom
California State Assembly; District 50
2800 28th Street, Suite 150
Santa Monica, CA 90405

Mike Gatto
California State Assembly; District 43
300 E. Magnolia Blvd, Suite 504
Burbank, CA 91502

Jimmy Gomez
California State Assembly; District 51
1910 W. Sunset Blvd, Suite 810
Los Angeles, CA 90026

Miguel Santiago
California State Assembly; District 53
320 W. 4th Street, Room 1050
Los Angeles, CA 90013

Assembly Member Ian Calderon
California State Assembly; District 57
13181 Crossroads Parkway North, Suite 160
City of Industry, CA 91746-3497

Assembly Member Ed Chau
California State Assembly; District 49
1255 Corporate Center Dr. Ste 306
Monterey Park, CA 91754

Assembly Member Roger Hernandez
California State Assembly; District 48
100 North Barranca Street, Suite 895
West Covina, CA 91791

Assembly Member Chris Holden
California State Assembly; District 41
600 N. Rosemead Blvd, Suite 117
Pasadena, CA 91107

Assembly Member Adrin Nazarian
California State Assembly; District 46
6150 Van Nuys Blvd, Suite 300
Van Nuys, CA 91401

Secretary of State Alex Padilla
California State Assembly; District 20
969 Colorado Boulevard, Suite 103
Los Angeles, California 90041

Advisory Council on Historic Preservation
1100 Pennsylvania Avenue, NW, Suite 809
Washington, DC 20004

Ronnie Salas
Fernandeno Tataviam Band of Mission Indians
1019 2nd Street, Suite #1
San Fernando, CA 91340

Robert Dorame
Gabrielino Tongva Indians of California
P.O. Box 490
Bellflower, CA 90707

Sam Dunlap
Gabrielino Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

Bernie Acuna
Gabrielino-Tongva Tribe
1875 Century Park East, #1500
Los Angeles, CA 90067

Ron Andrade
LA City/County Native American Indian Commission
3175 West 6th Street, Room, 403
Los Angeles, CA 90020

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

Julianne Polanco
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Anthony Morales
San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

Cindi Alvitre
Ti'At Society/Inter-Tribal Council of Pimu
3094 Mace Avenue, Apt. B
Costa Mesa, CA 92626

Gary Lee Moore
City of Los Angeles, Bureau of Engineering
1149 S. Broadway, Suite 700
Los Angeles, CA 90015

Shahram Kharaghani
City of Los Angeles, Bureau of Sanitation
1149 S. Broadway St, 10th Floor
Los Angeles, CA 90015

Alan Bell
City of Los Angeles, Department of City Planning
200 N. Spring St., Suite 667
Los Angeles, CA 90012

Marcie Edwards
City of Los Angeles, Department of Water and Power
PO Box 51111
Los Angeles, CA 90051

David Attaway
City of Los Angeles, Dept. Recreation and Parks
221 N. Figueroa St. Suite 100
Los Angeles, CA 90012

Michael Shnll
City of Los Angeles, Dept. Recreation and Parks
221 North Figueroa Street, Suite 1550
Los Angeles, CA 90012

Jan Perry
City of Los Angeles
Economic & Workforce Development Dept
1200 W. 7th St., 6th Floor
Los Angeles, CA 90017

Maria Martin
City of Los Angeles
Environmental Management Group
1149 S. Broadway, Suite 600
Los Angeles, CA 90015

Jan Green Rebstock, Ph.D
City of Los Angeles
Environmental Management Group
1149 S. Broadway, Suite 600
Los Angeles, CA 90015

Barbara Romero, Deputy Mayor of City Services
City of Los Angeles, Mayor's Office
200 N Spring St.
Los Angeles, CA 90012

Matt Szabo
Deputy Mayor of Budget & Innovation
City of Los Angeles, Mayor's Office
200 N Spring St., # 303
Los Angeles, CA 90012

Kelli Bernard
Deputy Mayor of Economic Development
City of Los Angeles, Mayor's Office
200 N Spring St.
Los Angeles, CA 90012

Sharon Tso, Chief Legislative Analyst
Office of Chief Legislative Analyst
City Hall
200 N Spring St., # 255
Los Angeles, CA 90012

Miguel Santana, Chief Administrative Officer
City Administrative Officer
200 N. Main St., Suite 1500
Los Angeles, CA 90012

City of Los Angeles, Council District 1
200 N Spring St. #470
Los Angeles, CA 90012

City of Los Angeles, Council District 2
200 N. Spring St. #435
Los Angeles, CA 90012

City of Los Angeles, Council District 3
200 N Spring St. #415
Los Angeles, CA 90012

City of Los Angeles, Council District 4
200 N Spring St. #425
Los Angeles, CA 90012

City of Los Angeles, Council District 5
200 N Spring St. #440
Los Angeles, CA 90012

City of Los Angeles, Council District 6
200 N. Spring St. #425
Los Angeles, CA 90012

City of Los Angeles, Council District 7
200 N Spring St. #455
Los Angeles, CA 90012

City of Los Angeles, Council District 8
200 N. Spring St. #460
Los Angeles, CA 90012

City of Los Angeles, Council District 9
200 N Spring St. #420
Los Angeles, CA 90012

City of Los Angeles, Council District 10
200 N. Spring St. #430
Los Angeles, CA 90012

City of Los Angeles, Council District 11
200 N Spring St. #475
Los Angeles, CA 90012

City of Los Angeles, Council District 12
200 N. Spring St. #405
Los Angeles, CA 90012

City of Los Angeles, Council District 13
200 N Spring St. #480
Los Angeles, CA 90012

City of Los Angeles, Council District 14
200 N Spring St. #465
Los Angeles, CA 90012

City of Los Angeles, Council District 15
200 N. Spring St. #410
Los Angeles, CA 90012

Commissioner Mike Davis
City of Los Angeles, Board of Public Works
200 N SPRING ST Suite 361
Los Angeles, CA 90012

Commissioner Kevin James
City of Los Angeles, Board of Public Works
200 N SPRING ST Suite 361
Los Angeles, CA 90012

Commissioner Monica Rodriguez
City of Los Angeles, Board of Public Works
200 N SPRING ST Suite 361
Los Angeles, CA 90012

Commissioner Heather Repenning
City of Los Angeles, Board of Public Works
200 N SPRING ST Suite 361
Los Angeles, CA 90012

Commissioner Joel Jacinto
City of Los Angeles, Board of Public Works
200 N SPRING ST Suite 361
Los Angeles, CA 90012

County of Los Angeles, Board of Supervisors
Kenneth Hahn Hall of Administration
500 W. Temple St.
Los Angeles, CA 90012

County of Los Angeles, Chief Executive Office
713 Kenneth Hahn Hall of Administration
500 W. Temple St.
Los Angeles, CA 90012

County of Los Angeles
Department Of Health Services
313 N Figueroa St #326
Los Angeles, CA 90012

Norma Garcia
County of Los Angeles
Department of Parks and Recreation
433 S. Vermont
Los Angeles, CA 90020

Kathline J. King
County of Los Angeles
Department of Parks and Recreation
433 South Vermont Ave
Los Angeles, CA 90020-1975

Jui Ing Chien
County of Los Angeles, Dept. of Parks and Rec.
Planning & Dev. Agency
510 South Vermont Avenue
Los Angeles, CA 90020

Gary Hildebrand, Deputy Director
Div. Head of Watershed Management Division
County of Los Angeles, Department of Public Works
900 S. Freemont Ave.
Alhambra, CA 91803

Richard Bruckner
County of Los Angeles
Regional Planning Department
320 West Temple Street
Los Angeles, CA 90012

Alma Martinez
Los Angeles County Department of Public Works
Chief of Government Relations
900 S. Fremont Ave.
Alhambra, CA 91803

Maria Chong Castillo
Office of LA County Supervisor Sheila Kuehl
821 Kenneth Hahn Hall of Administration
500 W. Temple St.
Los Angeles, CA 90012

Teresa Villegas
Office of Los Angeles County Supervisor Hilda Solis
856 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Enrique C. Zaldivar
Bureau of Sanitation
1149 S. Broadway St.
Los Angeles 90015

Pilar Buelna
Mt. Washington Association
P.O Box 50716
Los Angeles, CA 90050-0716

Martha Benedict
Arroyo Seco Neighborhood Council
P.O. Box 42254
Los Angeles, CA 90042

Courtney Morris
Atwater Village Neighborhood Council
3371 Glendale Blvd. # 105
Los Angeles, CA 90039

Hollywood Hills West Neighborhood Council
7095 Hollywood Blvd., Suite #1004
Hollywood, CA 90028

Gerardo Palos
Canoga Park Neighborhood Council
7248 OWENSMOUTH AVE
Canoga Park, CA 91303

Noel Fleming
Central City Association of Los Angeles
626 Wilshire Blvd., Suite 200
Los Angeles, CA 90017

Patti Berman
Downtown Los Angeles Neighborhood Council
P.O. BOX 13096
Los Angeles, CA 90013

Steve Appleton, President
Elysian Valley Riverside Neighborhood Council
1811 Ripple Street
Los Angeles, CA 90039

Louis Krokover
Encino Neighborhood Council
4924 Paso Robles Ave
Encino, CA 91316

Alisa Smith
Glassell Park Improvement Association
P.O. BOX 65881
Los Angeles, CA 90065

Ruby De Vera
Glassell Park Neighborhood Council
3750 Verdugo Rd.
Los Angeles, CA 90065

Andrew Montealegre
Glassell Park Neighborhood Council
Economic Development and Land Use Committee
3750 Verdugo Road
Los Angeles, CA 90065

Omar Mejorado
Greater Cypress Park Neighborhood Council
1150 Cypress Ave.
Los Angeles, CA 90065

Greater Echo Park Elysian Neighborhood Council
P.O. Box 261046
Los Angeles, CA 90026

Linda Demmers
Los Feliz Neighborhood Council
PO Box 27003
Los Angeles, CA 90027

Andrew Westall
Greater Toluca Lake Neighborhood Council
10116 RIVERSIDE DR. Suite 200
Toluca Lake, CA 91602

Kim Benjamin
Historic Cultural Neighborhood Council
307 E 1st, attn. Brian Kito
Los Angeles, CA 90012

Monica Alcaraz
Historic Highland Park Neighborhood Council
PO Box 50791
Los Angeles, CA 90050

Cynthia Lyons Weichelt
Lake Balboa Neighborhood Council
P.O. BOX 7720
Van Nuys, CA 91409

Nanci Rosas
Lincoln Heights Neighborhood Council
3516 North Broadway
Los Angeles, CA 90031

Chris Laib
Los Feliz Improvement Association
P.O. Box 29395
Los Angeles, CA 90029

Linda Demmers
Los Feliz Neighborhood Council
P.O. Box 27003
Los Angeles, CA 90027

Grant Michals
Montrose/Verdugo City/Sparr Heights Neighborhood Association
P.O. Box 732
Verdugo City, CA 91046

Caroline Schweich
Oaks Homeowners Association
PO Box 29155
Los Angeles, CA 90029

Cary Iaccino
Reseda Neighborhood Council
7449 RESEDA BLVD. #118
Reseda, CA 91335

Jill Banks Barad, LA DWP Commissioner
Sherman Oaks Neighborhood Council
PO BOX 5721
Sherman Oaks, CA 91413

John Walker
Studio City Neighborhood Council
4024 Radford Ave
Studio City, CA 91604

Lisa Sarkin
Studio City Neighborhood Council
4024 Radford Ave. Edit Bldg 2 suite 6
Studio City, CA 91604

Alan Dymond
Studio City Residents Association
P.O. BOX 1374
Studio City, CA 91614

Derek Waleko
Van Nuys Neighborhood Council
PO Box 3118
Van Nuys, CA 91404

Erick Lewis
Winnetka Neighborhood Council
20122 Vanowen St
Winnetka, CA 91306

Boyle Heights Neighborhood Council
2130 E. First Street, Suite 110
Los Angeles, CA 90033

Hector Huezo
Alliance of River Communities
312 N. State Street
Los Angeles, CA 90033

Arroyo Seco Regional Branch Library
6145 N. Figueroa Street
Los Angeles, CA 90042

Los Angeles Central Library
630 W 5th Street
Los Angeles, CA 90071

Cypress Park Branch Library
1150 Cypress Avenue
Los Angeles, CA 90065

Atwater Village Branch Library
3379 Glendale Boulevard
Los Angeles, CA 90039

Lincoln Heights Branch Library
2530 Workman Street
Los Angeles, CA 90031

Chinatown Branch Library
639 N. Hill Street
Los Angeles, CA 90012

Little Tokyo Branch Library
203 S. Los Angeles Street
Los Angeles, CA 90012

Benjamin Franklin Branch Library
2200 E. First Street
Los Angeles, CA 90033

City of Glendale
633 E. Broadway, Rm. 103
Glendale, CA 91206

Marc Stirdivant
City of Glendale
613 E. Broadway – Room 120
Glendale, CA 91206

Tracy Steinkruger
City of Burbank
Community Services Building,
150 North Third Street
Burbank, CA 91502

Steve Croft
City of Lakewood
5050 Clark Ave
Lakewood, CA 90712

Southern California Edison
P.O. Box 800
Rosemead, CA 91770

Jeffrey Kightlinger
Metropolitan Water District
P.O. Box 54153
Los Angeles, CA 90054

Lupe Valdez
Union Pacific Railroad
13181 Crossroads Pkwy N.
City of Industry, CA 91746

Melissa Hagan
Union Pacific Railroad
801 Louisiana, Ste. 300
Houston, TX 77002

Scott D. Moore
Uniou Pacific Railroad
10031 Foothills Blvd.
Roseville, CA 95747

Triui Jimenez
BNSF Railroad
One World Trade Center, Ste. 1680
Long Beach, CA 90831

Metrolink
P.O. Box 531776
Los Angeles, CA 90053

Nick Saponara
Los Angeles County MTA
One Gateway Plaza, Mail Stop 99-23-4
Los Angeles, CA 90012

Will Wright
AIA Los Angeles
3780 Wilshire Blvd., Snite 800
Los Angeles, CA 90010

Emily Nerad
Alternative Apparel
833 S. Spring Street, 4th Floor
Los Angeles, CA 90014

Hadley Arnold
ARIDLAND Institute at Woodbury University
7500 Glenoaks Blvd
Burbank, CA 91510

Tim Brick
Arroyo Seco Foundation
570 W. Avenue 26, Suite 450
Los Angeles, CA 90065

Arthur Golding
Arthur Golding and Associates
2548 North Catalina Street, Suite B
Los Angeles, CA 90027

Keith Greville
Arup
12777 West Jefferson Boulevard, Building D
Los Angeles, CA 90066

Dau Saltsburg
Big Brand Water Filter, Inc.
2088 Anchor Court #B
Newbury Park, CA 91320

California Coastal Conservancy
1330 Broadway, Ste 1100
Oakland, CA 94612

Douglas Carstens
CHATTEN-BROWN & CARSTENS
2200 Pacific Coast Highway, Ste. 318
Hermosa Beach, CA 90254

Elizabeth Chou
City News Service
LA City Hall, 200 N. Spring St., Room 345-A
Los Angeles, CA 90012

Nancy Steele
Council for Watershed Health
700 N. Alameda St.
Los Angeles, CA 90012

Michael Drennan
Drennan Enterprises
4635 Atoll Avenue
Sherman Oaks, CA 91423

Joshua Link
ECOTONE STUDIOS
2272 Colorado Boulevard #1366
Los Angeles, CA 90041

Tracy Stone
Elysian Valley Arts Collective
2041 Blake Ave
Los Angeles, CA 90039

Dan Silver
Endangered Habitats League
8424 Santa Monica Blvd., Suite A 592
Los Angeles, CA 90069

Jeff Schaffer
Enterprise Community Partners
600 Wilshire Boulevard, Suite 600
Los Angeles, CA 90017

Caryn Mandelbaum
Environment Now
12400 Wilshire Blvd., Ste. 650
Los Angeles, CA 90025

Elaine Rene-Weissman
ERW DESIGN
6624 Dume Drive
Malibu, CA 90265

Paul Audley
Film LA Inc.
6255 Sunset Blvd., 12th Floor
Hollywood, CA 90028

Ilaria Mazzoleni
FoLAR Community
7309 1/2 Waring Ave
Los Angeles, CA 90046

Netty Carr
Friends of Atwater Village
3371 Glendale Blvd, Unit 110
Los Angeles, CA 90039

Gerry Hans
Friends of Griffith Park
P.O. Box 27573
Los Angeles, CA 90027

Lewis MacAdams
Friends of the Los Angeles River
570 West Avenue 26, Suite 250
Los Angeles, CA 90065

Jeff Harlan
Great Ecology Environment + Design
1020 Prospect Street Suite 310
La Jolla, CA 92037

Kirsten James
Heal the Bay
1444 9th Street
Santa Monica, CA 90401

Scott Wendling
Kaiser Permanente
Walnut Center
Pasadena, CA 91188

Jacob Motta
Kaiser Permanente
Government and Community Relations
393 E. Walnut Street
Pasadena, CA 91188

Scott Wendling
Kaiser Permanente, Southern California Region
393 E. Walnut Street
Pasadena, CA 91188

George Wolfe
LA River Expeditions
313 Grand Blvd. #842
Venice, CA 90291

Omar Brownson
LA River Revitalization Corporation
570 W Ave 26, Suite 475
Los Angeles, CA 90065

LA Unified School District
333 S Beaudry Ave.
Los Angeles, CA 90017

Liz Crosson
LA Waterkeeper
120 Broadway, Suite 105
Santa Monica, CA 90401

Elizabeth Timme
LA-MAS
3051 N. Coolidge Ave.
Los Angeles, CA 90039

Angela Mooney D'Arcy, Executive Director
Sacred Places Institute for Indigenous People
Sustainability Initiative
120 Broadway, Suite 105
Santa Monica, CA 90401

Jill Sourial
The Nature Conservancy, Los Angeles Field Office
601 South Figueroa, Suite 1425
Los Angeles, CA 90017

Michael Antos
CSUN
18111 Nordhoff Street
Northridge, CA 91330-8249

Joseph T. Edmiston
Santa Monica Mountains Conservancy
5750 Ramirez Canyon
Malibu, CA 90265

Irma Munoz
Mujeres de la Tierra
Los Angeles River Center and Gardens
570 West Avenue 26, Suite 300
Los Angeles, CA 90065

Miguel Luna
Urban Semillas
5317 N. Figueroa Street, No. 9
Los Angeles, CA 90042

Timothy Popejoy
LAUSD OEHS
33 South Beaudry Avenue, 28th Floor
Los Angeles, CA 90017

Mark S. Laska
Great Ecology Environment + Design
1020 Prospect Street Suite 310
La Jolla, CA 92037

Joseph Pitruzzelli
LARABA
800 East 3rd St
Los Angeles, CA 90014

Jeff Jacobberger
Bicycle Advisory Committee

Ref Rodriguez
c/o Steve Zimmer
LAUSD Board President
333 South Beaudry Avenue, 24th Floor
Los Angeles, CA 90017

Gary Toebben
Los Angeles Area Chamber of Commerce
350 S. Bixel Street
Los Angeles, CA 90017

Los Angeles Audubon Society
PO Box 931057
Los Angeles, CA 90093

Los Angeles Conservancy
523 West Sixth Street, Snite 826
Los Angeles, CA 90014

Los Angeles Conservation Corps
P.O. BOX 15868
Los Angeles, CA 90015

J. Gonzalez
Los Angeles Unified School District
333 S. Beaudry Ave, 20th Fl
Los Angeles, CA 90017

Robert D. Freeman
Airport Environmental Manager
Los Angeles World Airports (LAWA)
P.O. Box 92216
Los Angeles, CA 90009-2216

Los Encinos School
17100 Ventura Blvd
Encino, CA 91316

Katherine Trisolini
Loyola Law School919 Albany Street, Burns 104
Los Angeles, CA 90015

Michael Banner
Main Street Capital BIDCO
1010 Wilshire Blvd. Ste. 807
Los Angeles, CA 90017

J.H. McQuiston
McQuiston Associates
6212 Yucca Street
Los Angeles, CA 90028

Lauren Bon
Metabolic Studio
1745 North Spring Street, Unit 4
Los Angeles, CA 90012

Mia Lehrer
Mia Lehrer + Associates
3780 Wilshire Boulevard, Suite 250
Los Angeles, CA 90010

George Lange
Mountains Recreation and Conservation Authority
570 West Avenue 26, Suite 100
Los Angeles, CA 90065

Natural Resources Defense Council
1314 Second Street
Santa Monica, CA 90401

Beth Pratt
California Director, Pacific Regional Center
National Wildlife Federation
PO Box 64
Midpines, CA 95345

Cathi Milligan
NELAart News
5668 York Blvd.
Los Angeles, CA 90042

Sarah Lyon
Oakwood Elementary School
11230 Moorpark Street
North Hollywood, CA 91602

Jim Burns
Occidental College
1600 Campus Road
Los Angeles, CA 90041

Robert Laughton, Director
Office of Environmental Health and Safety, LAUSD
333 South Beaudry Ave, 28th Floor
Los Angeles, CA 90017

Laura Garrett
Pasadena Audubon Society
1750 N. Altadena Drive
Pasadena, CA 91107

Fred Kaplan
Peak Solutions LLC
1933 11th Floor S. Broadway
Los Angeles, CA 90007

Alisa Smith
President GPIA
P.O. Box 65881
Los Angeles, CA 90065

Daveed Kapoor
RAC DESIGN BUILD
3048 North Coolidge Avenue
Los Angeles, CA 90039

Malcom Jackson
RPA ADVERTISING
2525 Colorado Ave.
Santa Monica, CA 90404

Tom Ford
Santa Monica Bay Restoration Commission
320 West 4th Street, Ste 200
Los Angeles, CA 90013

The Bay Foundation
P.O. Box 13336
Los Angeles, CA 90013

Irma Munoz
Santa Monica Mountains Conservancy
570 WEST AVENUE TWENTY-SIX, SUITE 100
Los Angeles, CA 90065

Charming Evelyn
Sierra Club, Los Angeles Chapter
3435 Wilshire Blvd, Ste 660
Los Angeles, CA 90010

Fred Dong
Sierra Club, Los Angeles Chapter
3435 Wilshire Blvd, Ste 320
Los Angeles, CA 90010

Craig Collins
Silver Lakes Reservoirs Conservancy
P.O. Box 39735
Los Angeles, CA 90039

Southern California Association of Governments
818 West 7th Street, 12th Floor
Los Angeles, CA 90017

St. Sebastian Catholic Church
1453 Federal Ave
Los Angeles, CA 90025

David Egeler
T. S. King Middle School
4201 Fountain Ave.
Los Angeles, CA 90029

Robert Garcia
The City Project
1055 Wilshire Blvd., Suite 1660
Los Angeles, CA 90017

Brian Cohen
The Nature Conservancy
402 W Broadway #1350
San Diego, CA 92101

Shona Ganguly
The Nature Conservancy, Los Angeles Field Office
601 South Figueroa, Suite 1425
Los Angeles, CA 90017

Melanie Winter
The River Project
3912 Laurel Canyon Blvd., # 208
Studio City, CA 91604

Jay Benoit
School for Environmental Studies
John Marshall HS
3939 Tracy Street
Los Angeles, CA 90027

Lynnette Kampe
Theodore Payne Foundation
10459 Tuxford Street
Sun Valley, CA 91352

John Yonai
Tierra West Advisors, Inc
2616 East 3rd St.
Los Angeles, CA 90033

Andy Lipkis
Tree People
12601 Mulholland Drive
Beverly Hills, CA 90210

Tori Kjer
Trust for Public Land
135 West Green St., 2nd FL
Pasadena, CA 91105

Roger Hoestercy
Trust for Public Land, Los Angeles Office
135 West Green St., 2nd FL
Pasadena, CA 91105

Dr. Matt Kondolf, PhD
UC Berkeley
202 Wurster Hall #2000
Berkeley, CA 94720

Keith C. Nathaniel
UC Cooperative Extension, Los Angeles County
700 West Main Street
Los Angeles, CA 91801

Elana Zilberg
UC San Diego
9500 Gilman Drive
La Jolla, CA 92093

Meredith McKenzie
Urban Rivers Institute
2548 El Molino Avenue
Altadena, CA 91001

Pauline Louie
Urban Waters Federal Partnership
700 N Alameda St
Los Angeles, CA 90012

Larry Pryor
USC Annenberg School for
Communication and Journalism
3502 Watt Way, ASC 326E
Los Angeles, CA 90089

Alexander Robinson
USC School of Architecture
850 West 37th Street, Watt Hall 204
Los Angeles, CA 90089

Robert Harris
USC School of Architecture
850 West 37th Street, Watt Hall 204
Los Angeles, CA 90089

Adriana Fernandez
Valley Industry & Commerce Association (VICA)
5121 Van Nuys Blvd., Ste. 208
Sherman Oaks, CA 91403

Jack Eidt
Director, Wild Heritage Planners
P.O. Box 50260
Los Angeles, CA 90050

Clifford Hutson
1320 Washington Ave.
Pomona, CA 91767

Jessica Hough
3167 Rowena Ave
Los Angeles, CA 90027

Donna Perkins
5921 Whitsett Ave APT 216
North Hollywood, CA 91607

Herb Agner
2731 Waverly Drive
Los Angeles, CA 90039

Ben Oswald
4223 Portola Ave
Los Angeles, CA 90032

Steve Brye
255 South Grand Ave APT 808
Los Angeles, CA 90012

Todd Garlington
2675 Rich Street
Los Angeles, CA 90039

Sarah Hayes
10509 Blythe Ave
Los Angeles, CA 90064

Eric Rapp
333 N. Windsor Blvd
Los Angeles, CA 90004

Russell Bates
2359 Lake View Ave
Los Angeles, CA 90039

Adam Hauck
3511 Greensward Road
Los Angeles, CA 90039

Fabienne Bouville
3837 Brunswick Ave
Los Angeles, CA 90039

Pat Morton
4400 Brunswick Ave
Los Angeles, CA 90039

Carl Olson
P. O. Box 6102
Woodland Hills, CA 91365

Dan Brotman
6211 Murietta Ave
Valley Glen, CA 91401

Liza Wlute
908 Malcom Ave.
Los Angeles, CA 90024

Alice Campbell
355 Canebrake Road, Canebrake
Julian, CA 92036

Mark Hanna
760 Loma Drive
Hermosa Beach, CA 90254

Damian Robledo
4044 Brunswick Avenue
Los Angeles, CA 90039

Joyce Dillard
P.O. Box 31377
Los Angeles, CA 90031

Lauren Lajoie Frye
865 Toro Street
San Luis Obispo, CA 93401

Tony Taylor
6737 Denny Avenue, #50
North Hollywood, CA 91606

Eraina Olson
1700 Greenbriar Lane
Brea, CA 92821

Erik Lerner
439 N CANON DR #PH
Beverly Hills, CA 90210

Salah Husseini
500 S Buena Vista St
Burbank, CA 91521

Joanne Hedge
1415 GARDEN STREET
Glendale, CA 91201

Alec Hudnut
4093 San Rafael Ave
Los Angeles, CA 90065

Alek Bartrosouf
302 N. Louise #11
Glendale, CA 91206

Anthony Plamondon
3733 Rolle St
Los Angeles, CA 90031

Ava Bise
3515 Griffith Pk. Bl.
Los Angeles, CA 90027

Carol Teutsch
841 Moon Ave
Los Angeles, CA 90065

Cathy Hrenda
PO Box 10026
Glendale, CA 91209

Charles Funaro II
221 E Walnut St #255
Pasadena, CA 91101

Charlotte Hildebrand
4267 San Rafael Ave.
Los Angeles, CA 90042

Christine Jocoy
420 Redondo Ave, Unit #305
Long Beach, CA 90814

Daniel Szuhay
1129 N Hoover St, Apt 207
Los Angeles, CA 90029

Darynne Jessler
4408 Gentry Ave
Valley Village, CA 91607

Duncan Sinclair
812 E Mountain St
Pasadena, CA 91104

Eddie Thompson
1315 N. Brighton St.
Burbank, CA 91506

Ely Lester
1411 Hillcrest Ave.
Glendale, CA 91202

Ilka Erren Pardinas
2658 Griffith Park Blvd., № 816
Los Angeles, CA 90039

Francie Kugelman
5063 Floristan Avenue
Los Angeles, CA 90041

Gerry Mischke
1412 Gordon St
Los Angeles, CA 90028

Gil and Herschel Shorr
5430 Gentry Avenue
Valley Village, CA 91607

Grace Lloyd
1131 Hill Street
Santa Monica, CA 90405

Harlan & Virginia Moyer
957 Nordica Dr
Los Angeles, CA 90065

Jae Moreno Rand
860 N. Ave 65
Los Angeles, CA 90042

Jessica Hough
3167 Rowena Avenue
Los Angeles, CA 90027

Jocelyne and Steve Finc
5715 Beck Avenue
North Hollywood, CA 91601

Jodie Mendelson
416 S. Spring St. #809
Los Angeles, CA 90013

Kathryn Savage
12354 Sarah Street
Studio City, CA 91604

Kay Camphuis
3776 Tracy Street
Los Angeles, CA 90027

Lane Barden
2450 Daly St. #4
Los Angeles, CA 90031

Larry LeGras
1300 Micheltorena St.
Los Angeles, CA 90026

Leila Menzies
4617 E. La Vante Street
Long Beach, CA 90815

Lawrence Freilich
135 S Jacksou St
Independence, CA 93526

Linda Javier
343 N. Niagara St.
Burbank, CA 91505

Marge Piane
2267 Moss Ave
Los Angeles, CA 90065

Michele Hutchins
6904 Ranchito Avenue
Van Nuys, CA 91405

Michael Antos
519 Fano Street Unit E
Monrovia, CA 91016

Mike Medberry
2005 W. Heron St.
Boise, ID 83702

Melissa Mills
2187 Alexdale Lane
Rowland Heights, CA 91748

Nicole Siskind
836 Wonder View Drive
Calabasas, CA 91302

Patricia Gleason
6767 W. Sunset Blvd. #117
Los Angeles, CA 90028

Peter and Marguerite Hess
336 S. Ave 52
Los Angeles, CA 90042

Peter Stenwedel
1575 Hazelwood Ave
Los Angeles, CA 90041

Raquel Maria Dillon
1575 Hazelwood Ave.
Los Angeles, CA 90041

Richard Riseinberg
648 1/2 S. Burnside Ave.
Los Angeles, CA 90036

Renne Bilson
12505 Sarah St.
Studio City, CA 91604

Rex Mayreis
397 E. Las Flores Drive
Altadena, CA 91001

Roberta Medford
2715 Sycamore Avenue
Montrose, CA 91020

Robert Dawson
4039 San Rafael Avenue
Los Angeles, CA 90065

Kathleen Robinson
5235 Hermosa Avenue
Eagle Rock, CA 90041

R. Rhoads Stephenson
4455 Rockland Place, Unit 10
La Canada, CA 91011

Ron Milam
1704 Morton Ave.
Los Angeles, CA 90026

Susan Petteway
808 N Spring St # 616
Los Angeles, CA 90012

Tobi Dragert
800 W. 1st St.
Los Angeles, CA 90012

Tim LaValley
6200 Franklin Avenue
Los Angeles, CA 90028

Todd Wexman
926 Tularosa Drive
Los Angeles, CA 90026

Thomas Nachtrab
10530 Larwin Ave. Unit 7
Chatsworth, CA 91311

Trent Lange
424 Kelton Ave, Apt 510
Los Angeles, CA 90024

Vic Baron
P.O. Box 411154
Los Angeles, CA 90041

Victoria Shabanian
1319 Opechee Way
Glendale, CA 91208

Sharon and Bill Weisman
5001 Carolyn Way
Glendale, CA 91214

Nicholas Wilhelm
500 Cornell Drive
Burbank, CA 91504

Sarah Hays
10509 Blythe Ave
Los Angeles, CA 90064

Joseph Pitruzzelli
625 Lincoln Blvd
Venice Beach, CA 90013

Chris Watts
1858 North Avenue 53
Los Angeles, CA 90042

Evelyn Gray
16653 Hamlin St
Lake Balboa, CA 91406

Robert Aronson
108 Catamaran Street #1
Marina del Rey, CA 90292

Nicolas de Zamaroczy
2618 Ellendale Pl. Apt. 7
Los Angeles, CA 90007

Liz Amsden
5158 Almaden Drive
Los Angeles, CA 90042

Cathy Carpenter
4617 La Barca Drive
Los Angeles, CA 91356

Peter Alexander
2436 Hidalgo Ave.
Los Angeles, CA 90039

Carolyn West
1621 Rancho Ave
Glendale, CA 91201

Pat Wolff
1020 El Sur Ave
Arcadia, CA 91006

Elaine LeBoeuf
1838 N. Alvarado St
Los Angeles, CA 90026

David Nemtzow
1254 9th Street
Santa Monica, CA 90401

Dessa Kaye
P.O. Box 1397
Studio City, CA 91614

Edward Belden
458 S. Main Street
Los Angeles, CA 90013

Lauren Deutsch
835 S. Lucerne Blvd., #103
Los Angeles, CA 90005

Mary Renaker
1237 ¼ – 18th St.
Santa Monica, CA 90404

Richard Pearce
240 Bentley Circle
Los Angeles, CA 90049

Antonio Gonzalez
2914 N. Main Street, 1st Floor, Suite A
Los Angeles, CA 90031

Ed Reyes
339 W. Ave 42
Los Angeles, CA 90065

Nancy Sutley
111 N. Hope Street
Los Angeles, CA 90012

Romel Pascual
111 N. Hope Street
Los Angeles, CA 90012

Steve Appleton
2426 Meadow Ave. No. 3
Los Angeles, CA 90031