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AUBURN-FOLSOM SOUTH UNIT OF THE CENTRAL VALLEY PROJECT

HEARINGS BEFORE THE SUBCOMMITTEE ON IRRIGATION AND RECLAMATION

OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

EIGHTY-SEVENTH CONGRESS

SECOND SESSION

ON

S. 103

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO
CONSTRUCT, OPERATE, AND MAINTAIN THE AUBURN-FOLSOM
SOUTH UNIT, AMERICAN RIVER DIVISION, CENTRAL VALLEY
PROJECT, CALIFORNIA, UNDER FEDERAL RECLAMATION LAWS

FEBRUARY 20 AND 21, 1962

Printed for the use of the
Committee on Interior and Insular Affairs



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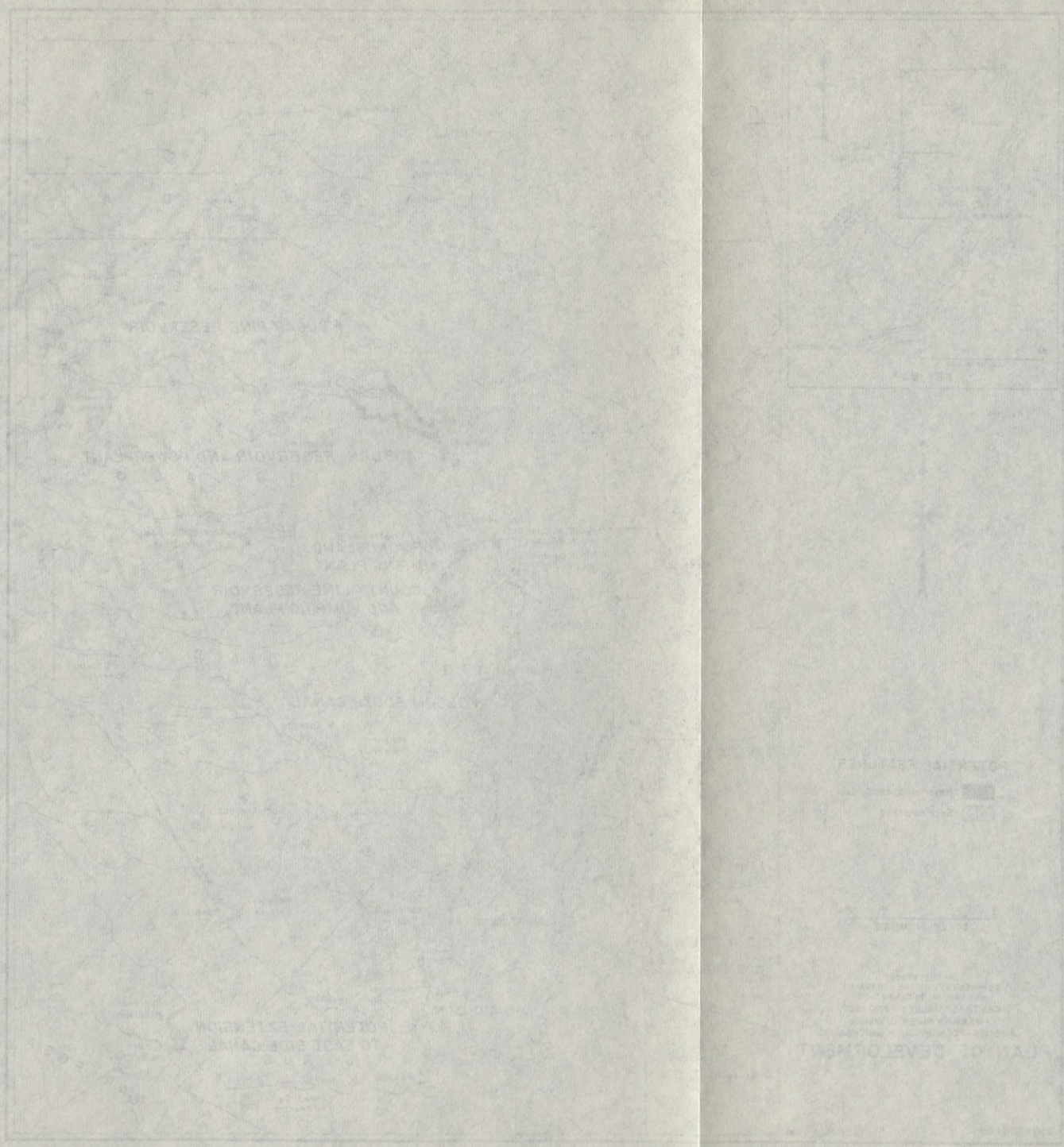
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PLAN OF DEVELOPMENT
FOR THE CANAL
AND
WATERWAYS
IN THE
DISTRICT OF
COLUMBIA
AND
ADJACENT AREAS
1910

AUBURN-FOLSOM SOUTH UNIT OF THE CENTRAL VALLEY PROJECT

TUESDAY, FEBRUARY 20, 1962

U.S. SENATE,
SUBCOMMITTEE ON IRRIGATION AND RECLAMATION,
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 3110, New Senate Office Building, Senator Henry M. Jackson presiding. Present: Senators Jackson, Burdick, Hickey, Kuchel, Allott, and Pearson.

Also present: Roy Whitacre, professional staff member.

Senator JACKSON. The committee will come to order. We are here this morning to hear testimony on S.103, a bill to authorize the Secretary of the Interior to construct, operate, and maintain the Auburn-Folsom South unit, American River division, Central Valley project, California, under Federal reclamation laws.

Reports have been received from both the Bureau of the Budget and the Department of the Interior. The Secretary recommends the authorization of the project if amended as suggested in the report. The Director of the Bureau of the Budget has no objection to the enactment of S. 103.

In order to clarify the situation as to the suggested amendments of the Department, I have had a committee print of the proposed legislation prepared by the staff; and copies are available to committee members now.

A copy of the bill, the committee print of the bill, and the reports of the executive agencies will be placed in the record at this point.

(The exhibits are as follows:)

[S. 103, 87th Cong., 1st sess.]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain the Auburn-Folsom South unit, American River division, Central Valley project, California, under Federal reclamation laws

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the principal purpose of increasing the supply of water available for irrigation and other beneficial uses in the Central Valley of California, the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), is authorized to construct, operate, and maintain, as an addition to, and an integral part of, the Central Valley project, California, the Auburn-Folsom South unit, American River division, in general accordance with plans of the Department of the Interior prepared pursuant to the Act of October 14, 1949 (63 Stat. 852) and adopted by the Secretary of the Interior on December 8, 1960. The works authorized to be constructed shall consist of—

(1) the Auburn Dam and Reservoir, a major storage reservoir having a storage capacity of approximately one million acre-feet, to be constructed on the American River near the city of Auburn, California;

(2) a hydroelectric powerplant at Auburn Dam with a generating capacity of approximately one hundred sixty thousand kilowatts and necessary electric transmission system for interconnection with the Central Valley project power system;

(3) a reservoir or reservoirs with necessary diversion works, conduits, and other appurtenant works of adequate capacity for the delivery of water supplies to approximately fifteen thousand acres of the Forest Hill Divide Area in Placer County;

(4) Folsom South Canal and related operating structures, including pumping plants, regulating reservoirs, floodways, channels, levees, and other appurtenant works for the diversion and conveyance of water of the American River from an appropriate point upstream of Nimbus Dam on said river to such point in San Joaquin County as the Secretary of the Interior determines will best serve the needs of Sacramento and San Joaquin Counties, and in the construction of such canal and related operating structures, the Secretary is authorized to provide, in such manner as he deems necessary and economically feasible, for the future construction of the east side division of the Central Valley project, now under study as a means of providing supplemental water on the east side of the southern San Joaquin Valley;

(5) Folsom-Malby Canal with necessary pumping plans and a regulatory reservoir of approximately twenty-five thousand acre-feet, located near Malby Crossing on Carson Creek six miles south of Folsom, California, to serve approximately ten thousand acres of land below an elevation of five hundred feet lying in Sacramento and El Dorado Counties.

SEC. 2. Subject to the provisions of this Act, the operation of the Auburn-Folsom South unit, American River division, shall be integrated and coordinated, from both a financial and an operational standpoint, with the operation of other features of the Central Valley project, as presently authorized and as may in the future be authorized by Act of Congress, in such manner as will effectuate the fullest, most beneficial, and most economic utilization of the water resources hereby made available. The Auburn Dam shall be operated for flood control in accordance with criteria established by the Secretary of the Army as provided for in section 7 of the Flood Control Act of 1944 (58 Stat. 887). Minimum basic facilities may be provided for the accommodation of the visiting public at Auburn Reservoir and its shoreland if responsible local interests agree to assume the operation and maintenance thereof. The costs of such facilities shall be nonreimbursable and nonreturnable.

SEC. 3. In locating and designating the works authorized for construction by the first section of this Act, the Secretary of the Interior through the Commission of Reclamation shall give due consideration to the reports upon the California water plan prepared by the State of California, and shall consult the local interests to be affected by the construction and operation of said works through public hearings or in such manner as in his discretion may be found best suited to a maximum expression of the views of such local interests.

SEC. 4. Nothing contained in this Act shall be construed by implication or otherwise as an allocation of water, and in the studies for the purposes of development plans for disposal of water as herein authorized the Secretary of the Interior shall make recommendations for the use of water in accord with State water laws, including but not limited to such laws giving priority to the counties and areas of origin for present and future needs.

SEC. 5. There are hereby authorized to be appropriated \$181,000,000, plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuation in construction costs as indicated by engineering cost indexes applicable to the type of construction authorized in this Act, and, in addition thereto, such sums as may be required to operate and maintain the Auburn-Folsom South unit.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., February 16, 1962.

Hon. CLINTON P. ANDERSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR SENATOR ANDERSON: This responds to your request for the views of this Department on S. 103, a bill to authorize the Secretary of the Interior to construct, operate, and maintain the Auburn-Folsom South unit, American River division, Central Valley project, California, under Federal reclamation laws.

We recommend that S. 103 be enacted if amended as hereinafter proposed.

The bill would authorize the construction of Auburn Dam, Reservoir, and powerplant on the North Fork of American River, the Folsom South Canal and distribution works, and facilities to provide a water supply to the Foresthill Divide and Folsom-Malby acres. This Department has transmitted to the Congress a planning report recommending construction of the Auburn-Folsom South unit. The facilities described in the bill are generally consistent with that report. This multiple-purpose unit represents an additional stage of the plan to conserve and make more useful the waters of the American River under the provisions of the American River Basin Development Act of October 14, 1949. It would be coordinated with and made an integral part of the Central Valley project.

The Auburn Dam would form a 1 million acre-foot reservoir and would include a 155,000-kilowatt powerplant at the toe of the dam. It would supply 265,000 acre-feet of water annually to the Folsom South Canal in addition to the water to be supplied by the Folsom Reservoir. It would also provide additional flood protection to the American River area and the city of Sacramento, and add 516 million kilowatt-hours annually to the Central Valley project hydroelectric power generation. Its cost is estimated to be \$138,812,000, including \$557,000 for recreation lands and basic public-use facilities. The total benefit-cost ratio for this feature on a 100-year period of analysis is 2.24 to 1. On a 50-year period, using direct benefits only, the ratio is 1.53 to 1.

The Foresthill Divide area lies above Auburn Reservoir between the North Fork and Middle Fork of the American River. The plan of development which now appears most desirable is to provide irrigation, municipal and industrial water service to a gross area of 5,000 acres and to enhance the fish and wildlife and recreational resources. This plan involves construction of Sugar Pine Dam and Reservoir on Shirttail Creek, a pressure pipeline to a regulating reservoir, and an irrigation distribution system. The cost of these works at April 1961 prices is estimated to be \$7,223,000 of which \$96,000 is for the irrigation distribution system and \$150,000 for recreation facilities.

There is urgent need for the development of the water resources of the Foresthill Divide area. The severe drought of the past few years in California has accentuated the need to alleviate existing water shortages and to provide for expanded irrigation and municipal and industrial water use. The Foresthill Divide Public Utility District and the Placer County Water Agency are actively interested in development of water resources to serve the Foresthill Divide area. The plan described above, which is somewhat different from that described in the proposed bill, would recognize plans contemplated by the local agencies. The proposed plan of development to serve the Foresthill Divide area is economically justified as demonstrated by a total benefit-cost ratio of 2.32 to 1 on a 100-year period of analysis and a direct benefit-cost ratio of 1.27 to 1 on a 50-year period of analysis. When integrated financially with the Central Valley project, the plan is found to be financially feasible.

The Folsom South Canal, as described in the Department's report, would provide means for conveying American River water for irrigation and municipal use in an area on the east side of the Central Valley extending from the American River southward to the city of Stockton. The unit would serve a gross area of about 518,400 acres. Within that area some 398,000 acres would

be served with irrigation water. The capital cost of this 67½-mile main canal and its appurtenances is estimated to be \$42,095,000, exclusive of the provisions for future East Side division service, which are discussed below. Through this canal some 852,000 acre-feet of water annually would be conveyed from American River to lands in Sacramento and San Joaquin Counties. The cost of distribution and drainage systems to serve the area is estimated at \$43,991,000. They may be built by the United States or independently by the local interests. In addition, a deep-well development program estimated at \$1,566,000 would be required to insure coordinated use of surface- and ground-water supplies. Installation of the deep wells is considered to be the responsibility of local interests. Construction of the Folsom-South Canal is engineeringly feasible and economically justified. The ratio of total benefits to costs is 4.7 to 1 on a 100-year period of analysis and the ratio of direct benefits to costs for a 50-year period is about 1.7 to 1.

The service area for the Folsom-Malby area generally described in section 1(5) of S. 103 lies between the American and Consumnes Rivers. It is a rapidly expanding area which includes sections of western El Dorado County and eastern Sacramento County at higher elevations than the Folsom-South Canal. The plan of development now proposed involves a diversion at the existing Folsom Reservoir, from which a 10.8-mile pipeline would deliver water to a proposed reservoir on Deer Creek, near the project lands and two pumping plants. Through these facilities water would be delivered to about 12,000 acres of land for municipal and industrial water supply. The proposed County Line Reservoir (previously referred to as the Carson Creek School Reservoir) would also provide opportunities for fish and wildlife enhancement and recreation and for flood protection to downstream lands. The estimated cost of this plan of development, at April 1961 prices, is \$11,916,000, including \$650,000 for recreation lands and facilities. This proposed plan is economically justified as demonstrated by a total benefit-cost ratio of 2.19 to 1 on a 100-year period of analysis and a direct benefit-cost ratio of 1.91 to 1 on a 50-year period of analysis.

Because the distribution and drainage systems in the Folsom South and Foresthill areas may be built by local interests and are in any case fully reimbursable, the unit water rates for irrigation are calculated to be \$2.75 and \$2.50 per acre-foot at canalside, respectively. This is substantially equal to the calculated payment capacity of the water users on the least productive lands proposed to be served and would meet all costs of operation and maintenance of the works and contribute toward the capital costs. The proposed charges for municipal and industrial water would repay all costs allocated to that purpose with interest. Power and energy generated at Auburn Dam would be delivered to the Central Valley project for sale at project rates. Surplus revenues from power and municipal and industrial water sales of the entire Central Valley project would repay the remaining unpaid portion of the irrigation allocation of the project, including the Auburn-Folsom South unit, within 50 years, with a substantial surplus remaining.

The Bureau of Reclamation is now engaged in feasibility studies of the initial phase, East Side division, Central Valley project, which will involve major canals, reservoirs, pumping plants, and other facilities to provide water from the American and Sacramento Rivers to irrigate lands and supply municipal and industrial needs to an area on the east side of San Joaquin Valley extending southward to the city of Bakersfield. These studies and the report thereon are expected to be completed by the Bureau of Reclamation in fiscal year 1962. The route of the East Side Canal is expected to parallel the Folsom South Canal for the 67½-mile reach from American River to Lone Tree Creek, east of Stockton. By building the Folsom South Canal initially to a suitable capacity to serve both the Folsom South unit and the East Side division, substantial savings in construction cost of the East Side division could be realized.

The bill would provide authority for the Secretary to build the Folsom South Canal to the necessary capacity, or to make other provisions for the future construction of the East Side division, but it makes no provision for the financing and amortization of the incremental costs of such adjustments to the Folsom South unit plans. We are proposing language which will take care of this deficiency.

We propose the insertion of a new section in the bill which will clarify existing authority to provide facilities for fish and wildlife conservation and development purposes. The Fish and Wildlife Service recommends further studies to ascertain the extent to which several possible means of improving the fishery might be practicable.

Development of recreational facilities is proposed at and near the Auburn Reservoir. Basic facilities, including the land therefor as set out in the departmental planning report, are recommended at this time for Federal construction.

The Department has under consideration the acquisition and development of additional lands and improved facilities for recreational development. We suggest that any authorization for such additional purposes be delayed pending further study. We plan to submit further recommendations on this phase of the project in the near future.

The Federal Power Commission, in commenting upon our proposed report on the Auburn powerplant features, suggested that consideration be given to a larger installed capacity, to provisions for future installation of an additional power unit, or to providing pump-storage facilities. In view of the proximity of the proposed plant to market centers and the availability of Folsom Reservoir to reregulate fluctuating power releases, it may be found desirable to adopt some such plan. To assure that such improvements in the power function can be made within the terms of the authorizing legislation, if found desirable and justified by preconstruction studies, we suggest the language bearing on this function be amended.

The specific items for which authorization is recommended are listed below with the current estimated costs:

Main facilities:

Auburn Dam, Reservoir, and powerplant.....	\$138,255,000
Recreation facilities and acquisition of land for recreation---	1,357,000
Foresthill Divide area.....	6,977,000
Folsom South Canal.....	42,095,000
Folsom-Malby area.....	11,266,000

Subtotal.....	<u>199,950,000</u>
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Distribution and drainage systems:

Folsom South service area.....	43,991,000
Foresthill Divide area.....	96,000

Subtotal.....	<u>44,087,000</u>
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Capacity for East Side division.....	23,540,000
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Total.....	<u>267,577,000</u>
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Cost estimates cited above are based upon October 1957 prices for Folsom South features, January 1958 prices for Auburn features, and April 1961 prices for the Foresthill Divide and Folsom-Malby area features, which prices would not be substantially different than current prices.

Existing laws relating to the Central Valley project, particularly the act of October 17, 1940 (54 Stat. 1198), provide authority for the construction of distribution system works. Although all or part of these systems may be built independently by local interests, the Congress should recognize that the entire distribution complex may have to be built or financed by the United States under existing laws.

The bill would impose a ceiling of \$181 million on the amount authorized to be appropriated for the purposes of the act. This amount is derived from the estimates of cost presented in our proposed report of October 31, 1960, on the Auburn-Folsom South unit, exclusive of works required for development of the Foresthill Divide and Folsom-Malby areas, the irrigation distribution systems, and the East Side division enlargement. That amount, however, would be inadequate to fulfill all the purposes and to construct all the facilities contemplated in the various modifications recommended in this letter. We suggest the legislation provide an overall appropriation ceiling of \$270 million.

The following specific amendments to the bill are recommended:

In line 5 on page 2, delete "December 8, 1960," and insert "December 15, 1961."

In line 13 on page 2, delete "sixty thousand kilowatts" and insert "fifty-five thousand kilowatts or more if the Secretary finds additional capacity to be justified."

In line 19 on page 2, delete "approximately fifteen thousand acres of".

In line 11 on page 3, insert between the word "Valley" and the semicolon at the end of the line the following: ", and the incremental costs of providing capacity in the Folsom South Canal, or of constructing the Folsom South Canal and appurtenant facilities so that it may be enlarged or added to in the future, to serve the East Side division of the Central Valley project, shall be allocated to irrigation for repayment from Central Valley project revenues. When and if the East Side division is authorized, these costs shall be deemed a part of the cost of that division and shall be reallocated as the Secretary deems right and proper."

In lines 12 through 18, page 3, amend the subsection to read as follows: "Folsom-Malby conduit, with necessary pumping plants and regulatory reservoir, and other appurtenant works for the delivery of water to serve lands which are at a higher elevation than can reasonably be served from the Folsom South Canal in Sacramento and El Dorado Counties."

Delete lines 6 through 10 on page 4 and insert a new section reading as follows and renumber sections "3", "4", and "5" as "4", "5", and "6", respectively:

"Sec. 3. (a) The Secretary of the Interior is authorized, in connection with the Auburn-Folsom South unit, to construct minimum basic public recreation facilities and to acquire lands necessary for that purpose, substantially in accordance with the plans in the report adopted by the Secretary on December 15, 1961, and to arrange for the operation and maintenance of the same by an appropriate State or local agency or organization. The cost of constructing such facilities and acquiring such lands shall be nonreimbursable and nonreturnable under the reclamation laws.

"(b) The Secretary may make such reasonable provision in the works authorized by this Act as he finds to be required for the conservation and development of fish and wildlife in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-666c, inclusive), and the portion of the construction costs allocated to these purposes and to flood control, together with an appropriate share of the operation, maintenance, and replacement costs therefor, shall be nonreimbursable and nonreturnable."

In line 13 on page 4 delete the word "Commission" and insert the word "Commissioner".

In line 4 on page 5 delete the figure "\$181,000,000" and insert the figure "\$270,000,000" in lieu thereof.

A statement of personnel and other requirements that enactment of this bill would entail is attached in accordance with the provisions of Public Law 801, 84th Congress.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

KENNETH HOLUM,
Assistant Secretary of the Interior.

FOLSOM SOUTH UNIT, CENTRAL VALLEY PROJECT, CALIFORNIA

Estimated additional man-years of civilian employment and expenditures for the first 5 years of proposed new or expanded programs

	1st	2d	3d	4th	5th
Estimated additional man-years of civilian employment:					
Executive direction:					
Executive	1	1	1	1	1
Clerical	1	1	1	1	1
Total, executive direction	2	2	2	2	2
Administrative services and support:					
Accountant	2	3	6	6	6
Clerical	5	6	10	10	10
Property management	4	5	8	8	8
Records maintenance	3	4	4	4	4
Total, administrative services and support	14	18	28	28	28
Substantive (program):					
Engineering aids	28	36	45	45	45
Engineers	18	32	36	36	36
Geologist	2	2	4	4	4
Total, substantive	48	70	85	85	85
Total, estimated additional man-years of civilian employment	64	90	115	115	115
Estimated additional expenditures:					
Personal services (\$1,000)	448	630	805	900	805
All other (\$1,000)	2,713	7,302	14,945	20,493	13,367
Total, estimated additional expenditures (\$1,000)	3,161	7,932	15,750	21,393	14,172

AUBURN UNIT, CENTRAL VALLEY PROJECT, CALIFORNIA

Estimated additional man-years of civilian employment and expenditures for the first 5 years of proposed new or expanded programs

	1st	2d	3d	4th	5th
Estimated additional man-years of civilian employment:					
Executive direction:					
Executive	1	1	1	1	1
Clerical	1	1	1	1	1
Total executive direction	2	2	2	2	2
Administrative services and support:					
Accountant	3	3	5	5	6
Clerical	4	6	10	12	13
Property management	4	5	8	8	8
Records maintenance	2	3	4	4	4
Total, administrative services and support	13	17	27	29	31
Substantive (program):					
Engineering aids	10	32	48	51	54
Engineers	15	21	38	38	38
Geologist	3	5	5	5	5
Total, substantive	28	58	91	94	97
Total, estimated additional man-years of civilian employment	43	77	120	125	130
Estimated additional expenditures:					
Personal services (\$1,000)	301	539	840	900	950
All other (\$1,000)	1,699	3,735	12,141	20,405	24,043
Total estimated additional expenditures (\$1,000)	2,000	4,274	12,981	21,305	24,993

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., February 15, 1962.

Hon. CLINTON P. ANDERSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This is in further reply to your letter of January 17, 1961, requesting the views of the Bureau of the Budget on S. 103, a bill to authorize the Secretary of the Interior to construct, operate, and maintain the Auburn-Folsom South unit, American River division, Central Valley project, California, under Federal reclamation laws.

The purpose of this bill is clearly stated in its title.

The bill would provide authority for the construction of the Folsom South Canal with additional capacity to serve the proposed East Side division of the Central Valley project. We would expect that, prior to starting construction of the Folsom-South Canal with the proposed excess capacity, the feasibility of the East Side division would be established and a report submitted to Congress under established executive branch procedures.

The project report of the Department of the Interior on the Auburn-Folsom South unit tentatively allocates costs of fish and wildlife in excess of the specific costs of fish and wildlife facilities. We would expect that, prior to a request for funds to initiate work on the Auburn-Folsom South unit, the costs of the project would be reallocated in accordance with evaluation standards for water resource projects to be established by this administration.

Accordingly, the Bureau of the Budget would have no objection to the enactment of S. 103.

Sincerely yours,

PHILLIP S. HUGHES,
Assistant Director for Legislative Reference.

[Committee Print, February 20, 1962]

AMENDMENTS PROPOSED BY INTERIOR DEPARTMENT SHOWN IN ITALIC

[S. 103, 87th Cong., 2d sess.]

[Omit the matter in brackets and insert the part printed in italic]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain the Auburn-Folsom South unit, American River division, Central Valley project, California, under Federal reclamation laws

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the principal purpose of increasing the supply of water available for irrigation and other beneficial uses in the Central Valley of California, the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), is authorized to construct, operate, and maintain, as an addition to, and an integral part of, the Central Valley project, California, the Auburn-Folsom South unit, American River division, in general accordance with plans of the Department of the Interior prepared pursuant to the Act of October 14, 1949 (63 Stat. 852) and adopted by the Secretary of the Interior on [December 8, 1960] December 15, 1961. The works authorized to be constructed shall consist of—

(1) the Auburn Dam and Reservoir, a major storage reservoir having a storage capacity of approximately one million acre-feet, to be constructed on the American River near the city of Auburn, California;

(2) a hydroelectric powerplant at Auburn Dam with a generating capacity of approximately [one hundred sixty thousand kilowatts] *one hundred fifty-five thousand kilowatts or more if the Secretary finds additional capacity to be justified* and necessary electric transmission system for interconnection for interconnection with the Central Valley project power system;

(3) a reservoir or reservoirs with necessary diversion works, conduits, and other appurtenant works of adequate capacity for the delivery of water supplies to [approximately fifteen thousand acres of] the Forest Hills Divide Area in Placer County;

(4) Folsom South Canal and related operating structures, including pumping plants, regulating reservoirs, floodways, channels, levees, and other appurtenant works for the diversion and conveyance of water of the American River from an appropriate point upstream of Nimbus Dam on said river to such point in San Joaquin County as the Secretary of the Interior determines will best serve the needs of Sacramento and San Joaquin Counties, and in the construction of such canal and related operating structures, the Secretary is authorized to provide, in such manner as he deems necessary and economically feasible, for the future construction of the east side division of the Central Valley project, now under study as a means of providing supplemental water on the east side of the southern San Joaquin [Valley] Valley, and the incremental costs of providing capacity in the Folsom South Canal, or of constructing the Folsom South Canal and appurtenant facilities so that it may be enlarged or added to in the future, to serve the east side division of the Central Valley project, shall be allocated to irrigation for repayment from Central Valley project revenues. When and if the east side division is authorized, these costs shall be deemed a part of the cost of that division and shall be reallocated as the Secretary deems right and proper; and

(5) [Folsom-Malby Canal with necessary pumping plants and a regulatory reservoir of approximately twenty-five thousand acre-feet, located near Malby Crossing on Carson Creek six miles south of Folsom, California, to serve approximately ten thousand acres of land below an elevation of five hundred feet lying in Sacramento and El Dorado Counties.] Folsom-Malby conduit, with necessary pumping plants and regulatory reservoir, and other appurtenant works for the delivery of water to serve lands which are at a higher elevation than can reasonably be served from the Folsom South Canal in Sacramento and El Dorado Counties.

SEC. 2. Subject to the provisions of this Act, the operation of the Auburn-Folsom South unit, American River division, shall be integrated and coordinated, from both a financial and an operational standpoint, with the operation of other features of the Central Valley project, as presently authorized and as may in the future be authorized by Act of Congress, in such manner as will effectuate the fullest, most beneficial, and most economic utilization of the water resources hereby made available. The Auburn Dam shall be operated for flood control in accordance with criteria established by the Secretary of the Army as provided for in section 7 of the Flood Control Act of 1944 (58 Stat. 887). [Minimum basic facilities may be provided for the accommodation of the visiting public at Auburn Reservoir and its shoreland if responsible local interests agree to assume the operation and maintenance thereof. The costs of such facilities shall be nonreimbursable and nonreturnable.]

SEC. 3. (a) *The Secretary of the Interior is authorized, in connection with the Auburn-Folsom South unit, to construct minimum basic public recreation facilities and to acquire lands necessary for that purpose, substantially in accordance with the plans in the report adopted by the Secretary on December 15, 1961, and to arrange for the operation and maintenance of the same by an appropriate State or local agency or organization. The cost of constructing such facilities and acquiring such lands shall be nonreimbursable and nonreturnable under the reclamation laws.*

(b) *The Secretary may make such reasonable provision in the works authorized by this Act as he finds to be required for the conservation and development of fish and wildlife in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-666c, inclusive), and the portion of the construction costs allocated to these purposes and to flood control, together with an appropriate share of the operation, maintenance, and replacement costs thereof, shall be nonreimbursable and nonreturnable.*

SEC. [3] 4. In locating and designating the works authorized for construction by the first section of this Act, the Secretary of the Interior through the [Commission] Commissioner of Reclamation shall give due consideration to the reports upon the California water plan prepared by the State of California, and shall consult the local interests to be affected by the construction and operation of said works through public hearings or in such manner as in his discretion may be found best suited to a maximum expression of the views of such local interests.

SEC. [4] 5. Nothing contained in this Act shall be construed by implication or otherwise as an allocation of water, and in the studies for the purposes of

development plans for disposal of water as herein authorized the Secretary of the Interior shall make recommendations for the use of water in accord with State water laws, including but not limited to such laws giving priority to the counties and areas of origin for present and future needs.

Sec. [5] 6. There are hereby authorized to be appropriated [\$181,000,000] \$270,000,000, plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuation in construction costs as indicated by engineering cost indexes applicable to the type of construction authorized in this Act, and, in addition thereto, such sums as may be required to operate and maintain the Auburn-Folsom South unit.

Senator JACKSON. This multipurpose project would authorize the 1 million-acre-foot Auburn Dam together with a 155,000-kilowatt powerplant. The construction of the 67½-mile Folsom South Canal to service the east side of the valley as far south as the city of Stockton for irrigation and domestic water and the related facilities for the Foresthill Divide and Folsom-Malby areas. The total overall cost as indicated in the Department report is \$267,577,000.

Because of the large number of witnesses from California, 2 days have been set aside so that everyone interested can be heard. I would urge, however, that written statements be submitted for the record and that the oral testimony be confined to a summary of the salient features.

Anyone who desires to testify and has not as yet so indicated should contact Mr. Whitacre, professional staff member, so that time can be allocated for the presentation.

Before calling the first witness, I want to express a hearty welcome on behalf of all of the committee to Senator Pearson from Kansas, a new member of the committee, and sitting here as a new member on the first bill.

We have quite a number of witnesses and, before calling our colleagues, I think it would be appropriate to hear, first of all, from the Secretary of Interior, Stewart L. Udall.

Mr. Secretary, we are delighted to have you with us this morning, and you may now proceed in your own way.

STATEMENT OF HON. STEWART L. UDALL, SECRETARY OF THE INTERIOR

Secretary UDALL. Thank you very much, Mr. Chairman. As you all can see, from the number of Congressmen here, this is a big project and a very important one from the standpoint of the Central Valley in California.

My regional director, Mr. Dugan, and his people are here and they can be interrogated at length concerning the details.

This project, the Auburn-Folsom South unit, would become a major addition to the Central Valley project in central California. It is, of course, a multipurpose project and as planned, in my opinion, it is highly sound and would be a fine addition to what is certainly one of the most successful and finest reclamation projects in this country, the Central Valley project, itself.

The planning on this project was authorized nearly 13 years ago. It embraces a large area. I think there are nearly four congressional districts at the present time that are affected or will ultimately be affected, more than that, even, by the total project.

This project is located, as you can see on the map, on the American River. The Auburn Reservoir and powerplant would be located immediately above the Folsom Dam on the river and, of course, the Folsom-South Canal which would cover a large area, all the way from above Sacramento to below Stockton, Calif., and will service one of the fine farming areas in the Central Valley.

What has been happening in this section of the Central Valley of California is the same story that has occurred in many of the other dryland areas in the West. There has been a constantly expanding dependence on ground-water supplies to keep present farming going. In pumping and mining out the underground water the water problem is increasingly critical.

Of course, we all know from previous projects in the West that there is a long leadtime in terms of getting the Auburn Dam built and getting the canals in place. It would be our estimate that there is a lead time here of 8 or 10 years between authorization and actually getting water on all of the ground. Therefore, I think we can foresee, and we predict, an increasingly critical water situation in this area and we think that this fact, in itself, fully justifies the canal features of the project and makes it more important.

Let me say something because of the discussion that has been prevalent lately concerning farm surpluses. I know the Secretary of Agriculture has made statements recently that large acreages in this country will have to go out of farm production. This area in the Central Valley is devoted in the main to pasture, livestock feed crops, grapes, tree fruits, rice, beans, sugarbeets, tomatoes—in other words, all types of specialty crops most of which are not supported under the price-support program of the Federal Government. Indeed, the Department is quite willing, and has so indicated, to accept what is now a standard type of language which we had in the San Luis bill last year and other legislation limiting the production of surplus crops being sure that this does not add to the farm products that we already have in terms of the surplus crop production problems.

Senator JACKSON. You do not mean limiting the production to surplus crops; you mean to prohibit the granting of water in the event that they should produce products that are in surplus?

Secretary UDALL. That is correct, Mr. Chairman.

Senator JACKSON. I knew you made an accidental error. I wanted to correct it.

Secretary UDALL. The Department is quite willing to accept such a provision, and, in fact, we think this represents sound policy in regard to the total present picture as far as agriculture is concerned. The farmers in this valley are agreeable and I am sure you will find no dissent on that point. This is an area that has specialized in the past and wants to continue to specialize in the main in production of crops that are not presently part of what we commonly call the farm problem.

As a multipurpose project, we not only have the flood control, power, and irrigation features; in light of the report of the Outdoor Recreation Resources Review Commission, I think the recreational aspects are extremely important. The nearby Folsom Reservoir had over 2 million visitors in 1960. I am sure it exceeded that for 1961. We

do not have the figures yet and we know of the tremendous interest of the American people in the fresh-water types of outdoor recreation. So that it seems to us this offers a major opportunity for outdoor recreation in what is the fastest growing State in the Union and will shortly be the most populous State in the Union.

The flood control and power aspects of the project are also very important. The city of Sacramento was saved in 1955, not long after Folsom Dam was constructed, from what might have been serious damage. We are all hoping we are going to have some more really wet years in California and in the West, and I am sure that the flood control aspects, as well as the opportunity to use these new power facilities that would be realized at Auburn Dam for peaking purposes as part of the Central Valley power system, is most important.

This is a complex project and our engineers will discuss many of the details. There are many small, what we would normally call, participating projects in this proposed unit, and we think again all of them are properly planned. Some of them involve water for municipal and industrial purposes and represent strong planning as far as the Central Valley system is concerned.

We have had the best kind of cooperation from Governor Brown and his people in California. We had some local problems. They have been worked out through the good offices of the congressional people, Senator Engle and Congressmen involved, and we are very happy to have what we think is a united front with regard to the details of the project.

For the project as conceived, and as we have it planned, over 95 percent of the cost would be repayable by water and power users, again, in the traditional pattern of reclamation development in the West. Of these projects which have been considered in the past year by my Department, I think this is one of the best and I think this represents a very fine opportunity for an investment in resource development since it is an investment which will not only produce economic growth but the costs of which will be repaid. I think that it is something that we can recommend without reservation and I so move to your committee, Mr. Chairman.

Senator JACKSON. Mr. Secretary, I want to thank you for your fine statement. I was impressed by the last sentence in your prepared text; that 95 percent of the cost is repayable by water and power. I think this is a pretty good showing in comparison with some of the projects that we have had to contend with where there is a large write-off on flood control and especially on fish and wildlife and recreational uses. I am going to defer the detail questions to the other people who will be appearing here from the Department.

Senator KUCHEL.

Senator KUCHEL. Thank you for your statement, Mr. Secretary. I, too, shall defer some particular questions I have, particularly with matters connected with recreation, until Mr. Dugan testifies. But I do want to underscore what our chairman has suggested, that this is repayable in the amount of 95 percent, and I want to add to that the rather comforting fact that the Central Valley's project in California is being repaid on the basis of about 90 percent which places it, I think, in a unique and highly favorable position and I am grateful that you have recommended it along with the appropriate agencies

in the Government. It is a piece of legislation that I have had my name on. Not only this year with my colleague from California, but as far back as 1956 I sponsored this legislation in the Senate and I am certainly grateful that it begins to appear now and we may move forward with respect to it.

Senator JACKSON. Senator Burdick, any questions?

Senator BURDICK. No questions.

Senator JACKSON. Senator Allott.

Senator ALLOTT. I have none.

Senator JACKSON. Senator Hickey?

Senator HICKEY. I have none.

Senator JACKSON. Senator Pearson.

Senator PEARSON. No questions.

Senator JACKSON. Mr. Secretary, we certainly appreciate your coming here this morning. We will be hearing from your departmental people in connection with the detail questions which the committee may wish to ask. Thank you very much.

Now, I would like to call on the members of the California delegation that are here present this morning. First of all, our colleague, Senator Clair Engle, who has been interested in this project for a long time.

STATEMENT OF HON. CLAIR ENGLE, A U.S. SENATOR FROM THE STATE OF CALIFORNIA

Senator ENGLE. Thank you very much, Mr. Chairman. I have listened with great care and read with interest the statement made by the Secretary of the Interior and I believe that all that I had to say in my short statement is really cumulative to the more detailed statement that is contained in the prepared text of the statement by Secretary Udall. I observe that he has made reference to the fact that there is unanimity on this project. As far as we know, no one is against it. Not even the Pacific Gas & Electric Co. on the power-issuе features, for which I am very much delighted. He referred also to our position with reference to farm surpluses.

Let me say that this kind of project takes agricultural commodities out of the area of Government support rather than puts them in and, should this committee deem it advisable, I would be glad to pose again the amendment which was offered on the San Luis project which I know the chairman is familiar with, and also Senator Kuchel.

Mr. Chairman, the Central Valley project is an old story to this committee. At the same time, by its comprehensive nature, it is perennially a new story, a constantly growing project designed to meet the ever-expanding water and power needs of a growing State. It is, I think, one of the great reclamation projects of our time, with a long history of successful operation and profitable repayment.

I am proud, Mr. Chairman, to have been the legislative author or coauthor of every addition to the Central Valley project since its original authorization in 1937. I now am the author, along with your distinguished committee colleague, Senator Kuchel, of the legislation before you, S. 103, to authorize the Auburn-Folsom South unit of the American River division. This unit is the next logical and necessary addition to the Central Valley project.

It is my purpose today to tell you why this is so. I will leave to the professional experts of the Department to describe in more detail what the project is, how it will work, what it will accomplish, and how much it will cost.

The basic reason we need this authorization now is that more water and more power are needed now in the Central Valley of California, and by the time construction funds can be appropriated, these new works built, and placed in operation—by that time, Mr. Chairman, the needs will be extremely acute.

For example, the principal agricultural areas of Sacramento and San Joaquin Counties (east of the Sacramento River Delta) are now served by the Central Valley project. The Folsom South Canal will deliver supplemental irrigation water to about 400,000 acres of good farmlands in these two counties that are dependent largely on ground water. Just as in the southern San Joaquin Valley a quarter of a century ago, the ground-water basin is being overdrawn, the wells must be drilled ever deeper, the water table is falling. Surface water from the American River is needed to balance the supply with the demand and thereby keep this fertile area in production. That is why we propose the 67-mile Folsom South Canal.

We propose also on the North Fork of the American River the million-acre-foot Auburn Dam to provide the additional reservoir capacity that will be required sooner or later to furnish a full water supply to the service area of the canal. You are aware, of course, that the American River already is partially regulated by the existing Folsom Reservoir. But Folsom does not fully conserve the entire natural runoff of the river; Folsom does not provide complete control of the floods that sometimes spill out of the American River around Sacramento; and Folsom does not yield sufficient summer and fall water to meet the ultimate irrigation requirement of the canal service area in Sacramento and San Joaquin Counties. Auburn Dam is needed to complete the multipurpose job of water conservation and flood control.

Auburn Dam is needed, also, with a powerplant at its base, to furnish the additional electric energy that always is in short supply in the Central Valley for our project pumping load, for local irrigation pumping, for municipal use and industrial use in Sacramento, Stockton, and other communities in the delta and bay region. The present power output of Shasta, Keswick, and Folsom is wholly used. Trinity power is all committed either by contract or by agreement. There is a Central Valley project waiting list of potential power customers, including the State of California itself. In fact, Mr. Chairman, as you know, the Central Valley project and the P.G. & E. power systems in California are interconnected—and last year the Central Valley project bought more power from the P.G. & E. than it sold to the P.G. & E. That is another reason why we need Auburn power at the earliest possible date.

I want to briefly speak of the two smaller foothill projects that are in this bill—the Malby unit, to deliver irrigation and domestic water to an area along the Sacramento-El Dorado County line, and the Foresthill Divide unit to do the same for a growing area in Placer County. These are good projects. Although relatively costly per unit, they can stand on their own feet economically if need be. But our mountain counties which are the areas of origin of all Central

Valley project water, deserve equal recognition with the valley counties. More and more people are moving into the lower Sierra regions. The logical way to handle the foothill developments, in my opinion, is to tie them in physically and financially with the larger valley water developments. We have done it before with success on the Central Valley project, notably the excellent and prosperous Sly Park unit in El Dorado County. I commend this formula to you again for Malby and Foresthill Divide.

A number of resolutions in support of this legislation have been submitted to me by the California Legislature, various city and county governments, irrigation districts, and chambers of commerce. With your permission I should like to submit them for the committee's consideration.

I thank you again, Mr. Chairman, and members of the committee, for calling this hearing and for giving me this opportunity to tell why I believe you should favorably recommend my bill, S. 103.

I ask unanimous consent, also, that a number of resolutions be presented for the committee's information, but inasmuch as these resolutions themselves are also cumulative in character, that they be listed by name and organization, rather than appear in the record, so as not to add extensively to the record.

Senator JACKSON. I think this is a very helpful suggestion. The resolutions will appear in the record at some appropriate place since other parties will no doubt offer more of them.¹

I will read the organizations. They are:

- Board of Supervisors of the Sacramento County Water Agency.
- Board of Supervisors of the County of Fresno, State of California.
- Board of Supervisors of the County of Kings, State of California; Board of Supervisors, County of Kern, State of California.
- City of Auburn, by mayor of the city of Auburn, Calif.
- Sacramento City Council, by Mayor McKinney.
- City of Roseville, Calif., by Mayor Campbell.
- City of Visalia, by Ira J. Chrisman, mayor.
- Board of Directors of Galt Irrigation District.
- Clay Water District of Sacramento County, Calif.
- Board of Supervisors of the San Joaquin County Flood Control and Water Conservation District.
- Woodbridge Irrigation District, secretary of board of directors.
- Board of Directors of North San Joaquin Water Conservation District.
- Board of Directors of the Stockton and East San Joaquin Water Conservation District.
- Resolution of Pixley Irrigation District.
- Board of Directors of the Saucelito Irrigation District.
- Tulare Irrigation District.
- Tulare Lake Basin Water Storage District.
- Kings County Water District, Hanford, Calif.
- Board of Supervisors of Rag Gulch Water District.
- Teapot Dome Water District of Visalia, Calif.
- Semitropic Water Storage District.
- Arvin-Edison Water Storage District.
- Kern County Water Agency.
- Auburn Area Chamber of Commerce.
- Chambers of Commerce from Sacramento, Greater Stockton.
- Lodi District Chamber of Commerce; Placer County; Madera County; Fresno Chamber of Commerce; Auburn Boat Club, Inc., Foresthill Divide, Tracy District; Tulare County Farm Bureau; Kings County Farm Bureau Water Department.

¹ The resolutions, together with those offered by other witnesses, appear in the appendix to this record.

Senator ENGLE. Thank you very much, Mr. Chairman, and, if it is permissible, I would like to reserve the opportunity, if the chairman will permit and the committee will permit, at the close of the testimony to make a minute or two of additional comment.

Senator JACKSON. The Senator certainly has that right. Thank you very much, Senator Engle. We appreciate having your statement.

Senator Kuchel, we are likewise delighted to have you, the senior member of the Subcommittee on Reclamation on the Republican side, present your comments regarding the bill.

**STATEMENT OF HON. THOMAS H. KUCHEL, A U.S. SENATOR FROM
THE STATE OF CALIFORNIA**

Senator KUCHEL. Mr. Chairman, I am delighted to join with my colleague from California in welcoming before our committee today an outstanding group of fellow Californians representing many segments of our economy and society, who are vitally concerned with the problem of adequately meeting the water needs of our State.

As long ago as April 18, 1956, I authored legislation to provide for the construction, operation, and maintenance of the Auburn unit with my then colleague, Senator Knowland. All of us at the Federal, State, and local levels have worked toward this day in the intervening period. On January 5, 1961, I was pleased to join in sponsoring the fourth Senate bill to authorize this project, which now united Auburn Dam and the Folsom South Canal into a single unit.

The proposal now before us would authorize the construction of not only the Auburn Dam, Reservoir, and powerplant on the North Fork of the American River, but also the Folsom South Canal and distribution works. In addition, facilities would be constructed to provide a water supply to the Folsom-Malby and Foresthill Divide areas.

This great addition to the Central Valley project would provide irrigation water to hundreds of thousands of acres which are now slowly drying up with a rapidly falling ground-water table. It would provide additional flood control protection for the city of Sacramento as well as electric power to meet the growing municipal and industrial needs. Great recreational opportunities will also become available as a byproduct of this development.

Mr. Chairman, our Nation and our State face a critical water shortage. As you know, in April 1959 I was honored to serve with you on the Senate Select Committee on Water Resources as vice chairman. The extensive research effort and public hearings which our commit-

tee undertook conservatively concluded, in part, that by 1980 there will be 244 million Americans and that at the dawn of the next century there will be almost 320 million people in our land. The national population picture is only intensified when we come to my own State of California. Our present population of almost 17 million is expected to almost double to 30 million by 1980. At the opening of the 21st century, we will near the 50 million mark.

Interestingly enough, other studies reveal that our State capital of Sacramento, a city integrally linked with the project now before us, will in a matter of decades become the largest city in our State. With our exploding population, the agricultural, industrial, and municipal requirements on our water resources become even more intense.

To solve these needs requires the joint effort of the Federal, State, and local governments as well as those in private industry who are equally concerned with the need for adequate water resources. The people of California recognized the requirement of urban-rural understanding and Federal-State cooperation when they voted in 1960 for \$1,750 million in general obligation, self-liquidating water bonds to pay for the initial phases of the State water plan. Under this program 20 reservoirs, 750 miles of aqueducts, and what will be the world's largest dam at Oroville on the Feather River will be constructed. We, as a State where people come from all over America and, indeed, the world, to seek a more abundant life and better economic opportunities, are deeply grateful for the contribution which has been made in the development of our water resources by both the Department of the Interior's Bureau of Reclamation and the Army's Corps of Engineers.

With these thoughts in mind, I once again wish to express my gratification for the unanimous support of the Auburn Dam-Folsom South Canal project which has been made evident by those in business, labor, agriculture, and community service at the local level. This essential step in the fulfillment of the dream behind the Central Valley project will be of assistance not only in meeting the water needs of the lower Sacramento Valley and mountain areas, but also of the east side of the San Joaquin Valley and the rich agricultural potential of that area.

Mr. Chairman, at this point I ask unanimous consent to have inserted in the record a list of the organizations which have filed letters and resolutions of support for this worthwhile project with me, as well as the text of those resolutions which are not presented by the witnesses to come before the committee.

(The list referred to follows:)

Group	City	Date
California Legislature, Senate Resolution 19	Sacramento	Feb. 9, 1962
California Farm Research and Legislative Committee	Santa Clara	Feb. 15, 1962
East Bay Municipal Utility District	Oakland	Feb. 12, 1962
City Council of the City of Auburn, Resolution 636	Auburn	Feb. 6, 1962
Placer County Board of Realtors	do	Feb. 6, 1962
Auburn Boat Club, Inc., Resolution 62B	do	Feb. 15, 1962
City Council of the City of Roseville, Resolution 62-7	Roseville	Feb. 16, 1962
Auburn Area Chamber of Commerce	Auburn	Feb. 5, 1962
Foresthill Divide Chamber of Commerce	Foresthill	Feb. 14, 1962
Ralph R. Parks	Auburn	Feb. 13, 1962
Sacramento County Board of Supervisors, Resolution 62-65	Sacramento	Feb. 9, 1962
Sacramento City Council, Resolution 39	do	Feb. 9, 1962
Sacramento City County Chamber of Commerce	do	Feb. 6, 1962
Board of Directors of Galt Irrigation District, Resolution 11	Herald	Feb. 13, 1962
Woodbridge Irrigation District, Board of Directors	Woodbridge	Feb. 13, 1962
Clay Water District	Sacramento	Feb. 13, 1962
City Council of the City of Lodi, Resolution 2508	Lodi	Feb. 7, 1962
Lodi District Chamber of Commerce	do	Feb. 14, 1962
Greater Stockton Chamber of Commerce	Stockton	Feb. 9, 1962
North San Joaquin Water Conservation District	Lodi	Feb. 12, 1962
Stockton Box Co.	Stockton	Feb. 14, 1962
Stockton and East San Joaquin County		
Tracy District Chamber of Commerce	Tracy	Feb. 9, 1962
Board of Supervisors County of Madera, Resolution 62-61	Madera	Feb. 8, 1962
Madera County Chamber of Commerce	do	Feb. 13, 1962
Fresno County Board of Supervisors	Fresno	Feb. 13, 1962
Fresno Chamber of Commerce	do	Feb. 16, 1962
Kings County Farm Bureau Water Department	Hanford	Feb. 15, 1962
Kings County Board of Supervisors, Resolution 62-10	do	Feb. 13, 1962
Kings County Water District, Resolution No. 45	do	Feb. 6, 1962
Kings County Family Farmers	do	Feb. 14, 1962
Board of Directors of Tulare Irrigation District	Tulare	Feb. 14, 1962
Tulare Lake Basin Water Storage District	Hanford	Feb. 6, 1962
Tulare County Farm Bureau	Visalia	Feb. 15, 1962
Board of Directors of the Pixley Irrigation District	Tulare	Feb. 15, 1962
Board of Directors of the Saucelito Irrigation District	Porterville	Feb. 8, 1962
Council of the City of Visalia	Visalia	Feb. 14, 1962
Kern County Board of Supervisors	Bakersfield	Feb. 13, 1962
Kern County Water Agency	do	Feb. 14, 1962
Ivanhoe Irrigation District	Visalia	Jan. 13, 1962
Semitropic Water Storage District	Bakersfield	Feb. 13, 1962
Arvin-Edison Water Storage District	do	Feb. 6, 1962

Senator KUCHEL. In addition, I do ask consent of the chairman that some editorial comments by a distinguished publisher of my State, Mr. William Cassidy, who is in the audience, be set forth in the record.

Senator JACKSON. Without objection it is so ordered.

(The editorial comments by Mr. William Cassidy are as follows:)

[From the Auburn (Calif.) Journal, Oct. 6, 1960]

Construction of the Auburn Dam is a job that has been uppermost in the minds of most of the people in Placer County and a great many in Sacramento and San Joaquin Counties and has been endorsed by Governor Brown, Senators Engle and Kuchel, Congressmen Johnson, Moss, McFall, and Sisk on the national scene.

One endorsement of the project that went almost unnoticed in the press was that of Senator John Kennedy when he spoke from his campaign train in Roseville recently. Some of his remarks about the Central Valley project generally and Auburn Dam specifically were overlooked as Governor Brown boarded the train (with a lot of unneeded assistance).

Proponents of the project have advocated the construction on the same bipartisan basis that has seen the development of the California water plan and the Central Valley project since 1931.

Authorization and construction of the project will bring benefits too numerous to mention here for both Placer County and the valley. Suffice it to say, "Keep the bipartisan support rolling."

[From the Auburn (Calif.) Journal, Feb. 15, 1962]

Prospects for authorization for the Auburn-Folsom South unit of the Central Valley project appear bright, and more than 40 Californians are hastily preparing testimony for the project which will be presented to congressional committees starting on Tuesday in Washington.

Approximately one-fourth of the witnesses will be from Placer County, representing city and county governments, chambers of commerce, and local business. Local opinion and support of this nature at congressional hearings play a major role in the thinking of the Members of Congress when the merits of such a project are discussed.

Auburn-Folsom South is in competition with other projects in the Nation, the sum total of which amounts to more than \$1 billion. The local \$270 million project must generate a great deal of local support and interest and display it before Congress, if authorization is to be granted.

The cities, the county, and the county chamber are to be congratulated for the large delegation they are sending to Washington on this all-important mission. The expenses involved are small indeed compared to the benefits to be reaped by all of the people of the county and the State.

The recent accord reached by the Placer County Water Agency and the Bureau of Reclamation on water rights in the American River now puts Placer County on the threshold of the greatest development in its history.

Construction of both projects, the upper American by the agency and the Auburn-Folsom South by the Bureau, will bring growth to the county and at the same time insure that growth with the water for the future.

Senator KUCHEL. In addition, Mr. Chairman, I do have a recent editorial from the Sacramento Bee favoring the project which I also ask be made a part of the record at this time.

Senator JACKSON. It will be included.

(The newspaper article from Sacramento Bee follows:)

[From the Sacramento Bee]

THIS SHOULD BE YEAR OF ACTION ON WATER UNITS

The U.S. Senate Interior Committee will open hearings in Washington, D.C., next Tuesday and the House Interior Committee next Thursday on legislation to authorize the Auburn Dam, the Malby Reservoir, and the Folsom South Canal system

This should be the year of decision by Congress on these projects which are of vital concern not alone to the American River basin but to all of eastern Sacramento and San Joaquin Counties and ultimately to all of the eastern San Joaquin Valley.

Seldom has there been presented to Congress a water development with which so much to so many people and the benefits of which are so definitely measurable. It is a gilt-edged undertaking.

For Sacramento one of the major benefits of the Auburn Dam is that, operated in conjunction with Folsom Dam, it would provide sorely needed flood protection for a community which is destined to attain a population of 1 million persons.

Folsom Dam in December 1955 paid for itself in a few hours when it prevented what almost certainly would have been a disastrous flood. But to complete this protection, Auburn Dam is needed and under circumstances similar to those which prevailed in 1955 this project also could be paid for in terms of the damage it would avert in one freshet.

The proposed canals leading south from Folsom through eastern Sacramento and San Joaquin Counties would furnish irrigation for more than 400,000 acres of farmlands and through the Malby Reservoir provide an assured water supply for the rapidly expanding industrial area in eastern Sacramento County.

A further emolument of the Auburn Reservoir is the recreational facilities it would provide. Some idea of the need for additional recreation in this, one of the fastest growing sections of the United States, is shown in the fact Folsom Lake last year attracted 2 million persons, 33,000 in a single day.

Overall, the Auburn-Folsom complex would be the cornerstone of plans already on the drawing board for a canal system to take water down the east side of the San Joaquin Valley where falling water tables make a new supply imperative to the future productiveness of that region.

The project is one which should be supported strongly by all interests in northern California and one which should appeal to Congress because of the extent and variety of its benefits. And, as Secretary of the Interior Stewart L. Udall stated in his report to President John F. Kennedy, this is the time to approve the undertaking by reason of the fact from 10 to 15 years elapse between authorization and completion of such undertakings. At the end of 15 years the need for the project, acute as it is now, will be several times greater.

Senator JACKSON. Thank you very much, Senator Kuchel. We are very pleased to have your statement at this time.

I think it would be helpful if the House delegates from California who are present—John E. Moss, Harold Johnson, John McFall, Mr. Sisk, and Mr. Miller, Mr. Hagen, and Mr. Collier, who is a State senator from California—maybe if you could all come up here, it might be a little easier around the table. I think it would help to expedite matters.

Our first witness is Congressman Harold T. Johnson. We will be very pleased, Congressman, to have your statement at this time.

**STATEMENT OF HON. HAROLD T. JOHNSON, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. JOHNSON. Thank you, Mr. Chairman and gentlemen of the committee. I have a prepared statement that I would like to have placed in the record as though read and will comment briefly on this particular project.

The project for the major part lies within my congressional district. It has been described by the Secretary here as being one that has been well engineered from the standpoint of being feasible. It is also economically feasible.

And there is a need for it in our State. It fits very well into the State water plan. We have the approval of the State people and, as our good Senator from California said, we are in complete harmony on this project at the present time and I know of no one who is here to oppose it. I will not take any more of your time. I am vitally interested in it. I hope that your committee will give it just consideration, and we hope that our two good Senators from California will see this through the Senate and we have every hope that we will have favorable considerable on the House side.

Senator JACKSON. Thank you very much, Congressman Johnson. We appreciate having your statement and it will be included in the record as if read.

Mr. JOHNSON. For more than two decades I have been actively engaged in the development of the American River watershed. Today we have before us the culmination of this effort, which when constructed would be a great step toward the goal of putting to beneficial use every available drop of water.

This afternoon I believe we will receive from the President a special message on natural resources. From all past comments by President Kennedy and members of his Cabinet, I am positive his views are unchanged since he declared in his natural resource message of 1961:

From the beginning of civilization, every nation's basic wealth and progress has stemmed in large measure from its natural resources.

Our entire society rests upon—and is dependent upon—our land, our forests, our forage, our water, our minerals. Virtually everything stems from the soil.

Within the next two decades the consumption of water in our Nation is going to double. Our current national consumption is about 300 billion gallons of water per day. By 1980, our people, their homes, their businesses, their industries, and their agriculture are going to demand 600 billion gallons of water every single day of the year.

If we are going to meet this challenge, we must get on with the job. Experience has shown that a project authorized today might well not deliver water until the mid-1970's or even later. We cannot afford delay.

This brings us to the development under consideration today. The Auburn Dam-Folsom South project, which would be authorized by S. 103 or by the legislation which I have introduced, H.R. 980, is a multiple-purpose unit representing an additional stage of the plan to conserve and make more useful the waters of the American River under the provisions of the American River Basin Development Act of October 14, 1949. It would be coordinated with and made an integral part of the Central Valley project.

I believe this is an especially important project for many reasons, not the least of which is its economic feasibility. With a ratio of annual benefits to annual costs of 3.25 to 1, this is a good project.

Without minimizing the importance of the agricultural benefits accruing from the construction of the Auburn-Folsom South unit, I would like to point out that the benefit-cost ratio would be favorable even if the agricultural benefits were not computed, so great is the demand and potential for domestic and industrial waters, flood control, and recreation.

In mentioning the agricultural benefits, I also want to stress that most crops grown in the area to be served are not in surplus. Many are grown nowhere else in the United States, so this development would cause no additional strain or competition upon our Nation's farm markets. Furthermore, the authorizing legislation would prohibit, specifically, development of new farmland for the production of crops which are in surplus supply. I would emphasize also that most of the agricultural water conserved by this project would be supplemental supplies.

Another primary reason I believe this project is vital is that this development would provide the counties of origin with the water resources which they need so desperately. The current persistent drought in California has had extremely serious effects upon the distressed foothill areas of California, which have been designated emergency areas because of the drought conditions. The water shortage has been felt not only by agricultural users, but by domestic users as well. This comes at a time when subdivision development in the two counties of origin, Placer and El Dorado, is growing rapidly. Developments now in process will house 50,000 new residents of the area.

The Auburn Dam-Folsom South project basically can be divided into four units, and I would like to take them one at a time.

First, there is the Auburn Dam. Located on the American River below the confluence of the North and Middle Forks about 2 miles from Auburn, Calif., this 515-foot-high dam would create a reservoir

of 1 million acre-feet. A quarter of this capacity would be available for flood control storage, providing complete control of flood waters originating in a 982-square-mile drainage area and protecting the city of Sacramento, the highly developed neighboring residential and industrial communities, and the great delta region of central California.

What are the needs for construction of Auburn Dam and Reservoir?

AGRICULTURAL

The water yield of the project would amount to 265,000 acre-feet annually to be used for domestic, municipal, industrial, and agricultural purposes. In the feasibility studies, the agricultural areas considered were those generally lying in Sacramento and San Joaquin Counties, and I believe that you will hear next from my able colleagues representing the neighboring counties, the Honorable John Moss, of Sacramento, and the Honorable John McFall, of San Joaquin.

However, I would like to mention benefits other than those accruing to these two valley counties. First of all, there are the benefits which will result from the development of the Foresthill Divide unit of this project, which I will take up later. Secondly, there are the benefits which would accrue to my home county of Placer.

The people of Placer County voted 25 to 1 to approve a \$140 million bond issue for development of necessary domestic, industrial, and agricultural water supplies for a rural and residential area of about 250,000 acres in western Placer County. Through agreements worked out between the Bureau of Reclamation and Placer County Water Agency, Auburn Dam would be the point of diversion for this development. Auburn Reservoir also would serve as a source of supplemental supply for this local water agency, a public body created under the laws of the State of California.

This is a fine demonstration of the type of cooperation needed between Federal and local governments in order to assure maximum development of the water resources of a river basin. With the construction of the Placer County agency's project and the Bureau of Reclamation's Auburn Reservoir, the American River will closely approach its maximum potential development.

I might also interject here that these benefits to the people of Placer County were not included in the basic benefit-cost feasibility computations, so you can see that the project is even more worthwhile than is shown in the Secretary of Interior's report.

Total agricultural benefits, according to Secretary Udall's report, amount to \$5,264,000 annually for the next 50 years.

MUNICIPAL AND INDUSTRIAL

In central California, which would receive industrial water from Auburn Reservoir, growth patterns have been established which show us there will be a population increase of 150,000 or more people in a relatively short time. Indicative of this is Placer County's Sunset City residential development, a subdivision of 12,000 acres. We must provide a supplemental supply of water to meet this growth.

The city of Stockton is mentioned specifically as a municipal beneficiary as a result of this project. This city depends solely upon

ground supplies of water. Any further overdraft of ground water would result in salt intrusion, which not only would prohibit further development of domestic and industrial water, but would jeopardize the ground-water supplies now available.

This situation exists through a large area of our Central Valley, and several other communities, including some in Placer and El Dorado Counties, are faced with similar situations. Domestic and industrial water required to meet a growing demand could be met through the construction of Auburn Reservoir.

The total municipal and industrial water benefits over a 50-year period would amount to \$2,229,900 annually.

COMMERCIAL POWER

During the past decade, the demand for power in northern California, the general market area for the Auburn project, has doubled. This demand has increased twice as fast as the population growth in the area. It is estimated by 1970—a scant 8 years away—the peak demand for power in the area will read 17 million kilowatts. To serve this, all agencies, Federal, local, and private enterprise, must utilize every available kilowatt of hydroelectric energy. The 155,000 kilowatts generated from the two hydroelectric units proposed for the Auburn powerplant would be absorbed quickly in this rapidly growing market.

Hydroelectric power benefits over 50 years would be \$5,354,000 annually.

FLOOD CONTROL

In a single flood in December 1955, Folsom Reservoir paid for itself in the amount of damage prevented in the city of Sacramento by the reservoir. This was a freak situation, however, since Folsom Reservoir. This was a freak situation, however, since Folsom Reservoir, through rare good fortune, was almost empty at this time of the flood. Normal operation of Folsom would never again permit this unique situation. Therefore, to protect the city of Sacramento, large urban areas surrounding that community, and the delta region of central California, the flood control development on the American River should be completed through construction of Auburn Dam.

Flood control benefits computed by the Secretary of the Interior amount to \$375,000 per year on a 50-year basis.

RECREATION

Although recreation is among the relatively smaller elements in computing benefit-cost ratios, it is an extremely important human factor. It is expected that the recreation use of Auburn Reservoir will exceed 2 million visits per year. I believe this estimate is conservative in view of the tremendous demand being experienced through California wherever a water project is constructed.

Recreation benefits, based on a 50-year period, are \$608,000 per year in the departmental report.

Standing by itself, the Auburn Reservoir unit of this project commands a benefit-cost ratio of 1.95 to 1, if computed on the basis of 50 years. Extend this computation to 100 years and the ratio is increased to 2.24 to 1.

In addition to this Auburn Reservoir is the key to the Auburn Dam-Folsom South unit and is the next logical step in the development of the Central Valley project.

The second section of the four-part package proposed by the Secretary of the Interior Stewart Udall and which would be authorized by S. 103 and H.R. 980 is the Foresthill Divide unit.

The Foresthill Divide area lies above Auburn Reservoir between the North and Middle Forks of the American River. It is proposed to develop irrigation, municipal, industrial wildlife, and recreational resources from this project. A 16,500-acre reservoir and a pressure pipeline would transmit the water from Shirttail Creek to the service area.

There is an urgent need for the development of water resources of the Foresthill Divide region. Severe drought has accentuated this need to alleviate existing water shortages. Present inadequate water supplies have prevented expansion in the area, although the Foresthill Public Utility District has received many inquiries concerning water service. Two substantial residential subdivisions exceeding 9,000 acres in size are ready to proceed if adequate water supplies can be developed.

Unfortunately, however, this potential growth has been forestalled because water service could not be provided by existing sources of supply. Thus, at a time when the needs of a growing population are reducing the agricultural potential of the Nation by diverting rich agricultural land to nonagricultural use, a potential suburban area is underdeveloped for lack of an adequate water supply.

The proposed plan of development to serve the Foresthill Divide area is economically justified as demonstrated by a total benefit-cost ratio of 2.32 to 1, on a 100-year period of analysis, and a direct benefit-cost ratio of 1.23 to 1 on a 50-year period.

The third unit I believe essential for the counties of origin is the Folsom-Malby project which would serve an area east of the Folsom South Canal between the American and Cosumnes Rivers. The area is adjacent to the Sacramento suburbs which are expanding rapidly.

The plan of development selected for the Folsom-Malby area would provide a municipal and industrial water supply only. Irrigation use was considered, but not incorporated into the proposals because of the proximity to urban areas and the poor soils. The Folsom-Malby Canal will permit rapid development through the assurance of water supplies. I understand that in El Dorado County subdivision development involving some 10,000 acres is ready to proceed as soon as water is available.

The plan of development includes a diversion at Folsom Reservoir. A 10-mile pipeline would deliver water to a reservoir on Deer Creek. Through two pumping plants, water would be delivered to about 12,000 acres of land.

Deer Creek Reservoir also would provide wonderful opportunities for fish and wildlife and recreation. Flood protection to downstream lands also would result.

The proposed plan is economically justified as demonstrated by a total benefit-cost ratio of 2.26 to 1 on a 100-year period of analysis and a direct benefit-cost ratio of 1.99 to 1 in 50 years.

The fourth unit of this project is, of course, the Folsom South Canal to be constructed in Sacramento and San Joaquin Counties. As I indicated above, my colleagues Congressmen Moss and McFall will discuss this in detail; however, I would like to point out that the benefit-cost ratio on the basis of 50 years is 4.03 to 1 and extended to 100 years is 4.70 to 1.

Auburn Reservoir is complementary to the Folsom South unit and the 265,000 acre-feet of water developed at the reservoir would be delivered to municipal, industrial and agricultural users through the Folsom South Canal.

In conclusion, I would like to quote the Secretary of Interior when he said that—

a broad objective look at this entire proposal makes it clear that it should be built as soon as possible and should be constructed by the Federal Government. There is an urgent need for the Auburn Dam-Folsom South unit because the ground-water table is dropping in a number of areas all along the east side of the Central Valley. The development is designed to provide supplemental irrigation water for this area and to stabilize production of presently existing lands.

The State of California, numerous organizations, municipalities, and other public and private agencies have endorsed the plan. Water agencies have been formed to take water from the project. At this point I would like to submit for inclusion in the hearing record various resolutions urging authorization of the Auburn Dam-Folsom South project.¹ The organizations are as follows:

California State Senate.
El Dorado County Board of Supervisors.
El Dorado County Water Agency.
City of Roseville.
City of Auburn.
Foresthill Public Utility District.
Nevada Irrigation District.
Auburn Area Chamber of Commerce.
Placer County Board of Realtors.
Building and Construction Trades Council of Sacramento-Yolo Counties.

You will also hear today representatives of several other groups who support this project. Certainly you will agree that there will be no difficulty in obtaining contracts for any water developed. Therefore, I respectfully request this committee to recommend authorization of the Auburn Dam-Folsom South project as an integral part of the Central Valley project.

Senator JACKSON. Next we are very pleased to have Congressman John E. Moss.

STATEMENT OF HON. JOHN E. MOSS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Moss. Mr. Chairman, I have a number of resolutions that I request be included in the hearing record on the same general conditions as were contained in the request from Senator Engle.

Senator JACKSON. Without objection, it will be so ordered.
(The resolutions appear in the appendix to this record.)

Mr. Moss. Before I give my formal statement, I would just like to highlight briefly that there is a resolution from the California

¹ The resolutions are printed in the appendix to this record.

State Senate, from the supervisors, city government, and water districts, an indication of the very widespread support, the urgent concern of the people I represent over the need for an early completion of this project which was clearly contemplated many years ago when the Folsom Dam was constructed.

The area is one of tremendous growth. During the past 10 years that I have been privileged to represent it in the House, it has had a growth rate of 87.5 percent, and this has not decreased. It is accelerating at this time.

Senator Engle has indicated that we are concerned here with the type of agriculture not in surplus. As a matter of fact, as he pointed out and, I think, a most significant point is that the completion of this project bringing a supply of water, a dependable supply, would undoubtedly, even today, change some of the acres now producing crops to more grazing and supporting of dairying in a large part of this area, where there is a demand, and would improve greatly the picture of agriculture. I want to thank you gentlemen for the time you are giving me and my colleagues and the membership we represent here this morning. I will now present my prepared statement.

Mr. Chairman, I am pleased to appear before your subcommittee to urge congressional authorization of the Auburn-Folsom South reclamation development to be a unit of the Central Valley project in California. The construction of this development is of crucial importance not only to the residents of the Sacramento and San Joaquin Valleys in California but also to the entire Central Valley and the reclamation program of the United States.

The Auburn-Folsom South development plan has been endorsed by the Department of the Interior, by the State of California, and by many organizations, municipalities, and other State agencies. It will provide water for irrigation on more than 400,000 acres. It will serve municipal and industrial needs in many cities within the four counties of Placer, El Dorado, Sacramento, and San Joaquin. It will add 155,000 kilowatts of essential and useful electrical energy. It will furnish protection from floods not only for the metropolitan area of the city of Sacramento, which I have the honor to represent, but also for other areas of the American River basin and delta. It will provide important recreational facilities to serve millions of people, both those residing in California and those who visit the Sacramento area from many other parts of the Nation.

The major features of the development plan as proposed by the Secretary of the Interior are:

THE AUBURN DAM, RESERVOIR, AND POWERPLANT

The proposed 515-foot-high Auburn Dam will form a reservoir of a million acre-feet on the North Fork of American River, to regulate the flow of the American River. The powerplant will add 155,000 kilowatts to the Central Valley system.

FOLSOM SOUTH CANAL

This canal, 68 miles long, would run from Lake Natomas through Sacramento and San Joaquin Counties to carry American River water to an area between Sacramento and Stockton where the ground water level has seriously dropped.

FOLSOM-MALBY CONDUIT AND COUNTY LINE DAM AND RESERVOIR

The 11-mile conduit and 40,000-acre-foot reservoir with the aid of two pumping plants are urgently needed to provide water for domestic, industrial, and irrigation use in a rapidly expanding area in western El Dorado County and eastern Sacramento County where the elevations are higher than those of the Folsom South Canal.

SUGAR PINE DAM AND RESERVOIR AND FORESTHILL CONDUIT

This 16,500-acre-foot reservoir and 14-mile conduit will conserve and develop water from streams tributary to the American River and supply that water to the Foresthill Divide area.

All of these features of the development plan are integral parts of the essential development of the Central Valley project.

The extensive surveys, studies, and reports of the Interior Department which were submitted to Congress on January 16 demonstrate that the proposed development "is economically justified and has engineering feasibility." The Secretary of the Interior has stated, "The ratio of annual benefits to annual costs is 3.25 to 1."

The need for prompt authorization and construction of the Auburn-Folsom unit has been made urgent not only by the long-continued drought conditions in the area south of Sacramento—not only by the ever-increasing needs of a growing population—but also to complement the existing Delta-Mendota Canal and the San Luis unit which is now being constructed. If the Auburn Reservoir had been available during the past 2 years, water that could have been released from Auburn would have produced substantial additional power for use in the delta and would have assisted other Central Valley project units in providing water for the Delta-Mendota Canal. Moreover, after the lands of the San Luis are developed there will be growing demands for water and power to meet San Luis pumping requirements, and unless additional Central Valley project power is made available by construction of the Auburn powerplant, it will become necessary to curtail power sales to present customers and thereby drastically affect the health, safety, and economy of the people who depend on that power.

I want to underscore the fact that the construction of this development is vital to maintain the agricultural economy of the Sacramento area. There has been a continuing growth of population in the past 10 years and I am positive that there will be an even greater population increase in the next 10 years. For the third successive year water has been increasingly scarce. The next decade will see tremendously increased demands for water. We cannot wait until the water shortage becomes critical in order to begin construction of the necessary dams, canals, and auxiliary units of a water conservation and supply system, because such a system requires many years from the time of initial authorization to the time of final completion. Furthermore, we of the Sacramento metropolitan area remember full well the threat posed by the serious flood of 1955 when the American River would have destroyed millions of dollars of valuable properties, but the Folsom Dam had just been completed and its nearly empty reservoir was available to control the flood. The Folsom Dam paid for

itself, not over a period of many years, but within a few hours. Never again, however, will so much storage space be available at Folsom Dam. If there is to be adequate flood protection for the city of Sacramento and its fast-growing surrounding areas it is essential to expedite construction of the Auburn Dam for future control of the floodwaters of the American River.

The sooner the construction of this essential feature of the Central Valley project is begun, the lower will be the eventual construction costs and the sooner the Federal Government will be able to utilize and earn revenues from the power that could be developed by the Auburn powerplant but which is now being wasted. Furthermore, I am sure, and the Secretary of the Interior has so stated, that there will be no difficulty in obtaining contracts for all waters which can be developed for irrigation and other purposes.

In addition, the increased opportunities for development of irrigation and fish and wildlife will be substantial. Therefore, it is eminently clear that the construction of all the features proposed for the Auburn-Folsom South unit will contribute substantially to the overall benefits of the entire Central Valley project and will thereby help to fulfill the purposes of the reclamation program of the United States.

Senator JACKSON. Thank you, Congressman Moss.

Next, Congressman John McFall.

STATEMENT OF HON. JOHN J. McFALL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Moss. Mr. Chairman, thank you for the opportunity of testifying today on authorizing legislation for the Auburn Dam-Folsom South Canal unit of the Central Valley project, proposed as the next major water resources development in the State of California.

This project is important to the Nation. It is vital to the future of central California, particularly the 11th Congressional District which I represent.

It is necessary to maintain our agricultural development.

It is the logical source of municipal and industrial water.

It will increase job opportunities in the area.

I am the author of H.R. 38, one of the many bills before your committee on this project, and a companion measure to S. 103.

You have already heard from Secretary of Interior Stewart L. Udall, who personally appeared before your committee to emphasize (a) the importance of this project and (b) its exceptionally high benefit-to-cost ratio.

You also will hear from representatives of the State of California and from spokesmen for many local districts.

The concern of the 11th Congressional District for this project is emphasized by the large delegation from San Joaquin County, the city of Stockton, the city of Lodi, and the San Joaquin County Water Advisory Committee, who have traveled the more than 3,000 miles to Washington to add their personal emphasis to our plea for favorable action.

In addition, I will put into the record resolutions¹ of support and endorsements from scores of agencies and organizations. I know of no opposition to the project.

Briefly, the proposal before you today is for a \$267 million project which would include:

1. Auburn Dam on the American River, a 515-foot-high dam with a 1 million-acre-foot reservoir and a 155,000-kilowatt powerplant, at a \$138.8 million cost.
2. Folsom South Canal, 67.5 miles long, from the American River through Sacramento and San Joaquin Counties to Lone Tree Creek, at a cost of \$42 million.
3. Foresthill Divide development, a 16,500-acre-foot reservoir on North Shirttail Canyon Creek, and a 14-mile canal, at a cost of \$7.2 million.
4. Folsom-Malby development, a 40,000-acre-foot reservoir on Carson Creek, and a 11-mile canal, at a cost of \$12 million.
5. Distribution and drainage systems that could be built by either Federal or local interests, at a cost of \$44 million. (This possibly should not be included in the project cost.)
6. Extra capacity in the Folsom South Canal to make it large enough to serve later as first unit of the East Side Canal, at a cost of \$23 million.

Legislation for the Folsom South Canal has been pending since the 2d session of the 84th Congress in 1956, and extensive feasibility studies have been undertaken, both before and since that time.

The feasibility report on Auburn-Folsom unit was submitted to Congress on January 15, 1962, with full administration support and a strong plea for action by the Secretary of Interior.

In his feasibility report, Secretary Udall made these points:

1. The proposed development is economically justified and engineering feasible.
2. Water users are ready, able, and willing to contract for the service.
3. Ground-water table in the area is dropping at an alarming rate.
4. The flood control that would be provided by the project is urgently needed.
5. There would be major fish, wildlife, and recreation benefits.
6. Water is needed in the service area for municipal and industrial as well as agricultural purposes.
7. Substantial savings in construction costs can be made by going ahead with the work now.

The Auburn Dam and the Folsom South Canal are related, since the dam would supply a portion of the water eventually needed to give full service to the canal area, so it is important that the entire project be authorized at this time, to show a clear Federal intent.

This project has one of the best benefit-to-cost ratios of any of the larger projects ever brought before the Congress.

The ratio is 3.25 to 1.

Compare the benefit-to-cost ratios of a few other major projects with which you are familiar:

Under construction: Trinity River division (California), 2.38 to 1; Glen Canyon storage unit (Arizona), 1.40 to 1.

¹ Printed in the appendix to this record.

Pending: San Juan-Chama (New Mexico), 1.26 to 1; Yellowtail Dam (Montana), 1.85 to 1; Fryingpan-Arkansas (Colorado), 1.65 to 1; Garrison diversion unit (North Dakota), 3.23 to 1.

The area proposed to be served with irrigation and municipal water from the Folsom South Canal includes some of the most intensively cultivated lands and the most heavily populated areas in the Central Valley of California.

It is an area where irrigation is essential to the growing of any crop and where natural surface waters are fully used and available ground-water supplies have been developed beyond the safe yield.

A price of \$2.75 per acre-foot has been established for this irrigation water to be delivered by the Folsom South Canal.

In addition to serving the irrigation requirements of Sacramento and San Joaquin Counties, the Folsom South Canal is planned to provide municipal and industrial water for future growth in the two counties. A price of \$14 per acre-foot has been established for this water.

In addition, the Folsom-Malby and Foresthill Divide developments proposed as integral parts of the Auburn-Folsom South unit would provide much needed water to Placer and El Dorado Counties.

The Folsom South Canal plus the proposed East Side division (with a canal down the San Joaquin Valley), in conjunction with the proposed New Melones Dam on the Stanislaus River, would provide for all present and future water needs of San Joaquin and Stanislaus Counties. I understand the East Side division report will be completed shortly.

The Folsom South service area lies on the east side of the Central Valley in a compact, roughly rectangular tract, extending about 55 miles from the American River in Placer and El Dorado Counties on the north to Lone Tree Creek in San Joaquin County on the south. Within that rectangle is a gross area of 518,400 acres, of which about 245,400 acres are now irrigated. Ultimately, some 398,100 acres will be productive, with about 362,700 acres irrigated in any year. Nearly 1 million people reside in the area to be served by this project.

The agricultural production on presently irrigated lands in the service area is primarily devoted to beef and dairy cattle. Cash crops raised are grapes, deciduous orchards, rice, sugar beets, beans, tomatoes, and other truck crops. With the project, much of the dry area now used for pasture and small grains would transfer to the crop pattern of the irrigated lands.

I should like to emphasize that this is largely a supplement water project. Most of the crops grown in the area are crops that are not in surplus. Many of these crops are not grown to any extent elsewhere in the United States and many are of great significance to the Nation's diet. However, should any concern exist relating to our agricultural surpluses, legislation authorizing this project could contain language to provide that no new land developed shall be used for the production of surplus crops.

A growing percentage of the area is used for urban and suburban purposes. The northwestern corner of the area is part of the suburban area of Sacramento, and the cities of Stockton and Lodi and several other population centers are entirely within the service area.

Surface-water supplies and recharge to the ground-water aquifers are now derived from the streams bordering or traversing the area,

the principal ones being American, Cosumnes, Mokelumne, and Calaveras Rivers.

Under present conditions, the entire surface-water supply during the irrigation season is utilized, and extensive use of ground water is made both for irrigation and for municipal and industrial water supply. Ground-water pumping during the study period on this project exceeded the calculated recharge by about 97,000 acre-feet annually, which has resulted in gradual recession of the water table throughout the area. In the areas most heavily pumped, water-table elevations declined as much as 24 feet in a 4-year period. Should this trend be permitted to continue indefinitely, lands presently irrigated from ground water will be forced out of production by increasing pumping costs.

Another serious consequence of continued overdraft of ground water is the lowering of the quality of the water pumped. In the vicinity of Stockton, wells now produce water of such poor quality as to be unusable for municipal, agricultural, and many industrial purposes.

In commenting on the feasibility report, the Secretary of Labor said the project is important to the job prospects for the area. His comment:

We have reviewed the proposed report in the light of the impact that the additional water may have on job opportunities in the area. The rate of growth of the Stockton area has been less than that of any other metropolitan area of California, due in part to an inadequate supply of water suitable for residential and industrial use. The additional water supply which will become available upon completion of the proposed project can improve the rate of growth of the area and should result in an appreciable increase in job opportunities in the area.

The U.S. Fish and Wildlife Service concluded that the project would have significant benefits to fish and wildlife resources, as well as recreational possibilities of the reservoir.

San Joaquin County interests have filed applications with the State of California to appropriate water from the American River in anticipation of the delivery of water from Folsom South Canal as the most logical source for supplemental requirements for areas in San Joaquin County.

Among the agencies in the county which filed for this American River water in the late 1940's were the California Water Service Co. which presently serves municipal domestic and industrial water within the Stockton metropolitan area, the city of Stockton primarily concerned with service of municipal water within the city, the North San Joaquin Water Conservation District which embraces the northeastern portion of the county and the city of Lodi, and the Stockton and East San Joaquin Water Conservation District which includes the agricultural areas in the central eastern portion of the county and the city of Stockton.

Rather than granting the necessary State water rights to the individual entities for a water supply from the American River, the State water rights board granted water rights to the U.S. Bureau of Reclamation but directed under the permits so granted that project service would be limited to deliveries for beneficial use within Placer, Sacramento, and San Joaquin Counties until 1969, provided the parties desiring such service within these counties executed agreements in accordance with Federal legislation laws.

Several entities within San Joaquin County are currently negotiating with the Bureau of Reclamation for such contracts.

Related to the matter of entering into water-service contracts with the U.S. Bureau of Reclamation, the San Joaquin County Board of Supervisors, under legislation introduced by its State legislators in 1961, sponsored amendments to the county flood control and water conservation district act for the specific purpose of affording the countywide agency authority to enter into contract with the United States for the delivery of Folsom South Canal project water in the event that individual areas within the county were not in a position to enter into the required repayment contracts.

As a result of that legislation, the California State Legislature enacted legislation which was approved into law by Governor Brown on July 20 of last year which will allow the countywide district to enter into contracts with the United States for water from the Folsom South Canal. We believe that this is an important step in illustrating that San Joaquin County desires to do everything possible to insure the repayment of the irrigation features of the Auburn Dam-Folsom South Canal project.

In closing, may I repeat that this is a good project, with one of the highest benefit-to-cost ratios for major undertakings ever before your committee. It is badly needed, and I urge your favorable action this year.

Thank you, Mr. Chairman.

Senator JACKSON. Thank you for a very fine statement.

Congressman Sisk has been detained for some reason. Without objection, Congressman Sisk's statement will be included at this point in the record.

(The statement of Congressman Sisk follows:)

STATEMENT OF HON. CONGRESSMAN B. F. SISK, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF CALIFORNIA

Mr. Chairman, you will have ample opportunity during your hearings to acquaint yourselves with the technical and economic aspects of the Folsom South and Auburn Dam proposals. I know you will be impressed, as I am, with both the urgent need and the soundness of these steps in the orderly extension and completion of the Central Valley project. I would not take your time to go again over these matters.

I would like, however, to direct your attention to and to emphasize the widespread and practically unanimous support of this project which will be evident to you as your hearings progress. I know how important you will consider this to be in your deliberations. I am sure it is the guiding rule of your members to authorize reclamation projects which are in themselves sound and economically justified, and where all the people directly and indirectly affected want them and are willing to pay for them.

In my experience, I do not believe I have seen a project which has the backing from such a widespread geographical area as this one has received. This partially stems from the immediate merit of the project, and also because it is recognized as an essential step toward further developments your committee will consider in the future.

To me, this vigorous support by all parts of northern and central California is both encouraging and significant. Even those areas not immediately benefited have witnesses here to back it. This means, to me, that there is a growing appreciation on the part of Californians that our water problems are statewide in scope, that they must be tackled and solved area by area, but through cooperation and mutual assistance. It also means we are recognizing that our great needs, our exploding population, our thirst for water for people and for ~~farming~~ farming to feed and clothe them, can be met only by the best efforts we can

put forth at the local, State, and Federal level in developing projects, with each agency in an assigned field, but working in full cooperation.

For example, you will hear from witnesses representing districts and agencies in my counties of Fresno, Madera, and Merced, all endorsing this project. They are backing it, not only on its merits, but also because they are looking to a continuing development of the Central Valley project as your committee may recommend future units, and they know it would be shortsighted and economically unsound to plan and build now without designing for the future. They recognize that Folsom South not only will provide urgently needed water for its immediate service area, and Auburn Dam both water and power for project purposes, but also that these works are essential links toward future works, which would be in full use were they in existence today.

We desperately need water, not to develop new farms and cities, but to sustain those we have. I most earnestly urge you to give the green light to these most needed works, and that you continue, as you have, to plan for the future.

Senator JACKSON. Congressman Miller. We are very pleased to have you, George. This is not exactly a space project.

STATEMENT OF HON. GEORGE P. MILLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. MILLER. I want to tell you, if I may, I am very happy to know that today we have culminated a great experiment in space and, of course, as chairman of the Committee on Science and Astronautics, I am very happy about it.

Mr. Chairman, I had the privilege of introducing the first bill that created the Folsom Dam. My then good colleague and your colleague, Senator Engle, picked it up and when he was chairman of the Committee on Interior and Insular Affairs saw it through to the enactment.

The time is rapidly approaching when no water in California should be allowed to run to the sea without its beneficial uses being taken off before it gets to the sea. I would just like to cite this for you, that the Secretary of Commerce at the request of the Army Engineers undertook a study of the population growth in the San Francisco Bay metropolitan area based on the year 2020. This area of 9 counties presently has a population of 3,700,000 people. By 2020, 60 years from now, it is anticipated that there will be 14,400,000 people in this area. And this is not peculiar to the San Francisco Bay area. It is merely the first of these metropolitan studies that have been made.

Now, the Secretary of Agriculture told us that the leadtime on this dam is perhaps 10 years. That is one-sixth of that time, and 60 years does not seem to be so far when we realize that World War II started over 20 years ago and, with the populations of this type, if expansion takes place within the United States, we are not going to be worried about surplus food. We are going to be worrying about where are we going to get the food to feed our people? That is why I feel that investments of this kind that are repayable to the amount that this investment will be are sound investments in the future of this country and I, personally, have supported them throughout the West and will continue to do so while I am here. Thank you.

Senator JACKSON. Thank you, Congressman Miller. We certainly want to thank our colleagues very much in the House for their help here today.

Now, as the last congressional witness we have Congressman Harlan Hagen. I believe the project reaches down as far as your district, eventually.

STATEMENT OF HON. HARLAN HAGEN, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF CALIFORNIA

Mr. HAGEN. Mr. Chairman, and other members of the committee, I first want to thank you for the opportunity of being here.

I will include at this point in the record a list of resolutions and telegrams in support of this project from the following named organizations and agencies within my congressional district:

1. Pixley Irrigation District.
2. Tulare Irrigation District.
3. Kings County Board of Supervisors.
4. Kings County Water District.
5. Saucelito Irrigation District.
6. Tulare Lake Basin Water Storage District.
7. Kings County Farm Bureau Water Department.
8. Tulare County Farm Bureau.
9. Ivanhoe Irrigation District.
10. Orange Cove Irrigation District.
11. Lower Tule River Irrigation District.
12. Kern County Board of Supervisors.
13. Semitropic Water Storage District.
14. Arvin-Edison Water Storage District.
15. Kern County Water Agency.
16. Delano-Earlimart Irrigation District.
17. Southern San Joaquin Municipal Utility District.
18. Tea Pot Dome Water District.
19. Hope Water District.
20. Greater Bakersfield Chamber of Commerce.

These resolutions reflect the substantial support from my congressional district for these projects.

The legislation before you will not automatically result in any delivery of water into the three San Joaquin Valley counties which I represent but my support for the legislation and that of my constituents is based on the premise that the Auburn Dam and the Folsom South Canal are vital components in the logical development of the Central Valley project. In the past projects of immediate benefit to our area have been helped by other areas of the State and we share a unity of purpose for the maximum development of water in California.

In addition, we hope to be ultimate beneficiaries of early action on this legislation provided that we can justify extension of a canal system south from the service area covered by the present proposals.

It is our feeling that these proposals are completely justifiable from the standpoint of cost benefit ratio and present one of the best water projects in the United States.

I should note that the good faith of California with respect to solving its own water problems has been demonstrated by voter approval of an approximate \$2 billion State water development. This action, however, exhausts the capacity of the State on its own for several years in the future and it is for this reason that we seek expansion of an existing Federal project.

I should also note that these proposals do not contemplate the expansion of farm acreage. They are designed solely to bolster up an existing agricultural economy. In that connection it is pertinent to observe that the agriculture involved is extremely diversified and that the crops which are grown in the area are overwhelmingly crops which do not enjoy a Government program of price support with the

attendant problems of Government storage of surplus and acquisition of surplus. In fact, many of the crops involved are grown solely in the State of California and unless such continued production is made possible the American consumer would be the loser to the same extent as the farmers engaged in their production.

I will not engage in a discussion of the technicalities of this project because such discussion can best be presented by the Bureau of Reclamation representatives who have developed the proposal and who support it in its entirety.

I am relying on the demonstrated friendliness of this committee to reclamation and on the persuasiveness of our very able two California Senators with respect to this project in the Senate.

I merely wish to point out that this project is not designed to bring new lands into production but rather to bolster an existing agriculture economy.

I would like also to mention that the State of California has undertaken an approximate \$2 billion project on its own so I think that we have demonstrated a willingness to solve some of our own problems but we are committed right at the moment up to the maximum capacity of the State to finance all of the water projects in the State.

Thank you very much.

Senator JACKSON. Thank you, Congressman Hagen. We certainly appreciate your statement.

Mr. HAGEN. Thank you.

Senator JACKSON. Randolph Collier who is a State senator from California is here with us. We are very pleased to have you, Senator, and any comments you would like to make.

STATEMENT OF HON. RANDOLPH COLLIER, A STATE SENATOR, CALIFORNIA LEGISLATURE

Senator COLLIER. Mr. Chairman, I want to thank you for the privilege of representing the California Legislature this morning by introducing into the record two resolutions of that body. I might say that I am the senior member of the California Senate now after 24 years. I had the privilege of serving with Senator Kuchel and Senator Engle and over half of the California delegation in the House. So, they are all my friends and sometimes they put me in an awkward position. I happen to be for old friends first.

I might say I am here to introduce into evidence Senate Joint Resolution No. 2 of the California Legislature adopted May 18, 1961. Also, I would like to introduce into evidence Senate Resolution No. 19 of February 6, 1962, by the California Senate.

Senator JACKSON. Without objection, they will be included in the record with other resolutions that have been presented.

Senator COLLIER. Thank you, and I consider it a privilege to be here among my colleagues.

Senator JACKSON. On behalf of the committee, we want to express our appreciation for coming over from the House. I know you are tied up over there and we appreciate having your helpful statements.

Next the Chair would like to call the following people. I think it might be helpful if you would come up to the table.

Assistant Commissioner Palmer, Regional Director H. P. Dugan. That is regional director from Sacramento and Ivan P. Head, project development engineer, Sacramento. If the three of you will come up here to the table, I think it would be very helpful. Commissioner Palmer, you may wish to lead off.

**STATEMENT OF WILLIAM I. PALMER, ASSISTANT COMMISSIONER;
ACCOMPANIED BY HUGH P. DUGAN, REGIONAL DIRECTOR; AND
IVAN P. HEAD, PROJECT DEVELOPMENT ENGINEER, BUREAU OF
RECLAMATION, SACRAMENTO, CALIF.**

Mr. PALMER. Thank you, Mr. Chairman.

We are pleased to have this opportunity to appear here in support of the Auburn-Folsom South unit authorization. The case has been well summed up by those who have preceded us.

It would be our desire to respond to any particular questions that you care to ask and to describe in detail some of the technical aspects of the project. I have a statement that I will read.

The Auburn-Folsom South unit is a logical and desirable extension of the Federal Central Valley project designed to utilize waters of the American River for irrigation, hydroelectric power, municipal and industrial water supplies, flood control, fish and wildlife, and recreation purposes. This unit will operate in conjunction with the existing Federal facilities and the facilities being constructed by the State to make the best possible use of the limited water supply throughout California's Central Valley. It is designed also in accordance with long-range plans to supplement Central Valley project service extending the entire length of the San Joaquin River basin.

Previous acts of Congress have authorized five major divisions and units of the Central Valley project for construction and integrated operation. They are the initial features, the American River division, the Sacramento Canals unit, the Trinity River division, and the San Luis unit. The American River division, as authorized by the act of October 14, 1949, consisted of Folsom and Nimbus Dams and the Sly Park unit. The act also directed that studies be made of additional works to deliver water for future irrigation and multiple uses within the Central Valley area. The Auburn-Folsom South unit investigations were conducted in accordance with this authorization, and our report thereon is now before you for consideration and action.

Water conditions in many areas of California were more critical in 1961 than in any year since 1931. This was the third consecutive year of drought or near drought conditions, with the area south of Sacramento being the hardest hit. The Auburn-Folsom South unit will provide supplemental water to this specific area and will enable us to operate other features of the Central Valley project with greater flexibility, thereby providing better service to the entire project area from Shasta Dam to Bakersfield. Had Auburn Dam, Reservoir, and powerplant been available during this drought period, both the water and power service from the Central Valley project would have been greatly enhanced.

The San Luis unit, which will soon be under construction, involves demands for water and power which would put further demands on the existing facilities. The flexibility of operation of Auburn Dam

and powerplant, having Folsom and Nimbus Reservoirs available for reregulation, will make it possible to fit the energy generated at Auburn Dam closely to the demand pattern. Power generated at Auburn would also help to avoid curtailment of power sales to present customers of the Central Valley project as existing power supplies are diverted to meet the San Luis unit pumping requirements.

Auburn Reservoir would also be effective in protecting the city of Sacramento and its environs from floods which are beyond the capacity of Folsom Reservoir to control. Such flood flows have occurred in recent years and may be equaled or exceeded at any time. These are compelling reasons for the early authorization and construction of Auburn Dam, Reservoir, and powerplant.

The water conserved and delivered by the various features of the Auburn-Folsom South unit will permit effective irrigation of about 400,000 acres of highly productive lands on the east side of the Central Valley, the main body of land being between Sacramento and Stockton. Although a major portion of the irrigable lands in this area are now irrigated, the supply, a combination of surface and ground water, is not adequate to serve the needs of these acres, and may be expected to become more critical as the demands of the cities, the suburban areas, and the industrial complex expand.

The importation of American River water into this area in quantities sufficient to meet foreseeable requirements, therefore, will not only relieve the present water users from the ever-present specter of drought and recurrent water shortages, but will also permit the conversion of surplus crop-producing dry farmlands to irrigated crops now predominately in short supply. This water supply also will remove present difficulties in securing water for domestic and industrial use, thereby permitting the realization of the full economic potential.

The total estimated cost of the Auburn-Folsom South unit is \$267,577,000. Of this amount, \$12,067,000, about 4 percent, is tentatively allocated to flood control, fish and wildlife, and recreation, and is considered nonreimbursable, leaving \$255,510,000 to be repaid by water and power users. A careful study of the financial effect of adding the Auburn-Folsom South unit to the Central Valley project reveals that all reimbursable costs will be returned by year 2019, which is assumed to be the 50th year after the last feature of the project is completed. In addition, substantial surplus revenues will accrue which will be available for return to the U.S. Treasury or to assist in further development of water in the Central Valley.

The estimated cost of the unit includes about \$44 million for Federal construction of the necessary irrigation water distribution systems. Under existing laws (particularly the act of October 17, 1940), construction of “* * * such distribution systems as the Secretary of the Interior deems necessary * * *” is authorized. However, some of the irrigation districts in the Central Valley have preferred to build their own systems using private financing or the loan provisions of the act of July 4, 1955, so that all or some portion of this item of estimated cost may not, in fact, be required from the Federal Treasury. In the absence of definite commitments from the water users on this subject, we have included the entire estimated cost of the distribution systems in the Federal construction cost estimate to indicate the maximum obligation if the Congress should enact the legislation.

Project water will be sold to contracting entities for irrigation, municipal, and industrial uses. The contracts will provide for payment at the rate pertaining to the use actually made of the water.

Our planning reports on this unit have been studied, reviewed, and commented upon by the affected State and Federal agencies and by the Bureau of the Budget for the President. Except for a few suggestions for improvement or modification, all of the comments received have been strongly in favor of the project. The Bureau of the Budget qualified its approval of the provision of capacity in the Folsom South Canal for the East Side division by a requirement that the feasibility of the East Side division would be demonstrated and a planning report thereon submitted to the Congress before starting construction on that feature. We have no objection to this requirement. A feasibility report on the East Side division is now in preparation in the field, is highly favorable, and has the support of local interests. Therefore, this requirement should not involve any change in the construction schedules of the Auburn-Folsom South unit.

Since completion of our feasibility report, we have advanced negotiations with the Placer County Water Agency on terms to control diversion of flows above Auburn Dam to western Placer County as contemplated in the agency's plan for development of the upper Middle Fork, American River, and tributaries. Terms generally acceptable to both the agency and the Government are being incorporated in a contract between the United States and the Placer County Water Agency. They provide for a graduated schedule of diversion, up to 237,000 acre-feet, by the year 2007, into western Placer County for municipal, industrial, and agricultural uses. Part of this diversion will be made pursuant to water permits to be obtained from the State water rights board. The remainder will be purchased by the agency from the Central Valley project under reclamation law.

The agreement on the diversion of this quantity of water was not reached in time to evaluate its effects on the Auburn-Folsom South unit in our feasibility report. The major effect on the unit will be diminution of Auburn power generation. Even with the diversion, however, the Auburn-Folsom South unit remains a strongly justified development. The net effect of the diversion is to reduce the 100-year benefit-cost ratio of the unit from 3.25 to 1 to 3.03 to 1. Considering direct benefits only, the reduction in the 50-year benefit-cost ratio would be from 1.60 to 1 to 1.38 to 1.

The Placer County development would affect future municipal and industrial water services. In our feasibility report, we identified some 74,000 acre-feet of water as being available from the Auburn-Folsom South unit to meet future unidentified demands. This water would no longer be available. Diversion to western Placer County would constitute an alternative use of this water.

In the interest of maximum balanced development of the water resources of the Central Valley and to encourage local agencies to develop such resources by their own efforts, we believe the agreement with the Placer County agency is both desirable and justified.

We will be glad to discuss further any matters concerning this proposal or to answer any questions.

However, there are two or three points I would like to summarize before asking Mr. Dugan and Mr. Head to describe the details of the project.

In the first place, I believe the committee should realize that this report and the bill that is now before the committee is in partial fulfillment of the directive of Congress as contained in the act of October 14, 1949, which directed that a study be made to determine the best possible use of water in the Folsom South area.

The Folsom South phase of the report, therefore, is in fulfillment of that directive of the Congress.

I should point out also that between \$60 and \$70 million or thereabout were expended by the Federal Government in the construction of Folsom Dam and that investment does not become fully utilitarian until after the canal system has been placed in operation and the service of that highly worthwhile development has been extended to the Folsom South area.

Now, if S. 103 is enacted, it would authorize the construction of Auburn Dam and Reservoir, which is a 515-foot earth-filled dam and a million acre-feet capacity reservoir. It would also authorize the construction of a powerplant of 155,000-kilowatt capacity, but leaves to the Secretary, as suggested in one of the proposed amendments to the bill, some flexibility in fixing the final capacity of plant to adapt it to the maximum production potential. It would authorize the Folsom South Canal to serve roughly 400,000 acres of irrigable land in the area identified on the map along the route of the 67-mile canal.

It would authorize works to serve the Malby area of about 12,000 acres and authorize also the Foresthill Divide feature of 3,140 acres. These features would do many things, as has been outlined. They would stabilize and extend in some measure the agricultural production in this area.

I would like again to stress that the nature of the agricultural production is such that it is complementary to the Nation's requirements and does not further burden the crop-surplus situation.

The unit would provide water for several cities and suburbs and industries, and supplement and support an expanding economy that has been described here. It would provide power production that would integrate well with existing Central Valley project plans and service to customers. Even more importantly, it would provide a desirable source of power to replace that that will be diverted from the customers of the Central Valley project for pumping at the San Luis project that will soon get under construction.

As has been described, it would provide highly valuable flood protection. It will conserve fish and wildlife habitat and it will create new recreational features of extremely high value, and along with other units of the Central Valley project, will maintain the present position of the delta with respect to water quality.

I would like to conclude by suggesting that some years ago when Hon. Senator Engle was chairman of the House Committee, he asked the Department to conduct an evaluation and appraisal of what the Central Valley project had accomplished in terms of contributing to the economic development of the State and of the Nation. Responsive to that request, a bulletin was published as Committee Print No. 11. It contains an evaluation of the worth of water conservation in that section of California. I reread it since this hearing has been scheduled and I found it most enlightening and containing extremely eloquent endorsement for the project that is before the committee now.

Thank you very much. The two gentlemen from Sacramento are available to proceed to outline the project, itself. They will describe it, and then we will all try to answer any questions that might come up.

Senator JACKSON. Mr. Palmer, I notice that in the original authorization the figure was \$181 million. And this has been increased to \$270 million. I was just wondering what the reason for the \$89 million?

Mr. PALMER. The reconciliation on that is found on page 5 of the departmental report on the bill.

Senator JACKSON. Page what did you say; 5?

Mr. PALMER. Page 5.

The estimate as given the committee here includes the cost of project features not included when S. 103 was introduced, such as the cost of the distribution systems that will be required to distribute the water made available from the project. In my statement I point out that the distribution systems as such are authorized, but in order that the Congress can have a full measure of the estimated cost that might have to be borne by the Federal Government, either under the provisions of Public Law 130, the distribution system bill, or Federal construction by the Bureau of Reclamation, the figure is given as \$43,991,000.

May I add at this point also that distribution systems in California might be undertaken by any one of a dozen different sources of financing or ways of construction, so the \$44 million figure represents a maximum amount not necessarily the amount that will be asked for.

Senator JACKSON. Well, I just wondered because the original bill had the authorization at \$181 million, why these other matters had not been taken into consideration at the time the original draft was prepared. I assume that the Department assisted in the preparation of the draft.

Mr. PALMER. In the original estimate, Auburn was estimated at \$139,612,000—Folsom South at \$42,095,000 for the \$181 million.

The estimates are added on page 5 of the report which includes the extra capacity in the Folsom-South Canal to accommodate future developments on the east side of \$23,540,000 and the distribution system estimate, itself of \$44 million.

Senator JACKSON. Well, that was provided for now in the original bill that was introduced in S. 103; was it not?

Mr. PALMER. No, sir.

Senator JACKSON. It seems to me all the planning had not been brought up to date on it. I am not trying to be unnecessarily critical, but the discrepancy here is quite substantial.

Mr. PALMER. In the original bill again, and bear in mind the report, the planning report had been sent forward at one time without either the Malby or Foresthill Divide units in it, and also without any estimate for the distribution system cost.

The distribution systems are authorized in any event. But the distribution system cost estimates were not contained in the original report. In order to give a full estimate of the cost of the project, the departmental report on the bill included the cost of the distribution system. They may or may not all be built under Federal auspices or under Federal contract.

Then the other item that was not included in the original bill was the cost of increasing the capacity of the Folsom South Canal rather

than coming in later and enlarging or deepening it or otherwise building a parallel canal system to take care of the future potential east side development.

Senator JACKSON. Do I understand that only 5 percent, roughly, of the total expenditure will be nonreimbursable?

Mr. PALMER. The total amount to be nonreimbursable under the bill and under the proposed allocation includes flood control, fish and wildlife, and recreation, and amounts to about \$12 million of the total. So, actually, the total amount recoverable to the Treasury is between 95 and 96 percent, with the remaining being allocated to nonreimbursable functions consonant with established congressional policy.

Senator JACKSON. Now, what about on the municipal and the industrial; that will be returned with interest, will it not?

Mr. PALMER. Yes, sir.

Senator JACKSON. In accordance with previous precedents.

Mr. PALMER. Yes, sir.

Senator JACKSON. What is the payout period on the municipal?

Mr. PALMER. The payout period on the municipal—

Senator JACKSON. Industrial.

Mr. PALMER. I will have the gentlemen from Sacramento give you the figures, but bear in mind these contracts will call for the delivery of water under the water service principle, with the price for water fixed on a per-acre-foot basis.

Senator JACKSON. So, it will vary?

Mr. PALMER. It varies from \$2.50 to \$2.75 per acre-foot for irrigation water as I recall it.

Senator JACKSON. What is the overall payout time for the irrigation features of the project?

Mr. DUGAN. The repayment of the project, Mr. Chairman, is on the basis of a 50-year payout period.

Senator JACKSON. 50-year period?

Mr. DUGAN. This is the period used on the Central Valley project.

Senator JACKSON. So there is no change in the law now applicable to the Central Valley project?

Mr. DUGAN. No; these are recommended for authorization as additional units of Central Valley project. The repayment would be on the basis of a 50-year period.

Senator JACKSON. Any questions of Assistant Commissioner Palmer?

Senator KUCHEL. I read your statement and I think it is complete, and I am glad to have you underline here in the beginning that approximately 95 percent is reimbursable. Your figure of total estimate cost on page 4 of \$267,577,000, 4 percent, or \$12,067,000 allocated to flood control, fish and wildlife, and recreation, is considered nonreimbursable, leaving \$255,510,000 to be repaid by the water and power users and, as you suggest in your statement, by the year 2019, which I assume means 50 years from the time of completion of the project, means that the reimbursable costs will have accumulated in the Treasury.

Mr. PALMER. That is correct, sir.

Senator KUCHEL. I do want to observe that in 2019 it is now estimated there will be over 55 million people living in the State of California. I think, therefore, your estimate of completion would be,

I assume, therefore 7 years after this session of the Congress, assuming that we did authorize it this year.

Is that about it?

Mr. DUGAN. That is correct.

Senator KUCHEL. Just generally, gentleman, I did receive a copy of a letter from people in the area of Auburn interested in trails. I wrote a very brief letter to Secretary Udall the other day in which I say:

TO SECRETARY UDALL:

DEAR MR. SECRETARY: One of the great events which takes place in the foothills of the Sierra-Nevada Mountains in northern California is the Western States Trail Ride. Many fine residents of California and Nevada relive the era of the gold rush and the mining camps as they ride the historic Main Trail which connects Sutters Fort in Sacramento with the first mining camps in the Sierra foothills. This trail then rises over the Sierra Nevada by way of Auburn with the eventual destination of the Comstock Lode in Nevada.

It is feared by these riders, hikers, and sportsmen that the contemplated construction of the great Auburn Dam and Reservoir will inundate part of this historic trail. Would it be possible, in the interest of the preservation of this fine recreational resource, to relocate the portion of the trail which is flooded above the waterline as a part of the construction and recreation cost attributed to the project?

I should be very grateful to have your views on this.

With kindest regards,

Sincerely yours,

THOMAS M. KUCHEL, *U.S. Senator.*

Generally speaking, would your answer be "yes" to that question?

Mr. DUGAN. Senator, we are interested in these trails and preservation of them. We have been working with these people, and in the future planning of the facilities we hope to work out some very suitable solutions.

Senator KUCHEL. I am grateful to you for that statement. Also in line with the chairman's statement, will you, Commissioner, or one of your good people, present for the record a complete breakdown of the reimbursability, based on the estimated cost which is included in this bill?

Mr. PALMER. Surely.

Mr. DUGAN. Yes, Senator. I think the committee does have a new tabulation entitled "Revised Cost Allocation and Probable Repayment." This covers the base Central Valley project including the now authorized San Luis unit. It indicates the costs that are attributable to the unit that is before you, the Auburn-Folsom South unit including Foresthill Divide and Malby. It gives you the total allocated cost for the enlarged project. The reimbursable portions of this base and enlarged project are shown on the tabulation, indicating for the base project a total reimbursement of \$955,689,000, and for the enlarged project a reimbursement of \$1,150,171,000. At the end of the year 2019, the Central Valley project would have an earned surplus of over \$259 million.

Senator KUCHEL. May that be set forth in full Mr. Chairman, in the record?

Senator JACKSON. Yes; the full revised cost allocation probable repayment, I think, should be included in the record at this point and it will be included.

Mr. PALMER. This was to have been inserted as part of Mr. Dugan's statement, but it can be done now.

Senator JACKSON. All right.

(The revised cost allocation and probable repayment tables follow :)

Revised cost allocation and probable repayment—Central Valley project, including the San Luis unit and with Auburn-Folsom South unit added

Function	Cost allocation			Probable repayment	
	Base Central Valley project ¹	Auburn-Folsom South unit	Total enlarged project	Base Central Valley project ¹	Enlarged Central Valley project
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)
Reimbursable:					
Irrigation and fish and wild-life.....	\$669,755	\$66,210	\$735,965	\$434,566	\$477,923
Municipal and industrial....	48,076	50,444	98,520	168,508	260,025
Commercial power.....	237,858	77,828	315,686	352,615	412,223
Total.....	955,689	194,482	1,150,171	² 955,689	³ 1,150,171
Nonreimbursable:					
Flood control.....	79,759	7,738	87,497	-----	-----
Navigation.....	16,555	-----	16,555	-----	-----
Fish and wildlife.....	28,647	2,972	31,619	-----	-----
Recreation.....	451	1,357	1,808	-----	-----
Total.....	125,412	12,067	137,479	-----	-----
Total project.....	1,081,101	⁴ 206,549	1,287,650	955,689	1,150,171

¹ Base Central Valley project including the San Luis unit. The savings in costs through joint construction and operation of the San Luis unit are not reflected in this analysis.

² Plus an earned surplus of \$292,691,000.

³ Plus an earned surplus of \$259,733,000.

⁴ Excludes \$23,540,000 cost for enlargement of Folsom South Canal to accommodate the East Side division and excludes the cost of distribution systems (\$44,087,000) which, if constructed by the United States, would be reimbursed under separate contracts by water users.

Senator JACKSON. Senator Burdick?

Senator BURDICK. I would just like to ask Mr. Palmer a question or two.

Mr. Palmer, you say that the reimbursable costs will be repaid 50 years after the completion of the project; does that apply to irrigation, power revenues, and municipal and industrial payments?

Mr. PALMER. Yes, sir; there is total payout achieved within that period of time, Senator.

Bear in mind the water would be marketed under the provisions of reclamation law widely used in California, the 9(C) and 9(E) water marketing contracts. The sum total of revenues derived from water sale of both municipal and industrial and irrigation water, plus available power revenues, would achieve total payout on the portions allocated for repayment by 2019.

Senator BURDICK. The starting point of repayment then would be at date of completion?

Mr. PALMER. Yes, sir.

Senator BURDICK. There has been some bandying around, you know, on the various projects about whether we include a 10-year construction period. Do you believe that this arrangement is consistent with reclamation law?

Mr. PALMER. It is consistent with reclamation law as we have had it reviewed by the solicitor's office. It is consistent with long-established practice of the Central Valley project.

Senator JACKSON. Senator Allott?

Senator ALLOTT. Mr. Palmer—I might say, Mr. Chairman, I am not in the least bit critical of our chairman, because, when he set this particular day for this hearing, I do not think that he anticipated what most of our minds would be concentrated on at this particular moment which is our first Mercury shot which is now in session and I was late because of my interest in that, and I know that everybody else's mind is somewhat in the same plane and the same orbit that mine is. So that my questions may be a little irrational in order this morning, but I would like to get two or three things straightened out.

First of all, I wonder if, since I am only acquainted with this area superficially, that is, having been in Sacramento Valley a couple of times and flown over it several times, I wonder if someone could begin this for me by pointing out on the map and perhaps by reference to the map which is a part of the files, Mr. Chairman, or not?

Senator JACKSON. Well, the map is not a part of the record at this point, but I think it should be. I assume that was going to be done when the regional director gave his testimony. I thought what we would do next is, that the regional director get into the details of the project and spell it out, and in that way we will get the whole picture, and I was about to call the regional director as the next witness to give a detailed breakdown and explanatory statement.

Senator ALLOTT. Well, I have two questions.

As I understand it—and perhaps these questions may be deferred better to the regional director—do you have a breakdown first, and would this be the appropriate place, with your regional director, of the amounts which will be reimbursed from this project alone without reference to any carrying by the Central Valley project, itself?

Mr. PALMER. That can be supplied if we do not have it here. I rather think we have it here now.

Senator ALLOTT. Will you supply that for the record?

Mr. PALMER. Yes; we will, sir.

(The following information was subsequently submitted:)

Repayment potential of the Auburn-Folsom South project increment

Repayment summaries given elsewhere for the Auburn-Folsom South unit reflect anticipated repayment for both the parent Central Valley project and the Auburn-Folsom South unit taken together, a repayment analysis of Auburn-Folsom South in incremental terms is also of interest. Such incremental analysis involves comparison of the parent project with the enlarged project over a comparable period of years, isolating the incremental revenues and costs at-

tributable solely to the Auburn-Folsom South unit addition.¹ The results of such an analysis is demonstrated in the following tabulation :

Item	Irrigation, including fish and wildlife and recreation	Municipal and industrial	Commercial power	Total
	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Incremental capital cost allocation ²	\$66, 210	\$50, 444	\$77, 828	\$194, 482
Incremental interest on investment.....		30, 738	37, 793	68, 531
Total incremental repayable investment cost.....	66, 210	81, 182	115, 621	263, 013
Total incremental net revenues (before interest).....	34, 548	116, 787	53, 987	205, 322
Surplus.....	-31, 662	35, 605	-61, 634	-57, 691

¹ Evaluated in terms of the difference in probable repayment between the enlarged Central Valley project, including Auburn-Folsom South unit, through fiscal year 2019, and the "base" Central Valley project without Auburn-Folsom South unit—extended for a comparable period—through fiscal year 2019 (using the 1961 Central Valley project average rate and repayment study). Auburn-Folsom South unit also includes the Folsom-Malby and Foresthill Divide developments.

² Includes interest during construction for the interest-bearing municipal and industrial and commercial power purposes, but excludes allocations to the nonreimbursable functions amounting to \$12,067,000.

Mr. DUGAN. We have this indication for you at this time. The municipal and industrial portion of this project will pay its part within the period allotted. The prices are established so that they will recover interest and capital expenditures for the municipal and industrial portion. The power features of the Central Valley project in total are self-liquidating.

Senator ALLOTT. The power features are.

Mr. DUGAN. The irrigation portion of the Auburn-Folsom South Unit will require subsidy from the other Central Valley projects in the amount of 31 percent of the total cost.

Senator ALLOTT. The other question I am going to ask and, Mr. Chairman, I may want to call these gentlemen back at that time if that is OK, because I first want to get a clear understanding, which I do not have at this time, as to just exactly what is hoped to be accomplished by this with relation to what now exists.

The other question would be this: If the distribution facilities might be constructed by local interests, why is the authorization for Federal construction sought?

Mr. PALMER. May I clarify that again or attempt to clarify it?

The distribution systems are already authorized under broad Central Valley legislation. We have felt that in coming to the committees of Congress, we should advise the committees of Congress as

to what might be the full cost of the project, even though part of it is already authorized. The distribution system is already authorized. Particularly, we would prefer to have a proper foundation laid with the legislative committees when we appear before the Appropriations Committees at some subsequent time asking for money if such is the program, to finance distribution systems either by way of the distribution system loan route under Public Law 130 or by direct Federal construction by the Bureau of Reclamation. We are frequently asked when we go before the committees on appropriation, are these distribution systems specifically authorized and, of course, we can go back to the broad legislative authorization for distribution systems in the Central Valley. We felt it gives a better foundation for appropriation requests to identify the total amount of possible Federal appropriation requirements to the legislative committees.

Senator ALLOTT. In other words, do I understand you are saying that while the distribution systems have previously been authorized, what you are attempting to do here is to show what the total cost and reimbursement, and so on, would be with relation to what is proposed now?

Mr. PALMER. That is correct, sir.

Mr. DUGAN. As a further point on this matter of distribution systems, I would like to call your attention to the table which has been furnished you of the most recent costs and repayment.

Senator JACKSON. The most recent costs of what?

Mr. DUGAN. The most recent cost allocations and repayment. You have this tabulation with the material that you were furnished, and we will make it a part of the record. However, the footnotes indicate—

Senator ALLOTT. Is that the revised cost allocation and probable repayment sheet that you are referring to?

Mr. DUGAN. Yes; and you will note, sir, the footnote No. 4 applying to the cost allocations for the Auburn-Folsom South unit excludes distribution system. It is not a part of this repayment calculation. The repayment for the distribution system has been taken care of by deducting from payment capacity the repayment of distribution system facilities. So that in our repayment for the project, we have accounted for the revenues that are available to pay these remaining costs shown on the tabulation.

Mr. PALMER. Mr. Allott, in that connection 100 percent of the cost of distribution systems is repayable within the maximum period permitted by law. We have contracts in force in California in some instances calling for payout in less than the 40-year period permitted.

Senator ALLOTT. I will go into these later when we get to an explanation of these other matters. At the moment I will defer.

Senator JACKSON. Thank you, Senator Allott.

Senator Hickey?

Senator HICKEY. Mr. Palmer, I just have three questions: One, I understand that this is a supplement to an already-existing project. Is that correct?

Mr. PALMER. That is correct. It is a further extension of the Central Valley project in California.

Senator HICKEY. And is the Folsom Dam and powerplant the already-existing project?

Mr. PALMER. Yes, sir.

Senator HICKEY. And now with regard to its initial economic feasibility and what today is apparent, is it meeting its commitments as the reclamation law prescribes?

Mr. PALMER. It is a completely economically sound feature. I might point out that had that dam not been on the river in 1955, extreme flood losses would have occurred. The entire cost of the dam probably was justified in flood control losses prevented which would have occurred without its being there, in maybe a couple of hours. It was justified in the beginning in terms of its flood control requirement and was built by the Corps of Engineers. The power features and other features for recreation and fish and wildlife have worked out, I think, far, far better than anyone anticipated at the time the original plan was drawn. As I indicated earlier, part of this proposal now before the committee is in fulfillment of the directive of the Congress that the Secretary study ways and means of taking the water made available to this area we are talking about.

Senator HICKEY. Were there some reimbursable features in the original project?

Mr. PALMER. Yes, sir. All of the power allocations were fully reimbursable with interest.

Senator HICKEY. Are they meeting the schedule, behind schedule, or ahead of schedule?

Mr. DUGAN. We are on schedule and the repayment potential of the project is exceeding our earlier expectations by some considerable extent.

Senator HICKEY. Well, now, just one concluding question: When this is ultimately prepared, will this, to a complete degree, use the available watershed facility in the area so that this is the complete capsule picture of what will be required to do the job in this area, what you call the Central Valley?

Mr. PALMER. Senator Hickey, as far as the American River watershed is concerned, the Auburn unit and the work being proposed to be built by the Placer County Water Agency will largely complete the construction on the American River. It will by no means complete the ultimate and full construction that will go forward in some future time based on some specific future act or actions of the Congress in unfolding the full economic potential of the Central Valley project. There are other units that are in various stages of planning, various stages of consideration on both the east and west side of both the Sacramento and San Joaquin Valleys, that are yet to be built before the full Central Valley project is completed.

Senator HICKEY. But you have these currently under survey for the purpose of shelved projects?

Mr. PALMER. Some of them are, sir; that is correct.

Senator HICKEY. How many are there?

Mr. PALMER. There is the large east side development that is in advanced stages of the planning process. There is a reconnaissance investigation underway on the west side of the Sacramento Valley and a cooperative multiple-purpose study of problems of the delta, involving local, State, and Federal agencies. There are a number of significant investigations in the South Bay area and of other smaller units in the Central Valley project.

Mr. DUGAN. In addition, there are projects in some of the mountain areas and elevations higher than the Folsom-South Canal. We are investigating a development on the Cosumnes River.

Senator HICKEY. I believe some of it will come out better with Mr. Dugan's testimony.

Mr. DUGAN. Another project under investigation is the San Felipe division that lies south of the San Francisco Bay. The area is greatly in need of supplemental water supply to meet its growing needs.

Senator HICKEY. The entire concept is tied to your supplemental period initially spoken of by the Secretary.

Mr. DUGAN. Yes, sir.

Senator JACKSON. Senator Pearson?

Senator PEARSON. Mr. Chairman, the question on my mind has been touched upon and I am concerned about knowing the extent of the present development and a description therefrom—I think you indicated we were about to go into that.

Senator JACKSON. That is correct and I thought now we would call on the regional director, Mr. Hugh Dugan, who is the director in Sacramento for that region.

Mr. DUGAN. Thank you.

Senator JACKSON. If you would go ahead, Mr. Dugan, and just sort of explain the details of the project and what you hope to accomplish, and particularly with reference to its integration into the overall Central Valley project, itself. I think this is important. Senator Allott was getting into part of it, and if you could develop the entire picture at this time, it would be very useful to the committee.

Mr. DUGAN. I would be happy to do this just as quickly as I can.

Senator ALLOTT. I wonder if we would not facilitate this, since this seems to be bothering two or three of us a little bit, the general picture, if we could not facilitate this before you make your statement by pointing out the existing situation and then specifically what is proposed, and then your statement will say why. Would that be satisfactory?

Senator JACKSON. That will be fine.

Why don't we start out by stating that your statement, Mr. Dugan, will be included in the record at this point, and you preface your remarks by explaining the general setup in the Central Valley project as it is at the present time?

Mr. DUGAN. Very good, sir.

(The prepared statement of Mr. Dugan is as follows:)

STATEMENT OF H. P. DUGAN, REGIONAL DIRECTOR, BUREAU OF RECLAMATION

We are pleased to have this opportunity to present to this committee the general plan, purposes and accomplishments of the Auburn-Folsom South unit. The general plan for the development is part of the overall plan for the American River developed by our planners and by those of the State of California over many years. The unit lies in north-central California, 100 to 200 miles east and northeast of San Francisco.

The American River, which furnishes the water supply for these features, rises in the Sierra Nevada, drops through steep canyons in its middle and lower courses, and enters the Sacramento Valley floor below Folsom Lake. At the city of Sacramento, California's capital and the largest city in the Central Valley, it joins the Sacramento River, which flows into the Sacramento-San Joaquin Delta and thence into San Francisco Bay and the Pacific Ocean.

A major purpose of the Auburn-Folsom South unit is to provide an urgently needed irrigation water supply for a productive area of over 400,000 acres.

Supplemental water would be furnished to irrigate land now threatened by a declining ground-water supply, and new water supplies would provide opportunities for irrigated farming by bringing additional lands under irrigation. Ground-water levels are continuing to drop. In the Sacramento County portion of the Folsom South service area, between 1953 and 1961, the water level dropped as much as 25 feet in places. The average decline was 16 feet in 8 years. In San Joaquin County, between 1955 and 1961, a similar 25-foot drop occurred. The average decline was 12 feet in 6 years. These water-table drops illustrate the seriousness of the water-supply situation and the consequences of the continual overdraft which the proposed works are designed to correct. New water supplies would also provide for suburban and urban needs by providing municipal and industrial water for an increasing population.

The concern with which local people view their water situation is shown by the formation of county agencies and water districts to contract for new water supplies. Before 1948, a land area of only 42,000 acres was in organized districts. Today, nearly 10 times that acreage is in organized districts, in addition to the all-inclusive county agencies. Of the 10 irrigation districts that have been organized in the Folsom South area, 8 have already indicated a desire to contract for water service. In addition to irrigation needs, municipal and industrial needs have been growing, as well as requirements for electric power. The rapid rise in population and property values adjacent to the American River has created a need for increasing the margin of protection on that river by additional flood control storage.

The unit would store the unregulated flows of the American River and convey them throughout the service area. Folsom Reservoir, constructed by the Corps of Engineers and operated by the Bureau of Reclamation, now provides 1 million acre-feet of multiple-purpose storage on the American River. Auburn Dam and Reservoir will provide another million acre-feet of American River storage to supplement Folsom storage, provide additional flood control, generate power, and provide recreational opportunities. The proposed Folsom South Canal will provide the major conveyance feature. The Folsom-Malby features will provide water supplies needed for suburban expansion, and the Foresthill Divide features, in addition to providing suburban water supplies, will also provide for development of some agricultural land.

The major feature of the plan of development for the Auburn-Folsom unit are: Auburn Dam, Reservoir, and powerplant; Folsom South Canal; Folsom-Malby conduit; County Line Dam and Reservoir; Sugar Pine Dam and Reservoir; Foresthill Divide conduit.

Auburn Dam will be an earthfill structure, rising 515 feet above streambed. Auburn Reservoir will have a capacity of 1 million acre-feet, extending up the Middle and North Forks of the American River for a distance of 20 miles and creating a very attractive lake with a water-surface area of 6,000 acres where the reservoir is full. The accompanying powerplant will have an installed capacity of at least 155,000 kilowatts, adding about 500 million kilowatt-hours annually to the power accomplishment of the Central Valley project. The capital costs of these features are estimated to be \$138,812,000, including the cost of necessary transmission facilities and including \$557,000 for minimum basic public-use facilities.

The 67½-mile Folsom South Canal will begin at Nimbus Dam, the afterbay of Folsom Dam. It will flow generally southward along the east side of the valley to its terminal at Lone Tree Creek, southeast of Stockton. It would be concrete lined its entire length. An initial capacity of 3,500 cubic feet per second would be required to serve the Folsom South area. The capital cost of the Folsom South Canal is estimated to be \$42,095,000. Distribution and drainage systems, which may be built by local interests, are estimated to cost \$43,991,000.

An additional \$23,540,000 will be required to provide added capacity in the Folsom South Canal for future service to the east side of the San Joaquin Valley. However, substantial future savings in the construction of the East Side division can be realized by so doing. By construction of the enlarged canal now an estimated \$16 million savings can be realized over construction of a parallel canal at a later time.

The Folsom-Malby features consist of a pumping plant, an 11-mile conduit with a capacity of 100 cubic feet per second, and a 40,000 acre-foot County Line Dam and Reservoir. A second pumping plant will be required to deliver water from the reservoir to the service area. Estimated cost of the Malby features is \$11,916,000. Included in this estimate is \$650,000 for public use and recreation land and facilities.

Features of the Foresthill Divide development include a 16,500-acre-foot Sugar Pine Dam and Reservoir and a 13.7-mile pipeline from the reservoir through the service area. The capital cost of this development is estimated to be \$7,223,000, including \$96,000 for a distribution system and \$150,000 for basic public use facilities.

Construction of the Auburn-Folsom South unit is engineeringly feasible and economically justified. The estimated construction cost is \$267,577,000, which includes capacity in Folsom South Canal for future use and the cost of distribution system and drainage systems, which may be built by local interests. The ratio of total benefits to costs for a 100-year period of analysis is 3.25 to 1, and for direct benefits is 1.84 to 1.

The National Park Service estimates that net recreation use at Auburn Reservoir would amount to 400,000 visitor days annually, creating a net annual monetary benefit of \$560,000. In the Folsom South Canal service area, wildlife benefits of \$44,000 annually are estimated by the Fish and Wildlife Service. The Fish and Wildlife Service has recommended further studies and trials to ascertain the extent to which potentialities for increasing salmon production could be realized.

Under full development, over one-half of the projected irrigated acreage in the Folsom South area is expected to be devoted to forage crops, such as irrigated pasture and alfalfa. Other crops include grapes, deciduous fruits, sugar beets, and truck crops. Rice, the only crop grown in the area that is considered a national surplus crop, is expected to comprise only about 3 percent of the irrigated acreage.

The unit would be integrated with the Central Valley project operationally and financially. Our report on the Auburn-Folsom unit called attention to the fact that the repayment demonstration did not include the recently authorized San Luis unit. A new repayment analysis made to include the San Luis unit demonstrates that the reimbursable costs of the Central Valley project, as now authorized with the Auburn-Folsom South unit added, can be repaid in full with surplus revenues of \$259,733,000 available at the end of the repayment period, or year 2019, which is 50 years after the last feature of the unit is completed.

In this analysis, a water-service charge of \$2.50 per acre-foot canalside for irrigation water was used for the Foresthill Divide area and \$2.75 per acre-foot for the Folsom South area. Municipal and industrial water-service charges are \$14 in the Folsom South area, \$32 in the Malby area, and \$85 per acre-foot in the Foresthill Divide area. That part of the power and energy sold to preference customers would be delivered at existing project rates.

Increasing needs for flood protection and water supply create an urgent need for the early construction of Auburn Dam and the Folsom South conveyance facility. More effective use of the water resources of the American River basin will yield benefits to the State and the Nation valued at \$36 million, over three times the costs.

Mr. DUGAN. We will start with Shasta Dam, one of our key features on the Sacramento River. This is an existing structure. It has a capacity of about 4½ million acre-feet. It has a large powerplant installation, and it has flood control. It has an afterbay and powerplant at Keswick.

These facilities are the key regulatory facilities that we now have on the Sacramento River. The Sacramento River is a river with a very dependable streamflow. It varies seasonally, and it must be regulated. It must be regulated for flood control as well. It has a great deal of power potential, and these facilities go a long way toward performing that function.

At the delta of the Sacramento and the San Joaquin Rivers we have a pumping facility that helps us to take water into the more arid river basin, the San Joaquin.

Senator ALLOTT. Where does that run from the delta area?

Mr. DURAN. The San Joaquin runs to the west and north, from our regulatory facility at Millerton Lake, and then enters the delta just to the northwest of the city of Stockton.

Senator ALLOTT. So you have the Sacramento coming in from the north, roughly, and the San Joaquin from the south?

Mr. DUGAN. That is correct. The San Joaquin is a more erratic river than the Sacramento. Its yields are not as heavy.

We have a great development of irrigation in the San Joaquin Basin, and much of this was accomplished by local projects prior to the Central Valley project.

The Central Valley project added the Millerton Lake facility, and we had a problem of replacing some of the lower water rights along the San Joaquin, so we could make water available at higher elevations from the Madera Canal going north from Millerton Lake and the Friant-Kern Canal going south.

We replaced these rights via our Tracy pumping plant, which is located in a position to take the water from the delta and water stored from Shasta Lake.

At that point it is lifted almost 200 feet and taken into a large canal that goes south along the west side of the San Joaquin Valley. It replaces the water rights held by these old projects at the lower end of the valley and makes it possible for us to provide water out of Millerton Lake at that elevation by exchange.

Senator ALLOTT. Didn't we have an enlargement or some project with the Tracy Canal here before us a couple of years ago?

Mr. DUGAN. That is true, Senator. We have a new unit that was authorized by the Congress, and we are now proceeding toward a construction program. We are in the advanced planning stages. This is a project we call the San Luis unit, being built for service of some 400,000 acres of very fertile land along the west side of the San Joaquin River.

The facilities that we will build there will be built jointly for the State of California and this reclamation project. These joint facilities will involve a pump lift from Delta-Mendota Canal. We are going to work this canal overtime. We are going to use it in the winter as well as in the irrigation season. We will take water out of it and put it in a forebay where it will be commingled with water taken by the State from the delta and through storage at Orville Dam.

We will use a reversible-pump turbine to pump water from the forebay into the San Luis Reservoir, where we will store our water with the State's water. When we release it through the pumps, we will generate power, and so we will recoup some of the losses that we incur in pumping water in to the reservoir in the first place. We will take the water south in the community canal through our San Luis unit, and from there the State will take their water south across the Tehachapis into Los Angeles.

Now we are adding to this complex of Central Valley units the Trinity River division. This project is nearing completion. Last October we had the privilege of having the dedication of Trinity Dam. It is a structure that is very comparable in size with the one that we have before you, Auburn Dam.

We will take water from this storage facility through a series of major tunnels and powerplants, and we will drop water after we take all the kilowatt-hours out of it into our reservoir at Keswick. It will be commingled with the waters of the Sacramento River, and it will be in a position to serve additional units such as the Sacramento canals unit that has been authorized.

Mr. Head is pointing to that canal system and diversion dam at Red Bluff to take the water out of the river. This dam is presently under construction. We will also bring the water down to introduce into the delta, which will make it possible for us to transport water south through our San Luis facilities.

Now, one of our problems in the Central Valley is to provide enough canal capacity to move water into the areas that need it, particularly into the San Joaquin Valley. The west side of the valley is being taken care of by the Sacramento canals and by the San Luis unit and by the development at Lake Berryessa. However, we are greatly in need of additional water along the east side of the San Joaquin. This is an area where the ground water is being depleted. The ground-water table is dropping every year.

We have had 3 straight years of drought in California, and the situation is growing increasingly critical along the east side of the San Joaquin.

Now, these aspects of the project, I think, will give you some concept of the services it performs. In addition, of course, to the water, we are providing power to preference customers through coordinated operation of these power facilities. We have some at Folsom. We have some at Nimbus, which is the afterbay to Folsom Dam on the American and will be a diversion dam for the Folsom South Canal.

We have some at Shasta, some at Keswick, and some at Trinity. At the present time we have about 450,000 kilowatts of dependable capacity that we are delivering to preference customers.

Senator ALLOTT. Without Trinity?

Mr. DUGAN. Without Trinity. Now, Trinity will be in operation in 1963. A major part of our power facility will then be available. This will add additional power capacity to the Central Valley system for the service of our customers. However, as we increase our pumping requirements at the San Luis unit, we will have to use some of this Trinity power. This will begin to draw power away from the Central Valley project along about 1970. It would be at this time that a facility such as the Auburn Dam would be helpful in meeting this powerload.

Senator ALLOTT. Now could we turn the map around?

Mr. DUGAN. Will this suffice for the coverage of the Central Valley project as a whole?

Senator ALLOTT. Generally. Now, could we go into this particular thing?

Mr. DUGAN. First of all all, we have Auburn Dam. It will be an earth-filled structure. It will be 515 feet.

Senator ALLOTT. Could we start with what structures you now have?

Mr. DUGAN. We have Folsom Dam, and we have Nimbus. Folsom is a power, flood control, and conservation project. We have about a million acre-feet of capacity to store water on that river and be used for flood control. In addition, Nimbus is a structure with a small powerplant and will form the point of diversion, as was always contemplated for a canal going south.

Senator ALLOTT. What is the capacity in power of your Folsom Dam?

Mr. DUGAN. Do you recall that?

Mr. HEAD. The nameplate is 165,000 kilowatts. Overload gets us up to 190,000-kilowatt capacity.

Senator ALLOTT. And Nimbus is what?

Mr. HEAD. About 13,500 kilowatts.

Mr. DUGAN. Shall I proceed with the proposed features?

Senator ALLOTT. Yes. Now, these are the two that are in existence?

Mr. DUGAN. Yes, sir; that is correct.

We do have one other small project. Sly Park Dam provides a small amount of water supply to a local area in El Dorado County.

Senator JACKSON. Just one question. Was Nimbus Dam initially a regulating agency for Folsom?

Mr. DUGAN. It is an afterbay reservoir for Folsom, and does perform the function of smoothing out the river before it reaches the city of Sacramento, so that we can vary our releases at Folsom and smooth them out at Nimbus. Nimbus is also used for the purpose of trapping the salmon that migrate up the river. As a part of the Central Valley project, we provide hatchery facilities, which the State of California operates, to harvest the salmon eggs from the salmon run.

Auburn Dam will create a million acre-foot capacity reservoir, extending up the middle and north forks of the American River for a distance of 20 miles, and it will create a very attractive lake, with water surface of about 6,000 acres when the reservoir is full.

There will be a powerplant with installed capacity of 155,000 kilowatts, and it will produce about half a billion kilowatt-hours annually. The capital costs of these features will be \$138,812,000, including necessary transmission facilities, and including \$557,000 for minimum basic public use facilities.

The 67½-mile Folsom South Canal will begin at Nimbus.

Senator ALLOTT. Before we get into that, sir, I hope you will pardon these interruptions. It will be much easier to get these questions answered as we go along. What will this enable you to sell electricity at from the Auburn Dam on the basis of your costs?

Mr. DUGAN. The power that is produced at Auburn Dam is contemplated for sale at the Central Valley project rates. The Central Valley project rates have been established for some years, and it would be our intention to continue them at this same level.

Senator ALLOTT. What are those rates?

Mr. DUGAN. They vary depending upon certain demand circumstances of the customer and transmission, but the average is about 4.6 mills per kilowatt-hour.

Senator ALLOTT. Go ahead.

Mr. DUGAN. The 67½-mile Folsom South Canal, beginning at Nimbus, will flow generally southward along the east side of the valley, and will terminate at Lone Tree Creek. That is southeast of the city of Stockton.

It will have an estimated capital cost of \$42,095,000. Of course, we have discussed the distribution systems that will be needed to make this water available throughout the service area at a cost of \$43,991,000. They may be built by local interests or by the Government under this plan.

Senator ALLOTT. Now, this \$43 million that goes into the South Folsom Canal—

Mr. DUGAN. The canal would be \$42 million, and the distribution system would be almost \$44 million.

Senator ALLOTT. Now, when you speak of the distribution system, you are referring, I presume, to laterals and canals of this type for actual application on land from the main canal?

Mr. DUGAN. That is correct, sir.

Senator ALLOTT. Does this include pipes or piping for distribution to municipalities?

Mr. DUGAN. No, sir. There are no costs included for facilities to deliver municipal and industrial water. That would have to be obtained at canalside by the recipient. We are proposing that an additional \$23,540,000 be provided to increase the capacity of the Folsom South Canal over and above what would be essential to serve this area in the Folsom South Canal. The reason that we are proposing this is that it is our belief that some \$16 million of savings could be realized by constructing a canal with a large capacity at this time, keeping in mind the desirability of extending the canal at some future date to the east side of the San Joaquin as far south as Bakersfield.

This has been referred to as our East Side division, and it is a potential that we believe deserves consideration for further development.

We have found in our canal construction in the Central Valley that a little extra capacity has always been good judgment. Mr. Head might turn the map to show you how this canal at this same elevation—

Senator ALLOTT. Before he does this, sir, could I ask you a question then? As I understand it, the \$42 million on the Folsom Canal would provide a capacity for what? How much water?

Mr. DUGAN. That provides a capacity starting in at 3,500 cubic feet per second, decreasing as the demands for water diminish as far south as Lone Tree Creek.

Senator ALLOTT. What is the amount of water available for diversion at the headgate of the Folsom Canal?

Mr. DUGAN. Well, Mr. Head can tell you just a little bit about that relating it to the Folsom Dam and the Auburn Dam as to yield.

Mr. HEAD. These two together will yield enough water to allow us to divert 852,000 acre-feet of water at this point here, Nimbus Dam.

Senator ALLOTT. Let's transfer that, if you will, into second-feet, roughly half of that on a year-round flow, you say 152?

Mr. HEAD. Well, 852,000 acre-feet would be diverted on a regular seasonal demand basis with agriculture peaking in July and August of around 20 percent, and municipal and industrial service peaking in the summertime at about 15 percent, with winter delivery for the latter. To convert that into second-feet, we would need 3,500 second-feet of capacity in this first reach to serve this area.

We can reduce that capacity at the Cosumnes River to 2,200 second-feet, and reduce it on to 100 second-feet at this terminal point in order to deliver the 852,000 acre-feet on the seasonal spread that I just indicated.

Senator ALLOTT. Now, the statement has been made, as I understand it, and I would like to be corrected if I am wrong, that there will be an additional 23 million suggested in here for increasing the capacity of this canal. Now, if you only have 3,500-second-feet capacity, which is needed at the maximum periods of distribution in

the summer, why do you want to construct a larger canal at an additional \$23 million?

Mr. DUGAN. Senator, we have a potential of greatly supplementing this canal system on the east side of the valley as we have on the west side of the valley with our Delta-Mendota Canal that I described to you earlier. We have a pump lift possibility from the delta, where we have a much greater supply of water coming from the Sacramento River and the storage facilities that lie on that stream or go into that stream, that can be made use of. This would permit the commingling of the waters of the Sacramento River Delta with those diverted from the American, and the transport of those waters south to areas as far as the San Joaquin River and even farther south from the vicinity of Millerton Lake to Bakersfield, Calif.

Now, these additional possibilities lead us to conclude that it would be good business to increase this capacity so that it could be utilized as a future enlargement of the Central Valley project, keeping in mind that there would be considerable savings of construction cost by availing ourselves of the opportunity to provide the additional capacity at this time and recognizing that the Central Valley project produces surpluses of repayment that could guarantee reimbursement for this added capacity, whether or not the East Side development ensues. We feel quite confident that the East Side development is going to be a necessary thing, and that this capacity is good business.

Senator ALLOTT. I don't like to take up all the questioning, but I want to get this matter clear. What do you envision in terms of actual demand, the time schedule for a pumping station from the delta area into the Folsom Canal?

Mr. DUGAN. The timing on that would, of course, be dependent upon when additional facilities south of Lone Tree Creek would be necessary, and at a time when the American River water supply was utilized to its fullest extent.

Senator ALLOTT. The Folsom Canal, Mr. Dugan, at its present capacity, initial capacity of 3,500 second-feet, aren't you at the present time planning on a future growth there that does not now exist, and that has to be projected forward for some years before it can be utilized?

Mr. DUGAN. The utilization of facilities south of Lone Tree Creek gives a near future possibility. We feel that when we are able to present additional plans for use of water in the southern end of the San Joaquin, the area will be most ready to use this water and to pay its costs.

Mr. PALMER. May I interject at this point, Senator Allott, that historically the water-marketing program in the Central Valley has been handled on the basis of providing the capacity for some foreseeable period of time ahead. For example, the canals to the south are designed with the thought in mind that they would provide that the last water would be marketed within 15 years of the time of completion of the canal. Now, actually, because of this fantastic growth that has been described to the committee, the water marketing has always preceded our estimates. In other words, we had attained the point years ahead of projections.

Looking at the map will indicate a number of things that we are trying to prevent this time. This is the Delta-Mendota Canal. Right

alongside of it is going to be another river-size canal dug out of that choice farming land. Had the original framers of this plan anticipated the growth that has been achieved, there would probably have been one canal built through that region.

The same thing here just south of San Luis Reservoir. Between the Delta-Mendota Canal and the first 18 miles of the San Luis Canal is a planned superhighway. So you have virtually sterilized that area of highly productive land.

The same on the east side of the valley. If and when this growth that we all anticipate is achieved, you would have to virtually duplicate the Friant-Kern Canal to deliver water into the area.

Now we are also confronted with a practical problem. You can't step in and enlarge a canal that is in operation during the entire year, because no city, for example, is going to want to have its waters muddied by knocking the banks of the canal out and broadening it or deepening it. So in this reach of the canal, we anticipate the east side canal would cover exactly the same routing of the Folsom South Canal.

It is, we think, good economics. It is good sense, and it is in the best interests of land and water and people to build the Folsom South Canal through this reach at the capacity that we think will soon be required.

Now, take the two things and break the problems down. First you have got the water market buildup period here in the Folsom South area. Here, we have enough irrigation districts organized and enough advanced negotiations on water service contracts to indicate that we can commit a very high percentage of the total water that will be available in this area before the works are actually started and certainly before the water service is available.

Then at the same time there are resolutions and active interest involved in an east side development that would indicate that long before we could get the canal built, the water will be required and desired at the price required to underwrite construction costs.

Senator ALLOTT. In other words, do I understand, Mr. Palmer, that what you are saying is that for this additional capacity, which is represented by the \$23 million item, that by the time you would construct it, you think that the demand would be there for that water at that time?

Mr. PALMER. It is my own personal belief that before we get the Auburn-Folsom South unit completed, the demand for water will be translated in terms of water service contracts to take the entire capacity designed for the Auburn-Folsom South.

Senator ALLOTT. Including the additional?

Mr. PALMER. No; it is also my belief that before we can ever get this east side unit authorized and built, that the demands will be there to utilize the full capacity. It is good business, we think, to build a canal now that would serve both uses, in that reach of it that would be common to both, that can be built now for a \$16 million less-cost than the two canals could be built for separately.

Senator ALLOTT. But \$23 million additional cost at the present time?

Mr. PALMER. That is correct, sir.

Mr. DUGAN. I hope that we made it clear that the start of the canal from the American River with a capacity of 3,500 cubic feet per second would be all that would be placed in this canal capacity to

a point as far south as the pump connection, and from that point on the additional capacity would be provided to take the canal to Lone Tree Creek at the end of the Folsom South service area. At the present time in that service area we have indications that about 75 percent of the water is ready for contract, and the other 25 percent certainly appears to be desired by the remaining districts. That is, about eight districts indicate that they will use 75 percent of the water. The balance of the districts, we are sure, will take the rest, and the counties of Sacramento and San Joaquin have also indicated their desires for water from this facility.

Senator ALLOTT. When you use the term "districts," do you use it in the sense of water districts?

Mr. DUGAN. Irrigation districts; yes, sir. Coupled with that demand, and you will have many witnesses that will tell you about it, we have investigated the east side division going south as far as Bakersfield to the point of being quite confident of its economic feasibility. We have had strong demonstration from the irrigation districts en route that they would like to have water service at the prices we are contemplating on this proposed east side division. That will unfold as time goes on. Our interest now is in providing capacity in the canal to give us flexibility for future growth.

Senator JACKSON. Mr. Dugan, would this be a convenient time in your presentation to suspend, or is there something you would like to wrap up very shortly here and find a more convenient time?

Mr. DUGAN. This would be most convenient, Senator.

Senator JACKSON. If that is true, we will suspend at this time. We will have to go and ask unanimous consent to continue the hearing. It is hoped that we can return here at 2 o'clock and continue the hearing, so I would suggest that you come back at 2 if we have consent.

Senator ALLOTT. Mr. Chairman, before we adjourn I would like to say that I will interpose no objection, of course, to the unanimous consent, but we do have an important item on the floor this afternoon, which some of us will have to attend and will therefore be impossible to attend this session a good portion of the time this afternoon. I just wanted to explain that to these people who are here and interested in this project because some of us will have to be on the floor.

Senator JACKSON. What Senator Allott has said is certainly true, and if we don't meet this afternoon we will meet at 10 o'clock in the morning, but at 2 o'clock we will certainly know, and Mr. Whitacre will be here and will be able to advise you.

(Whereupon, at 11:55 a.m., the subcommittee recessed.)

AFTERNOON SESSION

Senator KUCHEL (presiding). Come to order, please.

First of all, I am sure you will all be interested to know that the astronaut has apparently landed safely.

Secondly, if I may usurp the functions of my Democratic colleague, I would like to proceed with the testimony with the hope that it may be possible, although if it is not, we shall continue it tomorrow, to look forward to terminating the hearing this afternoon.

Off the record.

(Discussion off the record.)

Senator KUCHEL. I am now going to ask our new colleague from Kansas, Senator Pearson, if he has any further questions.

Senator PEARSON. Mr. Chairman, I have no further questions. I think Senator Allott had completed his questioning this morning, and the subject at that time was the existing present development, Senator, and a description of the new development as proposed in this bill.

Senator KUCHEL. All right, sir.

Do you have anything additional to add to the record, Mr. Dugan?

Mr. DUGAN. There are two items we did not discuss. The two units, Foresthill Divide and Folsom-Malby, are also part of this proposal.

I might briefly say that the Folsom-Malby area of about 12,000 acres is one that we believe would be a very fine development for municipal and industrial purposes in an area that is badly in need of a water supply source. The only obvious water supply source is the existing Folsom Reservoir, and pumping from this reservoir and a pressure system would be required to serve this area. It lies adjacent to the Aerojet Corp. facilities and other important industrial and municipal developments in the Sacramento area. This unit would consist of an 11-mile conduit of 100-cubic-feet-per-second capacity and a 40,000-acre-foot County Line dam and reservoir that would be multiple purpose in nature. It would provide some flood control on Deer Creek, which is a flood hazard to some of the more densely populous areas along the Cosumnes River. It would also provide a very fine recreational potential in the vicinity where there is a great need for this type of recreational use.

The Foresthill Divide unit is between the north and middle forks of the American River. This is a water supply development. The area that lies on this ridge is badly in need of industrial water, and also needs some irrigation supply for the lands in this area. The cost of the development would be about \$7 million, providing a reservoir of about 16,500-acre-foot capacity at Sugar Pine, and a 14-mile trunkline from the reservoir to reach the area of service. This is a proposal that would meet the needs of the area, and if necessary one that can be expanded by connection with some of the other small tributaries in this area.

I might mention also that the water charges that are proposed for this development will be \$2.50 per acre-foot in the agricultural area along the Foresthill Divide which is within their capacity.

Senator KUCHEL. \$2.50?

Mr. DUGAN. \$2.50; yes, sir.

The areas along the Folsom South Canal would pay \$2.75 for water at canalside. This represents over 70 percent of the payment capacity of this farm development.

I would like to point out that the Folsom South area is presently very highly developed and it is a supplemental rescue type of irrigation project.

The municipal and industrial water rates would be sufficient to pay the incremental costs associated with the facilities required.

The Folsom South Canal municipal and industrial water service charge would be \$14 per acre-foot at canalside. In the Malby area, the price would be \$32 per acre-foot, and on the Foresthill Divide

area, where water is very scarce and the cost of the municipal water is presently quite high, they would have to pay \$85. This would provide proper repayment of those facilities, and as further witnesses will, I am sure, tell you, this is a price that they are interested in paying.

Senator KUCHEL. Thank you very much, sir. Did you mention the cost estimate on these two parts of the overall project? Is that in your statistical information?

Mr. DUGAN. Yes; it is. The Folsom-Malby feature will be \$11,916,000, and the Foresthill Divide unit will be \$7,223,000.

In closing, I would like to say, Senator, that we have been advised of a very strong interest in purchasing water through these facilities, not only those that have been proposed along Deer Creek and the Folsom South Canal area, but many other areas to the south. It is a very dramatic and growing need for water in the area where the ground reservoirs are declining. I am sure that many of the witnesses here will give you good information on it.

Senator KUCHEL. Well, thank you very much, Mr. Dugan.

Senator Pearson, do you have any questions?

Senator PEARSON. No questions.

Senator KUCHEL. I greatly appreciate this, and if you will stand by on call for any subsequent information we would like to elicit from you, I would appreciate it.

Now, there is one more gentleman here. Do you have any statement to make?

Mr. HEAD. No, sir.

Senator KUCHEL. The State of California is represented by Hon. Ralph M. Brody, chairman of the California Water Commission, who also represents the Governor of California, and is a distinguished member of the California bar specializing in water law.

We are glad to have you here today, Mr. Brody, to speak. You may proceed.

STATEMENT OF RALPH M. BRODY, CHAIRMAN, CALIFORNIA WATER COMMISSION

Mr. BRODY. Mr. Chairman and members of the committee, my name is Ralph M. Brody, chairman of the California Water Commission. I am here on behalf of the State of California, which strongly supports S. 103 to authorize the Auburn-Folsom South unit, American River division, Central Valley project, California. I am accompanied by witnesses from the Sacramento and San Joaquin Valleys, the foothill areas served, and from the San Francisco Bay area, who are here in support of S. 103. Also, with your permission, I would like to submit for the record a statement by Edmund G. Brown, Governor of California, resolutions of the California Water Commission, and other documents in support of the authorization.

Witnesses from the Department of the Interior already have explained the project and its needs and benefits, so I will confine myself to telling your committee why California considers the early authorization and construction of this project so vital to our rapidly growing population and economy.

You will recall that at one time it was felt that construction of Auburn Dam and Reservoir could be delayed for 15 years. In recent

years, however, there have been events in California which have completely changed that timetable and, in our view, made immediate construction a necessity.

First, the State has been in the throes of a 3-year drought of almost unprecedented proportions. The California Department of Water Resources February 1 water conditions report shows an average of only 60 percent precipitation and runoff for the great agricultural Central Valley area. We have had, however, some heavy storms during the past week which may alter the long-range picture. It does not, however, change the fact that more storage and regulations are needed.

Unless nature reverses itself and precipitation for the remainder of this year is 200 percent of normal, California agriculture is in for real trouble. Even at this late stage of the winter, most of our reservoirs are less than half full and the snowpack is well below normal. There is a pressing need for more water storage.

Second, the capital city of California, Sacramento, a community of some 500,000 within the confines of the metropolitan area, needs additional flood control.

When Folsom Reservoir on the American River, built by the U.S. Army Corps of Engineers, was designed more than a decade ago, it would have readily stopped any flood of record to that point. Within 3 months of its completion, however, when it contained only a tenth of its water storage capacity, a flood of proportions only dreamed of struck California.

Folsom Reservoir filled in 4 days and, had the storm continued another 24 hours, the city of Sacramento would have been inundated by the record flow. Auburn Dam and Reservoir will give complete protection to Sacramento, which will have a population predicted at 1 million within the next decade.

Also, and this is partially related to the current drought, but mainly to population and economic growth, the need for supplemental water for irrigation and industrial and domestic uses is accelerating rapidly. Underground water tables throughout the great Central Valley are falling due to lack of adequate surface supplies. It is significant to note in this connection that deliveries of water from the presently constructed features of the Central Valley project have retarded, but not stopped, the lowering of ground water levels in the project service area.

Now, I would like to discuss two extremely important points concerning the relationship of Auburn-Folsom South unit with projects being built or planned by the State of California and local agencies.

There has been some talk to the effect that with the entry of the State into water project construction with its \$2 billion Feather River and delta diversion project, there is no longer any need for Federal participation in water development in California.

Nothing could be further from the truth.

At the present rate of growth, which shows no signs of lessening, it will require the combined efforts of the Federal Government, the State itself, and local agencies to supply water, power, and flood control to meet the requirements of our growth.

The great undertaking by the State is primarily a municipal and industrial water project, serving the vast urban areas of southern California and the San Francisco Bay area, as well as some agricul-

tural water in the central valleys and some mountain areas. It does not have the capacity to meet anywhere near the full agricultural requirements of the State.

Californians have been told many times by Congress that the Federal Government cannot supply all of the State's water demands, and that the local people must do something for themselves.

We have long recognized this principle, and we think that our record of self-help is better than any of the other States. We have a long record of cooperating with the Corps of Engineers on flood control projects, paying an average of more than 20 percent of the total costs. The State-Federal partnership on the San Luis Reservoir and related facilities is a milestone in State-Federal relationships.

We have underwritten the conservation costs of Black Butte and New Hogan Reservoirs, also a first in this type of cooperation.

Our State legislature has authorized payment of one-third of the costs of the recently authorized Sacramento River bank protection project.

Our scores of local agencies have expended, over the years, more than \$5 billion in local water development.

We submit that California has done more than its share of supplying its water needs. Still, the fact remains that our needs are outstripping our supplies, and that Federal participation is needed more than ever to close this gap.

The second point is that there are districts which, having been formed especially for this purpose, are ready, willing, and able to contract for water from the project. Most of them are represented here and will testify as to this point, as well as to their need of supplemental water.

There are many other points I could make, but these will be discussed in more detail by the various districts and communities having an interest in the benefits of this project.

In summary, Auburn-Folsom South unit is needed now for flood control, for supplemental agricultural water, for municipal and industrial water, for power for pumping, for recreation, and to supplement inflow to the Sacramento-San Joaquin River Delta.

The California Water Commission respectfully but strongly urges that your committee approve pending legislation authorizing the project.

Senator KUCHEL. Thank you, Mr. Brody.

Mr. BRODY. I have been requested by Governor Brown to appear here in his stead, and I would like, if I may, pursuant to his request, to read his statement into the record.

Senator KUCHEL. Very well.

Mr. BRODY. The Governor asked me first of all to indicate his regrets at not being here to present his views personally and to express his strong support of S. 103, to authorize the Auburn-Folsom South unit, American River Division, Central Valley project, California.

He also asked me to express his gratitude to the committee for its patience and indulgence in hearing so many California witnesses. At the conclusion of the reading of Governor Brown's statement, I would like to make a few observations of my own, Mr. Chairman.

Senator KUCHEL. Very well.

Mr. BRODY. The statement of Gov. Edmund G. Brown is as follows:

The construction and operation of this unit by the United States will constitute a positive forward step in the accomplishment of necessary water resources development in California.

The people of California are faced with problems of a real and seasonal deficiencies in water supply. The State is continually confronted with ever-growing demands for water for domestic, agricultural, municipal, and hydroelectric power purposes to serve the needs of a rapidly expanding population. Concurrently, demands increase for recreational use of water development facilities. The solution of California's water problems and the satisfaction of its needs will require all the means and effort that Federal, State, and local government can concertedly provide. Orderly and economical water resources development can be accomplished only through Federal-State-local cooperation.

Congress has recognized the value of cooperative water resources development in California. One example is the authorized joint Federal-State San Luis project designed to serve both the Central Valley project of the United States and the State water resources development system.

In agreeing to underwrite the conservation storage costs of the Black Butte and New Hogan flood control projects, the State made expeditious construction of those projects by the United States possible.

In a historic agreement entered into in May of 1960, the Bureau of Reclamation and the State department of water resources provided for coordinated operation of the Central Valley project and the State water resources development system. That agreement eliminates the likelihood of litigation over respective water rights priorities as between the two great water conservation and distribution systems, and facilitates the distribution of water to the areas throughout the State respectively served by each. Additional benefits accrue from the availability of greater amounts of conserved water and hydroelectric power than would be available under independent operation.

S. 103, the bill presently before you, would provide for necessary water resources development on the American River in an equally effective but more traditional manner. The authorization of the Auburn-Folsom South unit as an integral part of the Central Valley project will maximize the water and power supply benefits which are obtainable through coordination with other units of the projects.

We have reviewed the Federal reports on the feasibility of the Auburn-Folsom South unit and have conveyed to the Secretary of the Interior the recommendations of the State that this unit be authorized for construction by the U.S. Bureau of Reclamation.

In further support of the Auburn-Folsom South unit, I would like to discuss the urgent need for the unit as a part of the Central Valley project and how the unit is completely in conformance with the State's plan for the development of its water resources.

The proposed unit will provide badly needed flood control, provide water to lands in the Upper American River Basin and to the Central Valley below, enhance recreational opportunities, and generate electricity to satisfy the rapidly expanding needs of California.

There is no question of the urgent need for the new water supplies that will be made available by the Auburn-Folsom South unit. California has experienced three extremely dry years in a row, and this year was the start of a fourth. We are thankful that recent storms have materially aided our situation. It should be emphasized, however, that we have fallen behind in our average annual precipitation, and that losses in ground water and reservoir storage cannot be made up in 1 year.

The need for additional water for agricultural, industrial, and domestic purposes to provide for our exploding increase in population is of deep concern. Because of a lack of adequately developed surface supplies, ground-water levels of the Central Valley are dropping at an alarming rate.

The need for additional flood protection to Sacramento, the booming capital city of California with a total population within its urban area of well over half a million, has been adequately demonstrated in recent years. Folsom Reservoir on the lower American River was completed by the Corps of Engineers in 1954. Within 3 months' time following its completion, and before any significant storage in the reservoir had taken place, a torrential storm drenched the American River Basin. It was only because the storm struck at a time when

this reservoir was nearly empty that the city of Sacramento was saved from inundation. This fortunate set of circumstances may not recur the next time.

The Foresthill Divide feature of the Auburn-Folsom South unit will provide water to a service area where present inadequate water supplies have prevented municipal and industrial expansion. Potential growth of this area has been forestalled because water service could not be provided from existing sources.

The Folsom-Malby feature will supply water to a rapidly increasing urbanizing area located adjacent to Sacramento and to the huge Aerojet-General Corp. and to Folsom Lake. In this area there are substantial new requirements for water supplies for municipal and industrial purposes.

Auburn Reservoir will substantially increase the yield of water from the American River watershed for service to the service area of the Folsom South Canal. Agreement for the utilization of the remaining unregulated water of the American River Basin has been reached by the Placer County Water Agency and the Bureau of Reclamation. Under this agreement, water will be diverted from the reservoir for use in the west part of Placer County.

The location of Auburn Reservoir, adjacent to the Sacramento metropolitan area, and its stabilizing effect on the future operation of Folsom Reservoir, immediately downstream, will enhance the heavy recreational use currently experienced and will add materially to the enjoyment of the residents of California. Last year there were 2 million visitors at Folsom Lake. As our population grows, we will need more recreational areas.

Hydroelectric energy generated from the operation of Auburn Reservoir will assist in meeting the rapidly expanding energy needs of central California. In fact, the State of California has made formal application for Central Valley project power for pumping purposes in connection with the \$2 billion State water facilities.

Finally, the Folsom South Canal, in addition to conveying water to the severely water-deficient Folsom South service area, can serve as the initial conveyance feature of the Bureau of Reclamation's proposed East Side project. This project when developed will be of inestimable value in providing for the severely deficient present and future needs of the east side of the San Joaquin Valley.

The proposed legislation as presently drafted appears aptly drawn to accomplish the fulfillment of Federal responsibilities, and the satisfaction of water supply, power, and local and statewide recreational needs which the unit has been planned to provide. It does this in accordance with the general and coordinated plan for water development in California which gives direction and consistency to the combined efforts of the United States, the State of California, and local public agencies and organizations to provide the necessary lifeblood for continuing the economic growth and development of California and the Nation.

Mr. Chairman, that completes Governor Brown's statement.

I would like to make a few observations of my own. Before I do, there are some organizations which had asked that I indicate their support of the bill itself, which would not be able to have representation here today. The proposed Raisin City Water District has asked to indicate its support of the bill. I have before me a statement I understand which has been furnished to the committee staff of Mr. John McFarland, general manager of the East Bay Municipal Utility District; I also have an expression of support of the Westlands Water District in the Central Valley.

Just one final statement. In connection with Senator Allott's questions this morning with regard to the capacity of this initial unit, I shall only point out that there are, I should judge, 30 witnesses sitting behind me here who reside in and have agricultural interests in the area south of the terminus of this initial unit which, if the additional facilities were in existence today, would be prepared to contract for the much-needed water supplies. So that we know that the need is there and that it will exist in the future, and it is good business and good sense to provide this additional capacity at this point in time and effect the considerable savings which will result.

In conclusion, I would like to make my own observation. The fact that Governor Brown has alluded to the rapidly exploding population in California—historically, we have had the matter of local development in California which has been continuing and is continuing to proceed in terms of water development facilities at the rate of investment of about \$150 million a year. The Federal Government, over the years, has been investing a like sum in California. Only recently, within the last couple of years, as many of your committee members are well aware, the State of California has embarked upon a \$2 billion water development program. In addition to that, there is a program of the State of California for loans and grants to local agencies in the amount of \$130 million water resource development facilities. I point this out to indicate that California is also indulging in some self-help in this problem. But it is only through the combined efforts of Federal, State, and local investment in these facilities, none of which can do it alone, that we shall be able to keep pace with the demand for water and the need for water in California.

It is with that in mind that we respectfully urge upon this committee the approval of this legislation.

Thank you very much, Mr. Chairman.

Senator BURDICK. Mr. Brody, I thank you for your fine testimony and I hope you will, in turn, thank the Governor.

Senator KUCHEL?

Senator KUCHEL. I have no questions, except that I think it was good for you to embellish the record by demonstrating, as you have demonstrated, that south of the southern tip of the present proposed project exists a need for water today, so that the manner in which the canal would be built does envision at some future time the opportunity for justification of additional works.

Mr. BRODY. I feel this very strongly, Senator Kuchel.

Senator KUCHEL. Thank you.

Mr. BRODY. I would like to say, Mr. Chairman, we do have a large number of witnesses here today, and we have urged them to make their statements as brief as possible in order not to impose upon the committee.

Senator BURDICK. We appreciate that.

The information that we have now received is that Glenn has landed in the water and they are speeding toward his recovery.

The next group we have here is from Placer County.

I understand that B. W. Cassidy, chairman of the Auburn Dam Committee, is spokesman for the group.

What is your wish? Do you all want to appear together or individually?

STATEMENT OF V. W. CASSIDY, AUBURN, CHAIRMAN OF AUBURN DAM COMMITTEE

Mr. CASSIDY. Mr. Chairman, members of the committee, we have the Placer County delegation here, all of whom have statements to submit for the record.

My name is Bill Cassidy, chairman of the Auburn Dam Committee, and Mr. Gianelli will make a few brief comments on the testimony for the Auburn project.

Senator BURDICK. Have you produced the statements of the others?

Mr. CASSIDY. If they will come forward and bring their statements, I shall introduce them.

Clarence Reeves, city councilman, city of Auburn. At my right, Mr. Bill Gianelli, consulting engineer of the Auburn Dam Committee.

Mrs. Gladys Rohl, Auburn manager, Placer County Chamber of Commerce; Mr. Robert V. Norris, city of Auburn, councilman; Mr. Frank J. Paoli, chairman of the Placer County Water Agency; and J. E. Little, engineer of the Foresthill Divide Public Utility District.

With the Placer County people, we have the engineer, Sanford Karisky, and their attorney, Stan Kronic.

Senator BURDICK. Statements that you or they present will be included in the record.

(The following were submitted:)

STATEMENT OF TERRY ASHFORD, SUPERINTENDENT, AUBURN AREA RECREATION AND PARK DISTRICT

The Auburn Area Recreation and Park District, a public municipality, organized under article I, chapter 3, division 5, Public Resources Code 5780-7587, favors the development of the Auburn Dam. The district feels that a master plan for public use of these facilities is very important. Many areas in California have neglected this master planning of areas and find this a costly mistake at a later time.

The Auburn Recreation District is approximately 100 square miles in area with a represented population of 23,000 people.

A portion of the Auburn Dam will be within this district; therefore, we are very concerned regarding the master planning of this area for the public and will be more than willing to help in any way.

STATEMENT OF ROBERT V. NORRIS, MEMBER, AUBURN CITY COUNCIL, AUBURN, CALIF.

Mr. Chairman and members of the committee, my name is Robert V. Norris. I am vice mayor of the city of Auburn and I am one of three members of the city council appearing before your committee today to represent the people of Auburn, and express local opinion regarding the Auburn-Folsom South unit of the Central Valley project.

Auburn is the county seat of Placer County and is located 33 miles east of Sacramento on Interstate Route 80. The town is perched on the rim of the American River Canyon overlooking the proposed damsite and reservoir.

The history of the town dates from the gold rush of 1848, and has been a trading center for a vast area of Placer, El Dorado, and Nevada Counties since that time.

That Auburn has been cognizant of the necessity for water development for use in the county and other parts of the State has been demonstrated on at least two occasions at the polls when they voted overwhelmingly in favor of the \$1¼ billion State bond issue for water development, and voted nearly 30 to 1 in favor of the \$140 million bond issue to develop the Upper American River project by the Placer County Water Agency.

We, in Auburn, recognize the fact that the development of the vast water resources of California is a task which will take the unlimited efforts of local, State, and National Governments as well as private enterprise.

The people of California and of Placer County are doing their share in this cooperative effort, and therefore we are here today to urge your committee to take the next step in the development of the great Central Valley project and authorize this very important and highly feasible project.

Situated as it is, Auburn stands to benefit by the construction of the project and these benefits will offset the blow to the economy which we have recently experienced due to a disease called pear decline which has taken a serious toll of pear orchards in the area.

While Auburn will not receive any direct benefit from the project, such as water or power, we look forward to increased business activity during and after the construction period, to the recreation benefits which will accrue to the area, and to increased assessed valuation to the city and to the county through development, along the canyon rim, of residential and commercial property.

The Auburn Recreation Park and Parkway District and the county recreation commission stand ready to develop recreation facilities once the project is completed, and the city of Auburn stands ready to bear its share of the burden in providing additional facilities attendant with growth.

The people of Auburn and the surrounding area are vitally concerned with the problem of relocation of facilities which will come with the construction of the project. The two major routes which will be affected are the Foresthill Divide road and State Route 49 into El Dorado County.

It is our belief that 49 should be routed over the top of the dam and the Foresthill Divide road should be relocated as nearly as possible to its present route. These locations are necessary for the transportation of students as well as economic impact upon the community, and in the case of the Foresthill road to allow full development of the divide and insure the widest possible market for the water developed by the Bureau on the divide. The rerouting of State Route 49 has been discussed with the Bureau of Reclamation and we are confident that an equitable solution will be reached.

On behalf of the citizens of Auburn, I want to thank you gentlemen for the time you have granted us in appearing before you today.

STATEMENT OF WILLIAM R. GIANELLI, CONSULTING CIVIL ENGINEER, AUBURN DAM COMMITTEE

Mr. GIANELLI. Mr. Chairman and members of the committee, my name is William R. Gianelli, consulting civil engineer from Sacramento, Calif. I am appearing here today as a member of the Auburn Dam Committee on behalf of our chairman, Mr. William Cassidy, and other members of the committee.

The Auburn Dam Committee was organized in 1956 by a number of persons who were interested in the construction of Auburn Dam at the earliest possible date to provide additional, much-needed, water development and flood control on the American River in the Central Valley of California. At the present time the committee has 29 members who represent cities, counties, agriculture, and business, in a seven-county area which would be greatly benefited by the construction of Auburn Dam-Folsom project. Among the cities represented are Auburn, Roseville, Foresthill, Colfax, Lincoln, Sacramento, Stockton, and Oakland. Counties with representation on the committee are Placer, El Dorado, Sacramento, San Joaquin, Alameda, Santa Clara, and San Benito.

The Auburn Dam Committee was organized as a nonprofit organization in the year following the 1955 disastrous floods in California when it became apparent that additional flood control was vitally needed within the American River Basin of California's Central Valley. It soon thereafter also became apparent that, in addition to providing much-needed flood control, Auburn Dam could function as a multipurpose dam for the benefit of water conservation, recreation, power development, and other incidental purposes. In recognition of the fact that Auburn Reservoir would supply the additional water needed for the Folsom South Canal service area, our association has joined with the potential water users from the Folsom South Canal and is pleased to appear on behalf of the Auburn-Folsom South unit as an additional part of the Central Valley project in California.

We also support, as part of the Auburn Dam-Folsom South Canal project, the Folsom-Malby and Forest Hill Divide features.

I shall not take the time of the committee to go into the rest of the detailed statement, but I did want to point out that most of the witnesses here today will probably be appearing before you and presenting statements in connection with their need for an additional water supply. I would like to touch on something that the Governor referred to in his statement, the much-needed flood control required on the American River.

The American River Basin in California has experienced two record floods in the last 10 years, one in 1950 and again in 1955. In 1950, the area experienced many millions of dollars of damage as a result of the uncontrolled flow of the American River. In 1955, Folsom Dam had just been completed. If it were not for the fact that the reservoir was practically empty, the record flow that occurred in 1955 would not have been contained in the flood control reservation for Folsom Dam. Folsom Dam has a flood control reservation storage space of 412,000 acre-feet. The flood control utilized 670,000 acre-feet of storage space. So you can see, under the normal flood control allocation, if the reservoir had not been practically empty, the existing structure of Folsom Dam would not have taken care of the 1955 flood. With that in mind, the Auburn Dam Reservoir has been designed with an additional 250,000 acre-feet of flood control storage which, when combined with the 400,000 acre-feet of storage space in Folsom Reservoir, we believe will adequately handle the historic floods of record.

I just want to emphasize that there is a vital need in the growing communities in the American River Basin for flood control. We feel the Auburn-Folsom flood control project will supply that additional assistance.

We thank you for the opportunity to appear here today.

Senator BURDICK. Thank you.

(The complete statement by Mr. Gianelli is as follows:)

STATEMENT OF WILLIAM R. GIANELLI, MEMBER, AUBURN DAM COMMITTEE

Mr. Chairman and members of the committee, my name is William R. Gianelli, consulting civil engineer, from Sacramento, Calif. I am appearing here today as a member of the Auburn Dam Committee on behalf of our chairman, Mr. William Cassidy, and other members of the committee.

The Auburn Dam Committee was organized in 1956 by a number of persons who were interested in the construction of Auburn Dam at the earliest possible date to provide additional, much-needed water development and flood control on the American River in the Central Valley of California. At the present time the committee has 29 members who represent cities, counties, agriculture, and business in a 7-county area which would be greatly benefited by the construction of Auburn Dam-Folsom project. Among the cities represented are Auburn, Roseville, Foresthill, Colfax, Lincoln, Sacramento, Stockton, and Oakland. Counties with representation on the committee are Placer, El Dorado, Sacramento, San Joaquin, Alameda, Santa Clara, and San Benito.

The Auburn Dam Committee was organized as a nonprofit organization in the year following the 1955 disastrous floods in California when it became apparent that additional flood control was vitally needed within the American River Basin of California's Central Valley. It soon thereafter also became apparent that, in addition to providing much-needed flood control, Auburn Dam could function as a multipurpose dam for the benefit of water conservation, recreation, power development, and other incidental purposes. In recognition of the fact that Auburn Reservoir would supply the additional water needed for the Folsom South Canal service area, our association has joined with the potential water

users from the Folsom South Canal and is pleased to appear on behalf of the Auburn-Folsom South unit as an additional part of the Central Valley project in California. We also support, as part of the Auburn Dam-Folsom South Canal project, the Folsom-Malby and Forest Hill Divide features.

There are a number of representatives in our association who are vitally concerned with the additional flood control which will be provided by the construction of Auburn Dam and Reservoir. The reservoir will provide an additional 250,000 acre-feet of storage which the U.S. Army Corps of Engineers indicates is necessary to control floods and prevent damage to the highly developed areas along the lower reaches of the American River in the highly populated Sacramento metropolitan area. It is expected that this flood control storage space will also reduce flood control damages within the Sacramento-San Joaquin Delta area. The 250,000 acre-feet of flood control storage in Auburn Reservoir would, when combined with Folsom Reservoir, control the floods on the American River to 115,000 cubic feet per second, the safe channel capacity of the downstream levees.

The Corps of Engineers has estimated annual flood damage of almost one-half million dollars in the Sacramento metropolitan area which would be reduced to almost \$100,000 following completion of Auburn Dam and Reservoir. Sacramento County had an increase in population for the 7-year period 1950 to 1957 of 44 percent. As the population continues to increase the annual savings in flood damage will be even greater than estimated by the Corps of Engineers. Following the passage of the flood season, the Auburn Reservoir flood control space can and will be used for conservation storage.

Auburn Reservoir will provide an additional 265,000 acre-feet of water for irrigation, municipal, and industrial uses, primarily in the Folsom South Canal service area where ground-water levels in some places have been dropping several feet per year over the last few years. In addition, the Foresthill Divide and Malby features will provide much needed water supplies for western Placer and El Dorado Counties. Without further water development these areas will have their future growth seriously curtailed.

By integration of the Auburn Dam and Reservoir with the Federal Central Valley project, these water supplies can assist at least on an interim basis in meeting Federal and State water requirements out of the Sacramento-San Joaquin Delta. At the present time the Federal Central Valley project pumps large quantities of water out of the delta for its Delta-Mendota Canal requirements. Additional large amounts will be required in the delta to meet the demands of the Federal-San Luis project currently under construction and to meet the State's demands for its San Joaquin Valley-southern California aqueduct system. The State has also contracted with the United States for an interim supply out of the delta to meet the requirements of its South Bay aqueduct which will be serving the east and south San Francisco Bay area. In addition, release of this water downstream will provide benefits for navigation and salinity control in the Sacramento-San Joaquin Delta.

Auburn Reservoir is of vital importance to the Metropolitan Sacramento area as a recreational facility. This may best be illustrated by the benefits which have been derived in the area as a result of the construction of Folsom Reservoir.

It has been conservatively estimated by the National Park Service that Auburn Reservoir would attract some 400,000 visitor-days of use annually in addition to present use on the river, and that the benefits created by this would amount to \$640,000 annually. Both the National Park Service and the U.S. Fish and Wildlife Service have made studies of the potential of Auburn Reservoir as a means of enhancing recreation development and preserving and propagation of fish and wildlife resources.

The Auburn unit will be operated with full coordination of both water releases and power output with other units of the Central Valley project. Reregulations of Auburn Reservoir and Folsom Reservoir will permit considerable flexibility in the operation of Folsom powerplant and thereby justify the installation of 155,000 kilowatts at Auburn powerhouse with an estimated average increased system generation of 532 million kilowatt-hours a year. An important phase of making large amounts of power available is the ever-increasing need for commercial power in the area and pumping requirements for use in connection with irrigation and other water-conservation facilities.

The general power market for the Auburn unit is northern California and in particular the counties of El Dorado, Placer, San Joaquin, and Sacramento. The Sacramento Municipal Utility District energy sales and peak demand more than

doubled during the first 7 years of the 1950's. This growth is indicative of the tremendous power demands in the general power market area of the Auburn project. Prior to 1940 in northern California about 65 percent of the total installed capacity was in hydroelectric plants which were being used to supply base powerloads. By the mid-1950's the ratio had changed to predominantly steam-electric with hydro being used to meet peaking demands. With the limited hydroelectric potentials available it is expected that hydroelectric power will be in great demand for meeting the peakload requirements. Further, it is expected that as nuclear power becomes available it will place ever increasing demands on the limited hydroelectric power developments.

Within the last month, agreement has been reached between the Bureau of Reclamation and the Placer County Water Agency concerning the operation of that agency's project so that it will not interfere with the Auburn Dam-Folsom South Canal project. In addition, that agency, which proposes a water development project above Auburn Reservoir, will contract for a supplemental water supply out of Auburn Reservoir.

In summary, the Auburn Dam Committee and the agencies which it represents will be benefited by all of the multipurpose uses of the Auburn Dam-Folsom South Canal project. We urge your committee to recommend the early authorization of this vitally needed project as set forth in the reports before you.

It has been a pleasure to appear before your committee today, and should you have any questions with respect to our organization or its views on the Auburn Dam-Folsom South Canal project we will be pleased to answer them to the best of our ability.

Senator BURDICK. Mrs. Rohl.

STATEMENT OF MRS. GLADYS ROHL, MANAGER, PLACER COUNTY CHAMBER OF COMMERCE

Mrs. ROHL. Mr. Chairman and members of the committee, I am Mrs. Gladys Rohl, manager of the Placer County Chamber of Commerce and member of the Auburn Area Chamber of Commerce. I am also speaking on behalf of the Auburn Recreation District and the Placer County Recreation Commission. I have a prepared statement, and I shall just add a couple of comments.

It has been brought out previously that the recreation facilities in Folsom Lake are now operating about up to their maximum capacity. Folsom Dam was dedicated in 1956. By 1958, there were 1,300,000 visitor-days at Folsom. By 1960, there were 2,400,000 visitor-days. It is the feeling of the local recreation groups that, because of the actual physical shape of the proposed reservoir at Auburn, it would provide far above average facilities for water sports.

I would also like to bring to your attention that the same local recreation groups have stated their willingness to assume their responsibility where the operation of recreation facilities which are proposed in connection with the Auburn Dam are concerned.

Attached to my statement are letters from the Auburn Recreation District and the Placer County Recreation Commission in support of this thing.

We feel very strongly that the original estimates made on the proposed recreational use of Auburn Dam are probably far below what will actually occur. They were based on population figures estimated, projected to 1975, made about 3 years ago. That projected a population in the four counties of about a quarter of a million. This month, the Stanford Research Institute has released figures increasing that projected population to well over a million.

In 1946, the National Park Service made a study of the potential recreation facilities at Folsom Lake. They projected an estimated

annual visitor-days of 110,000. In 1960, that attendance was 220 times more than the original estimate. We feel that an additional recreation study possibly would be wise before this project is completed, in view of the past experience.

I wish to thank you in behalf of the Auburn chamber and the Placer County chamber for the privilege of appearing here.

(The complete statement of Mrs. Rohl is as follows:)

STATEMENT OF MRS. GLADYS ROHL, MANAGER, PLACER COUNTY
CHAMBER OF COMMERCE

Mr. Chairman and members of the committee, my name is Mrs. Gladys Rohl, and I am appearing here today as the manager of the Placer County chamber on behalf of the board of directors and members of the chamber.

The Placer County Chamber of Commerce has given strong support to all water-development projects in our area and we wish at this time to present four important reasons why the Auburn-Folsom South unit of the California Central Valley project will be of tremendous benefit to Placer County.

First, we believe that this project will greatly assist the Placer County Water Agency's upper American River project by eliminating the need of pumping to divert water to western Placer County for future industrial, commercial, and residential development, as well as supplemental water for agriculture. It is estimated that this will result in a direct saving of approximately \$6 million over a period of 50 years.

Secondly, we wish to point out that recreation is a major industry in Placer County. A study completed in 1960 showed that 92 percent of the 1-day visitors in our recreation area came from outside of our county. We believe that the reservoir created by the Auburn Dam project would provide excellent recreational facilities which would attract visitors from a wide area. Some indication of the use which would be made of this reservoir is shown in the present attendance at nearby Folsom Lake, dedicated in 1956, which increased from 1,300,000 visitor-days in 1958 to over 2,400,000 in 1960.

Studies made in connection with the California outdoor recreation plan which was completed in 1960 revealed that over 60 percent of the recreation tabulated centered about water sports. Boaters in particular have made extensive use of the Reservoirs in the State where facilities are available. Advantages of the long, narrow type of reservoir which would be created by Auburn Dam are pointed up in this study which also showed that offshore waters in large lakes are not used intensively by boaters, water skiers, and swimmers because of rough water. This is substantiated by local boating groups who feel that smoother water, and few mudflats or sandbars because of the steep terrain at the proposed Auburn Reservoir, would provide very desirable conditions for boating and related water sports. Local law-enforcement officers have stated that policing a reservoir of this type to maintain safety regulations could be done much more effectively than on wide bodies of water such as Lake Tahoe or Folsom Lake which are also under their jurisdiction.

Recreation groups in this area agree that if docking and parking facilities are installed in the areas designated in the recommendation of the National Park Service, a large number of water-sport enthusiasts could be accommodated at the Auburn Reservoir. They believe that the many small picnic sites, accessible only by boat, which could be developed at a minimum cost in the more scenic areas around the reservoir would have a particular attraction for water-sports enthusiasts.

These same local groups have indicated their willingness to assume responsibility where the recreation facilities proposed in connection with the Auburn Dam are concerned. Letters from the Placer County Recreation Commission and the Auburn Recreation District stating their interest are submitted as a part of this report. Both of these organizations are active in providing recreational facilities in this area. For a number of years the Auburn Recreation District has leased the boating area at Lake Clementine from the U.S. Army Engineers. They in turn have subleased it to the Auburn Boat Club, which has maintained and greatly increased the docking facilities. This area, which will be eliminated if the Auburn Dam is constructed, now averages about 50,000 visitor-days annually.

The Placer County Recreation Commission has acquired several properties at Lake Tahoe which are now being developed. They have also provided sanitary facilities at many locations along the rivers within the county. This commission has already joined forces with the El Dorado County Recreation Commission in a study of the potential recreation areas which would be created in both counties by the Auburn Dam as explained in their attached letter.

Additional recreational facilities could be provided at the proposed Sugar Pine Reservoir on the Foresthill Divide. Forest Service officials state that there are at least two very desirable national forest campground sites in the area which could accommodate about 12,000 campers annually. A very small, and much less accessible Forest Service reservoir campground in the same area with facilities for only six campsites is usually crowded far above its capacity with as many as 350 campers present on peak days. In addition, there are private properties adjacent to the Sugar Pine site which would be suitable for development as resort and summer home areas. This could add substantially to the assessed valuation in the Foresthill Divide which is largely within the national forest.

The recreation report on the proposed Auburn project which was prepared by the National Park Service estimated that 400,000 annual-visitor-days would be spent in the area in the early postconstruction period, with 1 million annual-visitor-days if full development of the recreational features were completed.

At the time this report was prepared, based on 1959 population figures, it was estimated that by 1975 there would be a total population of 768,000 in the 4 counties closest to the Auburn Dam—Sacramento, El Dorado, Placer, and Nevada. Figures released this month by Stanford Research Institute now project the combined population of these 4 counties at 1,066,000 by 1975—an increase of nearly 300,000 since the original estimate was made. This report also shows that the Sacramento metropolitan area continues to be the second most rapidly growing area in California. This continued growth in population within a 45-mile radius of the project, plus the proximity of heavily traveled Interstate Highway 80, indicate that there may be an even higher recreation use of the Auburn Reservoir than originally estimated.

A study of the recreation potential of Folsom Lake which was made by the National Park Service in March 1946 predicted 110,600 annual-visitor-days. Present attendance at Folsom Lake is now more than 220 times the original forecast.

Because of the above factors, and because of the economic importance of recreation to this area, we believe that additional studies on the recreational potential of this project should be made by the National Park Service. We also believe that it is important that such studies include the recreation potential in the Foresthill Divide phase of the project which was not included in the original study.

A third item of importance is the residential and commercial development which can be expected along the rim of the canyon overlooking the reservoir. When construction was begun on Folsom Dam most of the properties surrounding the lake were undeveloped lands of little value. The commercial and residential developments which have taken place in that area in recent years are now adding materially to the income of Placer County.

With nearly one-third of the entire acreage of Placer County in Federal ownership, it is of the utmost importance that private lands be developed to provide the maximum assessed valuation to the county. The development of the rim of the American River Canyon into desirable homesites, plus the industrial, commercial, and residential growth which can be anticipated in the western portion of the county as a result of the supplemental water the project would provide can materially increase the tax base of Placer County.

The fourth point we wish to stress is the benefit which would occur during the 4- to 5-year construction period. According to the California State Department of Employment, approximately 2,000 workers were employed during the construction of Folsom Dam. About 10 percent of these people moved into the immediate Folsom area, with the remainder commuting from various parts of Placer, El Dorado, and Sacramento Counties. It is anticipated that a similar situation would occur during the construction of Auburn Dam, with the result that the employment would benefit the entire area without creating serious problems with schools or other public facilities in any one community. We might also point out that with the completion of construction on U.S. Interstate Highway 80 in this area within the next 4 or 5 years, there will be a definite need for additional employment for construction workers already living in Placer County.

It is our sincere hope that your committee will see fit to recommend the authorization of this project. I wish to thank you for the opportunity of appearing before you, and if you have any questions I will try to answer them.

PLACER COUNTY CHAMBER OF COMMERCE.

GENTLEMEN: In connection with the forthcoming congressional hearings on the Auburn Dam-Folsom South unit of the Central Valley project, we submit the following. Initial steps have been taken to establish a Placer-El Dorado Bicity Recreation and Park Commission as recommended in the National Park Service report to the Bureau of Reclamation on "Recreation Potentialities," page 47, dated March 1960.

At present there is a joint committee from the recreation commission of the two counties. Preliminary maps have been prepared for recommending land acquisition. As soon as the project is approved, steps will be taken to form an operating bicounty agency to actively promote development of recreational facilities and provide means for operation and maintenance.

While this project is not primarily a recreation project, we invite attention to the fact that in all similar projects in this region, particularly Folsom Lake, the recreational use upon completion has far exceeded all predictions. Interstate Highway 80 parallels this lake for approximately 20 miles at a distance of only 2 to 4 miles, therefore it is reasonable to expect that this same situation will be the case with Auburn Reservoir.

This commission pledges itself to do everything within its power to see the perimeter of this lake be developed to its fullest recreation potential.

We therefore request that this statement be made a part of the recommendation of the Placer County Chamber of Commerce which will be presented to the respective congressional committees hearing testimony on the Auburn-Folsom South unit of the Central Valley project.

CARL PALMER,

Chairman, Placer County Recreation Commission.

Mr. CASSIDY. The next witness we have is Mr. Little, representing the Foresthill Divide Public Utility District.

STATEMENT OF J. E. LITTLE, ENGINEER, FORESTHILL DIVIDE
PUBLIC UTILITY DISTRICT

Mr. LITTLE. Mr. Chairman and members of the committee, I am J. E. Little, a registered civil engineer and county engineer for Placer County. I have prepared a statement and have very little further comment to make, except that I would like to stress that Foresthill has already reached a point of water starvation. It cannot grow any more as conditions are at the present time, and the local water supply that could be reached with the means available to the populous there have all been utilized.

The people there are back of this project 100 percent. They are presently paying for water slightly in excess of \$300 an acre-foot, which seems like an unbelievable rate. It amounts, actually, to \$1 and almost 9 cents per thousand gallons, which is practically the equivalent of reclamation of sea water.

I think there is nothing else I can add to that that is not covered in the statement that I have submitted.

Thank you, Mr. Chairman.

Senator BURDICK. Thank you.

(The complete statement by Mr. Little is as follows:).

STATEMENT OF J. E. LITTLE, MEMBER OF THE AUBURN DAM COMMITTEE

Mr. Chairman and members of the committee, my name is J. E. Little, registered civil engineer and county engineer for the county of Placer. I am a member of the Auburn Dam Committee and a representative of the Foresthill Divide; therefore, the remarks in my testimony will be confined to the Foresthill Divide project of the Auburn-Folsom South unit of the Central Valley project.

FORESTHILL DIVIDE AREA

The Foresthill Divide area has been well described in the report of the Bureau of Reclamation on the Auburn-Folsom South unit Central Valley project, California. This statement concerns that part of the divide lying westerly and below the easterly limits of the proposed Foresthill Divide unit of the project. This area includes the town of Foresthill with a population presently estimated at 900, and a total population on the divide estimated at 1,200.

Climate, and the soil which is suitable for irrigated crops, are ideal for the propagation of orchards and other crops, none of which are under Government support or in excess supply. Reclamation Bureau reports state that within the area of the proposed project lie 1,340 acres of land suitable for irrigated crops. Irrigable lands westerly and below the proposed project have been variously estimated to be from 5,000 to 15,000 acres. It would seem that the latter figure is more realistic, and while this latter area is not presently under consideration in the project, it is well to remember that the potential for future expansion exists.

AREA RESOURCES

Gold mining, which at one time was the principal industry of the area, is no longer of major importance. The economy of the district today is principally supported by the lumber industry. Tributary to Foresthill is one of the finest remaining stands of pine timber in the West. The estimated sustained yield production from this area is 45 million feet of lumber per year.

Cattle raising is practiced on a limited scale, and while no irrigated crops are commercially produced, the agricultural land within the area is an important resource.

If water was made available for irrigation, the agricultural land would become a far more important resource and its development would serve to round out the economy of the area.

PRESENT DEVELOPMENT

There are two lumber operations close to the town of Foresthill which are the backbone of the present economy of the divide. These mills employ approximately 350 men and have an annual payroll estimated at \$2 million.

Commercial agriculture within the proposed project area has made a beginning with the planting of about 66 acres of walnuts, in some cases interplanted with apples. These plantings are well financed and directed by men of top ability and knowledge in horticulture. They propose to progressively increase their plantings of these orchard crops to a total of 590 acres of walnuts.

WATER DEVELOPMENT

In the old days several ditches brought water from the high country to the Foresthill area for gold mining. No storage was provided and the use of water was limited to the months of the year when runoff waters were available. These ditches are completely inoperative today.

The Foresthill Public Utility District bonded itself to the limit and completed a water system in the town of Foresthill. This system cost \$215,000, and began water service in 1954 with an initial 140 connections. In July 1961 there were 223 connections.

The water supply of the public utility district depends on springs during the dry season. No storage is available except the Foresthill Public Utility District reservoir of approximately 750,000 gallons' capacity. In the 1959-60 fiscal year, the public utility district served to its customers a total of 90 acre-feet of water, of which 14.1 acre-feet went to industrial use. During the dry months

of the year there was a water shortage, and it was necessary to curtail deliveries to both domestic and industrial users. No water was available for irrigation. This shortage during summer months is chronic.

The sawmills have each developed a limited supply from springs which are estimated to produce about 90 acre-feet per year. Definite figures are not available.

Spring sources produce an estimated 34 acre-feet of water per year in the area west of Foresthill outside of the present public utility district boundaries. Definite figures are not available.

Other than the production of a few wells of very limited capacity, it would appear that the total usable supply of water in the area is approximately 214 acre-feet annually. From these same sources, it may be that a small additional amount could be had if storage were available to conserve water during the months of increased flow.

WATER SUMMARY

Water service in Foresthill is at a starvation level. At present rate of supply of available water, the public utility district cannot take on additional customers and must, through cooperation with domestic users, curtail their supply in order to supply supplemental water to the lumber mills which are the backbone of the local economy.

The lumber mills, even with supplemental water as above, are restricted in their operations and cannot enlarge their production, or plan to make greater utilization of the wood they haul in from the forest for lack of water.

Each mill is today air drying many millions of feet of lumber which might better be kiln dried because water is not available with which to operate the increased dry kiln capacity needed to correct and stabilize the operation.

There is no water for irrigation, so irrigated farming cannot be considered.

It is to be expected that the impact of the construction of the Upper American River project of the Placer County Water Agency will aggravate these conditions.

FUTURE DEVELOPMENT

The future development of Foresthill and the surrounding area depends almost entirely upon the development and availability of adequate supplies of water. The Foresthill Divide unit of the Auburn-Folsom South unit, Central Valley project, would accomplish this.

The Foresthill Public Utility District would then be in position to serve all customers requesting service, and the urban area may be expected to grow and increase in population with suburban-type developments which are sure to come with the population explosion which is now evident in the State of California.

The lumber mills in Foresthill will be able to increase their productions, produce better dry lumber, and expand their facilities for increased utilization and diversification of their products as is being done in other lumber production centers.

The horticulturists who are planting the above-mentioned orchards are of the opinion that under irrigation they could expect to harvest a yield three times greater than could be obtained under dryfarming methods. It would seem that with water available, the area which the Bureau engineers have estimated to be suitable for irrigated agriculture, would soon be utilized.

Some increase in the number of cattle sent to market can be expected if it is practical, considering the water costs involved, to raise irrigated pasture. All of these things will contribute to a well-rounded community development which will increase the production and economy of the county of Placer and add to its assessed valuation. It seems more than likely that if this project were already started, it would not be long before the water production of the proposed project would be fully utilized and studies would be necessary for future enlargement of the system.

The people of the Foresthill area passed their public utility district bond issue with a very heavy majority. They passed the \$140 million bond issue for construction of the Upper American River project of the Placer County Water Agency with more than a 99-percent affirmative vote. They are water conscious.

These water-conscious people of Foresthill thank you for your consideration and for the time you have allowed for this presentation.

Senator BURDICK. Off the record.
(Discussion off the record.)

Mr. CASSIDY. Mr. Chairman, that completes the testimony as far as the Auburn Dam is concerned.

Mr. Paoli represents the Placer County Water Agency. I did leave out one very important person who is back here in Washington with the Placer County Water Agency. He is a consulting engineer for the Placer agency, Mr. Harvey Banks, former director of water resources in California.

STATEMENT OF FRANK J. PAOLI, CHAIRMAN, PLACER COUNTY WATER AGENCY

Mr. PAOLI. Mr. Chairman and members of the committee, my name is Frank J. Paoli. I am chairman of the board of directors of the Placer County Water Agency. The Placer County Water Agency has been working hard since its creation in 1957 to develop the water resources of Placer County. At the present time we are preparing to construct a large project of our own, our middle fork American River project. This project will conserve water for our county's use, will generate power, will assist in controlling floods, and will open vast new areas for the recreational use of the people of the Nation. Our middle fork project will be built upstream from the Auburn Dam and Reservoir proposed in S. 103 (or H.R. 38 and H.R. 980).

Several months ago our agency entered into discussions with the regional office of the Bureau of Reclamation in Sacramento in an effort to resolve any conflicts which might occur between our project and the Federal Government's existing and future facilities. We also commenced to explore the possibility of our agency obtaining water from the proposed Auburn Reservoir. These discussions with the Bureau have resulted in an agreement between our agency and the regional office of the Bureau. We anticipate that within the next several days, the Secretary will approve the terms of this agreement.

Under the terms of this agreement our agency will purchase up to 117,000 acre-feet of water annually from the Central Valley project. If this amount of water is to be made available to us from the Central Valley project, it is essential that Auburn Dam and Reservoir be constructed. This purchased water will be diverted into western Placer County and it will be in addition to the amounts of water which we will divert from our own project under our own water rights. This additional amount of water to be purchased is necessary if the potential of our county is to be attained.

We are willing to enter into a contract at this time to purchase water and thereby obligate ourselves to help repay our portion of the costs of the works proposed in S. 103 (or H.R. 38 and H.R. 980). We are going forward with the construction of our project. If we are to accomplish the purposes set forth in our agreement with the Bureau, it is essential that Auburn be constructed as soon as possible. Therefore, the board of directors of the Placer County Water Agency urge that your committee give its approval to S. 103 (or H.R. 38 and H.R. 980), and that the Auburn-Folsom South unit be authorized during this session of Congress.

The people of Placer County are doing everything possible to find a solution to their water problems. The efforts we have put forth on our own project, the success we have achieved thus far, and our will-

ingness to obligate ourselves to purchase water to be developed by the Auburn Dam, demonstrate this fact. However, we are not able to solve all of our problems by ourselves. We need your assistance. We, the elected representatives of the people of Placer County, speak for them in saying they support S. 103 (or H.R. 38 and H.R. 980) and urge in the strongest possible way that you authorize the Auburn-Folsom South unit of the Central Valley project as provided for in this bill, and that it be constructed as early as possible.

Mr. Chairman and members of this committee, I thank you for the opportunity to have appeared before you today. I have a prepared formal statement setting forth our views at greater length which I would like to file with you.

I have with me here today from California, Mr. Thomas E. Doyle, a member of our board of directors; Mr. Stanley Kronick, our legal adviser; and Mr. Sanford Koretsky and Harvey O. Banks, our engineering consultant. We are all available to your committee should you have any questions.

I have resolutions with me here supporting the authorization of the project from the city of Roseville, from Colfax, Rockland, Lincoln, and also resolutions from the Roseville Chamber of Commerce and the Colfax Area Chamber of Commerce. I would like to add these to those which are made a part of the record by Senator Engle.

Senator BURDICK. They will be received and printed with the others.

(The complete statement by Mr. Paoli follows:)

STATEMENT OF FRANK J. PAOLI, CHAIRMAN OF THE BOARD OF DIRECTORS OF THE PLACER COUNTY WATER AGENCY OF THE STATE OF CALIFORNIA

Mr. Chairman and members of the committee, my name is Frank J. Paoli. I am the chairman of the board of directors of the Placer County Water Agency. The Placer County Water Agency was created by an act of the Legislature of the State of California in 1957. The boundaries of the Placer County Water Agency are coterminous with those of the county of Placer, and the county board of supervisors serves as the board of directors of the agency. Auburn, Calif., the site of the proposed Auburn Dam, is the county seat of Placer County.

The Placer County Water Agency has continued the work started by the county in 1948 and has diligently proceeded to develop the water resources of Placer County. Soon after the creation of the agency, we hired engineering, financial, and legal consultants to assist us in our efforts to provide Placer County with an adequate supply of water for its present and future needs. In the limited time of our existence, a great deal has been accomplished. We have investigated all means of attaining our objective—the development of a firm adequate supply of water for our county. To that end we have planned and are preparing to build a large project of our own in an effort to assist ourselves. This is our middle fork American River project, for which the voters of Placer County approved a \$140 million revenue bond issue by an astounding 24-to-1 yes vote.

This project, when completed, will consist of a series of dams, reservoirs, powerplants, tunnels, and conduits. The project will conserve water for our county's use, will generate power, will assist in controlling floods, and it will open vast new areas for the recreational use of the people of the Nation.

The final engineering of our project is now being prepared and construction is scheduled to begin in the spring of 1963. The estimated cost of our project is approximately \$125 million. It will be financed by revenue bonds secured by the revenues we will derive from the sale of the hydroelectric energy to be produced by the project. While our project will provide a supply of water for our county's use, it will not provide sufficient water for our full potential development.

Our middle fork American River project will be built upstream from the Auburn Dam and Reservoir proposed in S. 103. Our project, together with existing projects and the Auburn-Folsom South unit, will result in virtually full comprehensive development of the American River Basin.

Several months ago our agency entered into discussions with the regional office of the Bureau of Reclamation in Sacramento, Calif., in an effort to resolve any conflicts that might occur between our project and the Federal Government's existing and future facilities. We also commenced to explore the possibility of the Placer County Water Agency obtaining water from the proposed Auburn Reservoir. These negotiations have been carried on in a spirit of cooperation between the agency and the Bureau. Because of this cooperative attitude and the desire on the part of both parties to obtain the maximum development of the river basin, we were able to conclude a mutually satisfactory agreement.

The general terms of this agreement between our agency and the regional office of the Bureau of Reclamation were finalized only 2 weeks ago. They are contained in the attached joint press release prepared by Mr. Ivan P. Head, regional project development engineer, representing Regional Director H. P. Dugan; Mr. Frank Horne, regional solicitor; and Mr. Stanley W. Kronick, legal counsel for the agency. We anticipate that within the next 10 days the Secretary of the Interior will approve these terms.

Under the terms of this agreement our agency will purchase up to 117,000 acre-feet of water annually from the Central Valley project. If this amount of water is to be made available to us from the Central Valley project, it is essential that Auburn Dam and Reservoir be constructed. This purchased water will be diverted into western Placer County and it will be in addition to the amounts of water which we will divert from our own project under our own water rights. This additional amount of water to be purchased is necessary if the potential of our county is to be attained.

We are willing to enter into a contract at this time to purchase water and thereby obligate ourselves to help repay our portion of the costs of the works proposed in S. 103. We are going forward with the construction of our project. If we are to accomplish the purposes set forth in our agreement with the Bureau, it is essential that the Auburn Dam be constructed as soon as possible. Therefore, the board of directors of the Placer County Water Agency urge that your committee give its approval to S. 103 and that the authorization this bill provides be accomplished during this session of Congress.

We in Placer County feel that the efforts which we have put forth and the progress which we have thus far achieved on our own project, plus our willingness to obligate ourselves to purchase water which must be developed by Auburn Dam and Reservoir, demonstrates that the people of Placer County are doing everything possible to find a solution to their water problems. However, we are not able to solve all of these problems by ourselves. We need your assistance. Our people want water development and they support wholeheartedly all reasonable efforts to achieve it. They are looking forward eagerly to the maximum full development of the American River and we, their elected representatives, speak for them in saying they support S. 103 and urge in the strongest possible way that you authorize the Auburn-Folsom South unit of the Central Valley project as provided for in S. 103, and that it be constructed as early as possible.

When the Auburn-Folsom South unit is authorized, we hope that either Congress or the Department of the Interior will see that the recreational potential of that unit is developed to its maximum for the Nation's benefit. We hope funds will be provided for a series of recreational areas on the American River encompassing the Auburn Reservoir and the reservoirs to be developed by our middle fork American River project. We urge that the Federal Government do all in its power to preserve the historic trails and artifacts in the American River area. When it will be absolutely essential to inundate some of the trails, we urge they be relocated on higher ground.

Mr. Chairman and members of this committee, I thank you for the opportunity to have appeared before you today. Before ending my testimony I want to introduce for the record the other representatives of the Placer County Water Agency who are here with me today. They are: Mr. Thomas E. Doyle of Roseville, Calif., secretary and member of the board of directors of the Placer County Water Agency; Mr. Stanley Kronick, of Kronick, Moskovitz & Vanderlaan of Sacramento, Calif., legal advisers to the Placer County Water Agency; Mr. Sanford Koretsky, of McCreary & Koretsky Engineers of San Francisco, Calif., en-

gineers for the Placer County Water Agency; and Mr. Harvey O. Banks, of Leeds, Hill & Jewett, Inc., of San Francisco, Calif., engineering consultant for the Placer County Water Agency. We are all available to your committee should you have any questions.

JANUARY 30, 1962.

PRESS RELEASE ISSUED BY PLACER COUNTY WATER AGENCY AND THE BUREAU OF RECLAMATION

Frank J. Paoli, chairman of the Board of Directors of the Placer County Water Agency, and H. P. Dugan, regional director of the Bureau of Reclamation, announced today that an agreement has been reached between the agency and the regional office of the Bureau concerning the agency's proposed diversion from the American River under its Middle Fork, American River, project.

Dugan stated that he will forward to Washington the terms of the agreement recommending approval by officials of the Bureau of Reclamation and the Department of the Interior.

Paoli stated that this agreement, which was approved by the board of directors of the agency at a special meeting today, will assure western Placer County sufficient water to meet all its projected needs for at least the next 50 years with the construction of Auburn Dam. The amount of water provided will satisfy the needs of a population of 500,000 persons and the irrigation of at least 30,000 acres of new land.

The broad terms of the agreement will allow the agency, after construction of its Middle Fork, American River project, to divert increasing quantities of water from the American River without charge as the demands grow in western Placer County. These diversions will be made pursuant to water permits to be obtained from the California State Water Rights Board. The agreement will allow the agency to divert up to the following amounts of its water annually without charge:

Years:	Annual diversions without charge (acre-feet)
1967 through 1976	15,000
1977 through 1986	25,000
1987 through 1996	40,000
1997 through 2006	70,000
2007 and thereafter	120,000

In addition to the diversions listed above, the Bureau upon authorization and construction of the Auburn Dam and Reservoir will agree to sell to the agency at Central Valley project rates additional quantities of water when the agency needs them to meet its requirements in the future. The Bureau has agreed to sell to the agency sufficient quantities of water to allow a total maximum diversion under the agency's water permits plus the Bureau's water of up to 237,000 acre-feet in any one year.

Paoli further stated that according to the projected demands for water in western Placer County prepared by the Agency's consultants, this agreement will provide the agency with sufficient water without charge to meet all its demands through the year 1993. At that time the agency will purchase water from the Bureau to supplement its own diversions. In the event that the demands for water in western Placer County increase at a more rapid rate than predicted, Paoli stated that this agreement will allow the agency to purchase supplemental water at an earlier date.

Dugan and Paoli both stated that they were pleased that an agreement had been reached between the two groups who have been negotiating for several months on the very complex problems involving the development and use of American River waters. They hailed this agreement as a demonstration of cooperation by the Federal Government with a local agency to assure the maximum development of the water resources of the river basin. With the construction of the agency's Middle Fork, American River, project and the Bureau's Auburn unit, the American River will closely approach its maximum potential development. Both officials said that they felt that this agreement would guarantee the construction of both the agency's Middle Fork, American River, project and the Bureau's Auburn Dam unit at the very earliest possible dates.

Mr. CASSIDY. Thank you, Mr. Chairman.

Senator BURDICK. Next we have some delegations from El Dorado County.

STATEMENT OF EUGENE A. CHAPPIE, SUPERVISOR, EL DORADO COUNTY, CALIF.

Mr. CHAPPIE. Mr. Chairman and members of the committee, my name is Eugene A. Chappie. I am a member of the Board of Supervisors of El Dorado County, Calif., representing the Georgetown Divide area. It has been my privilege to serve on this board for the past 12 years, during which time water development in and for El Dorado County has been a subject of great concern to me.

Some 114 years ago the discovery of gold focused nationwide attention on that area which is now our county in the State of California. It is a historical fact that the exploitation of our resources in the form of gold mining in California played an important part in the success of the North and the preservation of this great American Union. As a very necessary part of mining operations there initially developed crude means of obtaining a water supply. More intricate and complicated canal systems were later built which form the backbone of present water supply systems in our area. These old canals have served us nobly and well but they have severe limitations and they do not serve the western areas of El Dorado County.

As development has occurred on the floor of the Central Valley of California, there has been increasing need for multipurpose water development on the major streams of the valley, one such stream being the American River. Folsom Dam was constructed in 1955 to conserve waters of the American River. At the time of construction we had very little expectation of utilizing directly any of this water within the county. Nevertheless, we were favorably disposed toward this development and strongly supported its construction. In the comparatively short time since its construction, conditions in western El Dorado County have changed so drastically that we presently anticipate development of a substantial area with water from Folsom Reservoir. At this time an area of some 10,000 acres is being changed from dry rangeland into a planned community called El Dorado Hills. This is but one of several land development programs in El Dorado County obtaining water from Folsom Reservoir.

While the major agricultural service area for water to be developed by the Auburn-Folsom South unit of the Central Valley project is located west and south of El Dorado County on the floor of the valley, development of this additional water will result in direct benefits to our county and will materially assist in providing a solution to our ever-present and growing water problems in the western portion of the county. A major contributing factor to the present lack of development in this area is the nonexistence of a water supply. We cannot overdraw our underground water supplies because we have none. The availability of a water supply to this area, as in the case of Folsom Reservoir, will result in major and substantial development in the county.

If for no other reason, the basic benefits to El Dorado County from water-conservation features of Auburn Dam would be ample reason for our enthusiastic support for this project. Increasingly,

however, benefits from recreation potentials are significant. We have just been through the experience of attempting to assist in bringing order to recreational uses in the Folsom Lake area after construction of this project. The three affected counties—Placer, Sacramento, and El Dorado—have worked together in a tricounty planning commission and with State and Federal entities. Our experience in this case and in the case of furnishing recreation facilities at Sly Park is such that we heartily endorse and support the changes now in effect in recreational planning on this proposed project at Auburn, Sugar Pine, and County Line Reservoirs. Upon completion of construction at Folsom and Sly Park, people came to use and enjoy the area. However, no preparations had been made for these people and there was a period of confusion while local, State, and Federal entities worked to resolve this problem. We are much encouraged by the advanced planning for recreation on features of this unit of the Central Valley project. As you know, present programing of Federal expenditures allocate some \$750,000 at Auburn Reservoir, some \$150,000 at Sugar Pine Reservoir on the Foresthill Divide, and some \$650,000 at County Line Reservoir for minimum basic recreational facilities. With these minimum expenditures in which we concur, it will be possible to have basic preparations made on completion of construction to take care of the hundreds, and yes, even thousands of people who are sure to visit and enjoy these projects. We trust that this will go a long way to eliminate the confusion which we witnessed and lived through on completion of construction at Folsom and Sly Park. El Dorado County is increasing its ability to administer a recreation program. The county now has a recreational commission which administers an annual budget of about \$80,000 which, to a mountain county such as ours, is an appreciable amount.

I should like to dwell for a few moments on one other point, and that is the extent of water-development activity in El Dorado County. As I mentioned earlier, construction at Folsom and Sly Park Dams of the American River division of the Central Valley project was completed in 1955. This provided a substantial amount of supplemental water supply to the county and has been a major factor in the tremendous growth which we have experienced over the past 5 years. But this has not been the only water-development program in the county. The Sacramento Municipal Utility District has its upper American River project—an \$85 to \$100 million hydroelectric development—under construction. The Georgetown Divide Public Utility District has just completed construction of the Stumpy Meadow Reservoir under the Public Law 984 (Small Reclamations Act of 1956) loan program. The Legislature of the State of California created the El Dorado County Water Agency in 1959, which agency is specifically charged with the responsibility of water development at the county level. The agency has recently contracted with the Bureau of Reclamation for a supply of water from Folsom Reservoir to potentially serve a gross area of some 50,000 acres in western El Dorado County adjacent to this reservoir. The agency has also engaged in intensive studies on a matching-fund basis to determine the

remaining feasible project to service El Dorado County. In undertaking this study program the agency has spent or obligated sums in excess of \$160,000 over the next 3 to 4 years. El Dorado County has demonstrated, by contracts and further studies, its intent to not just talk about water problems but to do something about them. We trust that our actions speak louder than our words.

We have had a realistic and most heartening relationship between local, State, and Federal governmental entities in our county as exemplified by Folsom, Sly Park, and Stumpy Meadows developments. We think this is a proper area for cooperative effort and we strongly endorse the program. We are aware of some of the difficult and complex problems which confront you and demand resolution on the national and international scenes. We trust, however, that you will not lose sight of the problems—which are opportunities in disguise—which confront us on a State and local level. You have in the past demonstrated your keen insight into these problems. There is tremendous local support in our county for this proposed project. For the record, may I present you with copies of resolutions from local groups supporting our request for early authorization of construction. On behalf of El Dorado County I would strongly urge and recommend that you give favorable consideration during this session of the Congress to authorization of construction by the U.S. Bureau of Reclamation of the Auburn-Folsom South unit, including the Foresthill Divide and Folsom-Malby features as part of the Central Valley project in California.

That completes my prepared statement, Senator. I would now like to highlight one or two items.

I would like to point out that we are a county of origin, and benefits of this project would be relatively few to us, some small benefits in the Malby area. We are cognizant of the recreational potential in the area. We are pleased with the fact that this project will carry some authorization for basic developments for recreation.

At Folsom, this caused quite a strain on our county treasury, and no provision was made for recreational development. This problem befell our county and the other two adjoining counties, Placer and Sacramento. We have made an effort to solve our own problems through reconnaissance studies by various State and Federal agencies and by numerous developments sponsored and financed locally.

Some of the problems that confront our county are the growth problems again.

Recently, we have approved in the Malby area, generally, a proposed development of some 10,000 acres which will require water from probably Folsom Lake. This will generate approximately 70,000 people in a relatively short period of time.

I would like to call now—first, however, I would like to urge, as a representative of our county, that your committee give favorable consideration, and we urge the construction of the Auburn Dam project.

Senator BURDICK. Thank you, Mr. Chappie. The resolutions you have presented will be placed with the others that have been submitted.

Mr. CHAPPIE. I would like now to introduce Mr. Harry Dunlop.

STATEMENT OF HARRY J. DUNLOP, SECRETARY, EL DORADO COUNTY WATER COMMITTEE

Mr. DUNLOP. Mr. Chairman and members of the committee, my name is Harry Dunlop. I am secretary of the El Dorado County Water Committee and secretary-manager of the El Dorado Irrigation District. It is indeed a privilege and a pleasure to appear before you today regarding the Auburn-Folsom South unit of the Central Valley project in California. While El Dorado County is not in the area of major use of water from this project, a major portion of the water for the project originates as rain and snow in our county. We have more than a passing interest in this development.

Central El Dorado County is presently the beneficiary of a reclamation development—the Sly Park unit of Central Valley project. We are familiar with the change that takes place in a community when a water supply is made available. Growth results—we are presently living in the midst of this growth, but we have not always had this blessing. A short 6 years ago we lived under entirely different conditions. The water shortage in central El Dorado County was so severe that it was necessary for the El Dorado Irrigation District to deny requests for water service, even for single-family residential use. It is most difficult to describe the anguish that is associated with having to tell a person who is full of hope with the prospects of building a home in the country that he cannot do so because there is no water available for his use, or to tell a farmer that he should not plant that additional acreage or orchard or irrigated pasture because you do not have any water for his use. With completion of Sly Park unit of the Central Valley project, this condition does not now prevail in central El Dorado County, but it does prevail in western El Dorado County—a short 15 miles west of the city of Placerville. In the dry summer months there is no water in any quantity in this area. The proposed works to serve the Folsom-Malby area reported on by the Bureau of Reclamation in their supplemental report will provide water service to a gross area of some 6,000 acres in western El Dorado County.

But why is it important that this feature be included in the Auburn-Folsom South unit? May I cite an existing development as one example. There is a veneer plant located along the railroad through this area. This particular location for the plant was chosen because of its strategic position with respect to raw materials, labor market, and transportation, beside other considerations. The plant employs a maximum of 127 people who live in Sacramento, Amador, and El Dorado Counties. The plant represents a capital investment of some three quarters of a million dollars. However, their experience in search for water has been most discouraging. They drilled two wells—two holes in the ground—one 115 feet deep and the other 154 feet deep, and have a total supply of some 20 gallons per hour. Only by the most conservative use of water, by enforcing the strictest of conservation measures, does the water supply permit operation of the plant in the dry summer months. This area is not blessed with an underground water supply as are other areas in the great Central Valley of California. If this plant is to survive, it must have an adequate water supply.

In the last 10 years an industrial complex has developed in eastern Sacramento County which has played an important part in the Nation's defense and space programs. Aerojet-General Corp. and Douglas Aircraft Co. have substantial facilities in this area. Western El Dorado County is within 5 miles of this complex but has had no development partly because of the complete absence of an adequate water supply.

However, this is not the only need involved. People are coming into El Dorado County in great numbers. Much as some oldtimers might like to put a stop to this virtual invasion, we cannot do so. About a century ago the Indians attempted to stop the westward migration; they were unsuccessful in spite of their bows and arrows. The population of El Dorado County has almost doubled in 10 years (16,207—1950 census to 29,390—1960 census). While much of this increase has been concentrated in the Lake Tahoe area, western El Dorado County is just now beginning to feel the impact of population growth resulting from development in the greater Sacramento area. Some studies and projections show El Dorado population doubling again by 1970 with a major portion of this growth occurring in western El Dorado County. To serve these people there must be water. It will take several years, perhaps 5 to 10 years, to build this project and place it in operation. If construction were to start immediately it would not be too soon.

There are other indications of growth which point up changes that are taking place in our county. The California State Board of Equalization reported that El Dorado County's continued growth and economic expansion was reflected by a 37-percent increase in taxable business during the first quarter of 1960, which was the second highest rate of increase in the State at that time. In January 1962 the State board of equalization reported that taxable transactions in the 25 northernmost counties in the State, which include El Dorado County, increased by 6.5 percent, which was half again as much as the average statewide gain. Private utility companies serving the county have made substantial investments in plant to meet our growing demands. The Pacific Telephone & Telegraph Co. has spent some \$3.5 million in plant since 1957, while the Pacific Gas & Electric Co. in the last two issues of "Market Outlook" has emphasized the dynamic forces at work placing El Dorado County among the 5 top counties in percentage growth within its 47-county service area in California.

Local special districts as well as the county have been active over the years in attempting to solve our water problems. The El Dorado Irrigation District for some 35 years exhausted every avenue of self-help and at the point of despair turned to the Bureau of Reclamation for assistance. Studies were conducted and with the very capable and able assistance of Senator Clair Engle, then Congressman representing our area, the Sly Park Unit of Central Valley project was authorized and built. With authorization of this project there was pioneered a new concept in water development which has since been applied to other more recently authorized projects. This new concept suggested that benefits should accrue to areas located upstream from a multipurpose project as well as to areas downstream. We believe this concept is both reasonable and equitable. It appears to us that nature has decreed the interdependence of these two areas for

there would be no water for downstream users if it did not initially fall in upstream areas.

I would be remiss in discharging my responsibilities if I failed to mention the continuing effort being made by the Georgetown Divide Public Utility District, Southside County Water District, Pollock Pines-Fresh Pond Public Utility District, El Dorado Hills County Water District, as well as the private water companies, each in their attempt to solve water problems in their respective areas in El Dorado County. Knowing the difficulties associated with a water-development project in our county, they join me in urging that you give every consideration to early authorization of construction of this unit of Central Valley project.

We are not unmindful of the magnitude and complexity of problems which you face as you determine from time to time which of the various proposed projects should be authorized for construction. We trust that we have demonstrated the dynamic challenge and the unprecedented opportunities confronting us which are limited essentially by our lack of an adequate water supply. We further trust that you will assist us in this businesslike approach to the solution of our problem. May I urge that you give favorable consideration to early authorization of construction by the U.S. Bureau of Reclamation of the Auburn-Folsom South unit, including the Foresthill Divide and Folsom-Malby area features, as a part of the Central Valley project in California. Thank you.

Mr. CHAPPE. Mr. Chairman, I have some resolutions and statements here from El Dorado County organizations supporting the early authorization of the Auburn-Folsom South unit.

Senator BURDICK. Without objection, they may be grouped with the others that have been presented.

Are there representatives here from Sacramento County?

STATEMENT OF JACK MINGO, CHAIRMAN, SACRAMENTO COUNTY BOARD OF SUPERVISORS

Mr. MINGO. Mr. Chairman, members of the committee, my name is Jack Mingo, chairman of the Board of Supervisors, County of Sacramento. I am authorized by that board to appear today before you for the purpose of expressing to you the county of Sacramento's great interest and strong support of Senate bill No. 103, which provides for the authorization of the Auburn-Folsom South unit of the Federal Central Valley project, California.

Senate bill No. 103 provides for the authorization of the Auburn-Folsom South unit of the Central Valley project, California.

Since one of the functions of the Folsom South unit of this project is to provide a water supply to serve areas within the county of Sacramento, this statement will be mostly confined to these areas.

The county of Sacramento's portion of the service area of the proposed Folsom South Canal contains approximately 198,000 acres, and forms the north part of a half million acres of potentially rich agricultural land extending southward from the American River and the outskirts of the city of Sacramento, between the Sierra Nevada foothills and the trough of the Sacramento and San Joaquin Valleys.

This 198,000-acre service area extends about 25 miles south from

the American River to Dry Creek, the Sacramento-San Joaquin County boundary, and lies in a 15-mile-wide strip between the Sierra Nevada foothills and the eastern edge of the Sacramento-San Joaquin River delta at elevations ranging from 5 to 175 feet.

Streams traversing the area in a southwesterly direction from the foothills include the Cosumnes River and Morrison, Laguna, and Dry Creeks. The lands of the area are principally the older terrace hardpan soils, although flood plains of varying width consisting of recent soils are associated with the streams.

All beds of the ground-water reservoir are discontinuous and grade abruptly laterally and vertically. A persistent silica-iron hardpan generally from 12 to 30 inches below the surface forms a barrier that impedes deep percolation of the water from the surface of most of the service area.

The navigable Sacramento River generally parallels and lies a short distance to the west of the service area. The soon-to-be completed Sacramento-Yolo Port District deepwater channel which lies west and generally parallel to the Sacramento River will be easily accessible to the service area.

Main lines of major railroads, the Western Pacific and the Southern Pacific, traverse the area from north to south. An excellent all-weather road network, comprised of a major interstate highway, two State highways, and numerous hard-surfaced county roads, exists in the area.

Adequate power, gas, and telephone services are available to the service area, with virtually all of the electric power being distributed by the Sacramento Municipal Utility District which utilizes energy generated by the Central Valley project.

Of the 198,000 acres classified as to suitability for irrigation, about 78 percent is class 3; 10 percent, class 2; 1 percent, class 1; 4 percent, class 4; and the remaining 7 percent, nonirrigable. Classes 1, 2, and 3 are considered to be arable, and class 4 as limited arable.

It is estimated that under full development, 149,500 acres will be irrigated in any one year. Irrigation is a necessity for the production of most crops. The main communities within this service area are Elk Grove, Florin, and Galt. Galt was founded in 1869, Florin in 1875, and Elk Grove in 1876. Domestic water service is provided Galt and Florin by public water districts, and Elk Grove by a privately owned water company.

Although the rapidly expanding city of Sacramento is crowding the north and west boundaries of the service area, the service area is predominantly agricultural.

Large-scale irrigation began as early as 1900, and the irrigated acreage has increased steadily over the years until the present when there are 60,000 acres under irrigation. The biggest increase has been from 1946 until 1953, when the number of acres under irrigation increased from 27,000 acres to 54,000 acres.

Although these figures show that there has not been a large increase in lands under irrigation since 1953, this does not mean that new land is not being developed. What it means is that there is a close balance between land formerly irrigated that has reverted to dry land and newly developed irrigated land so that the present acreage under irrigation is somewhat stabilized. Past expansion in irrigated acreage in the service area may be attributed to the rapid population increase of

the Sacramento metropolitan area and in the State as a whole, which has created an increased demand for dairy and beef products and farm produce. The population of Sacramento County increased from 277,140 in 1950 to 502,000 in 1960, an increase of 80.4 percent. Most of these products of the service area are presently marketed in the Sacramento metropolitan area, which represents approximately 70-75 percent of the county's population. It is reasonable to assume that as the population expansion continues, a growing demand for these and other farm products will also continue. The planning director of the county of Sacramento estimates that the future county population will be in year 1970 (830,000), 1980 (1,260,000), 1990 (1,800,000), and 2000 (2,440,000). These figures are significant in view of the fact this planning director's projected population of 500,000 for 1960 were one-half of 1 percent below the final 1960 census figures.

To increase total production of farm products to meet the growing demand, more irrigated acreage will be needed, and this, in turn, requires an additional water supply.

In addition to meeting these needs, conversion of dry land to irrigated farming would tend to stabilize the economy of the three-quarters of the service area that now is dryfarmed or in native pasture and now depend upon natural rainfall with its unpredictable variations.

During this increase of irrigated acreage, there has been a shift to crops with greater water requirements. This shift can be attributed to the growing demand for meat and dairy products in the city of Sacramento and the State, and to the fact that the shallow soils of the area are particularly suited for irrigated pasture. Pumping from wells has continued to supply the increased amounts of water needed for irrigation. This has resulted in an increasing overdraft upon the ground water, and a consequent decline in the water table.

Agricultural enterprises presently existent in the area vary from suburban homesites to beef and dry grain operations. The major portion of the irrigated land is being utilized in conjunction with family-type enterprises.

In terms of number and total gross income, grade A and B dairies constitute the predominant type of farm enterprise in the service area, beef cattle enterprises are next in importance, and lately acreage has been devoted to forage seed crops which are particularly well suited to the soil, climate, and location of the area. Approximately 5,000 acres are devoted to these crops now, and two statewide seed processing and marketing cooperatives have located plants in the service area which will provide a ready market outlet for any expanded production. Any expanded production depends on the availability of a supplemental surface water supply.

The owner-operated farm enterprises constitute the backbone of the agricultural economy of the service area. Absentee ownership is relatively insignificant, and leasehold operation is confined primarily to a few specialty crops. The few corporate-type farms existent in the area account for a relatively small portion of the irrigable acreage.

All but negligible amounts of the irrigation water supplies, and all of the municipal and industrial water supplies in this service area now are obtained from the ground-water basin. Ground-water pumpage for irrigation and for municipal and industrial requirement

has resulted in an overdraft on the ground-water basin. During the 1946-53 period the ground-water table declined an average of 1.3 feet annually. During the period of 1951-61 this decline has averaged 2.5 feet annually, and during the year 1960-61 the average drop was 3.6 feet. In areas of heavier pumping, the drop has been twice these averages or better.

The overdraft in 1953 was estimated at 55,000 acre-feet.

The continuation of the water table lowering, as has been evident the last 16 years, will, in the very near future, increase pumping cost to a level which will make this ground-water supply economically unfeasible for many more of the agricultural enterprises within the service area, and for developing new land for irrigation. Without a supplemental water supply which would stabilize water costs at a level which is economically feasible for all agricultural enterprises within the service area, the present irrigated acreage will probably decrease until a pumping depth is reached at which the cost of pumping and returns from investment balance. This condition would result in a large reduction in the number of acres now under irrigation.

Since the agricultural enterprise in this service area have a rather high water requirement while the returns from investment are rather low, this point, considering the ever-dropping ground-water level, can be reached in the very near future.

Under long-term future conditions without project development, an estimated 43,600 acres of land in the service area would be irrigated in any one year. This represents 10,500 acres less than was irrigated in 1953, and 16,400 acres less than now being irrigated.

The acreage withdrawn from irrigation presumably would revert to dryfarmed grain production. With full project development, it is estimated that the irrigated area would be greater by about 89,500 acres than at present.

There would be an estimated 1,673 farm units in the service area, with project development or about 950 units more than anticipated without project conditions.

It is estimated that the overall average farm unit would be approximately 100 acres.

The Folsom South unit report prepared by Bureau of Reclamation Region 2 personnel estimates that the 149,500 acres to be irrigated in any one year under full development has a weighted mean water requirement of 3.84 acre-feet per acre or a total season water requirement of 574,000 acre-feet. Meeting this demand will require that a total of 440,000 acre-feet of water be diverted from the Folsom Dam Reservoir to the Sacramento County service area via the proposed Folsom South Canal for integration with the available safe ground-water supply and reused return-flow waters from project drains.

With this supplemental water supply available canal side at an average price of \$2.75 per acre-foot, it will be possible for this Folsom South Canal service area to develop a water supply that will be economically feasible, and thus be able to prevent the economic hardship that would ensue if the present ground-water overdraft continues; to reduce the drought hazards inherent in dryfarming; and to assist in satisfying the growing food needs of the ever-expanding Sacramento metropolitan area, as well as to provide increased opportunities for farm development.

Public recognition of this need for a supplemental water supply was evidenced by the formation of a county water agency and of irrigation districts in the south area of Sacramento County a few years after the Folsom Dam and the Nimbus Dam were authorized in 1949 for construction and addition to the Central Valley project.

The Sacramento County Water Agency was formed, at the request of Sacramento County officials by an enactment of the State legislature, in the first extra session of 1952.

The Sacramento Water Agency Act which created this countywide public agency provides that the Board of Supervisors of the County of Sacramento be the directors of the agency. Under this act the agency has the power to develop water supplies, contract with State and Federal agencies to purchase a water supply, contract with other public districts or private companies for the sale of an agency water supply, sell water retail, to levy taxes, hold bond issue elections and any other functions which are necessary to fulfill the purpose of the act. It also has zoning powers which enables it to limit the costs of a project to the area receiving the benefit of the project.

The Elk Grove Irrigation District, containing about 83,000 acres, was formed in September 1952 and includes the greater portion of the service area lying north of the Cosumnes River. The Galt Irrigation District, containing approximately 36,000 acres, was formed September 29, 1953, and includes a large portion of the service area lying between the Cosumnes River and Dry Creek. The Clay Water District, containing about 6,000 acres, was formed in 1955 and includes land just to the east of the Galt Irrigation, and north of Clay.

The Omochumne-Hartnell Water District was formed in 1956 and contains 30,000 acres. This district runs approximately east and west astraddle the Cosumnes River and includes most of the Cosumnes River flood plain.

The primary purpose for the formation of these districts, with the exception of the Omochumne-Hartnell district, was to obtain supplemental water supplies from the American River and to be in a position to negotiate with the Bureau of Reclamation or the Sacramento County Water Agency for water service as soon as water is available.

The Omochumne-Hartnell Water District was formed to protect the area's water rights along the Cosumnes River and to work for the construction of the Nashville Dam now under study by the Bureau of Reclamation. For the past 3 years, this district has purchased water from the Sly Park project, which is operated in conjunction with the Folsom Dam.

This district could be a water user from the Folsom Dam on a temporary basis or even on a permanent basis.

The acres covered by these districts represents 77 percent of the total acreage in the service area.

Since the Sacramento County Water Agency includes the entire service area, public water districts are available to represent the entire service area.

Any area within the service area not part of a public water district can be made zones of the Sacramento County Water Agency and contract for a supplemental water supply from the Folsom South Canal through that medium. It is even possible to zone the entire service area for this purpose if this way was to prove more equitable to everyone.

The Sacramento County portion of the Folsom-Malby service area, which also includes El Dorado County, is located between the American and Cosumnes Rivers on the east boundary line of the county and contains approximately 9,600 acres.

The general area has the gently rolling to hilly relief usually associated with the foothills of the Sierra Nevada Mountains. Elevations vary from less than 300 feet near the west boundary of the service area to over 800 feet in the El Dorado County portion of the service area. Two creeks, Deer and Carson Creeks, cut the area from east to west with Deer Creek furnishing the site for the proposed County Line Dam, reservoir, and pump plant.

At the present time, the land is mainly used as dry pasture for cattle. The area is sparsely populated, and there is little or no irrigated agriculture.

The main reason by this Malby area is largely undeveloped is the lack of an adequate water supply.

However, as the more favorable lands close to the metropolitan center have become more intensely utilized, the newer developments have located further from the metropolitan center. There exists today very extensive urban developments north of the American River in areas which are quite comparable to the Malby area in terms of topography and climate conditions and in terms of both distance from and accessibility to the city of Sacramento. The chief distinction between the Malby area and the lands north of the American River lies in the availability of water supplies.

To the north and east of the Malby area, where a water supply is available, extensive urban developments are now taking place. Along the western edge of the Malby area, where again a water supply is available, is one of Sacramento County's largest industrial developments, the Aerojet-General Corp.

It is anticipated that the water demands of approximately 20,000 acre-feet annually would reach full development in about 25 years following the first full year of project operation. At an average population density comparable to that now existing in suburban areas north of the American River, there would be some 32,000 people living in the service area at full development.

As stated previously, the rapid population increase in the Sacramento metropolitan area and in the State as a whole has created an increased demand for dairy and beef products as well as other farm products. To increase total production of these products more irrigated acreage will be needed.

Because of the availability of water supplies, urban and industrial developments are being constructed on irrigated land, thus withdrawing the better county agricultural lands from important food production.

It is evident from the projected populations of Sacramento County for the next 40 years that every acre of irrigable land must be saved for important food production if the demands for such, this population expansion will make, are to be met.

Providing a water supply to the Folsom-Malby area would make it possible to shift this urban and industrial development to lands not suitable to intensive irrigation agriculture.

This shift would allow the agricultural, municipal, and industrial development of the county to be carried out with a better overall balance.

This Folsom-Malby project will also provide flood control, fishery, and recreational benefits which are very important to Sacramento County, whose population is now in excess of 550,000 and increasing annually.

The Bureau of Reclamation regional director, region 2, Mr. Dugan, conditions his recommendation of the Folsom-Malby features on the provision that a suitable district is organized and repayment contracts executed prior to the start of construction.

The Sacramento County Water Agency through its zoning powers can provide a suitable public district with the power to execute repayment contracts.

The county of Sacramento in July 1959 had representatives endorse and express their support for construction of the Folsom-Malby features at a public hearing held by the California Water Commission for the purpose of determining local views on the Folsom-South unit.

Both the service area of the Folsom South Canal project and the Folsom-Malby project fit into the California water plan. The California State Department of Water Resources has in all its published plans for the ultimate development of the Sacramento and San Joaquin Valleys considered that these service areas would best be served a water supply from storage on the American River.

The California State Water Rights Board in issuing the permit at Folsom Dam to the U.S. Government designated Sacramento County as a service area and at the same time recognized the area's right to contract with the U.S. Government for a water supply from Folsom Dam by conditions in the permit as follows:

14. Deliveries of water under permits issued pursuant to application 13,370 and 13,371 shall be limited to deliveries for beneficial use within Placer, Sacramento, and San Joaquin Counties and shall not be made beyond the westerly or southerly boundaries thereof, except on a temporary basis, until the needs of those counties, present or prospective, are fully met, provided, however, that agreements in accordance with Federal reclamation laws between permittee and parties desiring such service within said counties are executed by July 1, 1968.

These two projects also fit into the overall water plan of the county of Sacramento for providing a water supply to all the area of the county east of the Sacramento River, delta lands, and south of the American River and the city of Sacramento. The proposed service areas of these two projects, the proposed service area of the contemplated Nashville Dam on the Cosumnes River and the area that can be served by the existing water rights of the Natomas Water Co., of Folsom, Calif., would cover this entire section of the country. The Natomas Water Co. is now furnishing water to the Aerojet-General Corp.

Although the Auburn Dam and Foresthill Divide features of the Auburn-Folsom South unit are outside the county, their construction will furnish the county of Sacramento direct and indirect benefits.

The recreational facilities, because of the projects relative close proximity to the county of Sacramento, will be accessible to this county's residents and the flood control offered by Auburn Dam are very important to the county of Sacramento.

It was only back in 1955 that the Folsom Dam was taxed to its fullest capacity to hold back the floodwaters of the American River basin. Only the fact that, at the time the heavy rainstorms started, the water level in the Folsom Dam was lower than usual or contemplated during usual operation and the storm did not last 1 more day, saved areas below the dam serious flood damage with accompanying heavy financial losses. The Auburn Dam can help take a portion of this ever-possible flood load from the Folsom Dam.

Any project which improves the economy of an area also is a benefit to areas which are adjacent to that area. This is true of Sacramento County in relation to the location of the Auburn Dam and Foresthill Divide projects.

In conclusion, it can be stated that the Auburn-Folsom South unit of the Central Valley project, California, has been found to be economically and engineeringly feasible in reports made on these projects by the Bureau of Reclamation. There is support for the project by local interest, and it is very important to the agricultural, municipal, and industrial development of the county of Sacramento as well as to the economy of the county.

In view of these facts the board of supervisors of the county of Sacramento strongly endorses the Auburn-Folsom South unit of the Central Valley project, California, and urges early construction of the facilities as a Federal reclamation project to assist in implementing an overall Sacramento County water development program.

It would like at this time to reiterate some of the highlights in my statement.

All of the four features included in the Auburn-Folsom South unit have the unanimous support of Sacramento County, but since one of the functions of the Folsom South unit of this project is to provide a water supply to two separate areas within the county of Sacramento, the statement prepared by the county of Sacramento, which I will highlight in my remarks today, will be mostly confined to these service areas.

One of the features of the Folsom South unit, the Folsom South Canal will furnish a water supply to a service area in Sacramento County containing 198,000 acres.

The navigable Sacramento River, the soon to be completed deep water channel, two major railroads, major interstate and State highways and numerous hard-surfaced county roads furnished excellent transportation facilities to the area. Adequate power, gas, and telephone facilities are also available, with virtually all of the electric power being distributed by the Sacramento Municipal Utility District which utilizes energy generated by the Central Valley project.

Ninety-three percent of the acreage of this service area is considered to be irrigable, with 89 percent of irrigable acreage being class 3 and 4 land. This class of land, having a lower repayment capacity for irrigation water than the class 1 and 2 land, requires a low-cost water supply.

Irrigation is a necessity for crops suitable for production in this service area.

Statistics show that Sacramento County's population increased from 277,140 in 1950 to 502,000 in 1960. I might add that we are well over 553,000 today.

With the population of Sacramento County estimated to reach 2,440,000 in the year 2000, it is only reasonable to assume that there will be a growing demand for an additional water supply for irrigation and other uses.

During the 1946-53 period the ground-water table declined an average of 1.3 feet annually. During the past 10-year period, the decline has averaged 2.5 feet annually. In areas of heavier pumping, the decline has been twice this average or more.

Public recognition of the need for a supplemental water supply in this service area was evident by the formation of the Sacramento County Water Agency and of irrigation districts in the service area shortly after the Folsom and Nimbus Dams were authorized in 1949 for construction as an addition to the Central Valley project.

This agency which was formed at the request of Sacramento County officials by an enactment of the State legislature in 1952, gives the board of directors, which are also the board of supervisors, all the powers necessary to furnish this service area an additional surface water supply from the Folsom South Canal.

This Malby-Folsom project will also provide flood control, fishery, and recreational benefits which are important to the county of Sacramento.

Both the Folsom South Canal and the Folsom-Malby features of the Folsom South unit fit into the California water plan as well as the overall water supply development plan of the county of Sacramento.

As previously mentioned, the county of Sacramento is also supporting the authorization of the Auburn Dam and the Foresthill Divide features of the Auburn-Folsom South unit.

Although outside of Sacramento County, these projects will bring direct and indirect benefits to the county of Sacramento in terms of flood control, recreation, and the overall economy of the areas.

In conclusion, gentlemen, since the Auburn-Folsom South unit has been reported to be economically and engineeringly feasible by the Bureau of Reclamation Region 2 office, there is wide support by local interest and it is very important to the agricultural, municipal, and industrial development as well as to the economy of the county of Sacramento, I do on behalf of the county of Sacramento and its board of supervisors, strongly recommend a favorable recommendation on Senate bill No. 103 by this committee.

At this time I would like to place into the record copies of resolutions of the Omochumne-Hartnell Water District, Florin County Water District, city of North Sacramento, a letter to the Secretary of the Interior from the Sacramento City-County Chamber of Commerce, and a statement from the Aerojet-General Corp., city of Galt, and the Sacramento Municipal Utility District.¹

We as directors of the Sacramento County Water Agency are certainly ready to negotiate contracts for water which will be provided by this facility. We certainly urge the support of Senate bill 103 and, indeed, consider it a privilege to have the opportunity to have addressed you today.

Senator ANDERSON. What is that part about 198,000 acres?

¹ The exhibits are printed in the appendix to this record.

Mr. MINGO. The Folsom South Canal will contain a service area of some 198,000 acres, of which 89 percent, as I recall, is irrigable land.

Senator ANDERSON. Is it new land?

Mr. MINGO. Sir?

Senator ANDERSON. Is it new land being brought into production?

Mr. MINGO. No; it is actually a supplemental water supply that is actually needed in the area. We do have agricultural development throughout the entire area, but much of it has reverted to dryfarming at the present time due to the fact of a lack of water supply.

Senator ANDERSON. And it would irrigate these areas that are now doing dryfarming?

Mr. MINGO. Yes.

Senator ANDERSON. Would you mind if they put into the project the same requirements that are now being put into most of them, that no crops in surplus supply will be produced there?

Mr. MINGO. This will not refer to any of the crops you are talking about, that are in surplus.

Senator ANDERSON. What do you produce?

Mr. MINGO. Well, rice—you have a surplus in rice, for example, that is quite a contention at this time. But generally, the products produced in that particular area will be generally the products consumed by the entire metropolitan area in the nature of certain row crops and that type of crop.

Senator ANDERSON. What particular crops?

Mr. MINGO. Well, like tomatoes; for example, corn, and crops which are really not on your surplus lists.

Senator ANDERSON. You do not think corn is on the surplus list?

Mr. MINGO. Well, we do not have that much of a corn crop in this particular area. We have it more in the delta area, which is more of a row crop land situation than this particular area, which is a grade 3 and 4 land area, as contrary to your classes 1 and 2 lands for row crop purposes.

(Mr. Mingo submitted the following statements for inclusion in the record:)

STATEMENT OF GALT IRRIGATION DISTRICT REGARDING CONGRESSIONAL AUTHORIZATION FOR PROPOSAL FOR FOLSOM SOUTH CANAL

The Galt Irrigation District was organized September 18, 1953, by a vote of 272 to 6 following a lengthy campaign and period during which information was given to the voters and property owners within the boundaries of the said district. The Galt Irrigation District comprises approximately 33,000 acres in south Sacramento County in central California. The area within the district is predominantly an agricultural area and has for a number of years been farmed, both as dryfarming and as irrigated pasture for dairy operations and beef production.

The proximity of the Galt Irrigation District to the Nimbus diversion of the Folsom Dam and its location athwart the north-south axis of the Central Valley project coupled with an acute and increasing fall and drop in the underground water table made the construction of the Folsom Dam and the related Folsom South Canal a "natural" in its appeal to the good sense and economical development and progress of this particular area. The Folsom Dam was constructed and is presently in operation for both flood control and irrigation potential. The land within the area of the Galt Irrigation District lies immediately south of the Nimbus diversion of the Folsom Dam on the American River and distant approximately 18 miles. It was upon the express representation of the district, which aimed its every effort to obtain the earliest construction of the Folsom South Canal and the transportation of supplemental water from the American

River at the Nimbus diversion, that the property owners and voters of the district 9 years ago approved the formation of the district. It has been upon the continued representations of the board of directors and officers of the district to the public within the district that the public has supported and continued to maintain the said district in its present form, although the district has been unable to furnish any services or deliver any water. There thus are joined an economic and moral argument and need for the construction of the Folsom South Canal. The experience of the farmers and property owners within the area of the district, in terms of a drastic drop in the water table, will be developed more fully by two of the property owners within the district who also are members of the board of directors of the district, and who will make oral presentation to your honorable committee.

It is difficult to overemphasize the increasing critical shortage of water within the area of the district. The fact is that already failure by the district to supply any supplemental water has had the effect of a marked economical "damper" upon the farm, ranching, and agriculture and recent development plan and progress of the area. The Galt Irrigation District has, for a period of 9 years, cooperated with the Federal Government, with the State of California, with the county of Sacramento, and with the adjacent irrigation districts and other government entities, looking toward the close coordination and the careful, efficient, and economical planning for the Folsom South Canal, and has later expanded to include the correlated Auburn Dam and the proposed Malby project. Recent conferences and meetings have been held with representatives of the Bureau of Reclamation, Department of the Interior, with the Department of Water Resources of the State of California, with representatives of the Sacramento County Water Authority, and other interested agencies. The district itself, at the cost in excess of \$20,000, engaged engineering services to establish the economic feasibility of the Folsom South Canal and the development of an efficient water supply for the properties within the district. Lengthy negotiations were held with the Bureau of Reclamation which culminated in the execution by the officers of the district, after unanimous approval by the board of directors, of a tentative contract between the United States of America and the Galt Irrigation District for the purchase of supplemental water at a rate approved by the board, which said rate has been established, both by independent and Government investigations, to be economically feasible.

Adequate and ample water for the above-stated purposes is now presently available by means of the Folsom Dam and the Nimbus diversion which are already constructed and in operation.

For a period of 9 years the board of directors of the district has been trying to maintain and has successfully maintained the legal entity of the district for the purpose of serving the property owners and farming, agricultural, and other legitimate economical interests within the area of the district. Taxes have been paid for the purpose of the maintenance of the district, and the voters and property owners within the district have waited with patience and forbearance for Federal action to be taken.

The Folsom South Canal is desperately needed. Its economic feasibility and repayment costs have been carefully explored and are well within the economic and physical potential within the area to be served. Every dictate of public policy, welfare, sound economy, governmental consideration, urges the speedy and earliest possible authorization for the commencement of the Folsom South Canal. To this end, the district will maintain itself. For this purpose, the taxpayers have patiently waited. Toward the goal of a strong and healthy position of this country, the earliest possible action by the Federal Congress and its constituent committees is urged.

STATEMENT OF ERNEST C. HOWARD, DIRECTOR, CLAY WATER DISTRICT

Mr. Chairman and members of the committee, I am a member of the Board of Directors of the Clay Water District, a California water district located in the southeast portion of Sacramento County. I appear before you today at the direction of the district in order to urge that you give consideration to the early authorization and construction of the Auburn Dam-Folsom South Canal project.

Although the report of the Bureau of Reclamation covers several facilities which are included in the project, all of which are needed and feasible from an economic and engineering point of view. I wish to address my remarks to the portion of the project which most directly affects the Clay Water District and about which I have the most knowledge; namely, the Folsom South Canal.

NEED FOR SUPPLEMENTAL WATER SUPPLY FOR IRRIGATION

At the present time and for many years past, ground water has provided the principal source of supply for irrigation of land within the district. I have been growing irrigated crops within the district for the past 23 years, and I can speak with authority regarding the falling ground-water table within this area. I have personally maintained records on this matter since 1936 and they disclose that the ground-water table has consistently declined at the rate of 2½ feet per year.

At present I am irrigating over 1,000 acres from pumps. The declining water table has required deepening of wells, enlarging pumps, and greater usage of electrical energy. Unless the overdraft upon the ground-water supply is remedied, the increased costs of wells and pumping will become prohibitive and force many acres out of production. The need for a supplemental water supply has long been recognized. The district which I represent was formed on January 17, 1956, and the primary purpose for its formation was to secure supplemental irrigation sources related to the Folsom Dam project and, in particular, the South Folsom Canal. The report of the Bureau of Reclamation demonstrates, and my own experience confirms the fact, that there is an urgent need for a supplemental water supply which, if not met promptly, will result in pumping costs increasing beyond the ability of the land to pay.

FOLSOM SOUTH CANAL WILL MEET THIS NEED FOR SUPPLEMENTAL WATER
SUPPLY FOR IRRIGATION

The additional water which will be made available for irrigation by the Auburn Dam-Folsom South Canal project will not only stabilize the ground-water supply, at an economical pumping depth, but in addition, will permit additional land within the district to be placed into production. I would like to particularly call to the committee's attention that the land within the district is not devoted to the production of commodities which are in oversupply, nor are the farming operations within the district supported by Federal subsidies.

Finally, as demonstrated by the report of the Bureau of Reclamation, the cost of the water (based upon a canal-site price of \$2.75 per acre-foot) is within the capacity of the land to repay and the project as a whole shows a favorable benefit-cost ratio.

I wish to assure you that the Clay Water District is ready, willing, and able to buy water from Folsom South Canal.

I wish to thank you for the opportunity to appear before the committee and I respectfully urge that the project receive your favorable consideration.

STATEMENT OF MILON L. JOHNSTON, PRESIDENT, BOARD OF DIRECTORS, ELK
GROVE IRRIGATION DISTRICT

Gentlemen, I herewith summarize certain facts about my area, Elk Grove, Sacramento County, Calif., that leads to its present need for supplementary water. I will present a short review of the past history of water in this area. I will do this by describing the underground-water situation at my own ranch near Elk Grove.

My ranch is typical of most farms in the area. My grandfather purchased it in 1882. It is 160 acres of level, tillable land. By 1886, my grandfather had planted 40 acres to grapes and 40 acres to Bartlett pears. Until 1890, these trees and grapes did very well with no irrigation. Shortly after 1890, it was evident, by the lack of summer growth, that the trees and vines needed to be irrigated to survive. The first means of irrigation was done by windmills from shallow wells. In the spring of the year, ground water would be at a depth of about 6 feet. The windmill wells would be approximately 15 to 20 feet deep, pumping from 12 to 14 feet in midsummer. By 1900, the vineyards had grown and produced many prosperous crops, due to summer irrigations.

By 1910, the water table had dropped, and our farm could no longer depend on the windmill wells to irrigate our crops. In 1908, our first centrifugal pump was installed in a pit 12 feet deep, and the well had a depth of 80 feet. The pump was driven by a 20-horsepower gas engine.

By 1918, the water table had dropped to about 20 feet, and it was then necessary to dig a deeper pit and place the pump closer to the water. The well was deepened to 160 feet. Electric power was now available and the pump was

now driven by an electric motor. A few years prior to 1920, many farmers in Elk Grove vicinity had started small dairies for the reason that prohibition decreased the demand for grapes, prices dropped, and many of the farmers were forced to seek other means of livelihood and therefore started small dairies. By 1930, many vineyards had been removed and the land planted to dairy feed. Ladino clover was introduced into the Elk Grove area in 1929 as a summer pasture for dairy cattle. It proved a very successful crop and many acres were planted to this summer irrigated feed, but the irrigated pasture drew heavily on our underground-water supply, and by 1932, standing water in the wells was at 35 feet. In 1932, it was again necessary to lower our pump and dig our well deeper, this time to 265 feet.

It was after completion of the Shasta Dam, around 1938, that we could really notice the water table dropping. Prior to this time, during the months of February and March, when the Sacramento River was high and the lakes to the west of our ranch were full, it was not uncommon to see the water level in our well rise from 3 to 5 feet.

In 1940, to secure enough water to produce our crops, it was necessary to install turbine pumps. During the 1940's, the irrigated pastures in the Elk Grove area had more than doubled.

In 1948, it was necessary to again deepen our well, this time to 360 feet, and add more column to our turbine pump to secure sufficient water for our needs. Again, in 1956, we were faced with the problems of securing more water. This time we lowered our well to 660 feet and added more column to get the desired amount of water. At this time, we were pumping from 85 feet.

In 1960, I was again forced to change our pumping plant. This time we had to greatly increase our motor horsepower and change the bowls on the pump, as the pumping level had dropped to around 100 feet.

My neighbors and I cannot go much deeper with our wells to secure a better water supply, as salt water has been found in our area when going to about 800 feet.

As I have shown you, since 1935 it has required the expenditure of large sums of money to keep ahead of our water problem. The water table, currently, is dropping at a very rapid rate. In 1935, the pumping level was 42 feet; today it is 100 feet. The cost will soon be prohibitive to pump water from wells, for the type of soil characteristic to this community.

There are plenty of indications, at this time, that the farmers in Elk Grove area are hesitant to improve their farms due to the uncertainty of the present water supply. Our lands must have supplemental water if we are going to continue to have a prosperous community.

From the story I have told, you may easily understand that water is the root of our area's progress and prosperity.

Senator BURDICK. You may proceed, Mr. Mering.

STATEMENT OF PHILIP C. MERING, SACRAMENTO, MEMBER OF CITY COUNCIL

Mr. MERING. My name is Philip C. Mering and I am a city councilman from the city of Sacramento. I appear here in Washington at the direction of the city council, along with my fellow councilman, Mr. Willard Nielsen.

Although I speak to you as a councilman of the city of Sacramento, this is a plea for favorable consideration of this legislation based on the broad benefits which will accrue, not to my city alone, but to a large area of central California. Sacramento is the State capital; it is the largest city in the Central Valley of California. Several counties, of which Sacramento is the hub, hold this project as the key to their future development. Permit me to mention a few of the many benefits which this project can bring to us.

FLOOD CONTROL IS A BENEFIT

The Sacramento area has been menaced by devastating floods from the American River for all of its history. Folsom Dam brought the first real measure of protection. Yet in 1955, with a very low reservoir, we saw Folsom spillways discharge after only 4 days of a very bad storm. Other following storms, and in California they, too, often come that way, could have meant disastrous floods, yet we were fortunate and in that 1955 critical period another storm did not follow. The new Auburn Dam will substantially increase the flood-protection capabilities now afforded by Folsom Dam alone. We need this additional flood protection badly.

INCREASED DOMESTIC WATER SUPPLY IS A BENEFIT

Sacramento City is most fortunate in that it has a contract with the Bureau of Reclamation to guarantee its domestic water supply. But lying east and south of Sacramento are rapidly growing urban communities which have no firm and reliable domestic water supply. Our neighbor city of Stockton is in this plight. Auburn-Folsom South unit will provide these people with adequate water.

IRRIGATION OF NEW ACREAGES IS A BENEFIT

Along the eastern portion of Sacramento County, and south into San Joaquin County, are large agricultural areas devoted to dry-farming. Because of California's dry years, and seeming cycle of drought seasons, dryfarming contributes little to farm production, nor can it support significant farm populations. Water from Folsom South canals can bring productivity to 150,000 acres of good land in Sacramento County. The central part of California needs this boost in farm production. It needs this new agricultural opportunity for its people.

INDUSTRY WILL BENEFIT

The Folsom South canals, together with the Folsom-Malby unit, will make available ample supplies of water for industrial users such as Aerojet-General Corp. and Douglas Aircraft, prime missile producers, and the area's largest industrial complex. The storage of water in the proposed new Auburn Reservoir will also mean additional hydroelectric power as the waters are released to the canal system. All types of users—urban, rural, and industrial—will benefit from this new power.

CREATION OF NEW RECREATIONAL FACILITIES IS AN
IMPORTANT BENEFIT

The use of Folsom Reservoir as a recreational facility has far surpassed the earlier hopes and predictions. Auburn Dam will serve to reduce the extreme water-level fluctuations now experienced at Folsom Reservoir and this will improve Folsom's recreational capabilities. In addition, Auburn Reservoir will add a second manmade lake of comparable size. Folsom State Park, created around Folsom Reservoir with the assistance of Federal authorities, is the most heavily used in-

land facility of the entire State park system. During 1961 Folsom State Park had 21½ million visitor-days. This is twice the use experienced by Yosemite National Park itself. This high use of Folsom Park can be attributed to its close proximity to large metropolitan populations. It is also interesting to note that there were 75,000 boats launched at State-operated facilities in Folsom Park last year. The recreational asset of Folsom Lake will be duplicated by an even more attractive and equally accessible lake behind the proposed Auburn Dam. Although difficult to value in money, this recreational benefit ranks high among the values of the proposed project.

VERY BRIEFLY THESE BENEFITS CAN BE SUMMARIZED

The excellent benefit-cost ratio, which Bureau studies have indicated for this project, is proof that there will be great values to our area: better flood control; tens of thousands of acres with a firm supplemental water supply for productive farms; water for people and for industry. Project costs will be readily repaid as the years pass; the Bureau report shows this. More difficult to measure intrinsically is the general good which will come to our area; the tremendous indirect benefits of an improved farm economy, expanded industrial development, immensely valuable recreational assets, and an ample water supply so essential to population growth in California. We earnestly ask your help in bringing this project to reality.

Now I would like to highlight some of the points in my statement.

The council favors the authorization of this project, and we have already introduced into the record a resolution of the council.

In the interest of time, Mr. Chairman, I would like just to underscore the three principal reasons which prompted the appearance of the city of Sacramento at this hearing.

Although the city itself is fortunate in having an adequate water supply under an existing contract with the Bureau of Reclamation, we are well aware of the need of our neighbors for a domestic, industrial, and agricultural water supply. We are also aware that if this need is met, the city of Sacramento, as the largest city in the entire Central Valley, will certainly benefit.

Secondly, although it is difficult to value in terms of money, it is apparent that there will be substantial recreational benefits from the project. If Folsom Dam is any criterion, and I believe it is, the citizens of the city of Sacramento need and will fully utilize this recreational facility.

Finally, and as most important from the point of view of the city of Sacramento, is the additional flood control protection which the Auburn Dam will provide. Folsom Dam brought the first real measure of flood protection to the American River. Additional protection is needed.

I appreciate the opportunity to appear before the committee today. Senator BURDICK. Thank you.

Senator ANDERSON. You have a statement in here that irrigation of these acreages is a benefit. What do you expect to irrigate?

Mr. MERING. What do I expect to irrigate?

Senator ANDERSON. No.

Mr. MERING. I am sorry; I did not understand you, Senator.

Senator ANDERSON. What do the people under the project expect to irrigate?

Mr. MERING. I was just going to tell you; we have representatives here. I represent the city of Sacramento, and we are not, within the city, a large agriculture-producing area right at the moment. We have representatives here from three of the water districts within the county who are engaged in farming activities and can tell you firsthand what it is expected to irrigate and what is being irrigated, and I would request that one of them, who is the spokesman, appear before the committee and specifically answer the question.

Generally, I can say that the area is devoted mainly to irrigated and dry pasture for the production of beef and sheep.

Senator ANDERSON. Is not the city of Sacramento stated in your statement?

Mr. MERING. That is correct.

Senator ANDERSON. Do you not have a paragraph in here that says that irrigation of new acreage is a benefit?

Mr. MERING. That is correct. It will benefit the city of Sacramento.

Senator ANDERSON. If you do not know what they are going to grow, how do you know?

Mr. MERING. Let me explain it this way, Senator. As far as I am concerned, the new lands which will be irrigated will be mainly devoted to pasture. There are representatives here from Sacramento County and the water districts within the county who are better qualified than I do to discuss the farming features of this project.

As pointed out to you earlier, the benefits to the city of Sacramento, insofar as additional irrigation is concerned, are incidental benefits. The principal benefit to the city of Sacramento and the one which really prompts our appearance before you is the additional flood control protection on the American River.

Senator ANDERSON. Did not the California Water Board pass some sort of resolution about newly irrigated lands a few days ago, or weeks ago?

Mr. MERING. I am not aware of that action by the board.

Senator ANDERSON. Well, I thought that they had something to say about the upper Colorado River storage projects. You do not know about that?

Mr. MERING. I am unaware of that action, Senator.

Senator ANDERSON. The Senator who is presiding now has a great area of land in North Dakota in which he has some interest. There has been some opposition to that because it will put new acreage in, or put water on land which is now used for dryfarming. I think I am familiar with the area in his State for which they want to introduce irrigation. There has been a great deal of opposition to that. Is it wrong in North Dakota and right in California?

Mr. MERING. I do not pretend to pass judgment on that.

Senator ANDERSON. Well, how do you expect us to pass judgment on it?

Mr. MERING. I am very content to let that decision rest in your hands. It is our contention from the city of Sacramento that there will be incidental benefits to the city of Sacramento if this water is brought to our lands. I know this for a fact. The water table in the area is falling rapidly. If there were no new water brought in, no

new land brought under irrigation, a supplemental supply would be necessary to continue the existing agricultural operation.

Senator ANDERSON. Do you want to check that California water table?

Mr. MERING. I would be happy to look into that.

Senator ANDERSON. It might have some collateral bearing on this project.

Mr. MERING. May I once again emphasize that my primary reason for appearing here today is the flood control project. I did not expect to be put to answering questions on this agriculture feature of the project.

Senator ANDERSON. Is it not your testimony that this is largely a flood control project?

Mr. MERING. My testimony is that the principal benefit to the citizens I represent in the city of Sacramento will be from the flood control features which Auburn Dam will provide.

Senator ANDERSON. The bill provides for doing this under the Federal Reclamation Service. Flood control is under the Corps of Engineers. If it is flood control, why do you not ask that it be put under the Corps of Engineers and take it away from Reclamation?

Mr. MERING. It is my understanding, Senator, that the flood control feature is included in the present project, specifically the Auburn Dam, and being interested in this additional flood control, I am supporting the project.

Senator ANDERSON. With or without reclamation?

Mr. MERING. I do not want to divide my forces. I support the entire project. The benefit to the citizens of the city of Sacramento will come more directly from the flood control features.

Senator ANDERSON. You can understand that a member of the California congressional delegation recently has come out with a whole new series of speeches against the development of what is known as the upper Colorado River storage project, and presumably will follow it up by attacking the proposal of the Senator from North Dakota for his project. Do you not want the same rules to apply here?

Mr. MERING. I think the same rules should apply to everybody.

Senator ANDERSON. So do I. When we introduced our storage project, there was a good deal said about growing bananas on Pike's Peak. Well, I am not real sure we want to grow bananas on Pike's Peak.

Mr. MERING. I am aware, Senator, that there is a certain disagreement between California and Arizona on certain water supplies.

Senator ANDERSON. Of course, I am not so interested in the quarrel between California and Arizona as I am in the quarrel between California and New Mexico.

I think I had better say that my good friend from California, Senator Kuchel, has been extremely fair in his attitude toward us. I am not trying to include him in the fact that certain Congressmen got out and said that there should be no new land brought under irrigation, or anything of that nature. When I heard the figures used here, I just wondered if all the witnesses agreed with that Congressman or take the enlightened view that Senator Kuchel has taken.

Mr. MERING. I hope that I take the same enlightened view as the Senator from California, Senator Kuchel.

Senator KUCHEL. This is the point for me to say that I have the honor to greet my senior colleague from New Mexico as a very able Senator and my friend.

I think the questions he has asked of you, Mr. Mering, are important, because we deal here with a problem that is indigenous to the entire semiarid West. He comes from a State that is important, so do you. He comes from a State that has water problems, so do you. I feel sure that our friend from New Mexico is appreciative when we try to help him, and, may I say, vice versa.

Mr. MERING. I do not deny, Senator, the importance of these questions and the importance of the decision. I just want you to realize that I am not equipped personally to give you a good opinion or a good answer on the agricultural features of the Folsom South Canal.

Senator ANDERSON. Well, I only want to remind you that I supported the bill that had to do with the Santa Margarita situation. I supported Senator Kuchel with his San Luis project, and one after the other. But it is a harder proposition when some of the rest of the delegation go the other way. That is why I absolved him very quickly and was pleased to praise the fine support he gave us.

Senator ALLOTT. Will the Senator yield?

Senator ANDERSON. Yes.

Senator ALLOTT. I understand that after the conclusion of this morning's session, and I say this primarily for the benefit of the other spectators and witnesses who are here, there was some question about the rather extended questions by myself this morning, and it was pointed out that people of Colorado were not particularly in sympathy with the people of California, and this was the reason for my questions.

Now, in line with what has just been said, I was to make this clear: I have, in times past, differed very greatly with some of the positions taken by the State of California with respect to the upper Colorado River. This could not, as the record will show, keep me from supporting the various phases of the San Luis project, the Trinity project, and other projects in California, which I deem to be meritorious. If any of you have any feeling that there is any attempt to submarine this legislation per se by the Senator from Colorado, I hope you remove yourself from that opinion.

May I point out that we could have started out this morning with a very quick gloss over of this matter, putting the statements of the Secretary and the two Senators from California and the Congressmen into the record and said, well, is there anybody else who wants to say anything, and said, put your statements in the record, and concluded the record at that point and, at a subsequent time, perhaps you and perhaps we would have been extremely sorry that we did not make the record absolutely clear what was contemplated here and what was the cost. Because these are things we do have to make clear, and these are the things the committee has to act on.

I appreciate your yielding, Senator Anderson, because I think this should be made clear, because a given Senator, an individual Senator, has questions, it does not necessarily mean that he may be opposed. As in my own case, I did not pretend to understand the intricacies of all the central California projects. I have been an irrigation lawyer for some 30 years and I do not even pretend to know the in-

tricacies of all the water problems in my own State. To those of you who practice irrigation law, it will be easily understood that I have some knowledge of the subject, which means that I do not know everything there is to know about it by any means.

I just wanted to point this out at this time, because our attempt here is, as a committee, to get at the facts and show that we understand it so that we can act intelligently. This is all we can do and this is the best, in the long run, that we can do for California.

Senator KUCHEL. Will the Senator yield?

Senator ANDERSON. Surely.

Senator ALLOTT. I am through.

Senator KUCHEL. I do not think there is a better Senator in the U.S. Senate than my friend who sits on my left here, the Senator from Colorado. I want the record to show that I think he performed a service to the U.S. Senate this morning in the questions he asked.

This Congress is interested in considering feasible projects. It is not interested in considering projects that will not stand up to scrutiny, and the able Senator, water lawyer that he is, in the questions that he asked this morning, permitted this record to demonstrate affirmatively that it will stand up to scrutiny. We can be grateful for the construction of that kind of a record.

I would like, Mr. Chairman, because I think the question which you asked respecting the type of agricultural produce which would be in the service area of the Folsom South unit, I would like your permission to have pages 5 and 6 of the Folsom South unit report by the Department of the Interior, which is not very long, placed in the record at this point, which would show the type of agricultural produce.

Senator ANDERSON. The Senator from North Dakota is presiding. I certainly have no objection.

Senator KUCHEL. Oh, excuse me.

Senator BURDICK. Without objection, it will be included.

(The item referred to is as follows:)

Agriculture.—The economy of the Folsom South unit has been based on agriculture since settlement began in the early 19th century, but during the ensuing years there has been a change in the principal types of crops and enterprises. The early American landholders were predominantly cattlemen who allowed their stock to roam over the open range. Beef cattle still are produced in large numbers, particularly in Sacramento County, and along the eastern edge of the service area in San Joaquin County, although the methods of operation have become more intensive. Cash crop production, principally nonirrigated small grain, began shortly before mid-19th century and increased steadily in importance during the next three decades. The development of irrigation also was begun at midcentury by use of surface supplies, but the irrigated area expanded slowly until 1900 when diminishing profits from grain farming, together with the development of more satisfactory irrigation pumps gave impetus to an increase in irrigated acreage. The transition from dry to irrigated farming has continued to the present time. Grapes were first planted around 1855, and commercial orchard plantings were started around 1875. The latest crop survey¹ shows about 236,500 acres irrigated throughout the Folsom South unit with an additional 228,000 acres in dryland crops. The remainder of the arable land was fallow or idle. Improved pasture accounts for 40 percent of the irrigated lands, and grapes 18 percent; deciduous orchards 14 percent; and miscellaneous field crops at 28 percent make up the remainder.

¹ 1953 crop survey in Sacramento County; 1955 crop survey in San Joaquin County.

Mr. MINGO. Mr. Chairman, I would like to say at this time, with reference to Senator Allott, in his remarks just concluded here shortly, that I was one, after these hearings, who appeared before the Senator to congratulate him for his pertinent questions and state that he is the type of man I like to see in the legislature to show these are feasible projects. The type of questions he asked is the type of questions anybody sitting in your position must ask in order to make an intelligent decision upon your findings.

Senator ALLOTT. This is quite true, Mr. Chairman, and there are one or two others who did, too. But I understand that there was a little rumbling in other areas. I thought I ought to lay this to that. I did not come in here with any preconceived ideas about this project, but I hope to gain ideas by this hearing.

Mr. MERING. Thank you very much, Mr. Chairman.

Senator BURDICK. Next we have some witnesses from San Joaquin County.

STATEMENT OF VERNON F. LEHMAN, LODI, MEMBER, BOARD OF SUPERVISORS, COUNTY OF SAN JOAQUIN

Mr. LEHMAN. Mr. Chairman and members of the committee, my name is Vernon Lehman. I am a member of the Board of Supervisors of San Joaquin County, State of California. With me today is Mr. Frank Hoyt, also a member of our board. This statement is being made on behalf of the Board of Supervisors of San Joaquin County, the members of which are also the supervisors of the San Joaquin County Flood Control and Water Conservation District, a countywide district embracing all of the territory of San Joaquin County. A resolution of the board of supervisors, authorizing this presentation and endorsing the Auburn Dam-Folsom South Canal project is attached hereto. Mr. Hoyt and I represent the agricultural areas in San Joaquin County which urgently need the early authorization and construction of the Auburn Dam-Folsom South Canal project.

We have also attached to this statement copies of letters and resolutions in support of the Auburn Dam-Folsom South Canal project of various entities within San Joaquin County who were unable to be present here today but who have requested that we file a statement with your honorable committee on their behalf. In addition, there are a number of representatives from San Joaquin County present today in the committee room who will outline to you the particular urgent need for the Auburn Dam-Folsom South Canal project in their specific areas of our county.

The San Joaquin County Flood Control and Water Conservation District was created by an act of the California State Legislature in April of 1956, known as the San Joaquin County Flood Control and Water Conservation District Act (ch. 46, California Statutes 1956, first extraordinary session). Broadly, its objectives are to provide for the control of floodwater, to provide for a supplemental water supply, to conserve floodwater for beneficial use, and to protect life and property within the district. The district has broad powers of eminent domain and taxation, the ability to incur bonded indebtedness, to cooperate with Federal and State agencies, and to perform work beneficial to the district.

The population of San Joaquin County has increased from approximately 200,000 to 250,000 persons in the past 10 years, or an increase of approximately 25 percent. The San Joaquin County Planning Department presently predicts a 1980 population in San Joaquin County of from 385,000 to 470,000. The population of the city of Stockton, the county seat of San Joaquin County, has risen from approximately 71,000 in 1950 to approximately 86,000 in 1960, an increase in excess of 20 percent, which also reflects generally the growth of the other incorporated cities within the county.

The Folsom South Canal will service almost the entire east side of our county with an urgently needed supplemental water supply. Our county is predominantly an agricultural county and the future economic health of the county is dependent upon the ability of agriculture to continue to be able to secure an adequate water supply within its ability to pay. At the present time, approximately 80 percent of the acreage under water service in San Joaquin County is supplied by pumping from ground water basins. In many areas the water levels have dropped so much within the last 25 years that much of the irrigation development in the county is reaching the point at which ground water pumping is no longer economical. Many of our irrigation wells continue to fall rapidly with resultant costs for well deepening as well as greater pump lift costs. The present overdraft of ground water supplies indicates that under long-term future conditions, without the Folsom South Canal, present irrigated acreage in the Folsom South Canal service area would have to be reduced materially. We wish to emphasize that for San Joaquin County this is a project primarily to preserve our economy that now exists.

A crop survey in the San Joaquin County area made in 1955 showed that approximately 160,000 acres were irrigated out of a total of almost 240,000 acres. Irrigated pasture and other forage crops account for 40 percent of the irrigated lands; grapes and deciduous orchards occupy about 36 percent, with rice, sugarbeets, beans, canning tomatoes, and truck crops sharing the remaining irrigated acreage. The major portion of the irrigated land is being utilized in conjunction with family-type enterprises. Dairies, beef cattle enterprises, vineyards, and orchards predominate. Information is for the service area in our county.

San Joaquin County interests have recognized for many years that the answer to their supplemental water supply requirements depends upon importation of water into the county and that the most logical source for such imported supplies is the American River immediately to the north. In the past, San Joaquin County interests have actively supported the construction of Folsom Dam and Reservoir as the conservation feature which would supply a portion of the water for the proposed Folsom South Canal. In this connection, various interests within the county filed applications with the State of California to appropriate water from the American River in anticipation of the delivery of water through Folsom South Canal to areas in San Joaquin County. Among the agencies in the county which filed for this American River water in the late 1940's were the California Water Service Co., which presently serves domestic and industrial water within the Stockton metropolitan area, the city of Stockton, primarily concerned with service of municipal water within its limits, the North San Joaquin Water Conservation District, which embraces the north-

eastern portion of the county and the city of Lodi, and the Stockton and East San Joaquin Water Conservation District, which includes the agricultural areas in the central eastern portion of the county and the city of Stockton. Rather than granting the necessary State water rights to the individual entities for a water supply from the American River, the State water rights board granted water rights to the U.S. Bureau of Reclamation and directed under the permits so granted that project service would be limited to deliveries for beneficial use within Placer, Sacramento, and San Joaquin Counties, provided that the parties desiring such service within these counties executed agreements in accordance with Federal reclamation law by 1969. Several agencies within San Joaquin County are now negotiating with the Bureau of Reclamation for such contracts.

Related to the matter of entering into water service contracts with the U.S. Bureau of Reclamation, the San Joaquin County Board of Supervisors, through a bill introduced by its State legislators in 1961, sponsored amendments to the San Joaquin County Flood Control and Water Conservation District Act for the specific purpose of affording the countywide agency authority to enter into contracts with the United States for the delivery of Folsom South Canal project water in the event that individual areas within the county were not in a position to enter into the required repayment contracts. Accordingly, the California State Legislature enacted legislation, which was approved into law by Governor Brown on July 20 of last year (ch. 933, California Statutes 1961), which will allow the countywide district to enter into contracts with the United States for water from the Folsom South Canal. We believe that this is an important example in illustrating that San Joaquin County desires to do everything possible to insure the repayment of the irrigation features of the Auburn Dam-Folsom South Canal project.

Your committee might also be interested in knowing that in December of last year our board of supervisors entered into a contract with a leading engineering firm in California for the purpose of preparing a detailed estimate of water requirements of the county. The results of this study will be available by July 1 of this year and we expect that they will provide supplemental information upon which to base contract schedules for water service with the Bureau of Reclamation.

It has been a pleasure to appear before your honorable committee today and should you desire further information with respect to the need for Auburn Dam-Folsom South Canal in San Joaquin County we will be pleased to supply it to your committee.

Senator BURDICK. Thank you, Mr. Lehman.

Mr. LEHMAN. Next, I would like to introduce Alvin Landis, legal attorney for Stockton and east Joaquin Valley.

STATEMENT OF ALVIN LANDIS, SACRAMENTO, ATTORNEY FOR STOCKTON AND EAST JOAQUIN WATER DISTRICT

Mr. LANDIS. Mr. Chairman and members of the committee, my name is Alvin Landis. I am the legal consultant to the Stockton and East San Joaquin Water Conservation District. The district has authorized me to appear before you to express their appreciation for your early consideration of the authorization of the Auburn-Folsom

South unit of the Central Valley project and to relate briefly some of the reasons why early authorization of this project is so vital and important to the people of the area.

The growth or stagnation of any area is often dependent upon the realization by the people of the area of the existence and extent of their water problems and their efforts to resolve them successfully. The intelligence, foresight, and skill applied to obtaining, preserving, and developing adequate water supplies to meet the diverse needs of the people plays an important role in the welfare of the Nation as well as of particular areas.

The Stockton and East San Joaquin Water Conservation District comprises an area of approximately 80,000 acres and contains about 150,000 people. It constitutes an important segment of the total area and population which would be beneficially affected by the authorization and construction of Auburn-Folsom South unit of the Central Valley project. The district's water problems are of serious and major concern to the people in the district, and they trust that these problems will have your sympathetic consideration and understanding.

The agricultural land in this area is very rich and produces a variety of crops. More than 18,000 acres are in orchards producing walnuts, cherries, peaches, and other fruit. More than 10,000 acres are in alfalfa and irrigated pasture. About 22,000 acres are in miscellaneous field crops, of which tomatoes, beans, and sugarbeets predominate. There are about 10,000 acres of land which could be made productive if an adequate water supply was available. The city of Stockton, with an urban population of about 140,000, is included within the district and the problem of adequate water supplies relates itself both to the agricultural and municipal water needs of the area. Furthermore, the urban population of this city is expected to increase to about 400,000 by the year 2010. Consequently, we are concerned not only with the problem which confronts us today, but the aggravated condition which could confront us in the future.

The district has not been derelict in meeting its responsibilities. It has employed engineers and consultants to determine the extent of its problem and the means of resolving it. These studies have developed some extremely interesting data.

The present consumptive use of water for agricultural, municipal, and industrial uses amounts to more than 150,000 acre-feet per year. The present water supply from all sources under long-term mean seasonal conditions amounts to less than 95,000 acre-feet per year. The deficiency of more than 55,000 acre-feet per year has been supplied by mining the underground water supply. This has not only resulted in a serious depletion of the underground reservoir but has resulted, also, in a deterioration of the quality of water obtainable from some of the wells. In a few instances the deterioration has been sufficient to render the well water unsuitable for domestic and even some industrial uses.

The future presents a more bleak picture. By 1970 the total water requirements will increase to 180,000 acre-feet, but the supply from present sources will decrease to about 90,000 acre-feet, increasing the deficiency to 90,000 acre-feet per year. By the year 2010 the total water requirements are estimated at approximately 272,000 acre-feet. Without conservation measures the water supply obtainable from

present sources will decrease to less than 67,000 acre-feet, leaving a deficiency of almost 205,000 acre-feet per year.

Implicit in these statistics is the cold hard fact that unless alternate water supplies are made available in time, a growing, healthy community can only retrogress.

The report of the Secretary of the Interior and the independent studies made by the district establish conclusively that the Folsom South Canal is one of the major facilities to eliminate the deficiencies and furnish a great portion of the district's present and future supplemental water requirements. The district has supported this project since its inception. As early as December 4, 1956, the district informed the Bureau of Reclamation of its great interest in this project, its willingness to cooperate to achieve early authorization and construction, and, most important, its desire to contract with the United States for a water supply from the Folsom South Canal. As the studies of this project progressed and as the submission of the report became more imminent, the district requested and obtained a draft of contract which represented the type of contract which probably could be executed between the United States and the district in the event the Folsom South unit was authorized for construction. This occurred in February 1961. Thus it can be seen that this district has been in the forefront in support of the project and has repeatedly expressed its willingness to negotiate and contract for water service and repayment when the project is authorized.

The district's studies confirm and support the reasons assigned by the Secretary of the Interior for the transmission of the report to the Congress and the urgency of the project's early authorization. We strongly urge your favorable consideration of the legislation authorizing the construction of the Auburn-Folsom South unit of the Central Valley project.

Now, briefly, I would like to summarize some of the factors which I believe are compelling considerations for early authorization of the project. In very broad strokes, this is the picture in the area within the district I represent.

The present consumptive use of water for all purposes, municipal, agricultural, and industrial, equals approximately 150,000 acre-feet. The present supply from all sources is less than 95,000 acre-feet.

The deficiency has been made up by mining the underground water supply. At your left, there are a series of contour maps which indicate what has been happening to the ground water supply and can be more adequately discussed by Mr. Gianelli, who is the consulting engineer for many of the areas in the San Joaquin County. By 1970, the requirements will increase to about 180,000 acre-feet. The supply will decrease to about 90,000 acre-feet, and by the year 2010, the requirements are estimated at 272,000 acre-feet and the supply will decrease to approximately 67,000 acre-feet.

We face an ever-mounting deficiency, and, of course, it thus becomes evident as to our need for the construction of the Folsom South Canal as a primary source of water for our area.

One other point which I think is worthy of emphasis. As early as 1956, when the first bill was offered before the Senate for the authorization of the Folsom South Canal, our district expressed its willingness formally to the Bureau of Reclamation to enter into a contract for a water supply from that facility.

In 1960, when additional or other legislation was offered for consideration, we again expressed our willingness to contract with the Bureau for a water supply from that facility. In fact, I think we are the only districts which has the type of contract which the Bureau indicates it will probably utilize for the water service from the Folsom South Canal, so the record will show that we have been in the forefront, not only with respect to the support of the project itself but with respect to our willingness to repay our appropriate share of the Federal investment for water service. We appreciate the opportunity and the indulgence of the members of the committee in listening to all of us. I believe much of it, of course, is repetitive, but the importance of the ever-increasing deficiencies in water supply, to maintain a present economy and to anticipate what the future economy and needs might be, is exceptionally important to the people of that area.

Mr. LEHMAN. I would like to say at this time, Mr. Chairman, that that picture you see on the wall is the same thing that is happening all over the east side of the county. This is only one portion of our county. This same picture is taking place all over the east side, in the Folsom South area.

Senator ALLOTT. Mr. Chairman, could I ask a question at this point?

Senator BURDICK. Yes.

Senator ALLOTT. Mr. Landis, on the figures you just gave us, these are for the Stockton and East San Joaquin Water Conservation District, comprising about 80,000 acres. Where would that be on that map?

Mr. LANDIS. Would you delineate that?

Mr. GIANELLI. Stockton-East Joaquin Valley Water Conservation District embraces the city of Stockton and the area to the east, so it would lie in this area [indicating]. It is the lower portion of the Folsom South Canal service area.

Senator ALLOTT. Thank you.

Mr. LEHMAN. Next I would like to introduce the mayor of the city of Stockton, Tom Marnoch. He also has with him today Mr. Beckman, of the city council.

STATEMENT OF THOMAS E. MARNOCH, MAYOR, CITY OF STOCKTON

Mr. MARNOCH. Mr. Chairman and members of the committee, I am Mayor Tom Marnoch, of the city of Stockton, which is a community of approximately 88,000 people, with a metropolitan population of 120,000 people, totally dependent on an underground water basis rapidly being depleted by overdraft. The economy of our city is affected because of saline intrusion due to this overdraft. We cannot survive without supplemental water.

The U.S. naval supply annex is located in Stockton in an area that has turned completely to saline water, and they have applied to the city of Stockton for additional water. The city of the Stockton-East San Joaquin Water District jointly have hired consultants and spend thousands of dollars to survey our needs. The reports indicate the need of Folsom Canal in our fight for survival. We strongly support S. 103.

Stockton, Calif., is the largest city in the service area of the Folsom South Canal. It is a deepwater port, 80 miles inland and in all of

northern California second only to San Francisco in tonnage handled. It is the transportation hub of the great Central Valley of California at the intersection of U.S. Highways 50 and 99, and is served by three transcontinental railways.

Stockton, like most California cities, is growing rapidly. In the last year annexation added 950 acres to the incorporated area. Building permits in 1961 were 29 percent higher than in 1960. New buildings for four major department stores, including Sears, Roebuck and Montgomery Ward, are scheduled for completion this year. As a city grows, so does its use of water increase.

With the exception of a temporary service to the naval supply annex, all potable water in Stockton is pumped from wells. Originally these were artesian wells. Now it is some 75 feet to water.

The Stockton well field is limited in extent. It is bordered to the west and beneath by a body of underground saline water. As the fresh water is exhausted, salt water tends to replace it. Federal, State, and independent engineers have warned repeatedly that the present overdraft cannot continue indefinitely without seriously endangering both the quantity and the quality of Stockton's water supply.

Runoff and percolation from the mountains and high ground to the east are the natural sources for replenishment of the Stockton well field. Heavy pumping for agriculture intercepts this natural flow. What is left is not enough to meet the metropolitan needs.

No community can grow beyond the limits set by its supply of water. No matter whether it is Los Angeles, San Francisco, or Stockton, the time comes when water must be imported to supplement the local supply.

The need of a supplemental supply of water for Stockton has been recognized for many years. There is nothing to be gained by reviewing past history, but certain water rights on the American River have been assigned to the Federal Bureau of Reclamation with the proviso that the requirements of the city of Stockton and of San Joaquin County would be satisfied.

This brief review of the specific water problem confronting the city of Stockton is presented to this honorable committee in explanation of the urgency of the situation. At best it will be several years before the completion of the Folsom South Canal. The interim period is a critical one. Already, it has been necessary to build a 27-inch transmission conduit to bring water to the downtown area from a well field several miles away. Additional interim projects may have to be built if imported water is long delayed.

The city of Stockton recognizes that its water problem is a component part of, and inseparable from, the area problem of water deficiency. It is convinced that the Folsom South Canal is the one practical project that will eliminate this deficiency. On this basis the city of Stockton respectfully urges this honorable committee to use its best endeavor to further the authorization of the Auburn-Folsom South unit of the Central Valley project.

Senator BURDICK. Thank you, Mr. Marnock. The resolution you have presented to the committee will be printed with the rest that have been placed before us.

Mr. LEHMAN. Next I would like to introduce Mr. W. B. Parker, who is a farmer in the same district. I think he can tell you pretty well what is happening on his own ranch.

STATEMENT OF W. B. PARKER, FARMER, STOCKTON AREA

Mr. PARKER. Mr. Chairman, members of the committee, I moved on my farm in 1926. I put in my first well in 1927, because I found out I could not make a living on dry farming. The water table then stood at 26 feet. Today it is 83 feet, and since 1955, I have spent approximately \$8,000 repairing my pumps and deepening the wells, and everything that goes with a falling water table. During that time, my bill for electricity to run these pumps has increased to \$1,862.28, approximately a 50-percent increase for electrical energy. If it continues to drop, as it has, and I have known some of our neighbors who have smaller farms than I have, and by the way, mine is 144 acres—they have quit trying to get any more water. They are living in hopes that something will be done to bring this water table back.

The assessed valuation of our county is approximately a half billion dollars. The area I live in is one of the highest developed fruit and vegetable and walnut growing areas in the world—not the United States but the world. If we are not helped through your efforts and ours together, we are going to go into bankruptcy, and that area is going back into dry farming.

Today, the crops you can produce on dry farming would not pay the taxes. My taxes are \$2,495 this year. That is not including improvements, because my home was built in 1863.

If there are any questions, I shall do my best to answer them.

Senator ANDERSON. What is your water lift now, 83 feet?

Mr. PARKER. Yes, sir, and it was 26 feet in 1927, when I put in my first pumps. It has been a continuous dropping ever since, with the exception of 1 year, 1955, when we had water down the Calaveras River.

Senator ANDERSON. A great many other areas are hit much more than that?

Mr. PARKER. I am within 89 miles of underground salt water. Half the city of Stockton has been advised to put no more wells in that area. One of the largest canneries we sell our products to has had to abandon the wells and come into the city and pay city taxes on both storage of produce and the facilities they own in order to get fresh water in order to operate on.

Senator ANDERSON. Where is the Tracy pumping plant?

Mr. PARKER. Over on the West Side.

Senator ANDERSON. Does it have any relation to irrigation?

Mr. PARKER. Not a bit in the world. We are out there by ourselves. If we do not get that, we are going to dry up.

Senator ANDERSON. What do you produce now on your farm?

Mr. PARKER. Twenty acres of walnuts, 6 acres of cherries, 114 acres of tomatoes, and 4 acres in farmstead.

Senator ANDERSON. How much water do you use per acre?

Mr. PARKER. It takes approximately 3 feet per acre. Last year my farm was in tomatoes, and my water bill dropped about \$355 after I pulled out the cling peaches. They became economical and feasible.

Senator ALLOTT. Could I ask you to repeat that again? I did not get it.

Mr. PARKER. I said I pulled out 55 acres of cling peaches I had been canning because of conditions under which they were being produced; the cost of labor, taxes, everything else made orchards economically not feasible to operate.

Senator ALLOTT. What was the statement about tomatoes?

Mr. PARKER. I said the years I quoted, we put tomatoes in there last year, and we got 22½ tons per acre. I farmed tomatoes in Colorado, too.

Senator ALLOTT. Where?

Mr. PARKER. Between Boone and Hideaway, in that area. You get 10, you are doing well, sir. But we could not live on what you get. Our taxes, our water bills, our other costs are so high we could not exist on that.

I shall be happy to answer anybody's questions. I farm for a living.

Senator ANDERSON. If you get this supplemental water, what will you produce?

Mr. PARKER. Not a thing differently from what I have been producing, because I have tried to raise the crops that will produce the greatest income.

Senator ANDERSON. You have taken out cling peaches. What do you put in there?

Mr. PARKER. Tomatoes. This last year, I produced 22½ tons of tomatoes at \$30 a ton. That is far better than you get for peaches.

Senator ANDERSON. It is far above what some of us get for wheat.

Mr. PARKER. I should say it is. You should be aware of it, since you came from North Dakota. I have met you before, Senator.

Senator ANDERSON. I did not come from North Dakota. I came from South Dakota; I am a southerner.

Mr. PARKER. Well, it is the same area.

Senator BURDICK. The next witness?

Mr. LEHMAN. Mr. Jim Sorensen is the consulting engineer of the San Joaquin Water District, and he will appear later. Now I would like to call James Culbertson, mayor of the city of Lodi.

STATEMENT OF JAMES E. CULBERTSON, MAYOR, CITY OF LODI

Mr. CULBERTSON. I am James Culbertson, mayor of the city of Lodi. For your information, I have a resolution from the city of Lodi which I would like to submit for the record.¹

In addition, I would like to make a brief oral statement.

Lodi is located in the service area of Folsom South Canal, on the south bank of the Mokelumne River. Our community is largely supported by the agricultural activities in the surrounding area. Lodi owns its own water distribution system and our source of water is from the underground water. This is for our domestic and industrial water purposes. If the underground water continues to lower, we shall have to have supplemental water for domestic and industrial purposes. When I say industrial purposes, we have many wineries and many canneries in our area which use a large amount of water.

¹ The resolution is printed in the appendix to this record.

Though we are located on the Mokelumne River, we have no water rights on the Mokelumne and there is not a likelihood that we shall have them, because all the water rights have been allocated.

The city of Lodi strongly urges the endorsement of the Auburn Dam-Folsom South Canal project, and urge that you give your approval.

Thank you.

Mr. LEHMAN. Next I would like to call on Sherwood Beckman, chairman of the Woodbridge Irrigation District, San Joaquin County.

Senator ANDERSON. Mr. Beckman, how much of a problem is this flood of salt water that you get? I understand that when you pump and create a sort of vacuum, the salt water comes in from the ocean. How much of a problem is it out there?

Mr. BECKMAN. We have not that problem at the moment. The city of Stockton can answer that question.

Senator ANDERSON. You were asked to testify, and I wonder if it was a problem to you. I flew over that area and I know it was an illustration.

Mr. MARNOC. We have it coming up to our channel there, and at the present time, it is getting nearer to our city. However, this is an underground saline that comes in from the delta area and has infiltrated under into our water basin. It is resting underneath the water in most instances, but in some places, it has come to such a level that it is on top. Truthfully, the water table lowers, but in the meantime, the saline solution is coming in underneath it and holding the water on top. We do not know exactly how much we have on top before we reach the water that has the saline solution under it. But it filters from the west through the delta area.

Senator ANDERSON. How many parts of saline is it in the area?

Mr. MARNOC. I do not have those figures.

Mr. PARKER. Senator Anderson, I can partially answer it, being a farmer and being cognizant of what goes on among my neighbors. Back in the thirties, it got so dry that the parts got about 900 parts per million. They had to quit. I think it is now running between 400 or 500 parts per million. However, I have some charts in my bag which I shall be glad to introduce.

Senator ANDERSON. Well, they are having some difficulty down in Mexicali now. Is their saline content higher than 400 parts?

Mr. PARKER. Any place you are going to use it for agriculture, it must be around 400 parts per million, and that is the maximum you can use for irrigation.

Senator BURDICK. Are there any other questions?

Mr. Beckman, you may proceed.

STATEMENT OF SHERWOOD BECKMAN, PRESIDENT, WOODBRIDGE IRRIGATION DISTRICT

Mr. BECKMAN. Mr. Chairman, my name is Sherwood W. Beckman. I am president of the Woodbridge Irrigation District. I would like to offer for the record these resolutions. One is from the Woodbridge Irrigation District and the other is from Farmers and Merchants Bank of Central California. However, I would like to mention that our irrigation district serves an area of 40,000 acres, including Wood-

bridge Water Conservation District. In the season of 1961, our water supply was sufficient to furnish water to only 7,000 acres. Many of the other lands installed pumps and caused serious overdraft to the underground water supply in the area.

Many of the farmers in the district required loans to successfully operate their farms. Any bank cannot approve such loans unless an adequate water supply is available to such farmers.

Mr. Chairman, I feel that the Folsom South Canal is necessary to our district for a surface and ground water replacement to maintain our present economy.

I shall offer these for the record.¹

Senator ANDERSON. You said 20,000 acres in the district?

Mr. BECKMAN. No, we have 40,000 acres in the service area and we served 7,000 acres in the last year. That is all the water we had.

Senator ANDERSON. How did you pick out who got served and who did not?

Mr. BECKMAN. That was a problem.

Senator ANDERSON. How did you solve it?

Mr. BECKMAN. We solved it in this manner: There is an irrigation district that was formed originally some 35 years ago, and the other lands in the service area belong to the water conservation district. The conservation district had the water rights second. The earliest water rights were maintained or obtained by the land inside the irrigation district. So the second choice people knew that they were in second place, and they had to put down wells. We knew early in the season we could not service them, so they put down wells which did automatically create a heavy overdraft in the entire area.

Senator ANDERSON. The 7,000 acres got these from flowing canals?

Mr. BECKMAN. They got surface water, yes. They have the privilege because they bought the canal system in the first place and maintained it all these years, and the area that is in the district is—we have a checkerboard irrigation district, one piece of land in and the other one out, according to the vote we took when it was first formed. That is the method that we used to determine who was entitled to the water. Lands inside the district had first chance, and that is all the water we had. Outside the district were furnished by their own wells.

Mr. LEHMAN. At this time, Mr. Chairman, I would like to call on Mr. Bill Gianelli, consulting engineer for the Stockton East San Joaquin Conservation District to explain the chart which he has prepared showing the overdraft in the past year in the Stockton-San Joaquin Water Conservation District.

STATEMENT OF WILLIAM R. GIANELLI, CONSULTING CIVIL ENGINEER, AUBURN DAM COMMITTEE—Resumed

Mr. GIANELLI. Mr. Chairman, members of the committee, I think it might be well to refer to these maps to answer some of the questions the Senators may have.

The map on the lower left here represents the underground water surface elevations in 1958.

¹ The resolutions are printed in the appendix to this hearing record.

We have plotted in colors the different areas of elevation. For example, this red circle here, this dark red, represents water levels which are 50 to 65 feet below sea level. Then on up the blue area represents water levels that are in the range of on to 25 feet above sea level.

The purple area in the extreme right represents areas that have a water level of over 25 feet in elevation.

Coming over to the right—

Senator ALLOTT. May I interrupt you? What do you mean water levels over 25 feet in elevation?

Mr. GIANELLI. The water is standing 25 feet above sea level and the wells in this area are rated here in purple.

Senator BURDICK. What is the surface elevation?

Senator ANDERSON. How much do you have to lift?

Mr. GIANELLI. The surface elevations vary. We are going gradually up into the foothill area. The valley floor is the area essentially below the proposed Folsom area. The areas there will vary from 10 or 15 feet above sea level to perhaps 80 or 90 feet. The area above the line goes up more rapidly in areas above 100 feet.

Senator ANDERSON. And that brown part you have there, what is the lift there?

Mr. GIANELLI. Sir, this one? This will vary, the lift here, I would say, probably somewhere around 100 to 150 feet.

Mr. PARKER. About 250 would be closer. You are getting up into the foothills.

Mr. GIANELLI. As you get up here, it would be greater.

Senator ANDERSON. Are there wells now?

Mr. GIANELLI. There are.

Senator ANDERSON. So they are able to lift 200 feet.

Mr. GIANELLI. That is correct, some of them are lifting that high at the present time.

On this chart on the right, we have plotted this same underground water surface elevations for 1951. This represents the change that has taken place between the 2 years. In other words, instead of having a rather smaller area where the water level is 50 to 65 feet below sea level, we now have quite a large area. Where the areas standing above sea level before were indicated by blue and purple, they are now also indicated by blue and purple and you can see you have a much lesser area in this particular district where the water level is actually above sea level elevation.

The problem of quality of ground water is that there is a barrier which exists generally through this area like this. It is called a salt water barrier. The water to the west of this so-called salt water barrier is such that the quality is unfit for either domestic or agricultural purposes.

The problem is as the ground water levels are drawn down by excessive pumping, there is the express concern that the whole ground water basin eventually might be lost by virtue of bad quality water infiltrating from the area to the west, which represents the delta area, where there is actually sea water much of the year.

On the extreme upper map here, we have tried to show the actual changes in water surface elevations between these two in more or less of a picture form. The colored area in orange represents a drop of

15 to 30 feet in the last 3 years. The area in red represents a drop of over 30 feet in the last 3 years. The area in yellow represents a drop of from 15 feet in the last 3 years.

So this is a pretty good graphical illustration of what has happened to the ground water levels in that area.

As the Senator indicated, in some areas, the lift is not excessive, but we are concerned with the infiltration of this bad quality water into the area of the basin.

Senator KUCHEL. You are just lucky you are not near the ocean, or you would have nothing but salt water coming up.

Mr. GIANELLI. That is right. In this Sacramento-San Joaquin area, salt water does come back up into this area a portion of the time. It is this bad quality water that eventually gets into some of these ground water basins, and this is a thing that causes considerable problem.

Senator ALLOTT. May I ask you a question, please?

As I understand this canal, it will supply surface water for industrial, agricultural, and domestic use; correct?

Mr. GIANELLI. That is correct.

Senator ALLOTT. Now, what assurances do you have that your ground water levels will not continue to be depleted as far as they actually can so that you have a continuance of this? Of course, you would have some refeeding and restocking of your ground levels from your irrigation.

But what would you have to say about that?

Mr. GIANELLI. Well, we think that the bringing in of additional surface supplies will do two things. First of all, it will eliminate some of the pumping in that area by farmers who are now having to pump excessive distances. From an economic standpoint, it will be easier for them to use surface water. By virtue of that, we think the general ground water levels will rise.

In addition, as we apply surface water to this irrigated land, some of that water is bound to get away and replenish the ground water basin.

We think by bringing in another supply, it will first eliminate the draft on the ground water, and secondly, some of the water used for surface irrigation will find its way back to the ground water basins and will assist in bringing these ground water levels back up.

So we think it will assist in doing those two things.

Senator ALLOTT. There is no way of controlling this other than sheer economics of whether or not a man can get water cheaper out of a canal than he can get it out of a pump?

Mr. GIANELLI. I think that would be the primary consideration, plus the fact that some of the people who are getting surface supplies now will not have to put down irrigation wells.

Mr. LANDIS. Perhaps it might be useful if I could supplement Mr. Gianelli's answer.

In 1959, prior thereto, the city of Stockton and Stockton-East San Joaquin Water Conservation District employed the engineering firm of Alvin, Burdick & Houseman to study these problems which Mr. Gianelli has just described. It cost those areas several thousands of dollars. We have received the report and one of the prime recommendations of these consulting engineers is that Folsom South Canal

water is a must if the area is—the ground water is not to be completely destroyed by salt water intrusion. It would be a burden on the record, of course, to introduce this report, but for any member of the committee who desires to examine what we call the ABH report, we will be very happy to furnish a copy. But these are considerations which have been developed by the best consultants that the people in the area could employ at their own expense in an attempt to find out what their problems are and what the best techniques and methods and procedures are available for the resolution of those problems.

Mr. PARKER. Might I add something more? When you talked about that purple up there and said there were pumps, drawing from 150 to 200 feet? The pumps up there are negligible. That is not No. 1 farming land in any sense of the word. That is a few cattlemen up there who pump.

Senator ANDERSON. Do we understand if this project is put in, this will not be put into irrigation?

Mr. PARKER. No, that will not go into irrigation. It can not be affected by any project.

I do not know of any land in our area that can be brought further into irrigation than it is. Most of our farms are 100 acres or less. When a man of that size loses his surface water he is through.

At the time they are going to operate, there is no assurance of area longevity. Sure, there are some farms of 4,500 acres that use irrigation. A small man can not get into that kind of a deal.

Our farms, as I say, are under a hundred acres.

Senator ANDERSON. There will be no irrigation, as such, in this area marked in purple?

Mr. PARKER. I do not see how there could be, without a great deal of leveling, an impossible amount of leveling, because the subsoil is rocky.

I do not know where you would get the soil to fill the hole.

Senator ANDERSON. There is not going to be any flowing of water through a canal there?

Mr. PARKER. No, sir, the canal comes west of there. That is San Joaquin County on the map.

Mr. GIANELLI. You are talking about that area.

Senator ANDERSON. Where is that on the other map?

Mr. PARKER. It is in the northeast part of the county.

Mr. Chairman, it is above the Calaveras River.

Senator BURDICK. Let the record show that we are talking about purple instead of brown.

Any other questions?

(No response.)

Mr. LEHMAN. Thank you, Mr. Chairman, for this opportunity to appear before your committee.

Senator BURDICK. We are trying to ascertain if we can conclude these hearings this afternoon.

We would like to know how many have statements to file, how many would like to present oral testimony.

Mr. Sorensen?

Mr. HILL. We have two oral testimonies to present and several that would like to say a few words, if possible.

Senator BURDICK. Come forward to see how we get along.

Senator CARROLL. Mr. Chairman, I wonder if you will excuse me. I am due at a meeting of the Judiciary Constitutional Rights Subcommittee. They are examining into the constitutional rights of military personnel and I am due there.

Senator BURDICK. Certainly.

STATEMENT OF JAMES F. SORENSEN, VISALIA, MANAGER, FRIANT WATER USERS ASSOCIATION

MR. SORENSEN. My name is James F. Sorensen and I believe it might keep better order if I presented a short statement on behalf of North San Joaquin Water Conservation District, which is in San Joaquin County and I think will more properly follow the testimony you just received.

The North San Joaquin Water Conservation District is located in and around the city of Lodi, which is fairly centrally located within this service area.

North San Joaquin Water Conservation District is a district of some 52,000 acres. In this area, which has been developed for many years, our principal crops are Tokay grapes, and these are unique in this area in the United States.

Many tomatoes, as Mr. Parker indicated, were grown in this particular area, irrigated pasture and the like. This area has been rather completely developed for a good many years. This isn't a matter of land development; it is a matter of keeping and sustaining an existing economy in a particular area.

In connection with the ground water matter, I think it is well to realize that this area also has relied completely upon ground water pumping to meet its water needs.

There is this danger, if the water tables are drawn too low, of damaging the water bearing strata of the aquifers if high saline content waters or the like get into this reservoir, and there is serious danger of permanent damage.

I would also note that this district, over 4 years ago, in a sense commenced negotiations for a water service contract and several years ago had a distribution system proposal prepared by which they would use canal water to supplement the present ground water and the district contemplates that the use of some surface water would bring about a balance in the overall need, such that they could stop this overdrawing.

I am authorized by the board of directors to indicate their vigorous support for the Auburn Dam Folsom South Canal unit of the Central Valley project.

Senator ANDERSON. How many acres did you save were on Lodi?

Mr. SORENSEN. 52,000 acres in the district, in this North San Joaquin Water Conservation District.

Senator ANDERSON. What will the charge be against that land for irrigation?

Mr. SORENSEN. The water toll at Folsom South Canal side would be \$2.75 per acre-foot. Now, this is in the nature of a toll and there would be distribution charges added to this.

Now, in addition, the district would provide some sort of distribution system. Whether it would be by local financing such as they might arrange, or Public Law 130 loan program funds, or by the construction by the Bureau of Reclamation.

Senator ANDERSON. Has there been a study made as to what the individual farm is likely to pay per year for water per acre?

Mr. SORENSEN. Yes.

Senator ANDERSON. Is this \$2.75 charge—is there more to it? How much more?

Mr. SORENSEN. This would be the water toll per acre-foot. Just as a rough figure, if we said that the land might use 2 acre-feet per acre per year, this would be \$5.50 an acre per year water toll, plus a distribution charge of \$1—well, I think it would be safe to use, say, \$3 an acre for a distribution charge.

So we are then at \$8.50. There would be some district overhead, probably; possibly another dollar which would put it at nearly \$10.

On top of this, then, would be the repayment of a distribution system.

Now, this would depend on what type of financing and the maturity schedule for the repayment of the capital costs.

Senator ANDERSON. Isn't this under the Federal reclamation law?

Mr. SORENSEN. Yes, but the distribution system within the district might be financed locally under, for instance, a district warrant or a short-term bond, or it might be under a 40-year loan.

Senator KUCHEL. But that is not the fact here?

Mr. SORENSEN. Well, Senator Kuchel, this is not determined. This would be under the option of the local district at the time.

Senator KUCHEL. You are talking about their own system?

Mr. SORENSEN. Yes, sir.

Senator KUCHEL. He is talking about their own distribution system when they tack on to that Folsom South Canal.

Mr. SORENSEN. That is right. They would take water from the canal and distribute water in their own facilities, which might be constructed under several financing arrangements.

Senator ANDERSON. Then this project involves only the canal and doesn't involve any distribution system?

Mr. SORENSEN. The bill, as I remember, provides that the amount of money which is—well, the two hundred and some million dollars includes distribution systems which may not be constructed, let's say, at Government expense, which would be repayable.

Senator ANDERSON. Well, why would you want to pay interest when you can get it interest-free under reclamation law?

Mr. SORENSEN. Senator Anderson, this goes to a length of time for repayment. I think you are aware of the Public Law 130 program and why it was established, in that some districts in the Friant area, particularly, felt that it was more economical over the long haul, for instance, that they built their own systems with Federal loan funds, as distinguished from the Bureau of Reclamation constructing the systems wholly under the Bureau's supervision.

Some districts have constructed systems within the last few years and some currently with their own improvement districts and they pay interest and discharge the obligation in 10 years. They felt that this was preferable in some longer financing and entanglements that they might find themselves in.

Senator ANDERSON. Do I understand you suggest, then, that it is cheaper to pay interest for 10 years than to have it interest-free for 20?

Mr. SORENSEN. It depends, Senator Anderson, on the cost of the construction. If the district locally is able to build at a lower capital cost, and this is many times the case, of their own volition with a lower capital cost, than something the Bureau of Reclamation might build, then they have turned to local financing.

This has happened in a good many cases of which I am personally aware.

Senator ANDERSON. And I am, too. I have never quite understood it.

Mr. SORENSEN. Well, it is a matter of overhead for one thing, Senator, and standards, local contractors as compared with larger outside contractors. There are many factors that are involved in this. But this legislation does not specify that the distribution system shall be built or operated under any particular scheme, let us say. But the funds are there that would cover those expenses if they do end up being constructed by the Federal Government.

Senator ALLOTT. Mr. Sorensen, it is your understanding that the bill would also include distribution for municipalities?

Mr. SORENSEN. I can't answer that, Senator. As I remember, it does not, but I wouldn't say that from knowledge.

Senator ALLOTT. We will clear that up later.

Mr. SORENSEN. That would conclude that, and I believe Mr. Hill might add to it.

Senator KUCHEL. I believe if I might say so to the Senator, that was developed in your absence this morning in the testimony of the representative of the Bureau. He testified, in answer to your question, "No, it does not include any such costs."

(Mr. Sorensen presented the following additional statement:)

STATEMENT OF JAMES F. SORENSEN, CONSULTING ENGINEER, SECRETARY,
CENTRAL VALLEY EAST SIDE PROJECT ASSOCIATION

Mr. Chairman and members of the committee, thank you for the opportunity to be heard today in support of the presently proposed legislation to authorize the Auburn Dam-Folsom South Canal unit of the Central Valley project. The support of the association is directed particularly toward pending legislation before you which would provide for the authorization of this unit with the provision for enlargement of the Folsom South Canal to serve lands along the east side of the Central Valley.

Mr. Hill has indicated the geographical interest of the association and I believe that some mention should be made of the water conditions and the current situation in the Central Valley area with particular reference to the east side.

In considering the use of irrigation water, it is well to note that the earliest irrigation developments, starting about 100 years ago, were made using surface supplies directly diverted from the various east side streams, Kern, Tule, Keweah, Kings, Fresno, Merced, Tuolumne, Stanislaus, Cosumnes, American, Feather and other rivers. As development increased, generally in the early 1900's, storage facilities became increasingly necessary and as time has passed storage facilities have been constructed on practically every one of these streams. With the development of efficient centrifugal and deep-well turbine pumps, pumping from the underground reservoirs was used to supply water for use when the surface supplies were exhausted which usually occurred in midsummer, even with the reservoirs. In the period just prior to World War II, a general balance in water supplies and demands have been reached.

With the ending of World War II, the landowners and water users of the Central Valley found themselves in the middle of a tremendously expanding de-

mand for land and water for agricultural production and for urban development. The large influx of people into California was being felt directly and indirectly. In addition to the direct effects, the thousands of new people who settled in the southern California area had caused many thousands of cultivated acres to go out of production with the result that many of these displaced farm operators had to come into the San Joaquin Valley in a search for fertile farm lands.

The result was that the previously balanced situation became one of ground-water overdraft and falling groundwater levels. Additional major dams and reservoirs were built but the demand for water was increasing more rapidly than water could be made available. At the present time in much of the east side area, ground-water levels, which are the real indicator of the supply and demand status are at all time lows. This simply means that existing supplies are less than the existing demands.

Projects are being planned for local streams and needs in the few areas where undeveloped water remains. Unfortunately, in most of Sacramento, San Joaquin, Merced, Madera, Fresno, Kings, Tulare, and Kern Counties, there are no such untapped sources.

In the field of large water projects, the people of California have bonded themselves for \$1.75 billion for water development. In spite of all of the work that is underway in California, we are unable to keep pace with our water development needs.

The districts, counties, and other agencies in the Central Valley are united in their support for immediate passage of authorizing legislation for this unit. In this connection, to supplement the resolutions and letters introduced earlier, I have submitted copies of resolutions and letters from the following:

Counties of Kern, Madera, Kings, Tulare, Fresno, and Merced. Also Kaweah Delta Water Conservation District, Arvin-Edison Water Storage District, Tulare Irrigation District, Ivanhoe Irrigation District, Orange Cove Irrigation District, Lindsay-Strathmore Irrigation District, Madera County Chamber of Commerce, Minturn Co-op Gin, North San Joaquin Water Conservation District, Alta Irrigation District, Corcoran, Delano-Earlimart Irrigation District, Rag Gulch Water District, Tulare County Farm Bureau, Tulare Lake Basin Water Storage District, Woodlake City Council, Rosedale-Rio Bravo Water Storage District, Cloer Community Service District, Saucelito Irrigation District, Kings County Water District, Kern County Water Agency. Semitropic Water Storage District, Lower Tule River Irrigation District, and Pixley Irrigation District.

This support is based on the accomplishments of the existing facilities of the Central Valley project. The record of these multipurpose units has demonstrated that the project is fulfilling the goals which Congress had in mind. The early authorization and construction of the Auburn Dam-Folsom South unit with enlargement provisions would bring immediate relief for Sacramento and San Joaquin Counties and would provide a means to save construction costs for later use. The proposed extra capacity has been shown to be economically feasible.

I join in urging your early approval of the pending Auburn-Folsom South unit legislation.

STATEMENT OF FRANK HILL, STRATHMORE, PRESIDENT, CENTRAL VALLEY EAST SIDE PROJECT ASSOCIATION

Mr. HILL. I am Frank Hill, president of the Central Valley East Side Project Association.

Mr. Sorensen is the secretary for that association and he and I will both present statements which, I believe, have already been submitted.

At the end of our presentation, we have a few people from home that would like to say a few words, if at all possible. We guarantee they won't be lengthy.

I am a working farmer in Tulare County. I operate our family farm of 270 acres. We produce fruit and general field crops. Our irrigation needs were met in the last generation by pumps.

As that became more expensive, and lack of water and quality of water became poorer, we began to look for other ways of finding water.

We organized the Lin-More Irrigation District, of which I have been a director for 18 years and now president.

Lin-More District is one of the districts that are receiving water under the Central Valley project, under the Friant service unit.

We have made considerable recovery in the last 10 years we have been taking water, but there are so many isolated areas around the existing districts that are not in any district and that are continuing to pump, that it is just pulling the water out from under our districts and the more we put under, the more they pull out.

We feel that the only way we can continue to help ourselves is to help them in the importation of additional supplemental water. We hope this can be done through the development of the proposed east side project of the Central Valley project.

I have been sent here by the Central Valley East Side Association. This association represents people from all walks of life. Some of them are present users of Central Valley project water, others who are interested in development of additional water and a great number of potential users who are either in no organized district or in some cases, districts that were organized back in the last century.

It was done in the old hand method and they did the best they could locally. That is beginning to peter out and they have to get an additional supply of water someplace else.

This association includes 11 counties and extends from the Tehachapi Mountains on the south below Bakersfield to the Sacramento County area on the north.

We know that this contains some of the most fertile and productive land in the United States and possibly in the world.

This has been true for many years because of the unusual climate that we enjoy there and the aggressiveness of the farmers in the development of irrigation and conservation practices and the Central Valley has long been a leader in technological advances and development of crops and improvement of quality.

Everyone is also aware of the great influx of population in California. It seems that California is becoming the melting pot of America now. All of this has had such a demand on our resources, particularly water. The cities as well as agriculture are making demands on water. With this population increase in our State, it is imperative that we make a better distribution of the water in our State.

The cities are dependent upon agriculture in their processing plants. The valley is primarily an agricultural area.

The people that come there from other parts of the country are somehow or other connected with agriculture, whether directly connected with the farming or not processing plants or in the distribution or other industries that depend upon agriculture.

There are many reasons why we came here to seek authorization of this project.

The area that will be served that we have heard about this afternoon many times as the Auburn South unit. You have heard of the crops. You know them as well as I do by this time. But it is my understanding that it is merely a stabilization of the economy that now exists in that area.

Something has to be done to preserve the economy that has been built in that area.

The present methods of farming these crops require large amounts of investment, both in equipment and capital and labor and it just simply cannot be allowed to fall by the wayside.

Now, this East Side Association also supports this Auburn-Folsom South bill because of the proposed east side unit that was discussed here this morning.

It is something that is needed and as time goes along, it is going to be needed worse.

Down along the east side of the San Joaquin Valley are three of the most productive counties in the United States.

We grow sort of specialty crops there. There is very little of our crops that are in surplus. Citrus and all those things are in great demand all over the world.

Now, this portion of California that will be served by this east side project needs approximately a million and a half acre-feet of water.

Ultimately, as there is increased population and industry coming into the area, we will need up to 2½ million.

Those are the reasons we are here seeking the authorization of this Auburn Dam-Folsom South unit, for the area that it will immediately serve and also because it is a potential in the development of more projects that we will need all down the east side of the Central Valley.

My own personal philosophy is, yes, we live in this country, we own the land, we pay the taxes. We use that and some of it we use rather poorly.

If we cannot make an effort to leave this land for posterity in good or better condition than we found it, we are mighty poor citizens. That is my reason for being here.

With those thoughts in mind, we sincerely request that you favorably consider the authorization of this unit.

Senator ANDERSON. You have a statement in here saying that this group represents some 750,000 acres?

Mr. HILL. That is the Friant water users. I would like to dwell on that point just a moment, if I could.

Senator ANDERSON. How many of them are under this project?

Mr. HILL. There would be all of them. The Friant Water Users Association is the permanent contracting group, 22 districts now obtaining water in the Friant service area, and it is comprised of 750,000 acres.

Senator ANDERSON. Would you say these Friant water users aren't producing cotton?

Mr. HILL. Cotton is grown in the area. I think we are all rather familiar with California cotton, that it is in such demand that it is not in surplus.

I am a cotton grower.

Senator ANDERSON. It is not surplus?

Mr. HILL. Cotton as a whole, I think we can say, is surplus. But there is a ready market for California cotton.

Senator ANDERSON. How much of this land would be devoted to cotton, of the 750,000 acres?

Mr. HILL. Are you under the opinion that 750,000 acres would be brought into production?

Senator ANDERSON. No. No, I am just going back to the situation the Senator of North Dakota finds himself in.

His project originally was a million acres, all of the supplemental water. Now they have trimmed it down to 250,000 acres, because certain persons have said—they grow the type of wheat that is not in surplus either, but wheat generally is in surplus.

I am just wondering if this 750,000 acres—

Mr. HILL. The only answer I can give you, Senator, to that question is that cotton is controlled by allotment and it will not be increased.

It is already in production, has been right along.

Senator ANDERSON. You wouldn't try to tell me that the cotton production in the State of California, when you count bales per acre, is comparable to cotton produced in the southeastern part of the United States; would you?

Mr. HILL. I am not very familiar with the southeastern part of the United States, but I understand that we do grow more cotton per acre.

Senator ANDERSON. They get a half bale or something of that nature. Do you get four bales?

Mr. HILL. No; I wish I could. Two and a half has been my biggest acre.

Senator ANDERSON. Do you use the skip row program?

Mr. HILL. We had a small field in skip row.

Senator ANDERSON. You get two and a half bales on skip row?

Mr. HILL. On that little 3-acre piece I had, I picked three bales per acre on the skip row I had.

Senator ANDERSON. I saw a lot of cotton in California that went over four bales.

Mr. HILL. I agree, it is there. That is on the west side, on the other side of the valley.

I believe that this is not going to make any difference to cotton. We are controlled by allotments. We cannot control the acreage.

Senator ANDERSON. You are not controlled by allotment on bales; you are controlled by allotment on acres. Extra water makes a difference; does it not?

Mr. HILL. Yes; it does.

To a certain point, yes.

Senator ALLOTT. Mr. Hill, I would like to ask you one question. You spoke—is there any acreage in this area that you are speaking of primarily, not the big area, where the salt water comes in where land has had to be idle because of salination?

Mr. HILL. I cannot speak of the entire area. I will have to talk about my own.

Senator ALLOTT. I am talking about your own area.

Mr. HILL. Yes; in the Lindmore Irrigation District, which is approximately 50 percent citrus, I would say prior to the importation of Friant water, we lost three or four hundred acres of citrus. It was just too salty and salt conditions put the trees in a weakened condition and frost came along.

With the combination of the two, the trees had to be pulled out.

Senator ALLOTT. So far, the loss of productive acreage from this source has not been great, comparatively?

Mr. HILL. I will have to qualify that by saying if it had not been for the importation of Central Valley water, where we could use surface water rather than underground water—

Senator ALLOTT. I understand that. But I am just trying to get a picture of that in my own mind.

It has been insignificant, the actual acreage loss so far, whether it has been from Friant water or some other thing. The actual loss from salination has been small?

Mr. HILL. Over the general picture, it hasn't been large. But it is a thing we have to contend with, but to some farmers, it is pretty doggone big. To the individual farmer, it is a major item. Wells have had to be drilled to 600 feet to get more water and filled back up to 400 feet to shut out the salt.

Senator ALLOTT. Now, if I could get an answer to my question: How much land has actually been taken out of production in your area because it was unfit because of the use of salt water?

Mr. HILL. I would say 500 acres of citrus out of our Lindmore Irrigation District. That is an estimate.

Senator ALLOTT. Thank you, sir; that is all I wanted.

Senator ANDERSON. 500 out of a total of what?

Mr. HILL. Oh, about 11,000 acres planted to citrus. I am estimating these figures, Senator. I am not a citrus grower. I am just familiar with it.

Senator ANDERSON. What do you grow?

Mr. HILL. I grow field crops—fruit, cling peaches.

Senator ANDERSON. Cotton?

Mr. HILL. Cotton.

Senator ANDERSON. How many acres of cotton do you have?

Mr. HILL. An allotment of 93 acres.

Senator KUCHEL. Let's see if we can get this clear: What is your understanding of the southernmost point at which this bill would authorize the construction of a canal?

Mr. HILL. The bill we are discussing today would approximately be the southern end of Stanislaus County, I believe—northern edge of Stanislaus.

Senator KUCHEL. You are a resident of Tulare County?

Mr. HILL. Yes, sir.

Senator KUCHEL. How far is Tulare County from the southern tip of the canal which is envisioned in this legislation?

Mr. HILL. Oh, 125 to 150 miles. But I represent the association which encompasses the entire area.

Senator BURDICK. Does that conclude your testimony?

Mr. HILL. Yes, sir; thank you very much.

(Mr. Hill presented the following prepared statement:)

STATEMENT OF FRANK HILL, PRESIDENT, CENTRAL VALLEY EAST SIDE
PROJECT ASSOCIATION

I am Frank Hill, a working farmer from Tulare County, Calif., operating a diversified farm in the San Joaquin Valley in California. Fruit and cotton are the principal crops we produce on our family farm of 270 acres, all of which has been irrigated for two or more generations. The irrigation needs were first supplied by water pumped from the underground until the supply had been so depleted and the water level had so receded that we could no longer afford to pump the water. As a result of deepening wells and lower pumping levels, poorer quality water was being put onto the crops. Salt was of such amounts that the water was damaging to the trees and vines.

These lands of ours are in the Lindmore Irrigation District of which I have been a director for 18 years and am now president. The Lindmore District contains 27,000 acres, practically all of which are now irrigated. The district

obtains water from the Friant-Kern Canal of the Central Valley project. It has been a godsend to our area. However, even though we have made considerable recovery in our underground water table through the use of supplemental water, we are faced with the problem of surrounding areas, which have no supplement supply, pumping the water from underneath us. We must help them in order to help ourselves, and we feel that the only way to do this is to import more supplemental water. Our own Lindmore Irrigation District has applied for additional water, and we hope it can be delivered by the proposed East Side project of the CVP.

There are many other districts in the Central Valley that are using CVP water as a supplemental supply. All 22 districts taking water in our area, served by Friant Dam storage, have formed the Friant Water Users Association, of which I am president at the present time. This group encompasses some 750,000 acres, and some of the highest producing land in the world. Irrigation and transportation of water in the Central Valley of California is not new, and to those of us who were born in the valley and have lived our lives there, the problems involved are thoroughly familiar.

I have been sent here by the Central Valley East Side Association. This association represents many present users of CVP water, who are interested in developing additional water, and a great number of potential users, who are either in no organized district, or, in some cases, old districts that were developed even in the last century and must have additional water. The East Side Association includes 11 counties, from the Tehachapi Mountains on the south to the north edge of Sacramento County on the north. Among these counties are some of the top counties in the Nation in agricultural income. This has been true for many years because of the climate, improved irrigation, and conservation practices. The Central Valley has long been a leader in technological advances, in developing specialty crops, and in improvements in quality of many basic crops.

Everyone is aware of the great influx of population into California which has reached the point where it will soon have the largest population of any State in the Nation. California has now become the "melting pot" of our country. All of this has caused a great demand on our natural resources, particularly water. The cities, as well as agriculture, are making increased demands for water. With this growing population in our State, it is imperative that more water be developed for the east side of the Central Valley.

The cities are dependent upon agriculture, either directly or indirectly, for their subsistence. The many processing plants and canneries, etc., are dependent upon agriculture and also dependent upon large amounts of good quality water in their operations. Many of the people coming here from other parts of the country are dependent upon agriculture in one way or another; perhaps not by direct connection with farming, but with some of the allied industries which are dependent upon agriculture.

Many thoughts cause us to seek authorization of this Auburn Dam-Folsom South Canal unit of CVP with provision for enlargement. The area that will be served by the Auburn Dam-Folsom South unit has long been an area developed largely to permanent crops of trees, vines, etc. Their problem is one of lack of adequate supplies of water, as well as poor quality of water underlying the area. Present methods of farming these crops require large investments of capital and labor, and should not be allowed to suffer because of lack of water or poor quality water.

This East Side Project Association supports the Auburn Dam-Folsom South Canal unit for the further reason that it contains, through its enlarged canal capacity, the initial unit of the East Side project, which, it is contemplated, will supply water all the way down the east side of the Central Valleys of California. In this portion of the State lie some of the most productive lands in the world, developed to many permanent crops that are unique to California. Cotton is one of the principal crops and, as we all know, California cotton has been improved to the highest quality grown anywhere in the world and it is in demand all over the world. California citrus finds its way to all parts of the Nation. Because of climatic conditions the vegetable products and fruits produced here are needed in the markets of the whole country.

This portion of California needs about 1½ million acre-feet of supplemental water now, and ultimately about 2½ million acre-feet, to sustain the economy that has been developed in the past century, and to provide for the increasing

population in the State and in the Nation. The State has attempted to solve many of its water problems within its boundaries, but no provision has been made in the California water plan to alleviate the situation along the east side of the Central Valleys. We are in the general area served by the original CVP and must look to the enlargement of CVP for any relief.

It is my own personal philosophy that, even though we as citizens of this great country, own the land on which we pay our taxes, we are only given the privilege of using it for the short time we are here. It is our duty to posterity to make every effort to leave the land and natural resources in, at least, as good condition as we found them, if not better.

It is with all these thoughts in mind that we sincerely ask for the authorization of the Auburn Dam-Folsom South unit with provision for enlargement so as to serve as the initial step in the Central Valley East Side project.

Mr. SORENSEN. Mr. Chairman, I have a few comments I would like to make:

We have, for the record, copies of resolutions from the boards of supervisors in these valley counties, starting on the south with Kern County and including Tulare, Kings, Fresno, Madera, and Merced Counties.

This ties on to the county resolutions from the north end, giving a complete coverage there.

In addition, we have resolutions, and I believe this is significant, from many of the present long-term contractors from the Friant unit of the Central Valley project.

These are districts that are now receiving water. They are members, as Mr. Hill indicated, of the Friant Water Users Association that serves this 750,000 acres.

The fact that these districts urge approval of this legislation, I think, is significant because these districts are aware of the fact that in order that this project be built, it will extend their repayment periods, and in that sense, they are underwriting the additional expense which would come from such construction.

In addition, we are submitting for the record applications and indications and letters for substantial amounts of water were the water available, only as an indication of the interest.

We have had some discussions here about ground water. I would note that there is a serious overdraft in this entire east side area, commencing at Sacramento County on the north and extending clear into Kern County on the south.

I might note that quite generally, the water users and the taxpayers in these areas have supported water development by the Federal Government, by the State of California; our counties supported the bond issue recently, about a year and a half ago, and are anxious to do what they can.

They developed all the local water supplies which are available to them.

It seems to me that the fact that this association, with its general and large makeup, is united to support this legislation, is worthy of note, and I believe that you can get some indication of this from the people that we would like to call on for a very short statement and we have asked them to make them very short.

Senator BURDICK. Will those very short witnesses come forward?

Mr. SORENSEN. We though we might call them one at a time.

Senator BURDICK. All right.

Mr. SORENSEN. Mr. Fred G. Bandy, of the Madera Irrigation District would be the first one.

**STATEMENT OF FREDERICK G. BANDY, MANAGER, MADERA
IRRIGATION DISTRICT**

Mr. BANDY. Mr. Chairman, my name is Fred G. Bandy, I am manager of the Madera Irrigation District.

I will have a statement, a prepared statement. I do not have it with me. I will submit it for the record as soon as I have it available.

We are an operating irrigation district. We have been receiving water from the Central Valley project since 1944.

The areas adjacent to our district are in need of supplemental supplies of water.

The board of directors of our district has indicated a desire to include those areas and to contract for an additional supply of water to maintain an existing agricultural economy which exists adjacent to our district at this time.

I believe that is all I have.

I thank you.

Senator BURDICK. Thank you.

Mr. SORENSEN. Mr. Boone will be next and following him will be Mr. Martin.

**STATEMENT OF W. P. BOONE, BOARD CHAIRMAN, ALTA
IRRIGATION DISTRICT**

Mr. BOONE. Mr. Chairman and members of the committee, I am William P. Boone. I live in Tulare County, Calif.

I appreciate the opportunity to appear before you today to make a statement in support of the immediate authorization of the Auburn Dam-Folsom South Canal unit of the Central Valley project of California.

In this regard my district's support is directed toward the legislation before you which contemplates the enlargement of the Folsom South Canal to make possible the delivery of additional water supplies to the east side of the Central Valley of California.

I am a farmer in Dinuba, Tulare County, raising diversified crops; peaches, plums, alfalfa, and cotton.

I have been engaged in that occupation since 1920.

The landowners in this area commenced using water from the Kings River in the year 1883. Five years later under the Wright Act the Alta Irrigation District was organized and became a political subdivision of the State. The irrigated area in the district comprises 129,300 acres of intensively cultivated land.

The district has no outstanding debts. Bonds have all been paid off. At present we are negotiating for a long-term repayment storage contract for the space in Pine Flat Dam on the Kings River.

Reregulation of water from Kings River made possible by the use of Pine Flat Dam Reservoir has assisted us materially in making greater beneficial use of the water which we are entitled to.

During the past 10 years it has become obvious that the district needs additional water to balance the present demands against the surface and ground-water supplies available to us.

The landowners in the eastern portion of the district have relatively poor ground-water condition in their wells. Extreme difficulties are encountered in this section for the last 7 or 8 years.

Pumping in the area west of our district for the last 20 years has depleted the ground-water situation to a point where dry years create an extremely serious situation which can only be remedied by the importation of additional supplemental water.

The district has, for several years, purchased such surplus water from the Central Valley project that has been available and we have made every effort to make the most beneficial use thereof.

Our district includes the cities of Dinuba and Reedley and five other smaller communities. The total urban population is about 20,000. There has been a 50-percent increase in the past few years, and it is constantly continuing. Due to this fact, the demands on our domestic water supplies as well as our agricultural demands have increased substantially. Under conditions which existed 20 years ago our ground-water supplies were relatively well balanced.

The reaction due to the urbanization of agricultural lands in southern California which has caused the influx of many more townspeople as well as farmers who undertake to develop new water supplies has created a condition that must be corrected. Our district is being farmed more intensively than ever before.

Alta Irrigation District has formally requested that negotiations be undertaken for the purchase of 60,000 acre-feet of water each year from the Central Valley project. But since the present facilities are used to their ultimate capacity we must look toward the east side division for an increased water supply.

Attached hereto are data on the storage, lands, water supply, and pumpage from wells in the Alta Irrigation District, showing the needs for the aforementioned 60,000 acre-feet of additional water.

We hope that our farmers and landowners, including myself, can sustain our present state of development until additional supplies from the Central Valley project become available. I would hate to think of the financial losses to our landowners and to the people of our district that might occur in the next few years if immediate and concentrated effort does not provide some form of permanent relief.

On behalf of the landowners and water users of the Alta Irrigation District I respectfully urge that you take action to bring early authorization and construction of the Auburn Dam-Folsom South Canal unit, with provision for expansion for service to the east side of the Central Valley project.

Now, gentlemen, Mr. Chairman and members of the committee, if you care to ask me any questions that pertain to the Alta Irrigation District or the farming in my area, I will sure endeavor to answer them.

Senator BURDICK. No questions.

(The exhibits presented by Mr. Boone are as follows:)

FACTS PERTINENT TO THE ALTA IRRIGATION DISTRICT

INFORMATION OF STORAGE, EXCESS LAND, ET CETERA, FEBRUARY 19, 1962

1. Number of acres in Alta Irrigation District: 129,300 acres.
2. Total number of tax statements mailed: 9,500.
3. Number of excess landowners: 34.

4. Number of acres of excess land over 160 acres: Approximately 11,000 acres.
5. Average size of farms in Alta Irrigation District: 30 acres.
6. The past 3 years approximately 10,000 acres of new land has been developed in the district, and a possible 20,000 acres will be developed in the near future.
7. Total cost of storage for the 8 years of operation of Pine Flat Dam: \$634,630.50.
8. Paid for storage in Pine Flat Dam for the year 1960: \$58,366.50; year 1961: \$58,227.
9. Average amount of water run in Alta Irrigation District per year: 150,000 acre feet.
10. Total assessed valuation for 1961: \$9,222,024.14.
11. Total taxes collected for year 1961: \$316,133.07.
12. Average tax delinquency for 8-year period: 3.81 percent.
13. Summary of pumping in Alta Irrigation District 1955-56 to 1960-61 inclusive. See attached sheet.

Alta Irrigation District summary of data

Year	Number plants	Total plant horse-power	Total kilowatt-hours used	Total revenue	Kilo-watt-hours per acre-foot	Acre-feet pumped	Power cost per acre-foot	Cost per kilo-watt-hour
1955-56.....	2,713	26,249	27,018,738	\$523,679.87	116.7	231,615	\$2.26	\$0.0194
1956-57.....	2,802	27,613	14,351,247	381,492.60	101.7	141,130	2.70	.0266
1957-58.....	2,734	27,015	13,790,341	405,154.06	99.3	138,891	2.92	.0294
1958-59.....	2,794	27,676	15,682,580	415,929.61	101.2	154,953	2.68	.0265
1959-60.....	2,967	29,562	34,937,276	668,368.71	114.9	303,891	2.20	.0191
1960-61.....	2,983	30,861	42,189,636	743,997.07	129.1	326,859	2.28	.0176

Mr. SORENSEN. Mr. Martin.

STATEMENT OF W. T. MARTIN, PRESIDENT, CONSOLIDATED IRRIGATION DISTRICT

Mr. MARTIN. Mr. Chairman and members of the committee, I appreciate the opportunity to appear today and I would like to tell you some of the reasons why the Consolidated Irrigation District supports the early authorization and construction of the Auburn Dam-Folsom South Canal unit with enlargement provisions.

Our district has a long and illustrious history, having been formed in 1922 to acquire the water rights and physical holdings of the Consolidated Canal Co. which had first delivered surface water from the Kings River to the Selma-Fowler-Kingsburg area in the 1880's. The district paid off the \$750,000 for which it was bonded within 10 years.

Of the 152,000 acres in the district, 92,000 acres are served by surface water and 60,000 acres are irrigated by pumps drawing from the underground water supply. The underground water supply is derived from underflow from the Sierra Nevada Mountains and seepage from irrigation practices in the area. Also within the district there are five incorporated cities and several towns with a total urban population of about 20,000 persons. The total population in the district is between 45,000 and 50,000 people.

For nearly 15 years the groundwater levels in the district have dropped at a very serious rate and the district recognizing this situation, in 1954, made application for water service from the Central Valley project. Unfortunately, no water has been available except surplus amounts, from the Central Valley project and the alarming

drop in ground water levels has continued even more drastically through the 3 dry years of 1959, 1960, and 1961.

To conserve our present supplies, we have undertaken the piping of many miles of ditches in an effort to prevent seepage loss and reduce operating expenses. Any saving of water is beneficial when we consider that about 5,000 ranch operators depend on district supplies to meet their demands for watering irrigated crops. In addition to areas within our district, adjacent areas are drawing from the underground pool which exists under our district and extends on westerly from our district boundaries.

Our district has been fully developed for many years and at the present time our chief crop is grapes with deciduous fruits, cotton, alfalfa, irrigated pasture, and row crops being our major plantings. Almost two-thirds of our district is planted to grapes.

In addition to our agricultural needs for this area located in the richest farming county in the United States, we are faced with increasing demands to meet the ever-increasing uses by industrial developments. At the present time, two major industrial plants are under construction which coupled with the several wineries, gins, and packing plants are creating a demand for skilled help which can only ultimately result in an increased population in our area.

Consolidated Irrigation District is on record with the U.S. Bureau of Reclamation as requesting the service of 100,000 acre-feet annually of dependable water. If such an amount were available at the present time, we feel that we might be able to stabilize our underground water reservoir level which has dropped about an average of 30 feet in the last 15 years of which about half occurred during the last 3 years. In spite of the fact that the district has undertaken a piping program, has acquired nearly 1,000 acres of percolation pools through which surplus water can be applied, has purchased surplus Central Valley project supplies as available and has made full use of its 120,000 acre-feet of storage in Pine Flat Reservoir on the Kings River, we are sure that our present supplies are inadequate to meet the water needs of our district and its water users.

Our 5,000 landowners with an average farm of 27 acres have fully supported our board of directors in their application for Central Valley project supplies.

With the knowledge that the Folsom South Canal can be feasibly enlarged to meet the ultimate demands of the East Side division of the Central Valley project, the Consolidated Irrigation District heartily supports the immediate authorization and construction of the Auburn Dam-Folsom South Canal unit of the Central Valley project. We know that if additional supplemental water is not applied to our lands, we will surely be faced with economic disaster which would not only damage our agricultural economy but would have a far-reaching adverse effect on all of the allied industries located all over the United States which are a part of the agribusiness picture.

I have been sent here by my board of directors for the Consolidated Irrigation District to appear before this committee to tell you we would like to have you support this bill to the utmost because of need for water in our area.

I represent an area of 153,000 acres and our average farm home is less than 27 acres per farm.

I am not going to try to tell you all about it because you would think I was bragging and I would not want you to think that.

But I am proud to be there and I am mighty proud to be here.

I have served the district 37 years. When this term is out, it will be 40 years. I hope I will be all through with the job by that time.

Senator BURDICK. Thank you.

STATEMENT OF CLIFFORD E. TROTTER, MANAGER, TERRA BELLA IRRIGATION DISTRICT, SOUTHERN TULARE COUNTY, CALIF.

Mr. TROTTER. My name is Clifford Trotter and I am the manager of the Terra Bella Irrigation District located in southern Tulare County, Calif.

The Terra Bella Irrigation District was organized in 1915 for the purpose of providing water for an area which was to ultimately cover 10,000 acres. By 1936 water was being delivered to 4,500 acres, at which time it became evident that the water supply was grossly deficient and by 1950 when water from the Friant-Kern Canal arrived, the irrigated area had decreased to 2,600 acres. During this water-deficient period, the district took title to about half the total irrigable land and took back water rights from another one-sixth. In 1950 when the Friant-Kern Canal was completed and project water became available, the district owned 5,411 acres. With the help of a Public Law 130 loan our distribution system was improved and expanded and this land was put up for sale. Today the Terra Bella Irrigation District has sold 5,100 acres of that land, all of which has or will be planted primarily to citrus within the next 3 years. Water rights have been reinstated on the majority of dry land and by 1965 we will be delivering water to 11,000 acres. When our district is fully developed it is estimated that there will be a gross income to the community of \$2 million per year. The county of Tulare will triple its tax base from what it was in 1950. The Terra Bella Irrigation District and the farming community could not exist as it is today if it were not for the Central Valley project.

Because of the exacting climate required for citrus, olive, and vine crops, Tulare County has developed, over the years, as a prime area for these crops. With the pressures of urbanization on the orange groves of southern California more and more emphasis has been put on Tulare County until it has become the principal citrus region of the State. The University of California has stated that there will be fewer acres of oranges in California in 1970 than there are today, all due to southern California urban development.

Since the signing of our contract with the Bureau of Reclamation in 1950 we have received many applications for water from persons in the area to the west and south of our district. Just as in the case of the Terra Bella Irrigation District an evolution of land use has taken place in that region. First it was cattle with ranches consisting of thousands of acres, then came grain and as drilling methods were perfected row crops were planted and finally trees and vines. With the increased water use per acre in these crops more wells were drilled. Because of its proximity to the mountains, this area has a poor ground-water reservoir and an overdraft was soon established. In time wells were deepened, horsepower was increased until bed-rock was reached, and no more could be pumped.

The Terra Bella Irrigation District is an excellent example of how a land can prosper with water. We had an ideal climate, excellent soil type, and now have water. We feel we have a great deal at stake in the east side project. Hungry Hollow Dam is to be on our property and the high-line canal will run through our district as it makes it way south. We have on file applications from landowners requesting a combined total of approximately 30,000 acre-feet of water, all of which could be delivered within 3 miles of the canal.

The Terra Bella Irrigation District respectfully urges the acceptance of the Auburn Dam and Folsom South Canal with sufficient capacity to accommodate the contemplated east side division of the Central Valley project.

Senator BURDICK. Thank you, Mr. Trotter.

Mr. SORENSEN. Mr. Muller.

STATEMENT OF RAYMOND MULLER, TERRA BELLA, TULARE COUNTY, CALIF.

Mr. MULLER. My name is Raymond Muller. I live in Terra Bella, Tulare County, Calif. I was born and reared in that area and have farmed there all of my life. My farming has been diversified, producing grain, cattle, sheep, almonds, olives, citrus, persimmons and alfalfa seed, on some 1,200 acres, of which I own 700.

My grandparents came to the area in 1876. They or their families have been farming in southeastern Tulare County since that time. Types of farming have made three definite changes since they first came to the area. At first it was all livestock (sheep and cattle); next it changed to grain (dry farming) almost entirely. Finally, it changed to irrigated crops, mostly trees and vines. After the groves and vineyards were fully matured, we began to have water trouble. Following a series of dry years and too many wells being drilled, thousands of acres went back to dry farming. Thanks to the Central Valley project, the water conditions were helped and most of the acreage is back in tree crops, mostly citrus, and vines. This is good because our area is so well adapted, soil and climatewise, to this type of farming. Another change brought about by the change of crops has been in the size of farms in southeastern Tulare County. Where several thousand acres were necessary for dry farming, now farms of a hundred acres or less provide a good living.

Now, once again, because of the lowering of our underground water (in some instances, our wells have been deepened and are down to bedrock), we are headed for a far more serious water shortage than that heretofore faced. Therefore, it is essential that we import more water to this area from the northern part of our State where there is an abundant supply.

It has been proven that this area is one of the best in the United States in which to grow citrus, vine crops, deciduous fruit, nuts, olives, etc. Replacement of some of these crops will be needed badly in the future, for in other areas of the State they are being crowded out by urban expansion to make room for homes and industry. For example during the past 10 years in southern California, some 70,000 acres of citrus have been removed. During this time central California has increased its plantings by only 12,000 to 15,000 acres. In other areas of

the State, apricots, prunes, and so forth, are crops which are being curtailed to make room for urban expansion. Another great need for more water in our area is caused by the increasing population. People from all parts of the United States are moving to California. This, of course, increases the need for water for domestic, agriculture, and industrial uses tremendously.

I would like to point out the need for this water as a factor of economic value. For example, in our area, a producing citrus grove pays \$35 per acre in county and State taxes as compared to \$1.50 per acre on comparable land in the area without water. This same thing would hold true for Federal income tax. A person farming a hundred acres, fully developed with water, would probably pay more Federal tax than one farming a thousand acres in this area without water.

In summarizing, I would like to state that I am heartily in favor of bill S. 103, authorizing the Auburn-Folsom South unit of the Central Valley project because, I think it is necessary for our continued existence, our livelihood, and in the best interests of our entire country. This project, as well as supporting itself, will help the economy of our local, State and Federal Government.

It will not cause increases in our farm surpluses, because the kind of agricultural crops that this system will support, are, for the most part, not those crops of which we have a surplus. In fact, it would help to replace some of the crops that are of the surplus nature, such as grain. It would also help replace tree crops, vines, and other crops that are going to be so badly needed in the future because of their curtailment in other areas where there is great urban expansion.

Because of the tremendous influx of people from all over this great Nation of ours, coming to our area to live, increasing the water shortage here, the situation could be helped tremendously through the transporting of more water to the area as proposed by the east side project.

A number of individuals and organizations have asked me to represent them here. It is their request that I express their favor of this project, and their hope that you will give it your kind consideration and recommendation.

I wish to thank you for the opportunity and time you have given me to tell you of the needs of our area, and to express the wishes of my neighbors and myself.

Senator BURDICK. Thank you, Mr. Muller.

Mr. SORENSEN. Mr. Bryant?

STATEMENT OF DAVID M. BRYANT, DIRECTOR, KERN COUNTY WATER AGENCY

Mr. BRYANT. My name is David M. Bryant. I am a director of the Kern County Water Agency, which includes all of Kern County. We of the Kern County Water Agency are in support of S. 103 for reasons already presented by previous witnesses.

I am also a farmer from a portion of northern Kern County which is in desperate need of additional water to maintain its existing economy. We are aware of and sympathetic to the water needs of farmers in the area that would be served by the Auburn-Folsom South

unit of the Central Valley project, and for that reason alone we favor the authorization and construction of this project. Additionally, we are interested in the enactment of S. 103 as introduced because it contains a provision that the Secretary of the Interior may construct these works large enough to possibly become a part of the east side division of the Central Valley project, if authorized, which could bring additional water to our area and preserve its farms and communities.

For your information and for the record, I would like to submit copies of a resolution in support of S. 103 which has been adopted by the Kern County Water Agency.¹

Mr. SORENSON. Mr. Pandol, and then Mr. Lusich.

STATEMENT OF JACK PANDOL, DIRECTOR, RAG GULCH WATER DISTRICT

Mr. PANDOL. Mr. Chairman, gentlemen of this committee, my name is Jack Pandol. I, with my two brothers, are landowners and farmers in southern Tulare and northern Kern Counties of California. I am here with resolutions from, and I am the representative of, three water districts. They are the Delano-Earlimart Irrigation District, Southern San Joaquin Municipal Utility District, and dry, but proud, little Rag Gulch Irrigation District.

The first two are permanent contracting districts on the CVP's Friant-Kern Canal. The latter has a short-term contract and only gets water after all other districts get 100-percent supplies. Rag Gulch has spend over \$300,000 of our own money to build our distribution system just in case there may be extra water. Some years we get some, other years not a drop. These areas have tried to build or at least maintain their underground water supply but pumping in outlying areas have pulled the water out from under them, so it becomes a losing battle; heartbreaking to say the least.

In our Rag Gulch area, wells that are over 2,000 feet are not uncommon. Pumping depth of 500 to 700 feet are costly and we have water of poor quality. Some ranging over 400 parts per million of solid salts. After a few years the land will become useless.

These adjoining districts consist of well over 100,000 acres of the finest lands of California, the United States or probably anywhere in the world. We raise table grapes that can't be matched. Everyone knows the California navel orange, olives, melons, raisins, wines, cotton, vegetables and Ramona 55 wheat that is a must because of its high protein content. A large portion of our crops are exported to help the import-export balance. We do not have a problem of overproduction. We have more demand than supply.

Gentlemen, I was sent here to tell you that all of this will blow away if we don't get more water. We are not interested in developing new lands but just to maintain what we have. We are worried, the situation is gray, and if supplemental water is not granted us, we all lose. I as a landowner lose, the people we employ lose, the cities depending on agriculture lose and the tax rolls lose. So you see, this is not a one-sided proposition. We borrow the money from you and

¹ The resolution is printed in the appendix to this hearing record.

you will gain more, much more than you invested. On economics, I will not dwell; others have the answers.

The price of this water will not encourage cheap-priced surplus crops. It will not encourage speculators of crops or lands. This water cost is higher than we know it today, but God willing, wet years will build up our underground supply; and with this combination we can plan the future food supply that must be produced for the generations to come.

Many of us came a long way to tell you our serious problem. Auburn-South Canal with the enlarged version must be passed, then the east side portion of the CVP must be rushed because 10 years from now it may be too late. Also our growing towns and cities are taking more water and they cannot and must not be shorted. The large influx of people to California present a serious water problem.

We are in sympathy with our thirsty neighbors from the north and we want to go on record as supporting the project up there with the expanded version that we can eventually be able to use this water, because my area, as the supporting data I have submitted will show, we have one well that is 2,320 feet deep.

It has high salinity. We have other pumps, not that particular well, but wells pumping in excess of nearly 700-foot elevation.

This is very costly and if we don't get relief here within the next few years, we will suffer very, very drastically.

Thank you.

Senator BURDICK. Thank you.

STATEMENT OF GEORGE LUSICH, DIRECTOR, KERN COUNTY WATER AGENCY

Mr. LUSICH. I am George Lusich, director of the Kern County Water Agency.

I reside in the city of Bakersfield, representing the urban area of Bakersfield.

This is from the Metropolitan Bakersfield Water Steering Committee; it is dated February 19, 1962. This telegram reads as follows:

The Metropolitan Bakersfield Water Steering Committee, whose membership includes all of the major domestic water suppliers in the Bakersfield area, today adopted a resolution in support of the action taken last week by the Kern County Water Agency urging the Senate and House Insular Affairs Committee to approve the Auburn Dam and Folsom South Canal project with capacity to accommodate the contemplated East Side division of the Central Valley project including sufficient capacity for the southern and central San Joaquin Valley. Further that Congress is urged to authorize such projects. Membership on steering committee includes: City of Bakersfield, East Niles Community Services District, Oildale Mutual Water Co., Ashewater Co., Garden Water Co. California Water Service Co., Greenfield Water District, Vaughn Water Co., and Highland Park Public Utility District.

It is signed by Ken Cross, Chairman, Metropolitan Bakersfield Water Steering Committee.

Thank you.

Mr. SORENSEN. The last witness we have, Mr. Chairman, is Mr. Sam Barling.

STATEMENT OF SAM BARLING, PRESIDENT, SEMITROPIC WATER STORAGE DISTRICT, KERN COUNTY, CALIF.

Mr. BARLING. My name is Sam Barling, a farmer. I am also president of the board of directors of the Semitropic Water Storage District which is located in the northwest portion of Kern County. This district includes about 188,000 irrigable acres owned by 1,900 separate landowners. The district also includes about 10,000 acres of Federal wildlife refuge lands. Its farm product constitutes an important part of the farm economy of Kern County and California.

Ground water is the only present source of water for Semitropic District. This supply is now depleting rapidly and it is certain that supplemental surface water will be necessary to maintain the existing economy of the district. The decline of ground water levels caused by overpumping has also caused deterioration of ground water quality as encroachment of brackish water has taken place. If this deterioration continues, it is conceivable that within a relatively short time the ground water supply in the district may be permanently ruined for agricultural use.

Semitropic District is in the southern part of the San Joaquin Valley, contiguous to the present Friant-Kern Canal service area. It is anticipated that the district will be interested in contracting for water from the Central Valley project when the east side division is authorized.

While Semitropic Water Storage District includes no urban areas, a number of nearby communities greatly depend upon the economic activity generated by existing agriculture within the district. Therefore, unless the Semitropic District receives a supplemental supply of surface water within the next few years it could result in severe economic hardship for many nonfarm wage earners and business operators in a large portion of Kern County.

For these reasons the board of directors of the Semitropic Water Storage District supports the recommendation of the Secretary of the interior and urges that the Auburn-Folsom South unit of the Central Valley project be authorized in accordance with terms of S. 103.

We respectfully request earliest possible favorable action on this legislation, with capacity adequate also to serve the proposed east side division, in order to meet our urgent needs in time to sustain our present economy.

Senator ALLOTT. As a man who has lived all his life in a water-hungry State, I feel sort of at home among these Californians here who present a very good case.

It is not hard to understand the problem which confronts them. It is not hard to understand that something has to be done.

I hope I will not be accused of pulling anybody's leg and particularly my good friend here from California, who has spent so much time and worked so hard on this committee and who understands these problems so well, when I understand that we hope, in what I hope will be some legislation in California, the Frying Pan-Arkansas project, which will simply permit us to use a little less than 2 percent of the water that is allotted to Colorado under the original Colorado River compact and the Upper Colorado River compact, that we would not run into any opposition as we have from certain parts of

California—not you—in the past on that project, because we also are just a little water hungry.

Senator KUCHEL. My brother, the people of Colorado are people, too. You do have your problems.

Senator BURDICK. Incidentally, we have people in North Dakota.

Senator KUCHEL. And people in North Dakota; that is right; and that Garson project needs sympathetic treatment as does my brother's projects from Colorado.

This is a good indication, if I may say so, Mr. Chairman, for anyone to have the honor to sit on this committee from California, I think required reading is that book, "How To Win Friends and Influence People."

But I do appreciate the attention that both you gentlemen and, from time to time, my other colleagues, have given to this today.

These are busy days in the Senate and this is an important project to these people, Mr. Chairman.

Senator ALLOTT. The Senator from California has always been very understanding and sympathetic. I have to say that.

But when you think of the amount of water you are talking about here, we are trying to get 70,000, put 70,000 acre-feet to use in Colorado, of which all but about 45,000 acre-feet will have to go to municipalities and the 45,000 acre-feet will have to be spread for supplemental water over about 350,000 possible irrigated areas.

It naturally will not, because it is not feasible to spread it that far. Then I think you will understand that while we understand your problem, there are other States, too, all throughout the reclamation States. We all have this problem; you face it worse because you have this population, this greatly expanded population growth. We face it in Colorado also because Colorado is growing quite fast.

Senator BURDICK. Does that complete the witnesses?

Mr. SORENSON. Mr. Chairman, I wonder if we might request that a telegram which has been submitted may be incorporated in the record?

Senator BURDICK. It may be received.

(The telegram referred to is as follows:)

BAKERSFIELD, CALIF., February 19, 1962.

JAMES SORENSON,
Statler Hotel, Washington, D.C.:

The Metropolitan Bakersfield Water Steering Committee, whose membership includes all of the major domestic water suppliers in the Bakersfield area, today adopted a resolution in support of the action taken last week by the Kern County Water Agency urging the Senate and House Insular Affairs Committee to approve the Auburn Dam and Folsom South Canal project with capacity to accommodate the contemplated eastside division of the Central Valley project including sufficient capacity for the southern and central San Joaquin Valley. Further that Congress is urged to authorize such project. Membership on steering committee includes city of Bakersfield, East Niles Community Services District, Oildale Mutual Water Co., Ashewater Co., George Lusich, director, Kern County Water Agency, Garden Water Co., California Water Service Co., Greenfield Water District, Vaughn Water Co., Crest Water Co., Ken Cross, chairman, Metropolitan Bakersfield Water Steering Committee.

CREST WATER CO.,
Highland Park Public Utility District.

Senator KUCHEL. Mr. Chairman, if there is nothing further, I do suggest for my colleague from Colorado that we convene again tomorrow morning with the request that the Bureau officials be present.

Our colleague does have some questions he would like to ask, if that is agreeable.

Senator BURDICK. We will be in recess until 10 o'clock tomorrow morning.

(Whereupon, at 5:06 p.m., the committee recessed, to reconvene Wednesday, February 21, 1962, at 10 a.m.)

AUBURN-FOLSOM SOUTH UNIT OF THE CENTRAL VALLEY PROJECT

FEBRUARY 21, 1962

U.S. SENATE,
SUBCOMMITTEE ON IRRIGATION AND RECLAMATION
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10:25 a.m., in room 3108, New Senate Office Building, Senator Quentin N. Burdick presiding.

Present: Senators Burdick, Carroll, Kuchel, Allott, and Dworshak. Also present. Roy Whitacre, professional staff member.

Senator BURDICK. I will now call the representatives of the Bureau. Mr. Palmer, I believe that Senator Allot has a question at this time.

STATEMENT OF WILLIAM I. PALMER, ASSISTANT COMMISSIONER, BUREAU OF RECLAMATION; ACCOMPANIED BY HUGH P. DUGAN, REGIONAL DIRECTOR, BUREAU OF RECLAMATION, SACRAMENTO, CALIF.; AND IVAN P. HEAD, PROJECT DEVELOPMENT ENGINEER, SACRAMENTO, CALIF.—Resumed

Mr. PALMER. Thank you very much.

Senator ALLOTT. Thank you, gentlemen.

As you know, we have been slightly delayed here because Senator Kuchel had indicated that he would be back from the White House and has not been able to arrive. However, I don't think that what I have to bring out will make that much difference and I do appreciate the fact that you gentlemen also have things to do, as well as we.

I want to go back to yesterday, to the testimony just before we adjourned yesterday morning when we were discussing the canal itself, and get a matter or two straightened.

At that time Mr. Dugan said, and I am reading from page 9 of the temporary transcript here, "I hope that we make it clear that the start of the canal from the American River with a capacity of 3,500 cubic feet per second would be all that would be placed in this canal capacity to a point as far south as the pump connection."

Now, the pump connection would be down——

Mr. DUGAN. If we make a pump connection to the Sacramento River system it would be from the Sacramento River to a point on the canal south of the Cosumnes River crossing.

Senator ALLOTT. A distance of about what in miles?

Mr. DUGAN. From the point of diversion to the——

Senator ALLOTT. From the point of diversion——

Mr. DUGAN. To the point of interception. Do you know that distance, Mr. Head?

Mr. HEAD. About 15 miles.

Senator ALLOTT. About 15 miles, all right. This will fix it close enough.

From that point on the additional capacity would be provided to take the canal to Lone Tree Creek at the end of this service area.

Mr. DUGAN. Yes. The enlarged portion of the canal would run from the Cosumnes River to the termination point at Lone Tree Creek 67½ miles south of the diversion point.

Senator ALLOTT. So that the total enlargement would be, as I had understood that yesterday, a distance of about 67 miles on the canal?

Mr. DUGAN. No, it will be 52 miles that would be enlarged because the first 15 miles would be only the 3,500 second-feet as designed for the Folsom South Canal. The enlarged portion would be south of the Cosumnes River crossing. So the 67½ miles minus 15 miles would be 52½ miles.

Senator ALLOTT. All right.

We are speaking in terms of this, and it might be interpreted that this was referring to an existing system. When you say an enlarged, it means enlarged over the original projected size.

Mr. DUGAN. Yes, sir, that is correct. The enlarged portion pertains to the \$23,540,000 addition.

Senator ALLOTT. Then you go on to say, "At the present time in that service area we have indications that about 75 percent of the water is ready for contract" and so forth and so on.

You remember that testimony?

Mr. DUGAN. Yes. The area I was referring to was the Folsom South Canal service area where we have 75 percent of the area ready to contract and others interested.

Senator ALLOTT. Now, if we can turn around to this other map which you have there, Mr. Head, on page 3 of Secretary's report dated February 16, 1962, at the bottom of it ends a paragraph and then the top of page 4 begins a new paragraph which I want to read into the record:

"The Bureau of Reclamation is now engaged in feasibility studies of the initial phase East Side Division."

That is what is marked on this map as East Side Canal, is that correct?

Mr. DUGAN. That arrow points to the extended portion of the East Side Canal.

Now, when the canal is enlarged or if it were to be enlarged, it would be a part of the East Side Division through its first 67½ miles, and would continue as a canal system south from Lone Tree Creek following the red line that Mr. Head is pointing to on the map.

The yellow portion on this map, Senator, is the portion that is called the Folsom South Canal.

Senator ALLOTT. Now, will you designate on the map where the 67½ miles would be?

Mr. DUGAN. That terminates at the end of the yellow line.

Senator ALLOTT. Just below Stockton?

Mr. DUGAN. Yes, sir.

Senator ALLOTT. All right.

Now, then, the East Side division would be all of that portion below that?

Mr. DUGAN. Yes, sir.

Senator ALLOTT. Which on this map, on the large map we are now looking at, is projected down to Bakersfield?

Mr. DUGAN. That is correct.

Senator ALLOTT. Let me finish all of this one paragraph and get it in. I just said a few words so I will get the whole thing in:

The Bureau of Reclamation is now engaged in feasibility studies of the initial phase East Side division, Central Valley project which will involve major canals, reservoirs, pumping plants, and other facilities, to provide waters from the American and Sacramento Rivers to irrigate lands, to supply municipal and industrial needs to an area on the east side of San Joaquin Valley, extending southward to the city of Bakersfield. These studies and the report thereon are expected to be completed by the Bureau of Reclamation in fiscal year 1962.

And I will interlineate here, this is the part that bothers me:

The route of the East Side Canal is expected to parallel the Folsom South Canal for the 67½-mile reach from the American River to Lone Tree Creek east of Stockton. By building the Folsom South Canal initially to a suitable capacity to serve both the Folsom South unit and the East Side division substantial savings in construction costs of the East division could be realized.

Now, I confess that I am totally unable to understand the language of the Secretary's report when he says that the route of the East Side Canal is expected to parallel the Folsom South Canal with a 67½-mile reach.

Can you explain that?

Mr. DUGAN. Senator—I will do my best—the East Side Canal would be a canal that occupies the same route as the Folsom South Canal. But the first 67½ miles——

Senator ALLOTT. Let me interrupt you there so we—neither one is in existence now?

Mr. DUGAN. That is correct, sir.

Senator ALLOTT. Now go on. Why would you have two canals paralleling each other?

Mr. DUGAN. If we were to build the Folsom South Canal with only the capacity that would be required to serve the Folsom South service area, then we would have a diminishing capacity from the Cosumnes River crossing south to Lone Tree Creek. It would become quite a small canal at the terminus.

Now, the proposed enlargement would make it possible to convey water from the Cosumnes River south to Lone Tree Creek, and then to southern points if additional capacity were provided.

The alternative to providing that capacity at this time would be to either enlarge the Folsom South Canal or to build a canal paralleling it with capacity to provide service farther south when the East Side division is authorized and built.

To enlarge the canal would be an expensive undertaking and also one that would be an operational interruption for the service to the area, including these municipal and industrial users.

Senator ALLOTT. Do I understand, then, that what he is talking about, what the Secretary is talking about in his report to the committee, is that in the event the Folsom Canal is not constructed up to the limit of your suggestion now, that the East Side Canal would then parallel it?

Mr. DUGAN. Yes, that is correct.

Mr. PALMER. That is correct.

Mr. DUGAN. Now, of course, we have not presented the report on the East Side division as it has not been completed. We do believe that the demands for water south of Lone Tree Creek indicate the desirability of added capacity as insurance for whatever future expansions might occur.

Senator ALLOTT. Would it parallel it for 67 miles or for 52?

Mr. DUGAN. Yes, it would parallel it for 67—I am sorry, I just have misunderstood your question.

Senator ALLOTT. Would the East Side Canal, proposed East Side Canal, parallel the proposed Folsom Canal for 67 miles or for only 52?

Mr. DUGAN. 52½ miles.

Senator ALLOTT. Well, 52½ miles.

Mr. PALMER. There is always a possibility, Senator Allott, that you might have to enlarge a small section of the canal to bring surplus water available in the American River system down. I agree with Mr. Dugan that the direct parallel is, in fact, the 52½ miles.

Senator ALLOTT. In other words, let's get back to this. I may be very, very stupid about this.

Mr. PALMER. Perhaps this would help you. The canal would be a community canal as far as the Cosumnes River and from there south it would have to have enlarged capacity to take water farther south.

Senator ALLOTT. So that when he speaks of paralleling the Folsom South Canal, he is talking about a situation which would occur in the event you do not construct the total capacity that you now propose to discuss, to construct?

Mr. PALMER. I believe that is the way to put it.

Senator ALLOTT. Is that the way you would interpret this?

Mr. PALMER. Yes, sir.

Senator ALLOTT. Well, the report, maybe, is confused about this. If this is the situation, I think I understand it now. But I thought this should be made clear.

Mr. PALMER. Yes, sir.

Senator ALLOTT. Because it is inconceivable to me that you talk about paralleling another canal for this length of distance, for this distance, in view of the cost of construction, the cost of rights-of-way, the engineering problems involved, double flumes, double siphons, double everything, I presume all of these things would be involved in this construction.

Now, on the Folsom South Unit, this area which is proposed to be served lies southeast of Sacramento and includes Stockton with a gross area of about 518,000 acres.

Mr. PALMER. That is correct.

Senator ALLOTT. Most of which is now either dry farm or is natural pasture or is irrigated from wells.

Is this correct?

Mr. PALMER. It also includes land irrigated from gravity supplies from the streams that flow in from the east.

Senator ALLOTT. I can't read those streams, Dry Creek, Mokelumne, something like that.

Mr. HEAD. Dry Creek, Cosumnes River, and the Calaveras River. Senator ALLOTT. There is some direct diversion from those streams.

Mr. PALMER. Yes, sir.

Senator ALLOTT. Is that a steady supply or is it strictly a floodwater situation?

Mr. DUGAN. Mr. Head will describe just briefly for you the irrigated situation in the area at the present time and I think that he can tell you the acreage that is involved in percent irrigation and non-irrigation.

The green color on the map shows the present irrigated lands. Many of these areas are in short supply. And the yellow color indicates dry land portions. Will you supplement that, Mr. Head?

Senator ALLOTT. Yes. The question I asked was, Is the surface water or are the surface water diversions of the nature of the steady supply or are they strictly a floodwater, primarily a floodwater situation.

Mr. HEAD. Every year, in the Calaveras, the Mokelumne, and the Cosumnes areas a small amount of water is available for diversion, but in all cases now even in the bottom lands it is being supplemented ground water service.

The surface diversions out of these streams are very minor except for one district, the Woodbridge Irrigation District. They testified yesterday they have been irrigating about 20,000 acres by surface diversion. Last year they were only able to irrigate 7,000 acres by surface diversion and had to pump for the rest. The amount of water available for diversion is very small.

Senator ALLOTT. Yes. Generally speaking then, the diversions from these three of four rivers or streams that we—that you just named, could not be considered a constant flow proposition and are more or less based upon flood waters, spring runoff and that sort of thing?

Mr. HEAD. Yes; the runoff falls off very badly in the late summer.

Senator ALLOTT. Then of this it is said that water from the other reservoir would help to overcome the existing overdraft by stabilizing the ground water table and, of course, this is understandable, and provide either new or supplemental water to an estimated 362,700 acres of lands to be irrigated from the project.

Now, is it true that about 160,250 acres of this would be in irrigated pasture?

Mr. HEAD. 160,000 acres, yes.

Senator ALLOTT. 160,250 is the figure I have.

Mr. HEAD. Yes, I have the same figure.

Senator ALLOTT. If the Folsom canal is ultimately to convey 852,000 acre-feet of municipal and industrial water from Nimbus or below the Nimbus, and it would all be below the Nimbus, wouldn't it?

Mr. HEAD. Yes.

Senator ALLOTT. Then, however, the 1960 report of yours, Mr. Dugan showed on page 14 that it is currently estimated "that the Folsom Reservoir could supply the requirements during interim period until about 1977."

In other words, 15 years from now.

Mr. DUGAN. Yes, sir.

Senator ALLOTT. Let's make it clear that the Folsom Reservoir would supply this for 15 years in advance.

Mr. DUGAN. The Folsom Reservoir would be capable of supplying the area for a period of years. We estimated about 15 years. This is a rather difficult thing to estimate exactly from a hydrologic standpoint because we are projecting load growth and yields of reservoirs to meet these growing loads.

However, we must point out that to have a permanent supply for the payout period of the Folsom South Canal we would need the yield of Auburn Reservoir to complement the yield of the existing Folsom Reservoir.

Senator ALLOTT. Yes. But you would have no use for that water during the next 15 years.

Mr. DUGAN. We would be utilizing the water that we would derive through the storage at Auburn for hydropower production during this period. We would use it for the benefit of the fishery in the American River and to complement our water requirements in the delta of the Sacramento River.

This usage would be made in the interim period until the demands of the Folsom South area required that the Folsom Reservoir supply be supplemented. We would provide flood control at this structure for the protection of the city of Sacramento.

Senator ALLOTT. In view of the present situation of the national budget, which you are as fully aware of as I am, I hope, since you pay it, isn't this a little precipitate in planning for a water supply that is not really needed for a period of 15 years?

Mr. DUGAN. We believe, Senator, that all things considered, in view of the usage that would be made of the reservoir for the various purposes I just outlined, it would be prudent to build the reservoir as soon as possible.

Senator ALLOTT. Well, let me put it in another context. It would be prudent for us in the Upper Colorado, which is, I think, a very similar situation to this, to build some 10 or 11 participating projects today, too, but it is impossible under the Federal budget to build them. I think the situations are pretty much on all fours with respect for future usage. There is no question but that ultimately this use will have to be made of these waters in the Upper Colorado Basin, and I am not putting this on a lower State versus an upper State basin situation, but I think there is a parallel between the ultimate use up there and the ultimate use here.

Now, you suggested a moment ago that this water, some of it might be used down there at the present time but if you put that water to use in the area above Stockton there or the Stockton area and above, you certainly are not under any hallucination that any of that water in subsequent years is ever going to be available for distribution through the East Side canal, are you?

Mr. DUGAN. The Central Valley system is a very flexible one, as I tried to outline to you yesterday in discussing the complex of reservoirs.

They are operated as a team. They are operated to provide yield where that can be best utilized. Our biggest problem in Central Valley is getting these reservoirs tied together by canal systems. We will then be able to coordinate them even more in the future than we have in the past.

But I can assure you, Senator, that we would make optimum usage of this reservoir at any time it may be constructed even though we were not using the full yield of the reservoir in the service area of the Folsom South Canal.

Senator ALLOTT. Well, this gets down to the point that for the most practical use, the Auburn Reservoir for a period of a few years would be primarily as a power-producing unit.

Mr. DUGAN. Not primarily, sir. We would use the facility for the additional protection that the city of Sacramento needs for flood control. I think it was pointed out in some of the previous testimony—

Senator ALLOTT. Before we go any further than that, you have already got the Folsom Dam and powerplant there, have you not?

Mr. DUGAN. Yes, and in 1955—

Senator ALLOTT. And below that you have the reregulating Nimbus Dam and both of these are directly above Sacramento.

Mr. DUGAN. Yes.

The 1955 flood pointed out how much additional protection is needed in the American River basin.

At the time of the flood the reservoir was virtually empty and it filled almost to overflowing. Had the rains continued for just a few more hours we would not have been able to control the flood that was occurring on the American River.

I think you will recall this occurred around Christmastime in 1955. At that time there was a tremendous flood throughout that area and some of the communities there were completely inundated with water. All of the tributaries of the Sacramento were in flood stage, and it was the greatest of luck that the levee systems that protect the communities in the area were as effective as they were.

However, the American River reached a point where Sacramento could have been one of those very badly damaged communities. The levees would have been overtopped by additional water in the stream.

This is the additional thing that Auburn Reservoir will provide. It will complement Folsom Reservoir in the control of American River floods. We think this is highly important and we shouldn't delay it until some emergency does develop.

Senator ALLOTT. Let's go back to your 1955 flood.

How many times in this century have you had hydrographic records of similar floods in that river and when were they?

Mr. DUGAN. This was the highest one of record on the American River. However, Senator, we can never tell when these floods will occur. They don't occur in a sequence or frequency that can be predicted in advance. There has been other similar floods that have approached this 1955 flood. So the possibility of even higher flood stages, in this area is always with us.

Senator ALLOTT. Well, the possibility of a flood is always with us in any semiarid country, Mr. Dugan. Wouldn't you agree to that?

Mr. DUGAN. Certainly that is true, Senator. The possibilities of damage vary. The intensity of rainfall that you can get in a concentrated area and the watershed basin vary. So they are individual problems. But I would also like to point out one other aspect of Auburn. That is the power aspect that would help us maintain a power supply that is needed by preference customers in the Central

Valley project. Their loads are growing, they are rapidly exceeding the power supplies that we have available for them. We look to the power production at Auburn to complement this function of the Central Valley project. So these are the additional things that we believe make Auburn a good investment at this time. We think it is a highly feasible unit, one that is justified, and has good payout potential.

Senator ALLOTT. There are two points with respect to this, Mr. Dugan. This would involve \$65 million which while it might be desirable in a broad general sense, I have not been convinced at this point is a feasible necessity. Sixty-five million dollars for a 15-year period which would draw no interest, is that right?

Mr. PALMER. Senator Allott, may I attempt to do a bit of summarization on this that I think might be helpful?

Senator ALLOTT. All right.

Mr. PALMER. In the first place, if you project a water market in the Folsom South area and assume that by the end of year 15 you are going to have to have the full amount of water available, so that the farmer can demand the maximum amount that his water service contract calls for. You are not actually deferring the construction of the dam for that 15-year period because it has to be ready to perform its entire function at the time it is required.

When we start negotiating actual water service contracts, there is an implicit commitment of the Federal agency to be able to deliver the water as called for in the contract within the schedule as established. Moreover you cannot economically negotiate indefinitely. The 15-year period we believe is of about optimum length.

One of the difficulties we would have would be to contract for a full water supply for the entire Folsom South service area without Auburn in the system. The water demand would exceed available supply from Folsom alone.

So this is one of the aspects that from a strictly practical standpoint argues that we ought to be planning, we ought to be looking toward the completion of Auburn Dam and Reservoir.

Now, these additional points should be summarized again. First is this matter of power, with San Luis unit getting under construction, with the maximizing of pumping requirements for that project in the offing, with the shortages of power for preference customers already apparent as attested by the fact that the State of California has applied for power as a preference customer but has not yet been favorably considered as a preference customer because of doubt that the power is available. Another source of power is needed, Auburn could be that source. Then there is the ever-present possibilities of the high floodflows in the American River, and the high requirement for outdoor recreation. So we actually have many things, the water and power market, the flood potential, the need for recreation—all of the things to which the good people of the valley testified yesterday—all argue for the initiation at an early date of the construction of Auburn Dam and the authorization of that dam at the same time that we—

Senator ALLOTT. But we can't construct dams to protect against every possible, conceivable flood, and I don't know of any place in this country that it has been done.

Mr. DUGAN. Senator, the flood that has been used for design of structures in this basin is similar to the kind of flood protection that

the Corps of Engineers recommends everywhere. It is called a project-design flood, which is not a maximum possible flood by any means. It is one that is believed to be a design criterion that is realistic and reasonably conservative, considering the benefits that are involved.

Senator ALLOTT. I would like to correct the record, by the way. I said \$65 million, I think the cost of the Auburn Dam reservoir and powerplant is \$138,255,000.

Mr. DUGAN. Yes, that is correct, Senator. That is the cost of the total facility.

Senator ALLOTT. Let's turn, and I must say that while I realize the leadtime that must occur in the construction of these facilities, I don't think on the flood control that your testimony has been too strong, at least not in convincing me. But let's turn to the question of the wells.

Now, in the underground situation, water situation, it is estimated that there would be or that you would need a hundred, need 119,000 additional acre-feet of water which would be obtained through wells tapping the deep percolation from the imported water. I think we all understand how the water level is raised from percolation and how the water level is raised from irrigation. I don't think we need to discuss this or argue about this, do we?

Mr. DUGAN. No, sir.

Senator ALLOTT. We all understand this. It is said that about 140 wells averaging a capacity of about 1,100 gallons per minute would be required to produce this 119,000 acre-feet.

Now yesterday, it was indicated in the testimony that—by some person, I don't recall which one—that there would be a leasing of the number of wells. How are you going to increase the number of wells to tap this additional water that is needed from increasing the water table or raising the water table and at the same time lessen the number of wells?

Mr. HEAD. Our plan contemplates additional wells to get a full conjunctive operation of the ground and surface water. The water imported will give us more recharge by percolation into the ground water reservoir, allowing us to reclaim that water and put it back on the surface with additional wells.

Our plan does call for some additional wells to get full conjunctive operation.

Senator ALLOTT. Are the figures that I quoted excessive, sir? The 140 wells capacities about 1,100 gallons per minute.

Mr. HEAD. I believe your figure is about right.

Senator ALLOTT. I believe these figures come from Mr. Dugan's report.

Mr. HEAD. Yes. It sounds right to me.

Senator ALLOTT. Let me ask this: Is there any method of recharging a water table other than the methods, than that which would result from the natural use of water on the land, and the percolation that would result from it?

Mr. HEAD. No, sir, not to my knowledge in this area.

Senator ALLOTT. Now, we get over to another phase of this matter, and I am referring, on page 118 of your report, Mr. Dugan, which shows that after adjustments are made for the use of the present Central Valley project power, for pumping plants, that the additional

investment costs, net operating revenues, either would be as follows, and there you set out certain figures. It is page 118.

I am going to ask or suggest at this time, Mr. Reporter, that the table at the top of page 118 of Mr. Dugan's report, the Auburn-Folsom South unit be placed in the record, because I am going to refer to that table as it appears in your report.

(The table referred to follows:)

Function	Additional capital cost allocation ¹	Additional interest on investment	Additional investment cost	Additional net operating revenues	Change in surplus
Irrigation.....	² \$65, 108, 000		\$65, 108, 000	\$29, 984, 000	-\$35, 124, 000
Municipal and industrial service.....	42, 572, 000	\$17, 103, 000	59, 675, 000	93, 023, 000	33, 348, 000
Commercial power.....	² 73, 518, 000	53, 505, 000	127, 023, 000	62, 491, 000	-64, 532, 000
Fish and wildlife.....					
Total.....	181, 198, 000	70, 608, 000	251, 806, 000	185, 498, 000	-66, 308, 000

¹ Includes interest during construction for interest bearing purposes. Excludes \$5,795,000 to nonreimbursable functions.

² With \$175,000 adjustment for use of present project energy by Folsom South unit.

Senator ALLOTT. Now, this shows that as far as irrigation is—municipal and industrial—as far as irrigation is concerned there would be an additional investment of \$65,108,000, which would bring additional net operating revenues of \$29,984,000, leaving a deficit of \$35,124,000 for irrigation.

Is this correct?

Mr. DUGAN. Yes, that is correct.

Senator ALLOTT. Then under municipal and industrial, it shows an additional investment cost of \$59,675,000, with an additional net operating revenue of \$93,023,000, leaving a surplusage there of \$33,348,000, which comes roughly within \$2 million of balancing the deficit in the irrigation.

Then under commercial power this shows an additional investment cost of \$127 million with additional net operating revenues of \$62,491,000, leaving a deficit there of \$64,532,000.

Now, when we combine these figures, we get a complete additional investment cost of \$251,806,000, an additional net operating revenue of \$185,498,000, and we get a net deficit for all of these three classifications of \$66,308,000.

Now, it is proposed that this would be, would then be, repaid from the surplus revenue or the anticipated surplus revenues from the Central Valley project, which are expected to be \$244.5 million roughly in the year 2026, which is quite a few years away.

In other words, this project standing on its own will not be a reimbursable project, will it?

Mr. DUGAN. As an individual unit, no, sir.

Senator ALLOTT. Yes.

Mr. DUGAN. It is complemented by the Central Valley project of which it is a unit.

Senator ALLOTT. And unless the Central Valley project or the anticipated surplus revenues in the year 2026 are tapped for the—or to the tune of—\$66 million plus then this project could not stand on its feet.

Mr. DUGAN. It would not be completely reimbursable.

I would bring your attention also, sir, to this revised cost allocation and probable repayment table that includes the San Luis unit. I referred to that table yesterday and I think that you have received a copy. I would like to point out to you, sir, that this brings the Central Valley project payment analysis as nearly up to date as is possible, including the San Luis unit.

At the time the figures were prepared on page 118 the San Luis unit costs had not been added. I think that you readily recognize that with the base project, but including the San Luis unit, our earned surplus would be \$292,691,000.

Senator ALLOTT. Where do you get that figure?

Mr. DUGAN. That is on footnote No. 2.

Senator ALLOTT. Where is that?

Mr. DUGAN. In the table.

Senator ALLOTT. In the San Luis Valley project or the San Luis project?

Mr. DUGAN. It is for the Central Valley project. The total payout in the fourth column shows that the reimbursable portion of the base project which includes the San Luis unit, would require payment of \$955,689,000.

Senator ALLOTT. All right.

Mr. DUGAN. And an earned surplus would have accumulated at that time, which happens to be the year 2019 in this analysis as compared with the 2026 in the other, of \$292,691,000.

Now, when we add the Auburn-Folsom South unit, we increase the repayment requirements for the project to \$1,150,171,000, and the earned surplus is reduced to \$259,733,000.

So this latest evaluation which includes all these items, shows a decrease in revenues, earned surplus of about \$33 million due to the addition of the unit, and this, of course, does represent subsidy.

Senator ALLOTT. Well, I don't know how you can come in one place to the cost of this thing and show that you are going to have to tap it for \$66 million, and then—tap the Central Valley for \$66 million—and then combine the figures and say that you are only going to have to tap it for what, \$32 million, do you think, or \$33 million, what is the amount?

Mr. DUGAN. Our earned surplus, or revenues over and above paying all costs, would be reduced.

Senator ALLOTT. Let me make this point. That the Central Valley project was authorized upon the basis of certain feasibility.

Mr. DUGAN. Yes, sir.

Senator ALLOTT. Now, what we are doing here is authorizing another project whose feasibility depends upon tapping the Central Valley project for funds, \$66 million, and to that extent decreases the feasibility, the original feasibility of the Central Valley project.

Mr. DUGAN. There is no question but what the unit will use some of the surplus revenues. I would like to point out, sir, that the Central Valley project has proved an even better investment for the Federal Government than when the project was initially planned and conceived, because we have been able to make more flexible usage of our water supply and our power resources in developing payments. We have sold more municipal and industrial water than we anticipated that we would so we think it is a good solid and very fortunate

situation, that we have a project that can earn these types of surpluses, and be self-liquidating as a unit.

Now, of course, we have some difference in these figures due to the additional features that are involved, changes in the allocations that involve the nonreimbursable aspects, and so forth. The figures we have given you in this latest tabulation include the San Luis unit which was not available at the time the report was prepared. But we believe these figures are reliable and represent a realistic appraisal of the repayment potential of the project, and the surpluses that will ensue.

Mr. PALMER. Mr. Allott, if I might insert a thought here, this Auburn-Folsom South development is proposed to be authorized as an addition to the Central Valley project.

When you undertake such an addition, you take with it certain obligations and certain advantages. For example, flexibility of operation of the project will be greatly enhanced in both water and power fields. Each of the other units may be operated in such a manner as to get the maximum economic potential from them, so you may have benefits accruing, for example, to Folsom because of the addition of Auburn. This is the most direct possibility.

Now, on the other side, you have water rates and power rates already established on a projectwide basis. The irrigation rate is established on the water user's ability to pay pursuant to reclamation law. Throughout the entire project there is some subsidy to irrigation from the project to cover the cost of the project allocated to irrigation that is beyond the ability of the irrigator to pay.

For example, the overall estimated assistance required from power and other revenues for irrigation development is 34 percent, whereas as was testified yesterday the assistance required in this instance is 31 percent. So in terms of assistance required the full irrigation allocation in this instance would require less power or other assistance than the average for the valley.

Now, this is not a strange or novel or a unique concept. We applied it in the Missouri River Basin, we applied it in the Colorado River storage project, we applied it in the Columbia River Basin, in every instance where assistance from power is required to help underwrite the cost of irrigation.

Another factor that has to be considered is if you did not operate this as a feature of the Central Valley project to gain the optimum economic value of each of the features involved you would price your kilowatts differently, you would price your water differently, you would price many other things differently. But within the allocations or within the framework of instruction we have received from the Congress, the municipal and industrial water rate has been fixed on the basis of the amount necessary to return the allocation, with interest, within the 50-year period. It is suggested that it be operated as an integral part of the Central Valley system and the existing Central Valley project power rates are the power rates that would apply to these features. It will meet the requirement of Congress that it pay out within the period of time permitted.

The irrigation rate is fixed on the water user's ability to pay and does require subsidy. But when this is authorized as an integral part of the Central Valley project and added to it then the total economic package which is summarized in the tabulation that Mr. Dugan submitted yesterday, is the thing that we suggest should govern.

Senator ALLOTT. That is already a part of the record, I think.

Mr. PALMER. Yes, it is, sir.

Senator ALLOTT. So we will have it.

Now, I would like to turn to the Forest Hill Divide unit which, as far as I can recall, was not mentioned while I was here yesterday.

Would you mind telling me what this is all about and where it is?

Mr. DUGAN. Yes, Senator, we did discuss this unit while you were absent yesterday, and we will be glad to tell you a little bit about it.

Senator ALLOTT. All right, just go over it quickly.

Mr. DUGAN. Mr. Head is pointing to the area. The area is a mountain divide at an elevation of about 3,000 feet. It lies between the North Fork and the Middle Fork of the American River and the area is one that has industrial development, primarily lumber activity.

It is in need of additional municipal and industrial water supply. There is an area of approximately 1,300 acres as a potential irrigation project for orchard and truck crops and suburban type development.

The area would be reached by service through a 13 $\frac{7}{10}$ -mile pipeline from Sugar Pine Reservoir on Shirttail Creek to the service area. This development is estimated to cost \$7,223,000.

The water rates that would be charged for this area are \$2.50 per acre-foot for irrigation water as compared with the \$2.75 figure on the Folsom South area. The municipal water would cost \$85 per acre-foot, which is quite a high price as compared with the \$14 figure on the Folsom South Canal, but again it is based upon the principle of charging the costs associated with providing that municipal and industrial water supply.

Senator ALLOTT. Well, here again this is tied in with the Central Valley project.

Mr. DUGAN. Yes.

Senator ALLOTT. And here again you are increasing the burden on this entire project for this small or relatively small area.

Mr. DUGAN. To the extent that there is irrigation involved the \$2.50 per acre-foot would require subsidy from Central Valley project. However, the municipal and industrial portion would be self-liquidating at the \$85 figure.

Senator ALLOTT. Well now, is it true, and I take these from your own records, that there is \$4,021,000 irrigation allocation in this as a reimbursable cost, but only \$257,187 or 6.4 percent would be paid from water sales revenue, and the rest would have to be made up from the Central—which is \$3,711,413, which would have to be made up from Central Valley project power revenue?

Mr. DUGAN. That is correct.

Senator ALLOTT. Considering that much of these are based upon the desire of certain lumber companies to grow there, based on a projected or possible increase in population as a result of this development, and considering that the cost of the water would come to \$85 an acre-foot, and that only 6.25 percent or 6.4 percent of this, would come from the sale of water, isn't it pretty difficult to justify this project with relation to the entire situation?

Mr. DUGAN. Senator, we have a very desperate need for a supplemental water supply in this particular area. It is a high ridge with a limited supply and erratic flow and small tributaries. The area is

interested in water service—I think the witnesses have been here and indicated their desire for this water. It is costing them more than \$85 per acre-foot at the present time. The irrigation portion of the project, of course, has a good benefit-cost ratio. It is a good agricultural development. We feel that if the local people are interested in water and willing to contract for it at these prices, then we should recommend it, because we think that this development is certainly in keeping with the reclamation policy.

Senator ALLOTT. Well, actually you only have a total of 1,300 acres, 1,340 acres to be specific, which could be irrigated here, of which 520 are orchards, 70 for truck crops and berries, and 110 for irrigated pasture.

Now, certainly you are not going to try to tell me that you can justify a cost of \$85 an acre-foot for an irrigated pasture?

Mr. DUGAN. The irrigated pasture only pays \$2.50 per acre-foot for water.

Senator ALLOTT. What would the orchards pay?

Mr. DUGAN. They would pay the same price, \$2.50.

Senator ALLOTT. And the truck crops?

Mr. DUGAN. \$2.50.

Senator ALLOTT. How can you say then that when people are willing to contract at this price, the price we are talking about is \$85 an acre-foot.

Mr. DUGAN. The municipal and industrial price is \$85 an acre-foot. The municipal and industrial portion of this project would be fully reimbursed on the basis of that payment.

Senator ALLOTT. But \$4 million of this \$7 million goes to irrigation.

Mr. DUGAN. Yes. And the portion allocated to irrigation would require subsidy from the Central Valley project.

Senator ALLOTT. To the extent of roughly 93.6 percent?

Mr. DUGAN. Yes.

Senator ALLOTT. I would like to make a general inquiry into this particular area as to the possibilities of undue enrichment and I am speaking still about Foresthill, with respect to any particular companies or individuals who might own or have substantial holdings here. Can you give me any information on that?

Mr. DUGAN. Mr. Head can describe to you the entities that are serving water in the area and their organizations.

Mr. HEAD. The Stockton Box Co. and the Hughes Lumber Co., I believe, both have sawmills in the area. They have a small labor force that is now taking up all of the water supply there is available to the area. Their water supply averages only about 300 acre-feet a year now. They cannot even irrigate their lawns. This project would supply an M and I service to the area which would—

Senator ALLOTT. What is an M and I service?

Mr. HEAD. Pardon me, municipal and industrial service to the area or municipal service to the area and industrial service that would complement the industry. But in this case the people who receive this benefit would pay the entire cost allocated to this service, and this is the \$85 per acre-foot that Mr. Dugan spoke about. Of the total project \$2,500,000 is allocated to municipal and industrial service. The \$85 pays that entire allocation with a very small service.

Senator ALLOTT. Of this percentage to M and I, as you call it, how much of that is municipal and how much is industrial percentage-wise?

Mr. HEAD. I cannot answer that offhand.

Senator ALLOTT. Don't you think—

Mr. HEAD. We can supply that for the record.

Senator ALLOTT. Don't you think it would be important to this committee?

Mr. HEAD. Yes.

Senator ALLOTT. To know, since such a small part of this is going to irrigation, it would be important to this committee to know the proportion of that that might go to municipal use and the portion that is going to be devoted to industrial use.

Mr. HEAD. We will supply it for the record.

(The following information was subsequently submitted:)

6. PROJECT WATER USE IN FORESTHILL SERVICE AREA

Of the project water supply contemplated for the Foresthill unit (4,400 acre-feet delivery) it is estimated that 2,945 acre-feet would be used for irrigation, 1,355 acre-feet for municipal or domestic use and 100 acre-feet for industrial purposes, mostly lumbering.

Mr. DUGAN. Of course, Senator, this area is one that I described as very short of water supply. We expect the area to develop rapidly in the future because of the increasing population in that vicinity. This unit was designed to pick out the best features from an economic standpoint to serve this particular area but they could be added to by additional storage or by other reservoirs if and when the area does need it.

We think that the area will grow rapidly into a suburban type of economy, and we think that this is perhaps a starter, and we will probably sell a lot more municipal and industrial water in the future. Our contracts for Central Valley project water provide for a proportioning of the payments so that as M and I use is increased, additional revenues would be charged or obtained.

Senator ALLOTT. How far is this in miles from Sacramento, roughly?

Mr. HEAD. About 60 miles.

Senator ALLOTT. Why do you describe this as a suburban-type development then?

Mr. DUGAN. These areas such as Foresthill Divide are rapidly growing suburban-type of development. The area is attractive from the standpoint of climate, attractive from the standpoint of location, and it is more or less typical of the near-mountain areas that lie in the Sierras of California.

Senator ALLOTT. Are there any public lands in this area?

Mr. HEAD. Not on the ridge where the service area is.

Senator ALLOTT. That would be served by the Foresthill project?

Mr. HEAD. No, not to my knowledge.

Senator ALLOTT. Let's turn to the Malby unit.

Mr. PALMER. Before leaving Foresthill might I add, almost editorially, that the situation that exists there is not particularly dissimilar from the Sly Park area authorized and constructed as a part of the Folsom development. It is shown on the map.

Senator ALLOTT. What do you call the Sly Park?

Mr. PALMER. Sly Park?

Mr. DUGAN. The Folsom-Malby area is an area of land that lies adjacent to the existing Folsom Reservoir. It is an area of about 12,000 acres that is potentially a municipal and industrial water supply development. The county of Sacramento has indicated very great interest in the water supply of that area to accommodate the rapidly expanding suburban, municipal, and industrial growth in that vicinity. I don't know how familiar you are with Sacramento, Senator.

Senator ALLOTT. Not very.

Mr. DUGAN. It is an area that has expanded out into the county zones to a very remarkable extent. Just to the south of the Nimbus Dam and Reservoir is a major installation called Aerojet General Corp., where rocket fuels and rocket experimentation is taking place.

This is surrounded by a growth of suburban housing and many of the employees of this industry and the surrounding industries live in the suburban areas.

Senator ALLOTT. Well now, on this Malby unit this is not an irrigation unit. This is for municipal and industrial use.

Mr. DUGAN. Yes, if it were to be developed, it would be developed for that purpose.

The area would be served by pumping out of the Folsom Reservoir. We would have a pipeline that would proceed south about 11 miles to a reservoir called County Line Reservoir. It is a reservoir of about 40,000 acre-feet capacity and it would be multiple purpose in nature. It would provide some flood control on Deer Creek which is a tributary of the Cosumnes River and would help to control floods on the lower end of that river in the more highly developed area of Sacramento County which is adjacent to that stream.

Senator ALLOTT. What is the total cost of Malby?

Mr. DUGAN. The total cost of Malby is \$11,916,000.

Senator ALLOTT. Almost \$12 million.

Mr. DUGAN. Almost \$12 million.

Senator ALLOTT. How much of that have you allotted to flood control?

Mr. DUGAN. Mr. Head has these figures.

Senator ALLOTT. All right.

Mr. HEAD. We have allocated \$2,220,000 to flood control.

Senator ALLOTT. A little over one-sixth—

Mr. HEAD. Yes.

Senator ALLOTT (continuing). You have allocated to flood control.

Mr. DUGAN. Now, the water rate for this area, again is set to repay the allocation to the municipal and industrial portions of the project and is \$32 an acre-foot. This is a rate that we believe would be acceptable in the area. There is no other source of water supply in the area. Dry Creek is a very erratic stream. We would capture what little water we can from it but the balance of the supply, the bulk of the supply, would have to be pumped out of the Folsom Reservoir. We have recommended this unit on the basis that suitable contracts be obtained—

Senator ALLOTT. You say could be obtained?

Mr. DUGAN. That suitable contracts be obtained for the purchase of water to underwrite the project.

Senator ALLOTT. Well, there is quite a disparity between \$32 an acre-foot and \$85 an acre-foot.

Mr. DUGAN. Yes, sir, quite some difference.

Senator ALLOTT. And particularly since in the Foresthill project your primary development is for industrial and municipal use, not irrigation. And here your use is entirely municipal and industrial.

Mr. DUGAN. Yes, sir.

Senator ALLOTT. Why should these people not, in the case of the Malby unit, pay for this 100 percent? Aren't you getting pretty far away from the principle of reclamation?

Mr. DUGAN. We have established a price that will recover the total cost allocated to the municipal and industrial portion.

Senator ALLOTT. Which would be all except one-sixth which is allocated to flood control.

Mr. DUGAN. Yes, sir, except for fish and recreation.

Senator ALLOTT. Just two or three other questions here: under the Malby project is there any public land or any State land?

Mr. DUGAN. No, sir, I believe there is none.

Senator ALLOTT. Approximately how many private owners are there? I don't have the total acreage there, approximately 12,000 acres, I believe it is.

Mr. DUGAN. Yes, sir, about 12,000.

Senator ALLOTT. How many private owners are there in this area?

Mr. HEAD. I would estimate around 20. They vary from large grazing holdings to small grazing holdings in the area at the present time.

Senator ALLOTT. About 20.

Mr. HEAD. I could supply the exact figure for the record.
(The following information was later supplied:)

NUMBER OF LANDOWNERS—FOLSOM-MALBY SERVICE AREA

Current records of the respective county recorder's offices indicate 15 landowners for that portion of the Folsom-Malby Service area lying in El Dorado County and 10 landowners for that portion of the service area lying in Sacramento County. Of the 12,000-acre service area presently being considered, about 50 percent is located in each county.

Senator ALLOTT. So the benefits of this area would accrue to the land, to some 20 landowners, with no Federal or State ownership involved.

Mr. PALMER. Senator Allott, there are two points here that I think are significant.

Senator ALLOTT. May I have a yes or no to this question?

Mr. PALMER. I have to answer that by giving you just what I was proceeding to do.

Senator ALLOTT. All right, sir.

Mr. PALMER. In the first place you subsidize a large number of people any time a public project is undertaken even though every attempt is exerted to see that land is exchanged on the basis of just compensation for the holdings that are broken out. The large owner benefits. But the people who acquire a place to live and the water which makes that living possible, also benefit, and since the large holdings would be sold out in small parcels of land the benefits would be much more widespread than just the 20 or whatever that number happens to be who now own land in the area.

Senator ALLOTT. Would you condemn this land?

Mr. PALMER. No, sir. We have no authority to condemn the land.

Senator ALLOTT. All right.

What is the value of the land on an average per acre then of the 12,000 acres?

Mr. PALMER. I do not have that. Do you have that, Pat?

Mr. HEAD. No.

Mr. DUGAN. We can supply something for the record, Senator, that would be an indication of it.

(The following information was subsequently supplied:)

LAND VALUES IN FOLSOM-MALBY SERVICE AREA

Current land values in the Folsom-Malby Service area average about \$400 per acre; ranging between \$300 and \$700 per acre. These values were derived from a recent reconnaissance appraisal of acquisition costs of the proposed reservoir site. Two recent sales in adjacent areas average \$300 and \$400 per acre. Present assessed values for lands in the El Dorado County portion of the service area average about \$25 per acre.

Senator ALLOTT. Gentlemen, let's look at this frankly. You have 20 owners—and these figures are all approximate. I realize this—owing 12,000 acres upon which it is now proposed to put \$7 million of Federal money, and of that \$7 million, you propose to allocate \$2,220,000 to flood control. You propose to allocate another \$1,814,000 to fish and wildlife, so that of the total—and recreation of \$650,000—so that of the total \$7,232,000 you come up with \$4,684,000 allocated to nonreimbursable features to flood control, fish and wildlife, and recreation.

Mr. DUGAN. Yes, sir.

Senator ALLOTT. I haven't my slipstick with me, but I think that this \$4,684,000 would run about 50 percent then of the \$7,232,000—of a total, I beg your pardon, of a total of \$12 million cost.

Mr. DUGAN. Yes, it is a total cost of about \$12 million, Senator.

Senator ALLOTT. A little over that.

Now, on this basis then, to bring this out, because we have been into this problem many times over in this committee, then your fish and wildlife and recreation alone would run about \$2,400,000, which would be \$2,400,000 out of the \$12 million which have been allocated for this purpose, have you figured out what percentage that is?

Mr. DUGAN. Approximately 20 percent.

Senator ALLOTT. Approximately 20 percent.

Did I get an answer to my question as to the present value of the lands in this area?

Mr. DUGAN. No, Senator, we do not have a figure that we felt would be suitable at this time. We will present something for the record that will be sound. The area is one that is quite undeveloped. It is very marginal land. It is in large holdings because of the type of agriculture that is practiced here which is primarily some grazing, very minimal. The area would require considerable development, access roads and the like, before it would be in any shape to be utilized for municipal and industrial purposes, but it abuts those areas that are in need of this kind of service. The area fits into the complex of the vicinity. It is an area that has favorable topography and location and will fit into the needs of the community.

Senator ALLOTT. I want to get back now to the question raised by Mr. Palmer, in which he says that if it is subdivided then the benefits would accrue to someone, to a great many people, and with this I agree.

However, to the 20 people who own the land in this area the prospect of having water placed upon it for industrial and municipal development, of which 20 percent roughly will be carried by the Federal Government, offers a great opportunity for enrichment.

Has the Government made any plans or taken any steps or do you know of any steps that can be taken to control speculation in this area?

Mr. PALMER. I know of none, Senator. We do have the authority in the case of irrigation to effectively control speculation, but the ever-present problem of subdivision, and this is true everywhere where an irrigation project builds up, whether it be in Colorado or Utah or anywhere, the process of subdivision does encroach upon irrigated areas. This is true in Sacramento, for example, in that much of the irrigated farmland that surrounded Sacramento has already been incorporated within the city.

Mr. DUGAN. The problem here, Senator, is a water supply for this area. If it is to be developed, the only source is a Federal reservoir, Folsom Reservoir.

Senator ALLOTT. Then, since the opportunities for profits are exceedingly great, is there any reason why the people who get benefits of this should not pay for it?

Mr. DUGAN. We certainly feel that they are paying for the appropriate costs allocated to the municipal and industrial service. This we have attempted to do as meticulously as possible in the planning of the project.

Senator CARROLL. Will the Senator yield for a question?

Senator ALLOTT. I will be happy to. I think I have concluded my questioning.

Senator CARROLL. With relation to the benefit, is the identity of people ascertainable who will benefit? Do we know who these beneficiaries are at this time?

Mr. DUGAN. Well, it would be most difficult to say, Senator, who might benefit by just such a development as this. There would be many people involved. The ownership has been discussed. We estimated approximately 20 ownerships. This is just a guess, the area is one that has apparently been in this type ownership for a good long time. It is a marginal farming area at the present time, abutting on this very rapidly growing suburban community that surrounds Aerojet Corp.

Senator CARROLL. Twenty owners, you say?

Mr. DUGAN. Approximately, sir. This is only a guess that we made to depict as much as possible the nature of this area that Senator Allott was interested in.

Senator CARROLL. What is the size of the area?

Mr. DUGAN. It is 12,000 acres.

Senator CARROLL. Did I understand one of you gentlemen to say there are some restrictions? Are there any restrictions on speculation in this area at all?

Mr. PALMER. On agricultural development, the Omnibus Adjustment Act of May 25, 1926, section 46, provides that the lands should

be appraised prior to the delivery of water for agricultural purposes and the excess land should be sold at a price fixed by the Secretary. But this gets very difficult to apply when you get into municipal use and urbanization because there are so many other factors that go into that. Roads and streets have to be constructed, pipelines and distribution systems have to be put in, sanitary facilities, electric and telephone lines provided, and it is almost impossible to control subdivision under any type of Federal speculation control programs known.

Now, this problem is not unique to reclamation. It happens any time you build a development in an area.

For instance, by the very location of Aerojet in this particular area, all of the landowners who surrounded that area have benefited. Or if you build a flood-control dam all of the property that abuts the stream down below that makes it safe for subdivision benefits from that flood-control dam. So it is not a problem that is unique to reclamation development. In this area there is a requirement for further subdivision type land. It can be served as we understand it and analyzed the problem, best by pumping from the Folsom Reservoir, and all of the costs associated with making this service available that are allocated to that service are repayable to the Federal Treasury with interest.

Now, when you get to the problem of allocation, the flood-control allocation is fixed on the basis of procedures that have long since been recognized by the Congress and approved by the Congress, and the flood-control allocation in this instance has been devised upon that procedure. Similarly the allocation of fish and wildlife costs is on the same basis.

When you consider recreation in this instance as in all other instances unless we identify them and unless you give us authorization to do it otherwise, the costs involved are only the specific costs associated with the development. In other words, they are the minimum basic recreational facilities and specific land purchases. But there is no sharing in the joint works costs for recreation purposes.

Senator CARROLL. What you are saying in effect is that any project of this size and scope, there are bound to be some incidental benefits. Do you regard this question, the benefit to these 20 owners as an incidental benefit? How does it compare to benefits that flow to other people?

Mr. PALMER. I don't think there is any question but what these people will get substantial benefits from the development, but equally important, substantial benefit because of the subdivision of the area will accrue to a vast number of people, including the people in the county and cities and, in fact, to our defense installation there because of the location of Aerojet in that area.

Senator CARROLL. I thank you very much.

Mr. Kuchel, are you the chairman of this subcommittee?

Senator KUCHEL. Why, no.

Senator ALLOTT. I was asked by the chairman to take the Chair. But I yield it to anybody who wants to take it.

Senator CARROLL. I want to say for the record I have followed this testimony very carefully. This morning, I have spent since 9:30 this morning, with Senator Kefauver. I am on the Anti-Monopoly

Committee of the Senate Judiciary Committee. I am going to a meeting this afternoon at 2 o'clock with the minority leader, Senator Dirksen, and our own subcommittee, and I will not be able to be with you this afternoon.

I apologize to you gentlemen for not being here all the time but I will read the testimony. I don't—I am always sympathetic to, I assume that the Senator from California has an interest in this project.

Senator KUCHEL. Almost vital.

Senator CARROLL. So I am always sympathetic to his vital interest.

Senator KUCHEL. I thank you.

Senator CARROLL. And I will read the record, if you will excuse me.

Senator KUCHEL. Thank you.

Senator ALLOTT. Senator Dworshak has a couple of questions.

Senator DWORSHAK. I understand the total cost of this project is about \$267,577,000.

Mr. PALMER. That is correct.

Mr. DUGAN. Yes.

Senator DWORSHAK. What percentage of that is reimbursable?

Mr. PALMER. 95 plus, nearly 96 percent.

Senator DWORSHAK. Over how many years?

Mr. PALMER. Within the 50-year period permitted by law and authorized by the Congress.

Senator DWORSHAK. And the part that isn't reimbursable is allocated to recreation and other problems, flood control, what did you say 99?

Mr. PALMER. No, there is an amount of \$12,067,000 or slightly in excess of 4 percent is allocated to the three functions, flood control, fish and wildlife, and recreation that are considered and recommended as nonreimbursable.

Senator DWORSHAK. How many acres of new land will be irrigated?

Mr. PALMER. Senator Dworshak this is essentially a rescue project. It is essentially a project for service to irrigated land.

Senator DWORSHAK. Did you say "rescue"?

Mr. PALMER. Yes, sir.

Senator DWORSHAK. Well——

Mr. PALMER. It is an area that is already in a high state of development.

Senator DWORSHAK. I never heard of California being in need of that.

Senator KUCHEL. Senator, it has been and I am glad to recall that on many occasions you have come to the rescue of our State.

Mr. PALMER. May I describe what I had in mind as a rescue project?

Senator DWORSHAK. Yes, sir.

Mr. PALMER. The area, the service area, as defined there on the map includes about 400,000 acres that will receive water from the project. Much of that area will be in irrigated pasture after the development. Much of it is now in fruit, pasture, general field crops, quite generally not in the surplus category.

Senator DWORSHAK. How many acres of new land did you say will be benefited?

Mr. DUGAN. 116,000 acres.

Senator DWORSHAK. How many acres would receive supplemental water supply.

Mr. DUGAN. 247,000 are now irrigated or just about 68 percent of the lands to be irrigated are now being irrigated.

Senator DWORSHAK. And in what way would benefits accrue, supplemental water supply to these lands? By that I mean, they are producing now and what will they produce if this project is constructed that would mean such widespread benefits to the acreage.

Mr. PALMER. There was a rather full discussion yesterday and it goes into two or three substantial areas. One is that this is an area of excessive overdraft on underground water supplies and pump wells are going brine or starting to pump brine. In these areas a source of fresh water is required.

Senator DWORSHAK. There will not be any change in the kind of crops that would be raised under this project.

Mr. PALMER. I think not, sir.

Mr. DUGAN. That is essentially correct, Senator. It is pretty much a matter of sustaining the kind of agriculture.

Senator DWORSHAK. Maintaining what they already have?

Mr. DUGAN. Very nearly so, yes, sir.

Senator DWORSHAK. Well, it is inconceivable to me that you can, without going into details and I do not want to belabor this because I was not here yesterday, so far as the power development is concerned and the reimbursability from that source, it seems almost inconceivable to me that you can repay in a 50-year period \$267 or about \$250 million to the Federal Government. What have you got, some magic formula now?

Mr. PALMER. There is a complete analysis of the payout submitted in Mr. Dugan's statement yesterday as amended, a revised payout schedule or payout summary.

Senator DWORSHAK. I will read it.

Mr. DUGAN. It is a very favorable payout situation, Senator. We are quite proud of it. In 50 years we would pay out all the reimbursable portion and we would earn \$259 million surplus.

Senator DWORSHAK. Does the State of California through its water development department have any interest in this project?

Mr. DUGAN. No, sir, except that it is in keeping with the master plan of development for the State of California. This is quite a complex plan. I am sure you are acquainted with their State Feather River project that brings water from Oroville Dam on the Feather River, thence to the delta and then south across the San Joaquin Valley to Los Angeles. This is almost a \$2 billion undertaking and local people are undertaking a lot of development in California.

California needs a lot more water, they are growing very rapidly.

Senator DWORSHAK. Well, I recall a year ago when our Appropriation Subcommittee and the Interior Department and the Bureau of Reclamation budget received testimony from Mr. Warne who, I guess, is director of the State of California water developments—

Mr. DUGAN. Yes, sir.

Senator DWORSHAK (continuing). Program, that the State had bonded itself for what total amount, \$2 billion?

Senator KUCHEL. \$1,750 million.

Senator DWORSHAK. \$1,750 million, which was quite impressive, but I was just wondering why some of this money was not utilized for this project? I am a little bit skeptical without knowing any of the details as to why this should be entirely a Federal development

instead of the State getting into it on some matching basis or a joint venture basis which might lend greater confidence or encouragement to members of our committee in considering this project.

Mr. DUGAN. We are quite impressed, Senator, with the vast State program that is taking place in California. They certainly are pulling the major oar, almost a \$2 billion project is an instance of it. They are also financing small projects.

Senator DWORSHAK. But none of that \$2 billion is to be utilized in this development?

Mr. DUGAN. No, it is on the other side of the valley. This is on the east side of the San Joaquin and their aqueduct system goes down the west side, although we also have a unit on the west side, the San Luis unit.

Senator DWORSHAK. These are different watersheds?

Mr. DUGAN. Well, it is within the San Joaquin drainage basin but it is on opposite sides of the valley. It is quite a vast valley as I am sure you know.

Senator DWORSHAK. Yes.

Mr. DUGAN. This other map will orient you a little bit better to the northern part of California and the great Central Valley that runs from Shasta Dam down through Bakersfield.

Senator DWORSHAK. I have visited Shasta Dam, where is it there?

Mr. DUGAN. The State project begins with Oroville Dam on the Feather River. It will take water out of the delta, take it south, through some joint facilities we are building with the State, and then on to Los Angeles. This is down the west side of the valley. On the east side of the valley is an area with diminishing ground water supplies and something has to be done. It is a question of getting water there and doing it in time.

Senator DWORSHAK. What will happen if we can use salt water for irrigation with all of these experiments and a program underway under the supervision of the Department of Interior, isn't there a possibility that we may have even an excess supply of water within a few years?

Mr. DUGAN. Sir, I think there will be some expense to take the salt out and then, of course, when you do it you have to transport the water, which requires canals, pumping plants and so forth. We are talking about a fresh water supply from American River that all we have to do is build the canals to get it there.

I am sure that we all have great hopes for conversion of sea water. We hope this will supplement the fresh water supply and we are certainly going to need it as a supplement.

Senator DWORSHAK. Well, I can appreciate the development currently in California would require more and more supplies of water for industrial and irrigation purposes, but I am a little dubious about this \$250 million, as Mr. Palmer says it will all be repaid in a 50-year period, but I am still a little dubious. I will read the testimony of the hearing yesterday and maybe that will satisfy me.

Senator ALLOTT. Senator Kuchel?

Senator KUCHEL. Mr. Dugan, first of all because I think it does have a very unique and very excellent history, it would be helpful to my colleagues if you prepared for the record a statement of the payout on the Central Valley's project.

Mr. PALMER. Yes, sir, I will do that.

(The following was subsequently supplied to the committee:)

HISTORICAL AND PRESENT PROJECTIONS CENTRAL VALLEY PROJECT REPAYMENT

House Document 146 of February 24, 1947, reporting on the initial scope of the Central Valley project, presented construction cost estimates of \$381,231,000 for the storage and conveyance features of the project; through cost allocation procedure, \$312,896,000, or about 82 percent of the total cost, was held reimbursable and shown to be repaid by the end of year 2009.

By 1959, addition of Folsom Dam and reservoir, and revisions of the initial estimate for increases in the general construction price level in conjunction with actual construction experience resulted in a revised cost estimate of \$476,035,000. With addition of the Trinity River Division and Sacramento Canals unit (\$322,128,000), construction cost of the enlarged project amounted to about \$798 million, of which \$735 million, or 92 percent, was held reimbursable. Repayment studies indicated that within 50 years after addition of Trinity and Sacramento Canals, or fiscal year 2015, the revenues from the enlarged project could repay all allocated reimbursable costs; in addition, surplus revenues of about \$117 million would have accrued at the end of fiscal year 2015 for return to the National Treasury.

With the 1960 congressional authorization of the San Luis unit addition to the Central Valley project, construction cost estimates for the project increased to about \$1,082 million—assuming all-Federal construction of San Luis features under the authorized plan. A reallocation of costs in 1960, based upon revised hydrologic and operational criteria and consequent project accomplishments of the parent Central Valley project, resulted in reimbursable capital costs of \$956 million, or 88 percent of the total. An analysis of probable repayment indicated that net revenues from this enlarged project would repay the reimbursable cost by fiscal year 2018 (50 years following initial operation of San Luis unit) and, in addition, yield about \$292 million surplus returnable to the Treasury.

With addition of the proposed Auburn-Folsom South unit to the authorized Central Valley project, estimated total construction costs of storage and conveyance features would increase to \$1,288 million. An analysis of anticipated revenues shows that full repayment of the reimbursable costs of \$1,150 million, or 89 percent of total costs, can be accomplished by fiscal year 2019—50 years after integration of Auburn-Folsom South unit into the parent Central Valley project. Surplus revenues accruing at the end of fiscal year 2019 returnable to the Treasury are estimated at \$260 million.

The foregoing traces the total project repayment anticipated with each major new addition to the parent Central Valley project. Data given in House Document 146 showed an estimated \$18.4 million of net revenues available through fiscal year 1961 for repayment of the reimbursable project costs. Actual experience proved this estimate conservative. As of June 30, 1961, a total of \$95.5 million in net revenues had been applied toward repayment of the reimbursable investment—fivefold the original estimate.

Senator KUCHEL. North of Tehachapi Mountains I do want to say to my colleagues that this supplemental water project was originally envisioned as a State undertaking. As a matter of fact, in the depression years the people of the State did authorize such a project, but it was impossible for them to construct it, and that was the genesis of the Central Valley's project being approved as a Federal reclamation project. It does entail a vast amount of reservoirs and dams which would supply water, as my colleagues know to both the Sacramento Valley and the San Joaquin Valley.

That is the general area to be serviced.

Now, meanwhile, the water problems of the State, as they have arisen, have been solved by the other Federal projects and also by local people. My recollection is that we have about \$4 billion worth of local projects in the State paid for by the local taxpayers, and then as my colleagues know, since the population explosion there is simply unbelievable, we will pass New York this year. Whether we like it or not, the people are still coming there, half a million each year, the

State government then undertook the State water plan which encompasses in excess of \$12 billion of projects to be paid for by the State.

The first segment is the Feather River project, and on that, as has been stated, the people approved a bond issue of a billion 750 million dollars, and I am inclined to think, I rely a little bit on a hazy memory, with the money that the legislature has from time to time appropriated. I suppose it would be true to talk about the Feather River project as a \$2 billion project right now because from time to time over the years, millions of dollars have been spent, of State moneys exclusively in research, in the purchase of land and rights-of-way and the like.

Senator DWORSHAK. Will you yield at that point?

What are you going to do when you run out of water?

Senator KUCHEL. Well, here is the funny thing, disregarding the problem of the Arizona versus California lawsuit, which if that Rifkind opinion were to be applied as a decision of the court (you will remember last year we had kind of a roundtable discussion over that) and what an impact that would have on the upper Colorado River storage proposals, disregarding that, there is enough water, I will say to my colleagues, which, if captured, would take care of the needs of California, again if I am correct in my recollection, for the foreseeable future.

Meanwhile, you do have a remarkable history of payout so far as the Central Valley's project is concerned, above 90 percent. This will be 95 percent, and the theory of the State water plan, Henry, will be to take some of the surplus water in the north and take it over the mountains to the south. We have a very small percentage of California water available now in underground sources south of the Tehachapi Mountains and that is why this Colorado River importation has been so important. But if we are able, as a State, to assume a part of the burden in partnership with the Federal Government because we are going to continue to need Federal assistance, then our demands are going to be met in greater part by State waters. I think the comparison on costs demonstrates why the farmers in our State are going to have to look in the main to Federal reclamation assistance. These gentlemen have testified in terms of \$2.50 and \$3.50 an acre-foot for water which is far less expensive than what would be available under the State plan because the State plan encompasses no subsidy at all, and we are paying interest on that nearly \$2 billion of indebtedness.

I think also it is important for this record to disclose as vigorously as the representatives of the Bureau can, a word picture of why Malby is necessary. Just a few years ago you had nobody living in there. Now these great communities are flowering, and I think if you, Mr. Dugan, could supply simply a statement contrasting the situation in El Dorado County, for example, and environs 10 years ago as against what it is now, my colleagues would see what the problem is.

Mr. DUGAN. I would be very happy to do so, Senator.

Senator KUCHEL. For were you not to have found feasibility for the two adjunctions of this project what you would be doing is coming in here and making a recommendation to give a certain group of people an additional water supply but at the same time denying to their neighbors an additional water supply, and if that could be

as clearly set forth in this record as possible, I think the problems of the authors would be somewhat lessened.

Mr. DUGAN. Yes, sir.

Senator KUCHEL. If those can be supplied I ask consent that the hearings be left open for a week, would that give sufficient time?

Mr. DUGAN. Yes, Senator, we will be very happy to supply those as soon as possible.

INDICATIONS OF ECONOMIC GROWTH IN SACRAMENTO AND EL DORADO COUNTIES
OVER THE PAST 10 YEARS

Population of the Western States, and especially California, has greatly increased in the last 10 years, and Sacramento and El Dorado Counties have been among the leading areas: The population of these two counties has risen from 293,000 in 1950 to over 531,000 in 1960, amounting to an increase of 81 percent. This increase has been, at least partly, at the expense of farmland as the census of agriculture shows a decrease of almost 54,000 acres of cropland in the two counties during the same decade.

This decrease in agriculture, however, is more than offset by dramatic increases in other fields of activity. Manufacturing in Sacramento County alone has had a 191-percent increase in employment and \$143 million rise in wages which has contributed to an increase of personal income in Sacramento and El Dorado Counties of \$789 million for the period 1950-60.

The assessed valuation of tangible property in these counties increased from \$303 million in 1950 to \$776 million in 1960, which amounted to a 156-percent increase with a statewide increase of 117 percent for the same period.

The population of these two counties is projected at about 2½ million people by the year 2020 or an increase of 365 percent over the 1960 population of 531,000.

Senator ALLOTT. The hearings will now be closed.

They will be left open a week for the supplying of these or other statements and all of this, of course, will be subject to the further order of the chairman in the event of modification.

Mr. Palmer and Mr. Dugan and Mr. Head, thank you very much. Your testimony has been very helpful.

(Whereupon, at 12:10 p.m., the hearing of the committee was concluded.)

APPENDIX

(The following resolutions and statements were submitted during the course of the hearings. They were ordered printed as an appendix to the printed record.)

SENATE RESOLUTION 19

RELATIVE TO THE AUBURN DAM-FOLSOM SOUTH CANAL PROJECT

Whereas the Secretary of the Interior of the United States, with letter dated January 15, 1962, forwarded to the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the facilities to be constructed are vitally needed to supply water to areas within Placer, Sacramento, El Dorado, and San Joaquin Counties; and

Whereas the supplemental water which will be made available by the Auburn Dam-Folsom South Canal project is urgently needed, in part, to preserve the use of large acreages of highly productive farmland which is now endangered by a rapidly falling water table and a lack of adequate surface water supplies; and

Whereas the proposed facilities are necessary for the full development of the American River as a working unit of the Central Valley project; and

Whereas these facilities will provide much needed additional flood control protection for the city of Sacramento, along the lower regions of the American River, along the Sacramento River, and within the Sacramento-San Joaquin Delta; and

Whereas the entire State of California will benefit from the proposed project by additional flood protection for the capital city of the State and by the provision of an adequate supply of water for an important agricultural and urban area of California: Now, therefore, be it

Resolved, That the Senate of the State of California commends the Secretary of the Interior for recognizing the urgent need for the Auburn Dam-Folsom South Canal project; and be it further

Resolved, That the Senate of the State of California urges appropriate action, particularly by the U.S. Senate Interior and Insular Affairs Committee and by the U.S. House of Representatives Interior and Insular Affairs Committee, directed toward the early authorization and construction of the Auburn Dam-Folsom South Canal project; and be it further

Resolved, That the secretary of the senate shall transmit copies of this resolution to the President and Vice President of the United States, to the Speaker of the House of Representatives, to the chairman of the U.S. Senate Interior and Insular Affairs Committee, to the chairman of the U.S. House of Representatives Interior and Insular Affairs Committee, to each Senator and Representative from California in the Congress of the United States, and to the Secretary of the Interior of the United States.

RESOLUTION No. 62-65 OF THE BOARD OF DIRECTORS, SACRAMENTO COUNTY WATER AGENCY

Whereas the U.S. Government through the construction of the Folsom Dam has provided the necessary storage and diversion points for furnishing a water supply to designated service areas; and

Whereas the California State Water Rights Board in issuing the permit at Folsom Dam to the U.S. Government designated Sacramento County as a service area and at the same time recognized the area's right to contract with the U.S.

Government for a water supply from Folsom Dam by conditioning the permit as follows:

"14. Deliveries of water under permits issued pursuant to applications 13,370 and 13,371 shall be limited to deliveries for beneficial use within Placer, Sacramento, and San Joaquin Counties and shall not be made beyond the westerly or southerly boundaries thereof, except on a temporary basis, until the needs of those counties, present or prospective, are fully met: *Provided, however*, That agreements in accordance with Federal reclamation laws between permittee and parties desiring such service within said counties are executed by July 1, 1968";

and

Whereas it is proposed to serve a large portion of the Sacramento County service area by another proposed addition to the Central Valley project, the Folsom South Canal; and

Whereas there is a portion of the Sacramento County service area, immediately south of the American River, that cannot be served economically from the Folsom South Canal; and

Whereas the California State Department of Water Resources has in all its published plans for the ultimate development of the Sacramento and San Joaquin Valleys considered that the lands immediately to the south of the American River would best be served a water supply from storage on the American River; and

Whereas the best means of furnishing a water supply to this area from storage on the American River would be by the construction of the Folsom-Malby Canal, Malby Dam, and appurtenant works; and

Whereas Sacramento County is under great burdens to provide community services needed for the rapidly increasing population brought about by the military and related defense oriented industry; all of national interest; and

Whereas the increasing population pressures in Sacramento County has resulted in the construction of urban developments on irrigated land for reasons of an available and developed water supply, thus withdrawing the better county agricultural lands from important food production; and

Whereas the providing of water to the Folsom-Malby area would provide an opportunity to stop this undesirable trend and allow the construction of dwellings upon lands not suitable to the intensive irrigation agriculture; and

Whereas the U.S. Bureau of Reclamation has demonstrated in its report the economic and engineering feasibility of the construction of the Folsom-Malby unit; and

Whereas the water to be furnished by the unit can be placed to beneficial use in both Sacramento and El Dorado Counties: Now, therefore, be it

Resolved, That the board of supervisors and as ex officio the board of directors of the Sacramento County Water Agency, hereby strongly endorses the Folsom-Malby unit as an integral part of the Auburn-Folsom South unit of the Central Valley project, California, and urges early construction of the facility as a Federal reclamation project to assist the agency in implementing an overall county water development program necessary to serve rapid community growth brought about by measures directly related to the national defense.

RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF FRESNO

Whereas the bringing of additional water supplies to the San Joaquin Valley and particularly the east side thereof is a vital importance to the economic well-being of the entire valley; and

Whereas the westward migration of the past two decades has brought millions of new residents to California and the San Joaquin Valley thereby creating additional water needs for domestic, industrial, and agricultural purposes and it is imperative that additional supplies of water be provided to supplement the water presently available; and

Whereas the construction of what is generally known as the Auburn Dam-Folsom South unit of the Central Valley project with its provisions for the enlargement of the Folsom South Canal constitutes the only practical means whereby additional supplies of water can be imported into the eastern part of said valley from northern California and is therefore essential if the necessary supplemental supplies of water are to be made available to make possible the continued production of food and fiber together with the continued development

of industry to meet the ever-increasing demands of a growing population; and

Whereas the failure of Congress to authorize said Auburn Dam-Folsom South unit of the Central Valley project as proposed would be a disastrous economic setback to the entire area including the thousands of small businessmen and their employees dependent upon the well-being of agriculture and industry for their existence, and to the small communities on the east side of the San Joaquin Valley likewise dependent upon agriculture and industry for their existence; and

Whereas Federal legislation to authorize the Federal funds to be used for said project as is more particularly stated in Senate bill 103 is now pending before the U.S. Senate Interior Committee and should be enacted into law: Now, therefore, be it

Resolved, That the Board of Supervisors of the County of Fresno do hereby urge the Congress of the United States to enact into law S. 103 authorizing the construction of the Auburn Dam-Folsom South unit of the Central Valley project; and be it further

Resolved, That copies hereof be forwarded to the Honorable Clair Engle, Senator from the State of California, to the Honorable Thomas H. Kuchel, Senator from the State of California, and the Honorable B. F. Sisk, Congressman from the 12th Congressional District.

RESOLUTION No. 62-10 OF THE BOARD OF SUPERVISORS OF THE COUNTY OF KINGS

Whereas the East Side division of the Central Valley project is critically needed to serve lands on the east side of the San Joaquin Valley; and

Whereas the bringing of supplemental water supplies to the county of Kings is a matter of vital importance to the continued agricultural, industrial and other economical phases of development of said county and area; and

Whereas as each year passes, the water shortage becomes increasingly serious; and

Whereas a vital step in securing additional water for the San Joaquin Valley East Side is authorization of the Auburn Dam-Folsom South unit of the Central Valley project with provisions for enlargement of the Folsom South Canal to meet the demands of the proposed East Side division of the Central Valley project: Now, therefore, be it

Resolved, That this board of supervisors does hereby respectfully and strongly urge the authorization of the Folsom South Canal with enlargement provisions for the East Side division of the Central Valley project; be it further

Resolved, That certified copies of this resolution be transmitted by the clerk of this board to Senator Thomas H. Kuchel and to Senator Clair Engle and that such resolution be included in the record of the U.S. Senate Interior Committee hearings in Washington, D.C.

RESOLUTION OF THE BOARD OF SUPERVISORS COUNTY OF KERN

Whereas:

(a) On February 20 and 21, 1962, the Subcommittee on Irrigation and Reclamation of the U.S. Senate Committee on Interior and Insular Affairs will hold hearing in Washington, D.C., on bills providing for authorization of the Auburn Dam-Folsom South unit of the Central Valley project; and

(b) S. 103 provides for this authorization and contains provisions for the enlargement of the Folsom South Canal to meet the demands of the proposed East Side division of the Central Valley project; and

(c) The proposed East Side division of the Central Valley project would serve lands on the east side of the San Joaquin Valley; and

(d) Authorization of the Folsom South Canal with enlargement provisions would be a first step in securing needed additional water for the east side of the San Joaquin Valley; and

(e) This resolution has been recommended by the Central Valley East Side Project Association: Now, therefore, it is hereby

Resolved by the Board of Supervisors of the County of Kern, State of California, As follows:

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1. This board of supervisors extends its support to the authorization of the Auburn Dam-Folsom South unit of the Central Valley project and to Senate 103 providing for said authorization.

2. The Honorable Thomas H. Kuchel and the Honorable Clair Engle, Senators from California, are respectfully urged to give their support to such authorization and to said S. 103.

RESOLUTION NO. 39 OF THE SACRAMENTO CITY COUNCIL

Whereas the Congress of the United States is soon to conduct hearings for the determination of legislative action authorizing the Auburn-Folsom South unit of the Central Valley project as outlined in studies prepared by the U.S. Bureau of Reclamation; and

Whereas the Auburn-Folsom South unit will greatly increase the conservation and beneficial use of waters of the American River stream system; and

Whereas the Auburn Dam which is part of the proposed project is essential in the adequate control of floods from the American River and its tributaries; and

Whereas the Bureau of Reclamation has demonstrated in its report the economic and engineering feasibility of the project and has outlined the benefits to agricultural, domestic, and industrial users of this water: Now, therefore, be it

Resolved and ordered, That this council gives its complete endorsement and full support to the proposed Auburn-Folsom South unit project and urges its early construction to bring to this area the many benefits of the project.

RESOLUTION NO. 62-7 OF THE CITY OF ROSEVILLE, CALIF.

Be it resolved by the city council of the city of Roseville that, with the approval of the agreement between the Placer County Water Agency and the regional office of the Bureau of Reclamation in Sacramento by the U.S. Department of Interior, this council goes on record as supporting the authorization of the Auburn-Folsom South unit of the Central Valley project as provided for in S. 103, H.R. 38, and H.R. 980 and that the appropriate committees of the U.S. Congress be urged to give their immediate approval to such authorization.

RESOLUTION 636 OF THE CITY OF AUBURN, CALIF.

Whereas the Secretary of the Interior has under date of January 17, 1962, forwarded to the various affected committees of the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the facilities to be constructed under this project are vitally needed to supply water to areas within Placer, Sacramento, El Dorado, and San Joaquin Counties; and

Whereas the facilities are necessary for the full development of the American River as part of the Federal Central Valley project and they will also provide additional much needed flood control along lower reaches of the American River, the Sacramento River and within the Sacramento-San Joaquin Delta and will supply other benefits in addition; and

Whereas areas in Placer and neighboring counties will be major beneficiaries of project benefits primarily in times of supplemental water supply and recreation benefits: Now, therefore, be it

Resolved, That the City Council of the City of Auburn go on record as commending the Secretary of the Interior for recognizing the urgent need for Auburn Dam-Folsom South Canal project and related units as evidenced by the Secretary's recent recommendation to the Congress of the United States.

AUBURN-FOLSOM SOUTH UNIT—CENTRAL VALLEY PROJECT 169

RESOLUTION No. 165 OF THE CITY OF VISALIA, CALIF.

Whereas the city of Visalia and the landowners adjacent to its boundaries have been prime beneficiaries of the Central Valley project provided by the Federal Government for the benefit of lands on the east side of the San Joaquin Valley; and

Whereas it has now become increasingly apparent that additional water for these lands specifically and land within the county of Tulare generally will be needed in the near future to maintain existing productivity and allow for ever-increasing urban and domestic needs; and

Whereas the Federal Government has recognized such need and planned for the same by means of the contemplated Eastside Division of the Central Valley project; and

Whereas there is now pending before the Senate and House Interior and Insular Affairs Committees bills to authorize the Auburn Dam and Folsom South Canal which will bring water now greatly needed to Sacramento and San Joaquin County; and

Whereas not only Sacramento County and San Joaquin County but many additional areas within the San Joaquin Valley which will be served by the proposed Eastside Division are in critical need of additional water supplies; and

Whereas, although the State of California and local agencies therein are proceeding as rapidly as possible with local and State projects, such developments cannot keep pace with the ever-increasing need for water within the State of California without substantial assistance from the Federal Government: Now, therefore, be it

Resolved, That the Senate and House Interior and Insular Affairs Committees be, and they hereby are, respectfully urged to approve the Auburn Dam and Folsom South Canal project, with sufficient capacity to accommodate the contemplated Eastside Division of the Central Valley project, and that the Congress be, and it hereby is, respectfully urged to authorize such projects.

RESOLUTION OF THE CLAY WATER DISTRICT, SACRAMENTO COUNTY, CALIF.

Whereas the Congress of the United States is soon to conduct hearings for the determination of legislative action authorizing the Auburn-Folsom South unit of the Central Valley project as outlined in studies prepared by the U.S. Bureau of Reclamation; and

Whereas the Clay Water District lies within the service area of the project, an area whose farm acreage is endangered by a rapidly falling ground water table and by a lack of adequate surface water supply; and

Whereas the primary purpose for the formation of the district on January 17, 1956, was to secure supplemental irrigation sources which will be provided by the project: Now, therefore, be it

Resolved, That the board of directors of the Clay Water District gives its complete endorsement and full support to the proposed Auburn-Folsom South unit project and urges all appropriate action directed toward its early authorization and construction.

RESOLUTION OF THE WOODBRIDGE IRRIGATION DISTRICT

Whereas the Woodbridge Irrigation District serves an agricultural area of approximately 14,000 acres of land within its own district and approximately 26,500 acres of land within the Woodbridge Water Users Conservation District; and

Whereas, by reason of its irrigation facilities and irrigation practices, its water supply replenishes the underground reservoir in the Western Mokelumne unit containing more than 73,000 acres; and

Whereas the land within the district is devoted to the growing of alfalfa, clover, beans, annuals, vines and trees, cereals, pasture, rice asparagus, and berries, and the people of the area are dependent upon the agricultural economy for their livelihood; and

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Whereas in order to sustain and maintain the agricultural economy it is essential that a firm water supply be obtained; and

Whereas studies have indicated that deficient water supplies has required the utilization of water from the underground reservoir; and

Whereas said studies have indicated that a water supply of approximately 130,000 acre-feet per year would be required; and

Whereas there has been transmitted to the Congress of the United States the report of the Secretary of the Interior on the Auburn-Folsom South unit of the Central Valley project; and

Whereas the Folsom South Canal could furnish a water supply both for surface diversions and ground water replenishment and under certain conditions the district would require approximately 70,000 acre-feet per year from the Folsom South Canal; and

Whereas the early authorization and construction of Folsom South Canal would make available the water supply needed by the people of the district: Now, therefore, be it

Resolved, That the Woodbridge Irrigation District urge the Congress of the United States to enact legislation authorizing the Auburn-Folsom South unit of the Central Valley project.

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAUCELITO IRRIGATION DISTRICT

Whereas the east side of the southern San Joaquin Valley is in need of further supplemental water in order that the development of that portion of the valley can continue, and whereas the source of supplemental water can be obtained through the east side division of the Central Valley project commencing with the Auburn Dam-Folsom South Canal unit: Now, therefore, be it

Resolved, That we urge the Congress of the United States to authorize the construction of the Auburn Dam-Folsom South Canal unit of a sufficient size to serve not only the immediate area of the location of the dam but also the entire east side of the San Joaquin Valley.

RESOLUTION OF THE PIXLEY IRRIGATION DISTRICT

Whereas the Secretary of the Interior has under date of January 17, 1962, forwarded to the various affected committees of the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas these facilities are necessary for the full development of the American River as part of the Federal Central Valley project and will provide vitally needed supplemental water and additional flood control to areas within Placer, Sacramento, El Dorado, and San Joaquin Counties; and

Whereas the provisions for enlargement of the Folsom South Canal and its integration into the proposed east side division of the Federal Central Valley project will make available a vitally needed supplemental water supply to areas within Madera, Fresno, Tulare, and Kern Counties; and

Whereas the Pixley Irrigation District is a California irrigation district situate in the county of Tulare, State of California, comprising developed agricultural lands that are water deficient and in vital need of a supplemental irrigation water supply and dependent for that supply upon the enlargement and extension of the Federal Central Valley project through construction of the proposed east side division thereof: Now, therefore, be it

Resolved, That the Pixley Irrigation District does commend the Secretary of the Interior for recognizing the urgent need for Auburn Dam-Folsom South Canal project and related units, as evidenced by the Secretary's recent recommendation to the Congress of the United States; and be it further

Resolved, That the appropriate committees of Congress be urged to schedule early hearings in connection with the authorization of said project; and be it further

Resolved, That the Pixley Irrigation District does urge and recommend to the said committees of Congress that the said project, as recommended by the Secretary of the Interior, be authorized.

RESOLUTION OF THE TULARE IRRIGATION DISTRICT

Whereas the Secretary of the Interior has under date of January 17, 1962, forwarded to the various affected committees of the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas these facilities are necessary for the full development of the American River as part of the Federal Central Valley project and will provide vitally needed supplemental water and additional flood control to areas within Pacer, Sacramento, El Dorado, and San Joaquin Counties; and

Whereas the provisions for enlargement of the Folsom South Canal and its integration into the proposed east side division of the Federal Central Valley project will make available a vitally needed supplemental water supply to areas within Madera, Fresno, Tulare, and Kern Counties; and

Whereas the Tulare Irrigation District is a California irrigation district situate in the county of Tulare, State of California, comprising developed agricultural lands that are water deficient and in vital need of a supplemental irrigation water supply and dependent for that supply upon the enlargement and extension of the Federal Central Valley project through construction of the proposed east side division thereof: Now, therefore, be it

Resolved, That the Tulare Irrigation District does commend the Secretary of the Interior for recognizing the urgent need for Auburn Dam-Folsom South Canal project and related units, as evidenced by the Secretary's recent recommendation to the Congress of the United States; and be it further

Resolved, That the appropriate committees of Congress be urged to schedule early hearings in connection with the authorization of said project; and be it further

Resolved, That the Tulare Irrigation District does urge and recommend to the said committees of Congress that the said project, as recommended by the Secretary of the Interior, be authorized.

RESOLUTION OF THE TULARE LAKE BASIN WATER STORAGE DISTRICT

Whereas there is now pending in the Senate of the United States a proposed measure officially designated as S. 103 which, as drafted, provides for authorization of the Auburn Dam-Folsom South unit of the Central Valley project of the United States, in the State of California and contains provisions for the enlargement of the Folsom South Canal to meet expected demands for water from the proposed east side division of the Central Valley project; and

Whereas on February 20 and 21, the Interior Committee of the U.S. Senate will hold a hearing on such measure; and

Whereas Tulare Lake Basin Water Storage District wishes to secure additional supplies of water from such east side division of the Central Valley project and desires that such measure shall be enacted into law: Now, therefore, be it

Resolved, That Tulare Lake Basin Water Storage District does now declare its support for the development of such east side division of the Central Valley project and its desire that the Interior and Insular Affairs Committees, respectively, of the U.S. Senate and House of Representatives shall make a favorable report to their respective bodies for the passage of such measure with the terms therein which are above recited.

RESOLUTION No. 45 OF THE KINGS COUNTY WATER DISTRICT

Be it resolved, That the Kings County Water District, with offices at Hanford, Calif., and comprising 150,000 acres of farmlands, go on record as favoring the pending bills providing for the authorization of the Auburn Dam-Folsom South unit of the Central Valley project, and for Senate bill 103 providing for the enlargement of the Folsom South Canal to meet the demands of the proposed east side division of the Central Valley project.

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VISALIA, CALIF., February 15, 1962.

Senator CLAIR ENGLE,
Senate Office Building, Washington, D.C.:

The Teapot Dome Water District of this county urges that you support appropriations for the construction of the so-called east side project including the Folsom Dam and related facilities.

LEORY McCORMICK,
Attorney for the District.

RESOLUTION OF THE BOARD OF SUPERVISORS OF THE SAN JOAQUIN COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Whereas the Congress of the United States now has before it the report of the Secretary of Interior of the United States relative to the Auburn Dam-Folsom South Canal project and related units; and

Whereas the facilities proposed by the Auburn Dam-Folsom South Canal project are vitally needed to conserve and transport supplementary water to the county of San Joaquin and to areas within the nearby counties of Placer, Sacramento, and El Dorado; and

Whereas the supplemental water which will be brought to San Joaquin County by the Auburn Dam-Folsom South Canal project is urgently needed, in part, to preserve in use large valuable acreages of highly productive farmland which is now endangered by a rapidly falling ground water table and by a lack of adequate surface water supply; and

Whereas anticipated urban growth within San Joaquin County and within the Folsom South Canal service area will inevitably require substantial supplemental water as a basis for further development of the city of Stockton, the city of Lodi, and adjoining urban areas; and

Whereas the facilities mentioned in the aforementioned report are necessary for the full development of the American River as an operating unit of the Federal Central Valley project; and

Whereas the contemplated facilities will provide much-needed additional flood-control protection within the San Joaquin-Sacramento Delta; and

Whereas this countywide district, pursuant to chapter 933 of the Statutes of 1961, has placed itself in a position to contract for water to be made available from Folsom South Canal within San Joaquin County in the event that any area within this county and within the Folsom South service area is unprepared or unable to contract for such water: Now, therefore, it is hereby

Resolved, That this Board of Supervisors of the San Joaquin County Flood Control and Water Conservation District commends the Secretary of the Interior of the United States for recognizing the urgent necessity for the Auburn Dam-Folsom South Canal project; and be it further

Resolved That this board of supervisors wholeheartedly and enthusiastically endorses the Auburn Dam-Folsom South Canal projects as submitted to the Congress by the Secretary of the Interior, with letter dated January 15, 1962; and be it further

Resolved, That this board of supervisors urges all appropriate action, particularly by the U.S. Senate Interior and Insular Affairs Committee and the U.S. House of Representatives Interior and Insular Affairs Committee, directed toward the early authorization and construction of the Auburn Dam-Folsom South Canal project; and be it further

Resolved, That this board of supervisors authorizes and directs Supervisor Frank Hoyt and Supervisor Vernon Lehman to appear in Washington, D.C., before the U.S. Senate Interior and Insular Affairs Committee and the U.S. House of Representatives Interior and Insular Affairs Committee, in behalf of and in support of the Auburn Dam-Folsom South Canal project.

RESOLUTION OF THE BOARD OF DIRECTORS OF THE STOCKTON AND EAST SAN JOAQUIN WATER CONSERVATION DISTRICT

Whereas the Stockton and East San Joaquin Water Conservation District is a public entity organized under the laws of the State of California to develop, conserve, and utilize water resources to meet the needs of the people within the district; and

Whereas the district comprises an area of approximately 80,000 acres, including 50,000 acres utilized for agricultural purposes, 13,000 acres utilized for municipal and industrial purposes, and 10,000 acres of productive land which lie idle because of lack of a water supply; and

Whereas the district has expended large sums of money to determine the extent of its water requirements and the sources of supply from which these requirements can be met; and

Whereas these studies reveal the present agricultural and municipal consumptive uses of water in excess of 150,500 acre-feet per year compared to the available water supply from all present sources of less than 95,000 acre-feet per year under long-term, mean, seasonal conditions, thus indicating present deficiency of almost 56,000 acre-feet per year; and

Whereas it has been necessary, in order to overcome this deficiency, to mind the underground reservoir to a stage which has dangerously depleted such underground reservoir and has caused deterioration in the quality of water obtainable; and

Whereas the studies further reveal that by the year 1970 the water requirements for the district will increase to more than 180,000 acre-feet per year but that the water supply will decrease to about 90,000 acre-feet, increasing the deficiency to more than 90,000 acre-feet per year; and

Whereas the studies further reveal that by the year 2010 the district will require almost 272,000 acre-feet per year to meet its requirements and that without adequate conservation measures and the acquisition of an alternate supply the deficiency will be in the magnitude of near 205,000 acre-feet per year; and

Whereas the alarming increase in the deficient water supplies is a matter of grave concern to the people in the district; and

Whereas there has been transmitted to the Congress of the United States the report of the Secretary of the Interior on the Auburn-Folsom South unit of the Central Valley Project; and

Whereas said report, as well as the independent studies made by the district, conclusively establishes that the Folsom South Canal is a vital and an essential facility for the transportation of water and is the major source from which the indicated deficiencies could be greatly alleviated; and

Whereas delays in the authorization and construction of the Folsom South Canal constitute a serious threat to and endanger the economy and well-being of the people of this district: Now, therefore, be it

Resolved, That the people of this district, through its board of directors, urge the Congress of the United States to consider favorably the early enactment of legislation authorizing the construction, operation and maintenance of the Folsom South Canal.

STOCKTON CITY COUNCIL

RESOLUTION NO. 23,202

Whereas the Secretary of the Interior of the United States has transmitted to the President of the United States his report on the Auburn-Folsom South unit of the Central Valley project; and

Whereas the President has transmitted said report to the Congress of the United States; and

Whereas this city council has had an opportunity to review said report; and

Whereas it is the opinion of this city council that the Auburn-Folsom South unit and particularly the Folsom South Canal, a part of said project, is urgently needed by this area for the provision of vitally necessary supplemental water; and

Whereas the city of Stockton is dependent on the service area of the Folsom South Canal for its supply of water for domestic and industrial use: Now, therefore, be it

Resolved by the Council of the City of Stockton, That this city council hereby endorses the Auburn-Folsom South project as proposed in the aforementioned report and shall take all appropriate action in support of the early authorization and construction of the Auburn-Folsom South unit.

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RESOLUTION No. 4222 OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT

Whereas the Secretary of the Interior has, under date of January 17, 1962, forwarded to the various affected committees of the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the Sacramento Municipal Utility District serves one of the fastest growing areas in the United States and prognostications by all sources indicate this area will continue to grow at a rapid rate, necessitating new and adequate sources of electric power and water; and

Whereas the Sacramento Municipal Utility District, in a previous agreement with Placer County, has stated it would cooperate with said county to obtain authorization for the construction of the Auburn Dam and would assign to the construction agency certain water right applications held by the district: Now, therefore, be it

Resolved by the Board of Directors of Sacramento Municipal Utility District:

SECTION 1. That this agreement to assist Placer County be reaffirmed and that the Sacramento Municipal Utility District commend the Secretary of the Interior for recognizing the urgent need for Auburn Dam-Folsom South Canal project and related units as evidenced by the Secretary's recent recommendation to the Congress of the United States.

SEC. 2. That the Congress be urged to authorize promptly said project.

RESOLUTION No. 2631 OF THE CITY COUNCIL OF THE CITY OF NORTH SACRAMENTO

Whereas this council feels that one of the most satisfactory means of furnishing an adequate water supply to nearby service areas from storage on the American River would be by the construction of the Folsom South unit of the Central Valley project; and

Whereas the ever-increasing population pressure in Sacramento County and the Sacramento metropolitan area has resulted in a growing demand for all types of farm products in these areas; and

Whereas additional irrigated acreage will be essential if total production of such farm products is to keep in step with burgeoning needs; and

Whereas the ground supply is not adequate even now to provide sufficient water to develop the needed acreage, and from all reports is becoming increasingly overdrawn; and

Whereas the U.S. Bureau of Reclamation has demonstrated in its report the economic and engineering feasibility of furnishing a supplemental surface water supply to these service areas by the construction of the Folsom South unit of the Central Valley project; and

Whereas the Folsom-Malby unit, as an integral part of the Folsom South unit, not only can play a major part in keeping the agricultural, domestic and industrial development of the County of Sacramento in proper balance by supplying supplemental water, but also can provide other highly desirable benefits in the form of added flood control and recreational facilities: Now, therefore be it

Resolved by the City Council of the City of North Sacramento, That it endorse and hereby does strongly endorse the Auburn-Folsom South unit of the Central Valley project of which the Folsom South unit is an integral part; and be it further

Resolved, That said council hereby urges early construction of the facility as a Federal reclamation project, both to assist in implementing an overall Sacramento County water development program and to aid in developing resources vital to national defense.

RESOLUTION No. 256 OF THE CITY COUNCIL OF THE CITY OF ROCKLIN, CALIF.

Whereas we have been informed that the Placer County Water Agency and the Regional Office of the Bureau of Reclamation in Sacramento have concluded an agreement resolving the apparent conflicts between the agency's Middle Fork American River project and the Central Valley project; and

Whereas we have been informed that the said agreement between the Placer County Water Agency and the Regional Office of the Bureau of Reclamation is expected to receive the approval of the U.S. Department of Interior prior to the

congressional hearings on S. 103, H.R. 38, and H.R. 980 scheduled to be held February 20, 21, 22, and 23, 1962; and

Whereas under the terms of the said agreement the Bureau of Reclamation will sell to the Placer County Water Agency from the Auburn Reservoir up to 117,000 acre-feet of water annually for use by the Placer County Water Agency in Placer County; and

Whereas all estimates of the future growth in Placer County indicate that the county and the cities within the county will need substantial amounts of water other than the quantities to be developed and diverted by the Placer County Water Agency from its Middle Fork American River project: Now, therefore, be it

Resolved by the City Council of the City of Rocklin, That, with the approval of the agreement between the Placer County Water Agency and the Regional Office of the Bureau of Reclamation in Sacramento by the U.S. Department of Interior, this council go on record as supporting the authorization of the Auburn-Folsom South unit of the Central Valley project as provided for in S. 103, H.R. 38, and H.R. 980 and that the appropriate committees of the U.S. Congress be urged to give their immediate approval to such authorization.

RESOLUTION No. 600 OF THE CITY COUNCIL OF THE CITY OF LINCOLN, CALIF.

Whereas we have been informed that the Placer County Water Agency and the regional office of the Bureau of Reclamation in Sacramento have concluded an agreement resolving the apparent conflicts between the agency's Middle Fork American River project and the Central Valley project; and

Whereas we have been informed that the said agreement between the Placer County Water Agency and the regional office of the Bureau of Reclamation is expected to receive the approval of the U.S. Department of the Interior prior to the U.S. congressional hearings on S. 103, H.R. 38, and H.R. 980 scheduled to be held February 20, 21, 22 and 23, 1962; and

Whereas under the terms of the said agreement the Bureau of Reclamation will sell to the Placer County Water Agency from the Auburn Reservoir up to 117,000 acre-feet of water annually for use by the Placer County Water Agency in Placer County; and

Whereas all estimates of the future growth in Placer County indicate that the county and the cities within the county will need substantial amounts of water other than the quantities to be developed and diverted by the Placer County Water Agency from its Middle Fork American River project: Now, therefore, be it

Resolved by the City Council of the City of Lincoln, That, subject to the prior approval of the agreement between the Placer County Water Agency and the regional office of the Bureau of Reclamation in Sacramento by the U.S. Department of the Interior, this council go on record as supporting the authorization of the Auburn-Folsom South unit of the Central Valley project as provided for in S. 103, H.R. 38 and H.R. 980 and that the appropriate committees of the U.S. Congress be urged to give their immediate approval to such authorization.

RESOLUTION No. 62-297 OF THE BOARD OF SUPERVISORS, COUNTY OF TULANE,
STATE OF CALIFORNIA

Whereas the Secretary of the Interior of the United States, with letter dated January 15, 1962, forwarded to the Congress of the United States reports recommending the early authorization of the Auburn Dam and Folsom South Canal unit and related facilities; and

Whereas the additional water which will be made available by the Auburn Dam and Folsom South Canal unit with the proposed east side division is urgently needed to preserve in use large acreages of highly productive farmland which is now endangered by a rapidly falling ground water table and by a lack of adequate surface water supply; and

Whereas the facilities to be constructed are vitally needed to conserve and transport supplemental water to areas within Tulare County by means of the contemplated east side division of the Central Valley project; and

Whereas, although the State of California and other public and private agencies therein are proceeding as rapidly as possible with State and local proj-

ects, such developments cannot keep pace with the ever-increasing need for water within the State of California: Now, therefore, be it

Resolved as follows:

(1) The Board of Supervisors of the County of Tulare hereby endorses the Auburn Dam and Folsom South Canal unit with enlargement provisions as submitted to the Congress, and commends the Secretary of the Interior for recognizing the urgent need for the project.

(2) This board respectfully urges the Senate and House Interior and Insular Affairs Committees to approve the Auburn Dam and Folsom South Canal unit, with provisions for enlargement to sufficient capacity to accommodate the contemplated east side division of the Central Valley project, and Congress is respectfully urged to authorize such projects.

STATEMENT OF THE AMERICAN PUBLIC POWER ASSOCIATION, ALEX RADIN, GENERAL MANAGER

The American Public Power Association, representing more than 1,000 local publicly owned electric systems in 43 States and Puerto Rico, supports authorization of the Auburn Dam as a physically and financially integrated part of the Central Valley project.

At its most recent annual convention, held April 25-27, 1961, in San Antonio, Tex., APPA members approved the following resolution:

"Whereas the Auburn Dam unit of the Central Valley project is now proposed for authorization and such unit will provide much needed power, irrigation and municipal water, and flood control: Now, therefore, be it

Resolved, That the American Public Power Association urges the Congress to authorize the Federal Government to construct and operate Auburn Dam as an integral unit of the Central Valley project of the U.S. Bureau of Reclamation."

In addition to supplying water needed for agricultural, municipal, and industrial use, protecting and enhancing fish and wildlife, controlling floods, and aiding recreational development, Auburn Dam will make available 155,000 kilowatts of installed hydroelectric generating capacity and provide 516 million kilowatt-hours of electricity annually to help meet growing power requirements of the Central Valley project and of preference customers.

Power features planned for Auburn Dam are of direct interest to APPA members, who are preference customers for electricity generated at Federal projects. Approximately 30 percent of all electrical energy produced at Federal powerplants is sold to municipal, State, or other publicly owned electric systems.

Studies by the Bureau of Reclamation show the following advantages which would be realized by installation of generating facilities at Auburn Dam:

(1) The high dam required to create a reservoir of 1 million acre-feet capacity makes very substantial head available for the generation of hydroelectric power as the water is released.

(2) Opportunities to generate dependable power are particularly good at Auburn Dam since water released through the powerplant can be recaptured in Folsom Reservoir and then released as required for conservation needs; maximum flexibility is thus possible in operations for power generation at Auburn.

(3) Flexibility of operation of Auburn Dam will make it possible to fit the energy generated at Auburn Dam closely to the demand pattern and therefore its value will be augmented.

(4) Both general and local market areas for Auburn Dam power are in need of additional electricity for farms, homes, and industries. Increasing population, more irrigation pumping, more home appliances, and expanding industries are placing a burden on existing facilities.

(5) With addition of Auburn Dam, ability of the Central Valley project to aid in meeting preference customer loads will be increased by an estimated average 467 million kilowatt-hours annually from the beginning of full power operation in 1977 through 2026. Power generated at Auburn will help to avoid curtailment of power sales to present customers as Central Valley project power is diverted to meet San Luis pumping requirements.

(6) Installed capacity in northern California is predominantly in steam plants using nonrenewable fuel resources. Additional hydroelectric plants making use of the renewable water resources are desirable for the conservation of fuel resources. Generation at Auburn Dam corresponds to about 700,000 barrels of fuel oil annually.

(7) Annual equivalent primary power benefits from Auburn Dam are estimated at \$5,354,759 over a 50-year period and \$5,338,000 over a 100-year period. These direct tangible benefits are evaluated as the cost of power supplied to major load centers from steam-electric powerplants, built and operated by a privately financed corporation.

(8) All of the investment in power facilities at Auburn Dam will be repaid with interest.

(9) After the commercial power allocation is amortized, continuing net revenues from the Auburn plant will accrue to the Central Valley project account for use in assisting future irrigation units financially.

(10) Benefit-cost ratio for Auburn Dam, including the proposed power installation, is estimated to be 2.24 to 1 for total benefits and 1.73 to 1 for direct benefits based on a 100-year period, the minimum estimated economic life of the project. These values become 1.95 to 1 and 1.53 to 1 for a 50-year period.

The American Public Power Association strongly endorses the inclusion of power features in any multiple-purpose project where it can be proven to be economically and engineeringly feasible. All costs of power installation are, of course, returned to the Treasury with interest. Power is not only a "paying partner" in Federal water projects, but incorporation of generating facilities can insure maximum comprehensive development and provide the Federal Government with the greatest possible return on its investment.

For these reasons, APPA urges authorization of Auburn Dam.

RESOLUTION OF THE SOUTHERN SAN JOAQUIN MUNICIPAL UTILITY DISTRICT

Whereas landowners adjoining Southern San Joaquin Municipal Utility District are in dire need of supplemental water to make it possible for them to continue their farming operations on an economical basis; and

Whereas various private and public agencies are proceeding as rapidly as possible with the development of water, such development is not keeping pace with the expanding needs for agricultural and domestic water; and

Whereas the proposed Auburn Dam-Folsom South Canal unit, with provisions for enlargement for east side use would be a forward step in providing such needed supplemental water: Now, therefore, be it

Resolved, That the Southern San Joaquin Municipal Utility District urges the Congress of the United States to authorize and construct the Auburn Dam-Folsom South Canal unit, with provisions for enlargement for east side use, as soon as possible.

RESOLUTION OF THE KERN COUNTY WATER AGENCY

Whereas the Kern County Water Agency is a countywide public agency charged with responsibility with respect to the water needs of Kern County, Calif.; and

Whereas within the boundaries of the agency there are several irrigation districts which receive benefits through the Federal Central Valley project; and

Whereas other irrigation districts and agencies within Kern County have been organized for the purpose of securing water to supplement diminishing ground water supplies which, in some instances, are their sole supply; and

Whereas the growing demand for water for domestic, industrial, and irrigation needs, and the overdraft on ground water resources and their diminishment within the agency and neighboring areas make it abundantly evident that supplemental water must be obtained in the near future if present productivity, economic, and cultural advancement are to prevail; and

Whereas the Federal Government has recognized such need and planned for the same by means of the contemplated east side division of the Central Valley project; and

Whereas there is now pending before the Senate and House Interior and Insular Affairs Committees bills to authorize the Auburn Dam and Folsom South Canal which will bring water now greatly needed to Sacramento and San Joaquin County; and

Whereas not only Sacramento County and San Joaquin County, but many additional areas within the San Joaquin Valley which will be served by the proposed east side division are in critical need of supplemental water supplies; and

Whereas the Kern County Water Agency presently is attempting to negotiate

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with the State of California for a supplemental water supply from the State water project; and

Whereas although the State of California and local agencies therein, including this agency, are proceeding as rapidly as possible with State and local projects, such developments cannot keep pace with the ever-increasing need for water within the State of California: Now, therefore, be it

Resolved, That the Senate and House Interior and Insular Affairs Committees be, and they hereby are, respectfully urged to approve the Auburn Dam and Folsom South Canal project, with capacity to accommodate the contemplated east-side division of the Central Valley project, including sufficient capacity for the southern and central San Joaquin Valley, and that the Congress be, and it hereby is, respectfully urged to authorize such projects.

RESOLUTION OF SEMITROPIC WATER STORAGE DISTRICT

Whereas the Semitropic Water Storage District is a public agency organized under the laws of the State of California for the purpose of providing supplemental water for approximately 188,000 acres of irrigable land in the San Joaquin Valley portion of Kern County; and

Whereas ground water pumped from deep wells is the sole source of water for the agricultural development and domestic needs of the district; and

Whereas the available ground water supplies of the district and adjacent hydrologically related areas of the southern and central San Joaquin Valley are limited and insufficient to sustain the present economy and clearly indicate that supplemental water is needed and must be obtained soon; and

Whereas the Federal Government has recognized such need and planned for the same by means of the contemplated east side division of the Central Valley project; and

Whereas there is now pending before the Senate and House Interior and Insular Affairs Committees bills to authorize the Auburn Dam and Folsom South Canal which will bring water now greatly needed to Sacramento and San Joaquin County; and

Whereas not only Sacramento County and San Joaquin County, but many additional areas within the San Joaquin Valley which will be served by the proposed east side division are in critical need of supplemental water supplies; and

Whereas, although the State of California and local agencies, including this agency, are proceeding as rapidly as possible with State and local projects, such developments cannot keep pace with the ever-increasing need for water within the State of California: Now, therefore, be it

Resolved, That the Senate and House Interior and Insular Affairs Committee be, and they hereby are, respectfully urged to approve the Auburn Dam and Folsom South Canal project, with capacity to accommodate the contemplated east side division of the Central Valley project, including sufficient capacity for the southern and central San Joaquin Valley, and that the Congress be, and it hereby is, respectfully urged to authorize such projects.

RESOLUTION OF ARVIN-EDISON WATER STORAGE DISTRICT

Whereas the authorization by Congress of Auburn Dam-Folsom South Canal unit of the Central Valley project will protect the best interests of the Central Valley project and all landowners and persons interested therein, as well as the general and economical welfare of Kern County and the State of California: Be it

Resolved by the board of directors of Arvin-Edison Water Storage District, That such authorization is hereby supported and recommended for promoting the best interests of the district, the landowners and all persons interested in the Central Valley project, as well as the economical welfare of Kern County and of the State of California.

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RESOLUTION OF THE AUBURN AREA CHAMBER OF COMMERCE

Whereas the Secretary of the Interior has under date of January 17, 1962, forwarded to the various affected committees of the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the facilities to be constructed under this project are vitally needed to supply water to areas within Placer, Sacramento, El Dorado, and San Joaquin Counties; and

Whereas these facilities are necessary for the full development of the American River as part of the Federal Central Valley project and they will also provide additional much-needed flood control along the lower reaches of the American River, the Sacramento River, and within the Sacramento-San Joaquin Delta and will supply other benefits in addition; and

Whereas areas in Sacramento County will be major beneficiaries of project benefits primarily in terms of additional water supply and flood control: Now, therefore, be it

Resolved, That this organization go on record as commending the Secretary of the Interior for recognizing the urgent need for Auburn Dam-Folsom South Canal project and related units, as evidenced by the Secretary's recent recommendation to the Congress of the United States; and be it further

Resolved, That the appropriate committees of Congress be urged to schedule early hearings in connection with authorization of said project.

SACRAMENTO CITY-COUNTY CHAMBER OF COMMERCE,
Sacramento, Calif., February 6, 1962.

Senator CLAIR ENGLE,
Senate Office Building, Washington, D. C.

DEAR SENATOR ENGLE: At its regular semimonthly meeting on February 5, 1962, the board of directors of the Sacramento City-County Chamber of Commerce adopted by unanimous vote a recommendation that everything possible be done to assist in expediting the Auburn Dam-Folsom South Canal project and related units.

During the period of our consideration of this proposal, we investigated to determine whether there may be areas of opposition to this proposal. We found none. On the contrary, we have encountered only strong public support to it. Placer County Executive John M. Bernard has assured us that minor differences have all been settled by agreement with western officials of the Bureau of Reclamation, concerning water diversion to be made from the Placer agency project upstream, and that it is believed that this agreement will be approved by the Secretary of the Interior.

The Auburn Dam will be a unit of the Central Valley project, and will provide urgently needed benefits in connection with flood control, irrigation through the Folsom South Canal and in local areas, power generation and distribution through the CVP power grid, and recreation. The facilities to be constructed are necessary for the full development of the American River as a part of the Central Valley project.

Since this river flows through Sacramento, we are vitally concerned, and we urge your full support to the legislation now pending before the Congress which would authorize the Auburn Dam-Folsom South Canal and related units to the end that it will be passed during the 1962 congressional session.

Sincerely,

JOHN H. FABRETTI, *President.*
SIDNEY H. BIERLY, *Chairman,*
Natural Resources Committee.

RESOLUTION OF THE GREATER STOCKTON CHAMBER OF COMMERCE

Whereas the Secretary of the Interior of the United States has transmitted to the President of the United States his report on the Auburn-Folsom South unit of the Central Valley project; and

Whereas the President has transmitted said report to the Congress of the United States; and

Whereas the Greater Stockton Chamber of Commerce has had an opportunity to review said report; and

Whereas it is the opinion of the board of directors of the Greater Stockton Chamber of Commerce that the Auburn-Folsom South unit, and particularly the Folsom South Canal, a part of said project, is urgently needed by this area for the provision of vitally necessary supplemental water; not only for the Metropolitan Stockton area, agricultural, domestic and industrial use, but for the potential use by the military bases in this county of San Joaquin: Now, therefore, be it

Resolved, That this board of directors endorses the Auburn-Folsom South project as proposed in the aforementioned report and recommends that the Congress of the United States shall take all appropriate action in support of the early authorization and construction of the Auburn-Folsom South unit.

RESOLUTION OF THE LODI DISTRICT CHAMBER OF COMMERCE

Whereas the Secretary of the Interior of the United States has transmitted to the President of the United States his report on the Auburn-Folsom South unit of the Central Valley project; and

Whereas the President has transmitted this report to the Congress of the United States; and

Whereas these facilities are necessary for the full development of the American River as a working part of the Federal Central Valley project; and

Whereas the Water Committee of the Lodi District Chamber of commerce is composed of 14 different legal entities, to wit: San Joaquin County Board of Supervisors, the city of Lodi, the East Bay Municipal Utility District, U.S. District Corps of Army Engineers, California State Reclamation Board, Woodbridge Irrigation District, Woodbridge Water Users, Northern San Joaquin Conservation District, San Joaquin County Flood Control District, Makelumne Irrigation District, Lockeford Protective District, Bear Creek Soil Conservation District, Northern San Joaquin County Mosquito Abatement District, and the Pacific Gas & Electric Co.; and

Whereas the area represented by the foregoing districts comprises most of the northern part of the San Joaquin County; and

Whereas the economic welfare of this very rich agricultural area is greatly endangered by the rapidly dropping of the water table and lack of adequate surface water supply; and

Whereas presently available water is now in the Folsom Reservoir to correct this situation; now, therefore, it is hereby

Resolved, That the Lodi District Chamber of Commerce endorses the Auburn-Folsom South unit of the Central Valley project as submitted to the Congress; and be it further

Resolved, That the Lodi District Chamber of Commerce urges all appropriate action be directed toward the early authorization and construction of the Auburn-Folsom South Canal project.

RESOLUTION OF THE PLACER COUNTY BOARD OF REALTORS

Whereas the Secretary of the Interior has, under date of January 17, 1962, forwarded to the affected committees of the Congress reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the continuing population growth of California and resultant expanding and changing land use demands the harnessing of the North Fork of the American River, together with other rivers in the Federal Central Valley project, for the benefit and protection of land users; and

Whereas water now seriously needed for adequate development in El Dorado, Placer, Sacramento, and San Joaquin Counties is presently being wasted: Now, therefore, be it

Resolved, That Placer County Board of Realtors commend the Secretary of the Interior for his recommendation of early authorization of this project; and be it further

Resolved, That Placer County Board of Realtors urge early and affirmative action by appropriate committees of the Congress in connection with authorization of the Auburn Dam-Folsom South Canal project.

RESOLUTION OF THE MADERA COUNTY CHAMBER OF COMMERCE

Whereas many of the Madera County Chamber of Commerce members and many of the irrigated landowners within the boundaries of Madera County have been prime beneficiaries of the Central Valley project provided by the Federal Government for the benefit of lands on the east side of the San Joaquin Valley; and

Whereas it has now become increasingly apparent that additional water for these lands generally and land within the county of Madera specifically will be needed in the near future to maintain existing productivity and allow for ever-increasing domestic needs; and

Whereas the Federal Government has recognized such need and planned for the same by means of the contemplated east side division of the Central Valley project; and

Whereas there is now pending before the Senate and House Interior and Insular Affairs Committees bills to authorize the Auburn Dam and Folsom South Canal which will bring water now greatly needed to Sacramento and San Joaquin County; and

Whereas, not only Sacramento County and San Joaquin County, but many additional areas within the San Joaquin Valley which will be served by the proposed east side division are in critical need and additional water supplies; and

Whereas, although the State of California and local agencies therein are proceeding as rapidly as possible with local and State projects, such developments cannot keep pace with the ever-increasing need for water within the State of California without substantial assistance from the Federal Government: Now, therefore, be it

Resolved, That the Senate and House Interior and Insular Affairs Committees be, and they hereby are, respectfully urged to approve the Auburn Dam and Folsom South Canal project, with sufficient capacity to accommodate the contemplated east side division of the Central Valley project, and that the Congress be, and it hereby is, respectfully urged to authorize such projects.

RESOLUTION OF THE FRESNO CHAMBER OF COMMERCE

Whereas the Secretary of the Interior has forwarded to various committees of the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal unit; and

Whereas this is the first unit of the Central Valley East Side Canal project, which would provide supplementary water to the east side of the San Joaquin Valley; and

Whereas the east side of Fresno County is overdrawing its total water supply approximately 600,000 acre-feet per year; and

Whereas this overdraft is causing a critical lowering of the ground water levels which will ultimately require the abandonment of some industrial, commercial, and agricultural operations in the area; and

Whereas such abandonment would cause loss of local and national wealth and productive capacity: Now, therefore, be it

Resolved, That the board of directors of the Fresno County and City Chamber of Commerce go on record as commending the Secretary of the Interior for recognizing the urgent need for the Auburn Dam-Folsom South Canal and the Central Valley East Side project; and be it further

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Resolved, That the appropriate committees of Congress be urged to take action to expedite authorization of the Auburn Dam-Folsom South Canal project with enlarged capacity to provide for supply of water to the Central Valley East Side Canal system.

RESOLUTION No. 62B OF THE AUBURN BOAT CLUB, INC.

Whereas the Secretary of the Interior has under date of January 17, 1962, forwarded to the various affected committees of the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the facilities to be constructed under this project are vitally needed to supply water to areas within Placer, Sacramento, El Dorado, and San Joaquin Counties; and

Whereas these facilities are necessary for the full development of the American River as part of the Federal Central Valley project and they will also provide additional much-needed flood control along the lower reaches of the American River, the Sacramento River, and within the Sacramento-San Joaquin Delta, and will supply other benefits in addition; and

Whereas areas in these counties will be major beneficiaries of project benefits primarily in terms of additional water supply, flood control, and recreation: Now, therefore, be it

Resolved, That this organization go on record as commending the Secretary of the Interior for recognizing the urgent need for Auburn Dam-Folsom South Canal project and related units, as evidenced by the Secretary's recent recommendation to the Congress of the United States; and be it further

Resolved, That the appropriate committees of Congress be urged to schedule early hearings in connection with authorization of said project.

FOREST HILL DIVIDE CHAMBER OF COMMERCE,
Foresthill, Calif., February 14, 1962.

Hon. Senator CLAIR ENGLE,
Hon. Senator THOMAS H. KUCHEL,
Hon. Congressman HAROLD T. JOHNSON,

GENTLEMEN: On behalf of the Foresthill Chamber of Commerce, and other civic organizations of the Foresthill area, we are writing to ask your assistance in obtaining favorable action on the Auburn-Folsom South Unit, CVP, or more specifically, the Foresthill portion of the project comprising the Sugar Pine Reservoir and associated facilities.

We understand that this project has been declared feasible and is scheduled for hearings before the Interior and Insular Affairs Committees of both houses of Congress next week.

The future growth and development of the Forest Hill Divide depends upon our ability to obtain additional water, both for domestic-industrial and agricultural uses. The Foresthill Public Utility District which serves the domestic needs of Foresthill itself, is presently reaching the limits of its present sources, and a need for agricultural water is rapidly developing in the adjacent area.

Any help you can give in obtaining favorable action at these hearings will be greatly appreciated by the entire area, who are watching the progress of this project with a very keen interest.

Very truly yours,

JIM THOMPSON, *President.*

RESOLUTION OF THE TRACY DISTRICT CHAMBER OF COMMERCE

Whereas it is to the interest of our national economy that the Auburn Dam-Folsom South Canal be completed at the earliest date possible as outlined in Secretary of the Interior letter of January 15, 1962; and

Whereas the waters to be captured in this project has a market and will not bring new undeveloped land into production to further add surplus to our over-supply; and

Whereas this water will abate the lowering of the present underground water table; and

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Whereas the creation of this body of water will make an addition to the water recreation and wildlife of the West's fastest growing State; and

Whereas the flood-control features of this project will add materially to the economy of the Central Valley: Now, therefore, it is hereby

Resolved, That the Tracy District Chamber of Commerce commends the Secretary of the Interior for recognizing the urgent need for the Auburn Dam-Folsom South Canal project; and be it further

Resolved, That the Tracy District Chamber of Commerce endorses the Auburn Dam-Folsom South Canal project as submitted to the Congress.

RESOLUTION OF THE TULARE COUNTY FARM BUREAU

Whereas landowners are in dire need of supplemental water to make it possible for them to continue their farming operations on an economical basis; and

Whereas, while various private and public agencies are proceeding as rapidly as possible with the development of additional water, such development is not keeping pace with the expanding needs for agricultural and domestic water; and

Whereas the proposed Auburn Dam-Folsom South Canal unit, with provisions for enlargement for east side use would be a forward step in providing such needed supplemental water: Now, therefore, be it

Resolved, That we urge the Congress of the United States to authorize and construct the Auburn Dam-Folsom South Canal unit, with provisions for enlargement for east side use, as soon as possible.

RESOLUTION OF THE KINGS COUNTY FARM BUREAU WATER DEPARTMENT

Be it resolved, That the water department of the Kings County Farm Bureau go on record as favoring the pending bills providing for the authorization of the Auburn Dam-Folsom South unit of the Central Valley project, and for S. 103 providing for the enlargement of the Folsom South Canal to meet the demands of the proposed east side division of the Central Valley project.

RESOLUTION No. 2508 OF THE CITY OF LODI, CALIF.

Whereas the city of Lodi is located in San Joaquin County, Calif., along the Mokelumne River; and

Whereas the city of Lodi does not at present appropriate water from the Mokelumne River for its municipal water supply, nor does it have prospects of securing rights to waters from said river since all available water has already been allocated; and

Whereas the city of Lodi is entirely dependent for its water supply upon the underground water table which has been declining; and

Whereas the City Council of the City of Lodi recognizes its obligation to the citizens of the community to provide water for future domestic and industrial consumption; and

Whereas the Secretary of the Interior of the United States has forwarded to the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the additional water which will be made available by the Auburn Dam-Folsom South Canal project will provide a means for the city of Lodi to meet its future needs; and

Whereas these facilities are necessary for the full development of the American River as a working part of the Federal Central Valley project; and

Whereas these facilities will provide the additional benefits to persons and property in the Sacramento-San Joaquin Delta area as a flood control facility; and

Whereas the economy of the city of Lodi is largely dependent upon the maintenance of strong and prosperous agricultural activities in the areas surrounding the city; and

Whereas the City Council of the City of Lodi recognizes that the successful utilization of much farmland in this area is threatened by a rapidly falling

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ground water table which makes it imperative that a source for additional water be found and developed: Now, therefore, be it

Resolved, That the City Council of the City of Lodi endorses the Auburn Dam-Folsom South Canal project as submitted to the Congress so that—

(1) The city of Lodi will have an ample supply of water to meet its domestic and industrial needs; and

(2) The agricultural economy of the areas adjacent to the city of Lodi will be maintained; and be it further

Resolved, That the city of Lodi urges all appropriate action, particularly by the U.S. Senate Interior and Insular Affairs Committee and the U.S. House of Representatives Interior and Insular Affairs Committee, directed toward the early authorization and construction of the Auburn Dam-Folsom South project.

RESOLUTION OF THE SAN JOAQUIN FARM BUREAU FEDERATION

Whereas the Secretary of Interior of the United States has forwarded to the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project; and

Whereas the facilities to be constructed are vitally needed to conserve and transport supplemental water to areas within San Joaquin County; and

Whereas the additional water which will be made available by the Auburn Dam-Folsom South Canal project is urgently needed in San Joaquin County to preserve in use large acreages of highly productive farmland which is now endangered by a rapidly falling ground water table and by a lack of adequate surface water supply: Now, therefore, it is hereby

Resolved, That this San Joaquin Farm Bureau Federation endorse the Auburn Dam-Folsom South Canal project as outlined in S. 103, and urges all appropriate action, particularly by the U.S. Senate Interior and Insular Affairs Committee and the U.S. House of Representatives Interior and Insular Affairs Committee, directed toward the early authorization and construction of the Auburn Dam-Folsom South Canal project.

EAST BAY MUNICIPAL UTILITY DISTRICT,
Oakland, Calif., February 12, 1962.

Congressman JOHN J. McFALL,
House Office Building, Washington, D.C.

DEAR CONGRESSMAN McFALL: The East Bay Municipal Utility District wishes to go on record in support of the Auburn Dam-Folsom South Canal unit of the Central Valley project.

Our interest is twofold: (a) we wish to be of whatever assistance we can in helping to solve the water problems of our good neighbors on the Mokelumne River in San Joaquin County; and (b) although our present water development program will meet our needs for some time, we wish to be considered as a potential user of American River water as a supplemental supply.

Representatives of this office will be among California witnesses testifying before congressional committees in favor of this project.

Similar letters have been written to Senators Engle and Kuchel, as well as to Representatives George P. Miller, Jeffery Cohelan, John F. Baldwin, B. F. Sisk, and Harlan Hagen, urging their support of this project.

Please let us know if there is any further way in which we may be of assistance.

Sincerely,

JOHN W. McFARLAND, *General Manager.*

RESOLUTION OF THE VICTOR FARM BUREAU CENTER

Whereas the Auburn Dam-Folsom South Canal project is vitally needed to conserve and transport supplemental water to San Joaquin County; and

Whereas this additional water is urgently needed to preserve in use large acreages of highly productive farmland now endangered by a rapidly falling ground water table and a lack of adequate surface water supply; and

Whereas the Folsom-South Canal project and related units will provide much needed additional flood control protection: Now, therefore, be it

Resolved, That the Victor Farm Bureau Center, representing 296 farm families in the upper San Joaquin County area, urges all appropriate action, particularly by the U.S. Senate Interior and Insular Affairs Committee, and the U.S. House of Representatives Interior and Insular Affairs Committee, directed toward the early authorization and construction of the Auburn Dam-Folsom South Canal project.

RESOLUTION OF THE IVANHOE IRRIGATION DISTRICT

Whereas the landowners adjacent to the Ivanhoe Irrigation District are in need of supplemental water to enable them to continue their farming operations on an economic basis; and

Whereas while various private and public agencies are proceeding as rapidly as possible with the development of additional water, such development is not keeping pace with the expanding needs for agricultural and domestic water; and

Whereas the proposed Auburn Dam-Folsom South Canal unit, with provisions for enlargement for east side use, would be a forward step in providing such needed supplemental water: Now, therefore, be it

Resolved, That the Ivanhoe Irrigation District urges the Congress of the United States to authorize and construct the Auburn Dam-Folsom South unit, with provisions for enlargement for east side use, as soon as possible.

RESOLUTION OF THE ORANGE COVE IRRIGATION DISTRICT

Whereas landowners of Orange Cove Irrigation District are vitally concerned over the increasing water shortage in the southern San Joaquin Valley which has developed by reason of substantial overuse of the underground water supply in many areas combined with the limited amount of replenishment from natural sources; and

Whereas this shortage of water seriously endangers the present agricultural economy of the southern San Joaquin Valley and makes it imperative that an additional surface supplemental supply of water be brought into this area; and

Whereas although various private and public agencies are proceeding as rapidly as possible with the development of water, such development is not keeping pace with the existing needs for agricultural and domestic water; and

Whereas the proposed Auburn Dam-Folsom South Canal unit, of the Central Valley project, with provisions for increased capacity for east side division use would be a forward step in providing such needed supplemental water: Now, therefore, be it

Resolved, That the Orange Cove Irrigation District urges the Congress of the United States to authorize and construct the Auburn Dam-Folsom South Canal unit of the Central Valley project with provisions for increased capacity for east side division use as soon as possible.

STATEMENT OF THE CALIFORNIA FARM RESEARCH AND LEGISLATIVE COMMITTEE

Senator Anderson and members of the subcommittee, since the Central Valley project was originally authorized for Federal construction and development under provisions of reclamation law, the California Farm Research and Legislative Committee has worked unceasingly for its speedy expansion and completion.

The Auburn-Folsom South unit, as provided for in Senate bill 103 could only be considered because Folsom Dam on the American River was authorized and completed. It is significant that Senator Engle, one of the authors of S. 103, introduced the measure for the American River project in the 80th Congress—13 years ago—and that it took the combined forces of Senators and Representatives dedicated "to the public interest" to successfully steer it through the Congress over the well-organized opposition of the private power interests which attempted to prevent appropriations for Federal power facilities at Folsom. This victory which laid the foundation for the project we are discussing today was won with the united support of farseeing farm, labor, public bodies and civic

groups who saw the future of California in the history of the economic resurgence stemming from adequate water and power resources in semiarid States.

We are confident that these same forces in California, in the Nation as a whole and in the Congress, will unite to insure enactment of all the provisions enumerated in S. 103 including:

The 1 million acre-foot storage reservoir, Auburn Dam and Reservoir on the American River;

The hydroelectric power plant at Auburn Dam with a generating capacity of 160,000 kilowatts and necessary electric transmission system for interconnection with the Central Valley project power system;

Reservoirs and related works to supply some 15,000 acres with water supplies in the Forest Hill Divide area in Placer County;

The Folsom South Canal and related works to divert and convey water upstream from Nimbus Dam on the American River to the Sacramento and San Joaquin service areas, setting the stage for later extension of the east side division of the Central Valley project to provide supplemental water on the east side of the San Joaquin Valley;

Folsom-Malby Canal with a regulatory reservoir of approximately 25,000 acre-feet, located some 6 miles south of Folsom, to serve some 10,000 acres of land in Sacramento and El Dorado Counties.

Our committee was extremely gratified at the recognition given the Auburn-Folsom South project by the Bureau of the Budget in approving funds for Auburn Dam and the Folsom South Canal early in January and with Secretary of Interior Stewart Udall's followup urging prompt congressional approval.

The action of your subcommittee in scheduling these hearings so that Congress might have before it the information necessary for authorizing the project including appropriation of some \$181 million to start this urgent reclamation unit of the Central Valley project is, we believe, in line with the nationwide need for stimulating our overall economy, increasing the number of jobs available to many workers now unemployed and planning to meet the water requirements of California's booming population, along with intensified agricultural production and irrigated acres essential to balance our economy.

In spite of the welcome spell of rain now being experienced in California, following dry years of serious impact on our underground water table, we are far below projected safety levels.

Urbanization has forced farmers out of many central costal areas and into the Sacramento and San Joaquin Valleys. The need for keeping ahead of water requirements in these valleys is urgent and compelling, not only for farmers but to serve the industries and domestic users responsible for the horizontal growth of California's metropolitan areas—more people, in larger numbers, concentrated in a relatively limited number of such areas dominating what we now designate as counties, but estimated by the year 2000 to transcend arbitrary city and county boundary lines.

This urbanization trend was already clear in the latest census figures comparing 1950 and 1960. Sacramento County, for example, increased 80.7 percent in population, from 277,140 in 1950 to 500,719 in 1960. Within the proposed service area of the Auburn-Folsom South project the city of Lodi (San Joaquin County), grew from 13,798 people in 1950 to 23,201 in 1960, or an increase of 68.1 percent. Roseville experienced a rise of 35.8 percent, from 41,649, including its environs, to 56,579 in 1960.

More startling are the projections in the study of the Urban Land Institute: "Metropolitanization of the United States" by Jerome P. Pickard figured from 1960 to the year 2000. The growth projection for the city of Bakersfield, for example, is 204 percent with an estimated population rising from 143,000 to 434,000, pulling in surrounding farmland and projecting the most highly specialized use of farmland not presently irrigated.

The growth pattern for the city of Stockton by the year 2000 is projected from 172,000 people in 1960 to 510,000 in the year 2000, a gain of 196 percent.

Some of these projections as they relate to areas where we have information are appended in the form of charts, for your information.

A great deal of publicity has recently been given to the question of farm surpluses, as a result of which there might be some apprehension on the part of city people especially to support Federal projects aimed to expand the use of irrigation of farmlands.

In the case of the Auburn and Folsom South service area there need be no such apprehension.

Only 245,000 acres of the 518,400 acres within the 55 mile rectangle from the American River in Placer and El Dorado Counties on the North to Lone Tree Creek in San Joaquin County on the south are now irrigated.

Much of the dry area is now used for pasture and small grains, whereas the irrigated crops are not presently supported. Such cash crops as grapes, deciduous fruits, beans, tomatoes, and other truck crops are not in surplus. It is expected that as urbanization makes further inroads on farmlands under irrigation in the Auburn-Folsom South service area will follow the pattern of specialized fruit and vegetable cash crops being displaced in other areas and required to meet the higher living standards of the State and Nation's urban families.

A growing percentage of the service area is already used for urban and suburban living. From our population projections, this trend will intensify.

To meet domestic, industrial, and current agricultural irrigation requirements, water table elevations, because of pumping from the underground, declined some 24 feet during a 4-year study period. Ground water pumping exceeded the calculated recharge by about 97,000 acre-feet annually. Another consequence is the poor quality of water as wells go deeper.

It is clear that an outside source of water for all purposes is critically needed and that the facilities to be provided by S. 103 are the most economical and feasible to do the job.

The U.S. Bureau of Reclamation has found the project feasible with a cost-benefit for Auburn of 1.73 to 1 for direct benefits and for the Folsom South Canal, 1.97 to 1. Legislation for the Folsom South Canal has been pending since the second session of the 84th Congress in 1956.

Our committee urges a "DO PASS" on S. 103.

The California Farm Research & Legislative Committee was established in February 1941 as an informal, nonprofit, voluntary group of farmers and cooperating civic, labor, and church members directed by representatives of affiliated bargaining associations, farmer cooperatives and various civic organizations dedicated to the preservation of California farmers as independent owner-operators and a democratic rural economy. Since an adequate water supply is imperative to such preservation, our committee has, for more than 21 years, been in the forefront of educational and legislative campaigns to provide a widely distributed water supply at a cost within the reach of the majority of California's farm families who own and operate their own commercial enterprises.

CHART I.—Increase in population by county and city in the service area of the proposed Auburn-Folsom South unit, American River division Central Valley project, California

	1950	1960	Percent increase
Placer County.....	41,649	56,998	36.9
Roseville.....	8,723	13,421	53.9
Sacramento County.....	277,140	502,778	81.4
Galt.....	1,333	1,868	40.1
Sacramento.....	137,572	191,667	39.3
North Sacramento.....	6,029	12,922	114.3
San Joaquin County.....	200,750	249,989	24.5
Lodi.....	13,798	22,229	61.1
Stockton.....	70,853	86,321	21.8
Madera County.....	36,954	40,468	9.5
Madera.....	10,497	14,430	37.5
Fresno County.....	276,515	365,945	32.3
Fresno.....	91,669	133,929	46.1
Selma.....	5,964	6,954	16.3
Tulare County.....	149,264	168,403	12.8
Dinuba.....	4,971	6,103	22.8
Visalia.....	11,749	15,791	34.4
El Dorado County.....	16,207	29,390	81.3
El Dorado.....			
Kern County.....	228,309	291,984	27.9
Bakersfield.....	34,784	56,848	63.4

Source: California Statistical Abstract, 1961, U.S. Department of Commerce, Bureau of the Census.

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CHART II.—*Projected population of major metropolitan areas¹ in the service area of the proposed Auburn-Folsom South unit, American River division, Central Valley project, California*

	Estimate 1956	Projected 1960	Percent increase	Projected 2000	Percent increase
Sacramento.....	380,000	460,000	21.1	1,416,000	207.8
Stockton.....	155,000	172,000	11.0	510,000	196.5
Fresno.....	185,000	204,000	10.3	587,000	187.7
Bakersfield.....	130,000	143,000	10.0	434,000	203.5

¹ Defined as urban area including one or more adjacent or nearby cities having a total area population of 250,000 or more.

Source: "Metropolitanization of the United States," by Jerome P. Pickard. Urban Land Institute Research Monograph 2, 1200 18th St. N.W., Washington, D.C., 1959.

HANFORD, CALIF., *February 14, 1962.*

HON. CLINTON ANDERSON,
*Senate Interior Committee, Senate Office Building,
Washington, D.C.*

DEAR MR. ANDERSON: The Kings Family Farmers ask you to do all you can to expedite the passage of S. 103. We are a group of family farmers who are self-supporting from cotton, alfalfa, dairy, grapes, walnuts, beef, poultry, and grain commodities. It is imperative that we have supplementary water in the Kings River service area. Pine Flat Reservoir does not provide enough water for our needs.

Our well water level has dropped dangerously low. In order to have a progressive expansion of family farms in this rich agricultural area we must have more water. About 670,000 acres farmed by 5,500 families (these families qualify for Federal project water since they are within 160 acres or 320 for husband and wife), need the extra water in order to make a decent living for their families.

Thank you for your help.

Very sincerely,

KINGS COUNTY FAMILY FARMERS,
MARY E. MENDES, *Chairman.*

ESCALON GRANGE, No. 447,
Escalon, Calif., February 15, 1962.

HON. CLAIR ENGLE,
Senate Office Building, Washington, D.C.

DEAR MR. ENGLE: At our last meeting the Escalon Grange instructed me to write to request your continued effort to get funds for the construction of the Folsom South Canal. The northeast section of San Joaquin County needs supplemental irrigation water as the water table in the irrigation wells continues to drop.

I live in the South San Joaquin Irrigation District. Domestic wells in my area, the water level is at 40 feet. These water levels will drop even more if the northeast section of San Joaquin County does not receive surface water which will be delivered by the Folsom South Canal. Most domestic wells in my area are drilled to around 80 feet. If the water table drops to near this level many new domestic wells will have to be drilled. Keep up the work for this project.

Sincerely yours,

ARLEY FIRCH, *Secretary.*

VALLEY OAKS GRANGE No. 368,
Galt, Calif.

Senator CLAIR ENGLE,
U.S. Senate, Washington, D.C.

DEAR SIR: We are writing this letter regarding legislation for the Folsom South Canal, which has been pending since the second session of the 84th Congress in 1956.

The Folsom South Canal will serve a gross area of approximately 520,000 acres of which about 400,000 acres will finally be irrigated when the project is operat-

ing at full capacity. This area lies on the east side of the Central Valley, extending about 55 miles south of the American River in a roughly rectangular shape.

The cash crops in this area are grapes, orchards, rice, sugarbeets, beans, tomatoes, and other truck crops, also beef and dairy cattle. Surplus crops are not a problem in this area. In fact there is a deficiency in California of practically all foods, and due to distance and transportation costs this project is equally desirable by producer and consumer.

A part of suburban Sacramento, the city of Stockton, and several other population centers lie entirely within this area. This can lead to a very serious problem in municipal, industrial, and drinking water in the suburban area, also a complete breakdown of fire protection and sanitation facilities are quite possible in the foreseeable future.

All this is due to the drastic lowering of the underground water table which was as much as 24 feet in the 4-year study period, and as much as 20 feet in the last 2 years in the Galt area.

In the Stockton area, wells are now producing water that is unusable for municipal, agricultural, and many industrial purposes.

We are now entering another growing season with a rainfall only slightly higher than one-half of normal. We are in one of the most serious droughts California has ever experienced. The seriousness of this can best be illustrated, by the report, published February 8, that the snowfall will have to be double of normal for the rest of the season just to take care of evaporation on Lake Tahoe.

We think we have established the need for this project. The welfare of approximately 1 million people directly depends on the passage of this legislation, and many more indirectly. The city officials of Stockton are very concerned about their water.

The feasibility reports are all in and the Budget Bureau has reported the Folsom South Canal out favorably.

We are now praying for a favorable report from Congress.

This letter was read at the regular meeting of Valley Oaks Grange No. 368, February 9, 1962.

VALLEY OAKS GRANGE No. 368,
MARY BROOKINS, *Secretary*,
WALTER HERING, *Master*.

RESOLUTION OF THE EASTERN MERCED COUNTY WATER DISTRICT

Whereas the area of about 75,000 acres near Le Grand in Merced County in California's Central Valley is a highly productive area devoted to the irrigated production of cotton, pasture and general crops, and

Whereas the groundwater supplies from which irrigation water is obtained are being depleted rapidly, and

Whereas the farmers' very large investments in land development and equipment are in jeopardy as the ground water supplies dwindle, and

Whereas the farmers of the area are strongly supporting formation of a water district to obtain a supplemental water supply, and

Whereas the steering committee for the district has reviewed the plans of the Bureau of Reclamation for the east side division of the Central Valley project including the tentative rates for irrigation water set by the Regional Director; now, therefore, be it

Resolved, That the steering committee endorses the plan for the east side division and indicates hereby that the water rates are reasonable and acceptable, and be it further

Resolved, That the steering committee, speaking for the proposed district, hereby indicates its desire and willingness to contract and pay for water as soon as it becomes available through the East Side Canal, and be it further

Resolved, That the steering committee urges the Congress and the Interior Department to proceed with the Auburn-Folsom South Canal project, initial features of the east side division, as rapidly as possible.

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RESOLUTION OF THE DELANO-EARLIMART IRRIGATION DISTRICT

Whereas the Delano-Earlimart Irrigation District comprises some 56,000 acres of highly developed land in Tulare and Kern Counties; and

Whereas said district has contracted with the U.S. Bureau of Reclamation for a supplemental supply of water based on net consumptive needs; and

Whereas said district has also contracted for a distribution system at \$200 per acre; and

Whereas since said contracts were signed, land has been developed on three sides of the district, pumping water from the ground water table connected to our water table, which is seriously jeopardizing our project by increasing the cost of pumping water in dry years; and

Whereas the proposed east side division of the Central Valley project of the U.S. Bureau of Reclamation is designed to supply these outside developed lands with supplemental water to take care of their needs;

Now, therefore, be it resolved, that we hereby request that this committee holding hearings on S. 103 and companion bills, concerning all matters related to the Auburn Dam-Folsom South Canal unit of the Central Valley project, including enlargement for the east side division, report favorably on this bill including the enlargement for the east side division and request its passage as soon as possible; and

It is further resolved, that Mr. Jack Pandol who has been appointed to represent the Delano-Earlimart Irrigation District concerning all matters related to S. 103 and companion bills, is requested to present this resolution to the members of this committee.

RESOLUTION OF THE NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT

Whereas this district comprises approximately 52,700 acres of land, situated in the northern part of the county of San Joaquin, the State of California, about 2,500 acres thereof lying within the corporate limits of the city of Lodi, and the remainder thereof being highly productive agricultural lands used for the production of grapes, tree fruits, nuts, row crops, alfalfa, clover, and other farm crops; and

Whereas the aforesaid agricultural lands now are, and for more than 50 years last past have been, irrigated from wells, and the city of Lodi now obtains, and for more than 50 years has obtained, its requirements of water for domestic and industrial purposes from wells, which wells draw upon the ground water basin underlying this district; and

Whereas the ground water table within this district has drastically receded during the past 15 years, and is now in extremely overdrawn condition; and

Whereas, to, alleviate the aforesaid depleted and overdrawn underground water condition, this district must obtain a supplemental supply of water at the earliest possible time to save and preserve the agricultural lands within this district and to provide the domestic and industrial water needs of the city of Lodi; and

Whereas, pursuant to State of California Water Rights Board Decision No. D-893 dated March 19, 1958, this district is entitled to obtain its required supply of supplemental water from and out of the American River by way of the proposed Folsom South Canal under appropriate contract between this district and the U.S. Bureau of Reclamation; and

Whereas the Secretary of the Interior of the United States recently forwarded to the Congress of the United States his report recommending the early authorization of the proposed Auburn Dam-Folsom South Canal project and related units; and

Whereas the earliest possible authorization and construction of said proposed Auburn Dam-Folsom South Canal project is most urgent and necessary to save and preserve the lands of this district.

Now, therefore, it is hereby resolved, that this district hereby commends the Secretary of the Interior for recognizing the urgent need of the Auburn Dam-Folsom South Canal project.

Be it further resolved, that this district urges the Interior and Insular Affairs Committees of the U.S. Senate and of the U.S. House of Representatives and the Members of the U.S. Congress to take such steps and actions as may be required to accomplish the early authorization and construction of said Auburn Dam-Folsom South Canal project.

RESOLUTION OF THE MADERA IRRIGATION DISTRICT

Whereas the Madera Irrigation District and the landowners within its boundaries have been prime beneficiaries of the Central Valley project provided by the Federal Government for the Benefit of lands on the east side of the San Joaquin Valley; and

Whereas it has now become increasingly apparent that additional water for these lands generally and land within the county of Medera specifically will be needed in the near future to maintain existing productivity and allow for ever-increasing domestic needs; and

Whereas the Federal Government has recognized such need and planned for the same by means of the contemplated east side division of the Central Valley project; and

Whereas there is now pending before the Senate and House Interior and Insular Affairs Committees bills to authorize the Auburn Dam and Folsom South Canal which will bring water now greaterly needed to Sacramento and San Joaquin County; and

Whereas not only Sacramento County and San Joaquin County, but many additional areas within the San Joaquin Valley which will be served by the proposed east side division are in critical need of additional water supplies; and

Whereas although the State of California and local agencies therein are proceeding as rapidly as possible with local and State projects, such developments cannot keep pace with the ever-increasing need for water within the State of California without substantial assistance from the Federal Government; Now, therefore be it

Resolved, That the Senate and House Interior and Insular Affairs Committees be, and they hereby are, respectfully urged to approve the Auburn Dam and Folsom South Canal project, with sufficient capacity to accommodate the contemplated east side division of the Central Valley project, and that the Congress be, and it hereby is, respectfully urged to authorize such projects.

GALT, CALIF., *February 17, 1962.*

Senator CLINTON ANDERSON,
New Senate Building, Washington, D.C.

DEAR SIR: The members of the Alta Mesa farm center ask your help in petitioning the Folsom South Canal water for their district.

The Alta Mesa farm center is located in the extreme south of Sacramento County. This area is undoubtedly the hardest hit for water in the entire Sacramento County.

The water table in this area has been dropping at the rate of about 9 feet per year. At this rate irrigation by well will be out of the question within the next few years.

Without supplementary water, such as the Folsom South Canal would bring, this area would become a desert since almost the entire production is clover and irrigated permanent pasture. We therefore urge you to do everything possible to bring about speedy completion of this project.

Sincerely yours,

HERMAN FARMER
Secretary, Alta Mesa Farm Center.

RESOLUTION NO. 62-1 OF ELK GROVE IRRIGATION DISTRICT

Whereas Elk Grove Irrigation District is an irrigation district duly organized and existing under the laws of the State of California; and

Whereas the territory of Elk Grove Irrigation District is situated in the southern portion of Sacramento County, Calif.; and

Whereas Elk Grove Irrigation District has no stream, lake, reservoir, canal, or other source located in its territory from which to distribute water except for ground water from wells; and

Whereas the territory of Elk Grove Irrigation District is in the immediate proximity to Folsom Reservoir in Sacramento County, Calif., and said reservoir contains great quantities of water not now being distributed into the southern portion of Sacramento County; and

Whereas the territory of Elk Grove Irrigation District cannot be supplied adequately from ground water sources and a canal leading from Folsom Reser-

voir is necessary to lead waters into the territory of Elk Grove Irrigation District; and

Whereas the proposed route for Folsom South Canal will pass adjacent to the boundaries of Elk Grove Irrigation District and said canal will be of great benefit to Elk Grove Irrigation District; and

Whereas Elk Grove Irrigation District and the Bureau of Reclamation have established a form of contract for the purchase and sale of water to be supplied to Elk Grove Irrigation District from said proposed canal when water from said canal is available; and

Whereas Folsom South Canal is the only feasible means for transporting water from Folsom Reservoir to the territory of Elk Grove Irrigation District:

Now, therefore, Elk Grove Irrigation District urges the House of Representatives of the United States to authorize construction of the Folsom South Canal as described in the attachments to the letter dated January 15, 1962, of the Secretary of the Interior which said Secretary has duly forwarded to the U.S. House of Representatives Committee on Interior and Insular Affairs.

RESOLUTION OF THE BOARD OF DIRECTORS OF THE FARMERS & MERCHANTS BANK
OF CENTRAL CALIFORNIA

Whereas Farmers & Merchants Bank of Central California maintains offices within the cities of Sacramento, Galt, Lodi, Linden, and Modesto, in the State of California, providing commercial banking services for agriculture, business, and industry carried on and conducted within an area in the Central Valley of California extending from Sacramento County to the north to Stanislaus County to the south; and

Whereas the ground water table underlying the agricultural lands within the aforesaid area has greatly receded during the past 10 to 20 years, and accordingly a firm supply of supplemental water must be obtained for said lands to assure the continued productivity thereof; and

Whereas the aforesaid lands are devoted to the production of food and fiber which are most vital to the economy of the State of California and the United States of America, and said lands represent large investments by the owners and operators thereof; and

Whereas Farmers & Merchants Bank of Central California has heretofore participated, and is now participating, to a large extent in financing the aforesaid investments; and

Whereas the proposed Auburn Dam-Folsom South Canal project is designed to provide a supplemental supply of water required for the agricultural lands lying within the aforesaid area, and the construction of said project will serve to preserve said lands and assure the continued productivity thereof: Now, therefore, it is hereby

Resolved, That Farmers & Merchants Bank of Central California hereby endorses the Auburn Dam-Folsom South Canal project; and be it further

Resolved, That Farmers & Merchants Bank of Central California hereby urges the Congress of the United States and the Interior and Insular Affairs Committees of the U.S. Senate and of the U.S. House of Representatives to take such action as is necessary and proper for the authorization and construction of said Auburn Dam-Folsom South Canal project at the earliest possible time.

RESOLUTION No. 6-62 OF CITY COUNCIL OF THE CITY OF COLFAX, CALIF.

Whereas the City Council of the City of Colfax has been informed that the Placer County Water Agency and the regional office of the Bureau of Reclamation in Sacramento have concluded an agreement resolving the apparent conflicts between the agency's Middle Fork American River project; and

Whereas the City Council of the City of Colfax has been informed that the said agreement between the Placer County Water Agency and the regional office of the Bureau of Reclamation is expected to receive the approval of the U.S. Department of Interior prior to the U.S. congressional hearings on S. 103, H.R. 38, and H.R. 980, scheduled to be held February 20, 21, 22, and 23, 1962; and

Whereas under the terms of the said agreement the Bureau of Reclamation will sell to the Placer County Water Agency from the Auburn Reservoir up to 117,000 acre-feet of water annually for use by the Placer County Water Agency in Placer County; and

Whereas all estimates of the future growth in Placer County indicate that the county and the cities within the county will need substantial amounts of water other than the quantities to be developed and diverted by the Placer County Water Agency from its Middle Fork American River project: Now, therefore, be it

Resolved, by the City Council of the City of Colfax that, with the approval of the agreement between the Placer County Water Agency and the regional office of the Bureau of Reclamation in Sacramento by the U.S. Department of Interior, the City Council of the City of Colfax go on record as supporting the authorization of the Auburn-Folsom South unit of the Central Valley project as provided for in S. 103, H.R. 38, and H.R. 980, and that the appropriate committees of the U.S. Congress be urged to give their immediate approval to such authorization.

RESOLUTION No. 110-62 OF WESTLANDS WATER DISTRICT

Whereas a bill is now pending before the Congress of the United States to authorize the construction of Auburn Dam and Folsom-South Canal as a part of the Central Valley project; and

Whereas such facilities should and do include capacity to accommodate the contemplated east side division of the Central Valley project; and

Whereas such works are required principally for the sustaining of an existing agricultural economy within the area to be served as well as urban areas; and

Whereas the failure to provide additional water would have a disastrous effect upon a vital agricultural area with a resultant adverse effect upon the State and the Nation; and

Whereas the Westlands Water District, while not a direct beneficiary of such a project, recognizes its importance to the San Joaquin Valley and the State of California: Now, therefore, be it

Resolved, That the board of directors of this district do, and it does hereby, respectfully urge the approval of the authorization for the construction of Auburn Dam and Folsom-South Canal and the enactment of such legislation by the Congress of the United States.

RESOLUTION No. 173 OF CITY OF GALT, CALIF.

Whereas the best means of furnishing a water supply to these service areas from storage on the American River would be by the construction of the Folsom South unit of the Central Valley project; and

Whereas the ever-increasing population pressure in Sacramento County and the Sacramento metropolitan area has resulted in a growing demand for meat and dairy products in these areas; and

Whereas to increase total production of farm products to meet the growing demand more irrigated acreage will be needed and this in turn requires an additional water supply; and

Whereas the ground water supply is lacking or the existing ground water is overdrawn; and

Whereas the U.S. Bureau of Reclamation has demonstrated in its report the economic and engineering feasibility of furnishing the necessary supplemental surface water supply to these service areas by the construction of the Folsom South unit of the Central Valley project; and

Whereas the Folsom-Malby unit as an integral part of the Folsom South unit can furnish additional flood control and recreational benefits as well as provide a means of helping keep the agricultural, domestic, and industrial development of the county of Sacramento in proper balance; and

Whereas construction of the Auburn Dam will further enhance the water supply available for use from the Folsom South Canal as well as furnish important flood control and recreational benefits: Now, therefore, be it

Resolved, That the City Council of the City of Galt hereby strongly endorses the Auburn-Folsom South unit of the Central Valley project, of which the Folsom South unit is an integral part, and urges early construction of the facility as a Federal reclamation project to assist in implementing an overall Sacramento County water development program necessary to serve rapid community growth related to a great extent to the national defense.

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STATEMENT OF ELMER E. NELSON, ASSISTANT TO THE PRESIDENT, AEROJET-GENERAL CORP.

Mr. Chairman and members of the committee, my name is Elmer E. Nelson, assistant to the president, Aerojet-General Corp. My interest in this proposal before you stems from the huge industrial potential in the eastern Sacramento County area, the great expansion already planned, and the need of water for future expansion, not only by the firm I represent, but others in the same general area.

I make this statement in support of early authorization and construction of the Auburn-Folsom South unit in the general interest of the economy of the county, and more specifically in support of inclusion of the Folsom-Malby area in the plan which will be of direct benefit to the industrial area in which we are located.

In support of my stand, I would like to cite a few facts which will clearly demonstrate the growth potential of the area generally south of Folsom Lake and Nimbus Reservoir in Sacramento County. I shall use our company's experience, but only as an example of what can happen here.

In 1954 Aerojet-General had 600 employees. Today it employs over 17,500. Aerojet-General now has an annual payroll of \$120 million.

Investment in the Sacramento area plants of the firm will be about \$128 million by the end of this year. Other industries like this can develop here if conditions are favorable. New industries mean new jobs and a better economic future for all of California. From these facts you can see that the potential of this area is limitless.

We are fortunate to have a source of water adequate to supply and service projects as comprehensive as the Auburn-Folsom South unit including the Folsom-Malby area. Certainly it behooves us, through those projects, to create the most reasonable and beneficial usage of our water in industrial and agricultural pursuits. It would be unpardonable for such endeavors to be precluded for lack of water.

Historically the Central Valley project has included all multiple uses of water including municipal and industrial use.

The Auburn-Folsom South unit should be authorized to meet all existing and future requirements in eastern Sacramento and western El Dorado Counties. For that reason, I respectfully urge your committee to authorize the inclusion of the Malby unit and reservoir as an integral part of this project as it is now included in the California water plan and as it is now also included in legislation pending before Congress. The Malby unit, as you are aware, would be an extension to the south of the existing Natomas ditch now served from Folsom Lake. Offstream storage would be provided at County Line Reservoir on Deer Creek to store winter spill from Folsom Lake.

Sacramento County has a magnificent opportunity to prepare for unprecedented growth in the next 50 years in an industrial area that is second to none in California. To construct such a project as the Auburn-Folsom South unit and now provide for higher land in western El Dorado and eastern Sacramento Counties would appear to be closing the door on future expansion.

RESOLUTION NO. 22 OF OMOCHUMNE-HARTNELL WATER DISTRICT

Whereas the Secretary of Interior of the United States has transmitted to the President of the United States his report on the Auburn-Folsom South unit of the Central Valley project; and

Whereas the President has transmitted said report to the Congress of the United States; and

Whereas the demands on the ground water basin by lands in the Folsom South service area north and south of the Omochumne-Hartnell Water District has resulted in a large overdraft of this ground water basin and the continued lowering of the ground water level; and

Whereas to meet the ever-increasing demand for dairy and beef products and other farm products, caused by rapid population increase in the County of Sacramento metropolitan area will require more irrigated acreage which in turn requires an additional water supply; and

Whereas a supplemental water supply is needed to meet this additional water supply; and

Whereas the U.S. Bureau of Reclamation has demonstrated in its report, the economic and engineering feasibility of furnishing the necessary supplemental surface water supply to the Folsom-South service area as well as an interim supply to the Omochumne-Hartnell Water District until such time as the Nashville Dam on the Consumnes River is completed, by the construction of the Folsom South unit of the Central Valley project; and

Whereas the Folsom-Malby unit as an integral part of the Folsom South unit can furnish additional flood control and recreational benefits as well as provide a means of helping keep the agricultural, domestic, and industrial development of the County of Sacramento in proper balance; and

Whereas construction of the Auburn Dam will further enhance the water supply available for use from the Folsom South Canal as well as furnish important flood control and recreational benefits: Now, therefore, be it

Resolved, That the board of directors of the Omochumne-Hartnell Water District, hereby strongly endorses the Auburn-Folsom South unit of the Central Valley project, and urges early construction of the facility as a Federal reclamation project to assist the County of Sacramento in implementing an overall county water development program necessary to serve rapid community growth.

RESOLUTION OF THE FLORIN COUNTY WATER DISTRICT

Whereas the report on the Auburn-Folsom South unit of the Central Valley project has been transmitted to Congress, and

Whereas the facilities to be constructed under this project are vitally needed to supply water to areas within Placer, Sacramento, El Dorado and San Joaquin Counties, and

Whereas these facilities will provide additional much-needed flood control along the lower reaches of the American River, the Sacramento River, and within the Sacramento-San Joaquin Delta and will supply other benefits in addition, and

Whereas Sacramento County will be major beneficiaries of project benefits primarily in terms of additional water supply, flood control, and recreation, and

Whereas the Florin County Water District, being located partly inside and outside the north boundary line of the proposed Folsom South Canal service area, will benefit directly by the addition of a supplemental surface water supply to this service area: Now, therefore, be it

Resolved, That the board of directors of the Florin County Water District hereby strongly endorses the Auburn-Folsom South unit of the Central Valley project which the Folsom South Canal is an integral part, and urges early construction of the facility as a Federal reclamation project.

RESOLUTION OF THE FARMINGTON SOIL CONSERVATION DISTRICT

Whereas the underground water supply in this area is failing rapidly; and
Whereas this agricultural area of about 30,000 acres is highly developed and produces such valuable crops as walnuts, cherries, tomatoes, sugarbeets, rice, beans and many other crops; and

Whereas without an additional supply of water this area would experience a very serious economic setback; and

Whereas the authorization and construction of the Auburn Dam and Folsom South Canal would be of more benefit than any other single project ever built or ever contemplated in this part of the San Joaquin Valley; and

Whereas the completion of Auburn Dam and Folsom South Canal would not only supply a sufficient quantity of water to offset the overdraft on the underground water supply, but would also provide much-needed flood control protection in adjacent areas: Therefore, it is hereby

Resolved, That the Farmington Soil Conservation District endorses authorization and construction of Auburn Dam and Folsom South Canal.

STATEMENT OF CALIFORNIA WATER SERVICE CO.

This statement is made on behalf of the California Water Service Co., as the principal distributor of domestic and industrial water in the Stockton metropolitan area. The company is vitally interested on behalf of its customers in the early authorization and construction of the Auburn Dam-Folsom South Canal

project as a source of supplemental water supplies to the Stockton area. The company's water supply is obtained from an underground supply common to the city of Stockton and surrounding agricultural area. Most of the service area of the company is included within the boundaries of the Stockton & East San Joaquin Water Conservation District.

Recent study of the Stockton underground water supply shows a continual decline in water level. During dry cycles the decline has been at a greater rate and during periods of more than normal rainfall the decline has been less. The overdraft on the underground supply in the entire Stockton & East San Joaquin Water Conservation District is estimated to be 55,800 acre-feet in the year 1960.

California Water Service Co., has long been active in joining with other local interests in supporting appropriations and investigations of the Federal Government which have been aimed at bringing a supplemental water supply to the area. We are pleased to note that the results of some of these investigations are before you now in the report which was transmitted to your committee by the Secretary of the Interior under date of January 15, 1962.

Our studies have indicated that one of the most logical sources of supplemental supplies for the Stockton area would be from the American River upon which both Folsom Dam and Reservoir are located and upon which the Auburn Dam and Reservoir would be constructed. As early as 1948 California Water Service Co., as well as the Stockton & East San Joaquin Water Conservation District, city of Stockton, and others, filed applications to appropriate water from the American River for use in our service area. These applications envisioned the delivery of water through the Folsom South Canal. Our applications were denied after extensive hearings by the State water rights board and instead the water rights necessary for the Folsom South Canal were assigned to the U.S. Bureau of Reclamation. The water rights board decision, however, made it quite clear that the proper course for California Water Service Co., to follow would be to contract for delivery of water from this facility.

The company is prepared to contract, either directly with the United States or through the Stockton & East San Joaquin Water Conservation District or some other appropriate agency, for a share of Folsom South Canal water. At the present time the Stockton & East San Joaquin Water Conservation District is in the process of negotiating a contract with the Bureau of Reclamation for service in our area. We actively support those negotiations.

We appreciate very much the opportunity of filing this statement with the committee. Should there be any questions which the committee may have with respect to the supply of California Water Service Co., or its plans for the future, we will be pleased to furnish such information upon request.

WOODBRIDGE WATER USERS CONSERVATION DISTRICT,
Stockton, Calif., February 5, 1962.

Mr. THOMAS J. SHEPHARD,
*Deputy County Council,
San Joaquin County Courthouse,
Stockton, Calif.*

DEAR MR. SHEPHARD: Pursuant to the suggestion of Congressman John J. McFall, that organizations coordinate their efforts for the Folsom South Canal through the San Joaquin County delegation who will personally appear before the House and Senate committee on February 19, 1962, in Washington, D.C., the Woodbridge Water Users Conservation District forwards this letter to you and its resolution in support of the Folsom South Canal.

Woodbridge Water Users Conservation District is a conservation district of 26,000 acres. The district consists of highly developed agricultural lands and, also in certain areas, of suburban and urban development. Real property, together with improvements and personal property within the district, have a value of approximately \$25 million.

On February 2, 1961, the directors of the Woodbridge Water Users Conservation District passed the following resolution:

"Resolved and ordered, That the Folsom South unit is of urgent necessity to this district. That whether the Federal project is the Folsom South unit or the Auburn-Folsom South unit depends upon a determination of a congressional committee and financial problems confronting the present Congress, but that this district is specifically interested in the Folsom South unit, desiring its construction as early as possible. The secretary is hereby authorized to transmit a copy of this resolution to the Honorable John J. McFall."

This resolution is still in full force and effect, and is herewith submitted as set forth in this letter.

Pursuant to call of the Board of Supervisors of the County of San Joaquin, on November 9, 1961, there was a meeting with the Honorable Kenneth Holum, Assistant Secretary of the Department of the Interior of the United States. There was present at said meeting President R. N. Blossom of the Woodbridge Water Users Conservation District and Tom H. Louttit, secretary for said district. President R. N. Blossom, at said meeting, spoke in favor of the necessity of the Folsom South Canal to the Woodbridge Water Users Conservation District. A memorandum of such meeting is contained in the board of directors minutes of February 1, 1962.

This district also has made application for waters from the Folsom South Canal and said application is still pending.

Representatives of this district will attend the meeting called by the county of San Joaquin, State of California, on February 7, 1962, in support of the Folsom South Canal.

However, having passed a resolution on February 2, 1961, which is still in full force and effect and the regular meeting of the board of directors having been had on February 1, 1962, it will be impossible to call another meeting for the purpose of passing any further resolution. It is believed, however, that the above resolution should suffice.

As secretary of the Woodbridge Water Users Conservation District, I hereby certify that the resolution of February 2, 1961, is still in full force and effect and manifests the district's early, continued, and present interest in the Folsom South Canal.

Respectfully yours,

TOM LOUITTIT, *Secretary.*

RESOLUTION OF THE CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT

Whereas Central San Joaquin Water Conservation District, comprising over 70,000 acres of level and irrigable land in the central part of San Joaquin County of California, east of the city of Stockton, is devoted largely to the production of irrigated crops, the water being now supplied entirely by individual land-owners' pumps; and

Whereas the water table in the district has been dropping rapidly, pumping costs are constantly increasing, a serious scarcity of irrigation water is developing, and a surface water supply is needed in the immediate future; and

Whereas the proposed Folsom South Canal will pass through the upper portion of this district and it will be practical and feasible to irrigate all portions of the district from such canal; and

Whereas the Secretary of the Interior of the United States has recommended to Congress the authorization of this project: Therefore be it

Resolved, That Central San Joaquin Water Conservation District urges appropriate action by the Congress of the United States toward early construction of the Auburn Dam-Folsom South Canal project.

RECLAMATION DISTRICT No. 1614,
Stockton, Calif., February 7, 1962.

MR. THOMAS J. SHEPHARD,
*Deputy County Counsel,
San Joaquin County Courthouse,
Stockton, Calif.*

DEAR MR. SHEPHARD: Pursuant to the suggestion of Congressman John J. McFall that organizations coordinate their efforts for the Folsom South Canal project by presenting their resolutions to the San Joaquin County delegation who will personally appear before the House and Senate committee in February 1962, in Washington, D.C., Reclamation District No. 1614 of the county of San Joaquin forwards this letter to you and its resolution in support of the Folsom South unit.

There are 4,200 property owners within the boundary of Reclamation District No. 1614. The district is, in fact, part of the urban area of the city of Stockton, San Joaquin County, Calif. There are approximately 4,200 residences within the district, together with schools, firehouses, and such public buildings as are

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necessary to maintain a residential area. The district is fundamentally interested in a supplemental water supply. Part of the district's underground supply of water is already of saline content. A municipal and industrial supply of water should be available to this district.

There are approximately 12,500 persons within said district and the total valuation of said district is \$30 million.

District representatives have attended every meeting held within the county of San Joaquin relating to the Folsom South unit, or the Auburn-Folsom South unit. Reports of the U.S. Bureau of Reclamation relating to the Auburn-Folsom South unit have been examined by the representatives of said district and said district is familiar with its purposes.

The original resolution in support of the Folsom South unit was adopted by the board of trustees of this district on February 1, 1961. The board of trustees of Reclamation District No. 1614 of the county of San Joaquin did, in furtherance of its original resolution, therefore, on February 7, 1962, pass the following resolution:

"Resolved and Ordered, That the Auburn-Folsom South unit, Central Valley project, and more particularly, the Folsom South unit is of specific necessity in order to secure a supplemental supply of water for the residents of Reclamation District 1614; be it further

"Resolved and Ordered, That this district has supported the Folsom South unit, ever since adoption of its resolution of February 1, 1961, and its representatives have attended all meetings relating to the Folsom South unit and the Auburn-Folsom South Canal held in the county of San Joaquin, State of California: Now, therefore, be it

"Resolved and Ordered, That in cooperation with the county of San Joaquin, State of California, reclamation district 1614 of the county of San Joaquin hereby determines that the early construction of the Auburn-Folsom South unit is necessary to the public welfare of the residents and inhabitants of Reclamation District 1614; be it further

"Resolved, Therefore, That the Congress of the United States and all Federal officials are hereby urged that the Auburn-Folsom South unit be constructed at the earliest possible moment, such construction being by Federal funds. That this district specifically endorses the flood control provisions of the Auburn Reservoir, looking forward to the further control of 150,000 acre-feet of floodwaters and specifically endorses the Folsom South Canal so that more waters will be available to the district for municipal and industrial use."

It so happens that the last public meeting concerned the Folsom South Canal was held under the auspices of the county of San Joaquin the morning of February 7, 1962. The meeting of the trustees of Reclamation District 1614 of the county of San Joaquin, was held at 4 p.m., February 7, 1962. Consequently, in passing the above resolution, said district passed said resolution well informed and approves of the Auburn-Folsom South unit as such construction of the same as is now contemplated by the U.S. Bureau of Reclamation.

Respectfully submitted.

TOM H. LOUITT, *Secretary.*

MOKELUMNE RIVER IRRIGATION DISTRICT,
Stockton, Calif., February 5, 1962.

Mr. THOMAS J. SHEPARD,
*Deputy County Counsel,
San Joaquin County Courthouse, Stockton, Calif.*

DEAR MR. SHEPARD: Pursuant to the suggestion of Congressman John J. McFall, that organizations coordinate their efforts for the Folsom South Canal through the San Joaquin County delegation who will personally appear before the House and Senate committees on February 19, 1962, in Washington, D.C., the Mokelumne River Irrigation District forwards this letter to you and its resolution in support of the Folsom South Canal.

Mokelumne River Irrigation District is an irrigation district of 1,500 acres. The district consists of highly developed agricultural lands.

On February 7, 1961, the directors of the Mokelumne River Irrigation District passed the following resolution:

"Resolved and Ordered, That Hon. John J. McFall, Congressman for the 11th Congressional District, support such legislation as would assure the construction of the Folsom South unit at the earliest possible date; that he use his own

discretion in determining whether such construction could be best obtained by supporting either the Auburn-Folsom South unit or the Folsom South unit; that this district, however, is specifically interested in the early construction of the Folsom South unit. The secretary is hereby authorized to transmit a copy of this resolution to Hon. John J. McFall."

This resolution is still in full force and effect, and is herewith submitted as set forth in this letter.

Pursuant to call of the Board of Supervisors of the County of San Joaquin, on November 9, 1961, there was a meeting with the Honorable Kenneth Holum, Assistant Secretary of the Department of the Interior of the United States. There was present at said meeting President Niel C. Locke of the Mokelumne River Irrigation District and Tom H. Louttit, secretary for said district. President Niel C. Locke, at said meeting, spoke in favor of the necessity of the Folsom South Canal to the Mokelumne River Irrigation District.

Representatives of this district will attend the meeting called by the county of San Joaquin, State of California on February 7, 1962, in support of the Folsom South Canal.

However, having passed a resolution February 7, 1961, and it being impossible to have a meeting of the Mokelumne River Irrigation District directors in time to transmit papers to Washington, D.C., no meeting will be had. It is submitted, however, that the above resolution should suffice.

As secretary of the Mokelumne River Irrigation District, I hereby certify that the resolution of February 7, 1961, is still in full force and effect and manifests the district's early, continued, and present interest in the Folsom South Canal.

Respectfully yours,

Tom H. LOUITTIT, *Secretary.*

RESOLUTION OF THE LINDMORE IRRIGATION DISTRICT

Whereas Lindmore Irrigation District is one of the first beneficiaries of the Friant-Kern service area of the Central Valley project provided by the Federal Government for the benefit of lands on the east side of the San Joaquin Valley; and

Whereas Lindmore Irrigation District now has on record with the Department of the Interior, Bureau of Reclamation, an application for additional class 1 water; and

Whereas it is becoming increasingly apparent that additional water for San Joaquin Valley lands generally, and lands along the east side of the valley particularly, will be needed in the near future to maintain productivity and allow for increasing domestic needs; and

Whereas although the State of California and local agencies therein are proceeding as rapidly as possible with local and State projects, such developments cannot keep pace with the increasing need for water within the State without substantial assistance from the Federal Government; and

Whereas the Federal Government has recognized such need and has planned for same by the contemplated east side division of the Central Valley project; and

Whereas there is now pending before the Senate and House Interior and Insular Affairs Committees bills to authorize the Auburn Dam and Folsom South Canal, which will bring water now greatly needed to Sacramento and San Joaquin Counties; and

Whereas not only lands in Sacramento and San Joaquin Counties, but many additional areas within the San Joaquin Valley which will be served by the proposed east side division are in critical need of additional water: Now, therefore, be it

Resolved, That the Senate and House Interior and Insular Affairs Committees be, and they are hereby, respectfully urged to approve the Auburn Dam and Folsom South Canal project, with sufficient capacity to accommodate the contemplated east side division of the Central Valley project; and be it further

Resolved, That the Congress be, and it is hereby respectfully urged to authorize such projects.

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RESOLUTION OF THE EL DORADO COUNTY CHAMBER OF COMMERCE

Whereas a great amount of water originating in El Dorado County is now wasted and flows to the Pacific Ocean; and

Whereas the construction of the Auburn Dam is important to the development of water resources in El Dorado County; and

Whereas the Malby unit which would pump water from Folsom Dam at an elevation of 500 feet for storage in the Deer Creek area in El Dorado County would provide municipal and industrial water for the west end of El Dorado County; and

Whereas the extension of this water to western El Dorado County appears to be the only real factor which would bring about the development of that area; and

Whereas although the major areas to derive benefit would be eastern Sacramento County, this development would benefit all of this section of the State and therefore what benefits one benefits all: Now, therefore, be it

Resolved, That the directors of the El Dorado County Chamber of Commerce have unanimously gone on record urging authorization of the construction of Auburn Dam and the South Folsom Canal including the Malby area as units of the Central Valley project.

JOINT RESOLUTION OF GROWLERSBURG POST AND AUXILIARY No. 9241, VETERANS OF FOREIGN WARS

Whereas great amounts of water generated in El Dorado County are wasted to the sea; and

Whereas the construction of Auburn Dam would impound and preserve this water for beneficial uses in areas of water deficiency; and

Whereas the continued growth and expansion of this State is sorely pressed to keep abreast of increased water and power demands; and

Whereas the early authorization of the Auburn project would immediately assist and supplement the ultimate objectives of the Central Valley project: Now, therefore, be it

Resolved, That Growlersburg Post and Auxiliary No. 9241, Veterans of Foreign Wars, are of record in urging the authorizing and early construction of the Auburn Dam project.

RESOLUTION OF THE EL DORADO-AMADOR POMONA GRANGE No. 14

Whereas a great amount of water originating in El Dorado County is now wasted and flows to the Pacific Ocean, and

Whereas the construction of the Auburn Dam is important to the development of water resources in El Dorado County, and

Whereas the Malby unit which would pump water from Folsom Dam at an elevation of 500 feet for storage in the Deer Creek area in El Dorado County would provide municipal and industrial water for the west end of El Dorado County, and

Whereas the extension of this water to western El Dorado County appears to be the only factor which would bring about the development of that area, and

Whereas, although the major areas to derive benefit would be eastern Sacramento County, this development would benefit all of this section for if it benefits all of this section of the State, therefore, what benefits one benefits all: Now, therefore, be it

Resolved, That El Dorado-Amador Pomona Grange has unanimously gone on record urging authorization of the construction of Auburn Dam and the South Folsom Canal including the Malby area as units of the Central Valley project.

RESOLUTION OF THE GEORGETOWN VOLUNTEER FIRE DEPARTMENT, GEORGETOWN, CALIF.

Whereas a great amount of water originating in El Dorado County is now wasted and flows to the Pacific Ocean, and

Whereas the construction of the Auburn Dam is important to the development of water resources in El Dorado County, and

Whereas the Malby unit which would pump water from Folsom Dam at an elevation of 500 feet for storage in the Deer Creek area in El Dorado County would provide municipal and industrial water for the west end of El Dorado County, and

Whereas the extension of this water to western El Dorado County appears to be the only factor which would bring about the development of that area, and

Whereas, although the major areas to derive benefit would be eastern Sacramento County, this development would benefit all this section of the State and therefore what benefits one benefits all: Now, therefore, be it

Resolved, That the members of the Georgetown Volunteer Fire Department of Georgetown, El Dorado County, Calif., have unanimously gone on record urging authorization of the construction of Auburn Dam and the South Folsom Canal including the Malby area units of the Central Valley project.

RESOLUTION OF THE GEORGETOWN DIVIDE ASSOCIATION, INC., GEORGETOWN, CALIF.

Whereas the extension of this water to western El Dorado County would provide and appear to be the only factor which would bring about development of that area, and

Whereas although the major areas to derive benefit would be Eastern Sacramento County, this development would benefit all of this section of the State and therefore what benefits one benefits all.

Whereas the great amount of water originating in El Dorado County is now wasted and flows to the Pacific Ocean: Now, therefore, be it

Resolved, That Georgetown Divide Association, Inc., has unanimously gone on record urging authorization of the construction of Auburn Dam and the South Folsom Canal including Malby area as units of the Central Valley project.

RESOLUTION OF THE BOARD OF DIRECTORS OF THE EL DORADO IRRIGATION DISTRICT

Whereas the United States has constructed Folsom Dam and appurtenant works and water is available from this project for service in the Central Valley of California, and

Whereas the U.S. Bureau of Reclamation has completed a report on the feasibility of a water supply development entitled Folsom South unit, Central Valley project, California; and

Whereas the U.S. Bureau of Reclamation has completed a supplemental report on the feasibility of a water supply development for the Folsom-Malby areas; and

Whereas features of the Malby Canal and Reservoir will benefit portions of the western El Dorado County by providing a much-needed dependable water supply to this area: Now, therefore, be it and it is hereby

Resolved by the board of directors of the El Dorado Irrigation District, That the California Water Commission be respectfully requested to direct every effort toward obtaining early authorization of the Auburn Dam and Folsom South units of the Central Valley project, including features of the Malby Canal and Reservoir for construction by the U.S. Bureau of Reclamation.

RESOLUTION OF THE EL DORADO COUNTY FARM BUREAU

The board of directors of the El Dorado County Farm Bureau, realizing the need for further development of water resources in El Dorado County and believing the construction of the Auburn Dam to be an important step in such development, have voted to support this project: Therefore be it

Resolved, That the board of directors of the El Dorado County Farm Bureau have unanimously gone on record urging authorization of the construction of Auburn Dam and the South Folsom Canal including the Malby area as units of the Central Valley project.

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RESOLUTION OF THE UNITED RESCUE GRANGE No. 450, RESCUE, CALIF.

Whereas a great amount of water originating in El Dorado County is now wasted and flows to the Pacific Ocean; and

Whereas the construction of the Auburn Dam is important to the development of water resources in El Dorado County; and

Whereas the Malby unit, which would pump water from Folsom Dam at an elevation of 500 feet for storage in the Deer Creek area in El Dorado County, would provide municipal and industrial water for the west end of El Dorado County; and

Whereas the extension of this water to western El Dorado County appears to be the only factor which would bring about the development of that area; and

Whereas, although the major areas to derive benefit would be the eastern Sacramento County, this development would benefit all of this section of the State and therefore what benefits one benefits all: Now, therefore, be it

Resolved, that the members of the United Rescue Grange No. 450 have un-animously gone on record urging authorization of the construction of Auburn Dam and the South Folsom Canal including the Malby area as units of the Central Valley project.

SOROPTIMIST FEDERATION OF THE AMERICAS, INC.,
SOROPTIMIST CLUB OF PLACERVILLE,
Placerville, Calif., February 15, 1962.

SENATE INTERIOR COMMITTEE,
Washington, D.C.

DEAR SIR: The Soroptimist Club of Placerville urges you to support the construction of Auburn Dam and the South Folsom Canal including the Malby area. These are of great importance to our continued growth in El Dorado County.

Sincerely,

GUIDOTTA M. DAVIS, *Corresponding Secretary.*

PLACERVILLE HOME & GARDEN CLUB,
Placerville, Calif., February 12, 1962.

SENATE INTERIOR COMMITTEE,
Washington, D.C.

GENTLEMEN: We heartily endorse the resolution sent you by the El Dorado County Chamber of Commerce relative to the great need for the construction of the Auburn Dam in the west portion of El Dorado County. In order to provide water for the rapidly expanding westerly portion of our county and the easterly portion of Sacramento County it is highly important that this dam be authorized without delay and that the South Folsom Canal and the Malby unit be authorized, also, as necessary accompaniments to the Auburn Dam unit as part of the Central Valley project.

Very truly yours,

RUTH D. SCHREIBER, *Secretary.*

RESOLUTION OF THE GOLDEN LAND HOME & GARDEN CLUB

Whereas the entire State of California has been facing a water shortage, while at the same time much of the runoff water in many streams is going to waste; and

Whereas the construction of the Auburn Dam will do much to relieve this shortage; and

Whereas the Malby unit would greatly benefit this section of our State: Now, therefore, be it

Resolved, That the members of Golden Land Home & Garden Club of El Dorado County, Calif., have un-animously gone on record urging the early authorization for these projects.

POLLOCK PINES, CALIF., February 8, 1962.

SENATE INTERIOR COMMITTEE,
Washington, D.C.

DEAR SIR: Being a fair-sized property owner in El Dorado County, I support the resolution concerning the construction of the Auburn Dam.

The construction of this dam would not only be a "shot in the arm" to the economy of this area, but a plentiful supply of water is almost pure gold in itself.

Besides aiding El Dorado County this would be of great benefit to eastern Sacramento County, which, in the end, could mean expansion of industry, homes, and agriculture.

We recommend and urge quick action on this reservation.

Yours very truly,

L. R. ALDERMAN.

RESOLUTION OF THE POLLOCK PINES PTA, POLLOCK PINES, CALIF.

Whereas a great amount of water originating in El Dorado County is now wasted and flows to the Pacific Ocean; and

Whereas the construction of the Auburn Dam is important to the development of water resources in El Dorado County; and

Whereas the Malby unit which would pump water from Folsom Dam at an elevation of 500 feet for storage in the Deer Creek area in El Dorado County would provide municipal and industrial water for the west end of El Dorado County; and

Whereas the extension of this water to western El Dorado County appears to be the only factor which would bring about the development of that area; and

Whereas, although the major areas to derive benefit would be eastern Sacramento County, this development would benefit all of this section of the State and, therefore, what benefits one benefits all: Now, therefore, be it

Resolved, That the directors of the El Dorado County Chamber of Commerce have unanimously gone on record urging authorization of the construction of Auburn Dam and the South Folsom Canal including the Malby area as units of the Central Valley project.

POLLOCK PINES, CALIF., February 8, 1962.

SENATE INTERIOR COMMITTEE,
Washington, D.C.

DEAR SIR: As a community-minded group of Pollock Pines we support the resolution concerning the construction of the Auburn Dam.

The construction of this dam would not only be a shot in the arm to the economy in this area, but a plentiful supply of water is almost pure gold in itself.

Besides aiding in El Dorado County, this would be of great benefit to eastern Sacramento County, which in the end could mean expansion of industry, homes, and agriculture.

We recommend and urge quick action on this reservation.

Yours very truly,

L. R. ALDERMAN,
President, Pollock Pines Businessmen's Association,
Pollock Pines, Calif.

THE ROTARY CLUB OF POLLOCK PINES,
Pollock Pines, Calif., February 8, 1962.

SENATE INTERIOR COMMITTEE,
Washington, D.C.

DEAR SIR: Twenty-three members of the Pollock Pines Rotary Club voted 100-percent affirmative for the support of the resolution concerning the construction of the Auburn Dam.

The construction of this dam would not only be a shot in the arm to the economy in this area, but a plentiful supply of water is almost pure gold in itself.

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Besides aiding El Dorado County, this would be of great benefit to eastern Sacramento County, which, in the end, could mean expansion of industry, homes, and agriculture.

We recommend and urge quick action on this reservation.

Yours very truly,

L. R. ALDERMAN,
*President, Rotary Club of Pollock Pines,
Pollock Pines, Calif.*

SACRAMENTO, CALIF., *February 19, 1962.*

SENATOR CLINTON P. ANDERSON,
*Chairman, Senate Irrigation Subcommittee, Room 454, Senate Office Building,
Washington, D.C.*

DEAR SIR: The Building and Construction Council of Sacramento, Yolo, and Amador Counties, in regular meeting representing 29 local unions of approximately 15,000 members, went on record to solicit your support by approving funds for the Auburn Dam-Folsom South Canal. We have 30 percent unemployed; so manpower is no problem.

Sincerely,

R. A. CAPLES, *Business Manager.*

BAKERSFIELD, CALIF., *February 20, 1962.*

CONGRESSMAN HARLAN HAGEN,
House of Representatives, Washington, D.C.:

We concur with resolution adopted by Kern County Water Agency February 14, 1962, regarding approval of Auburn Dam and Folsom South Canal unit of Central Valley project. We urge Congress to authorize these projects.

ROBERT PARKER,
*Chairman, Agri-Business Committee, Greater Bakersfield Chamber of
Commerce.*

RESOLUTION OF THE LOTUS-COLOMA BOOSTERS CLUB

Whereas a great amount of water originating in El Dorado County is now wasted and flows to the Pacific Ocean, and

Whereas the construction of the Auburn Dam is important to the development of water resources in El Dorado County, and

Whereas the Malby unit which would pump water from Folsom Dam at an elevation of 500 feet for storage in the Deer Creek area in El Dorado County would provide municipal and industrial water for the west end of El Dorado County, and

Whereas the extension of this water to western El Dorado County appears to be the only factor which would bring about the development of that area, and

Whereas, although the major areas to derive benefit would be eastern Sacramento County, this development would benefit all of this section of the State and therefore what benefits one benefits all: Now, therefore, be it

Resolved, That the members of the Lotus-Coloma Boosters Club have unanimously gone on record supporting authorization of the construction of Auburn Dam and the South Folsom Canal, including the Malby area, as units of the Central Valley project.

RESOLUTION OF THE RAG GULCH WATER DISTRICT

Whereas the Rag Gulch Water District and the landowners within its boundaries have been beneficiaries of the Central Valley project provided by the Federal Government for the benefit of lands on the east side of the San Joaquin Valley; and

Whereas it has now become increasingly apparent that additional water for these lands generally and land within the counties of Kern and Tulare specifically will be needed in the near future to maintain existing productivity and allow for ever-increasing domestic needs; and

Whereas the Federal Government has recognized such need and planned for the same by means of the contemplated east side division of the Central Valley project; and

Whereas there is now pending before the Senate and House Interior and Insular Affairs Committees bills to authorize the Auburn Dam and Folsom South Canal which will bring water now greatly needed to Sacramento and San Joaquin Counties; and

Whereas not only Sacramento County and San Joaquin County, but many additional areas such as Kern and Tulare Counties within the San Joaquin Valley which will be served by the proposed east side division are in critical need of additional water supplies;

Whereas, although the State of California and local agencies therein are proceeding as rapidly as possible with local and State projects, such developments cannot keep pace with the ever-increasing need for water within the State of California without substantial assistance from the Federal Government: Now, therefore, be it

Resolved, That the Senate and House Interior and Insular Affairs Committees be, and they hereby are, respectfully urged to approve the Auburn Dam and Folsom South Canal project, with sufficient capacity to accommodate the contemplated east side division of the Central Valley project, and that the Congress be, and it hereby is, respectfully urged to authorize such projects.

RESOLUTION OF THE CLOER COMMUNITY SERVICES DISTRICT

Whereas it appears that from information supplied to this board of directors the proposed price of water to be furnished to this district through the facilities of the East Side Canal is \$7 per acre-foot: Now, therefore, be it

Resolved, That this board of directors approve the price of \$7 per acre-foot for East Side Canal water furnished to the district.

RESOLUTION OF THE MINTURN COOPERATIVE GIN, INC.

Whereas the Minturn Cooperative Gin, Inc., and its members within the boundaries have been prime beneficiaries of the Central Valley project provided by the Federal Government for the benefit of lands on the east side of the San Joaquin Valley; and

Whereas it has now become increasingly apparent that additional water for these lands generally and land with the counties of Madera and Merced specifically will be needed in the near future to maintain existing productivity and allow for ever-increasing domestic needs; and

Whereas the Federal Government has recognized such need and planned for the same by means of the contemplated East Side division of the Central Valley project; and

Whereas there is now pending before the Senate and House Interior and Insular Affairs Committees bills to authorize the Auburn Dam and Folsom South Canal which will bring water now greatly needed to Sacramento and San Joaquin County and many additional areas within the San Joaquin Valley which will be served by the proposed East Side division are in critical need of additional water supplies; and

Whereas, although the State of California and local agencies therein are proceeding as rapidly as possible with local and State projects, such developments cannot keep pace with the ever-increasing need for water within the State of California without substantial assistance from the Federal Government: Now, therefore, be it

Resolved, That the Senate and House Interior and Insular Affairs Committees be, and they hereby are, respectfully urged to approve the Auburn Dam and Folsom South Canal project, with sufficient capacity to accommodate the contemplated East Side division of the Central Valley project, and that the Congress be, and it hereby is, respectfully urged to authorize such projects.

RESOLUTION OF THE COLFAX AREA CHAMBER OF COMMERCE

Whereas we have been informed that the Placer County Water Agency and the regional office of the Bureau of Reclamation in Sacramento have concluded an agreement resolving the apparent conflicts between the agency's Middle Fork American River project and the Central Valley project; and

Whereas we have been informed that the said agreement between the Placer County Water Agency and the regional office of the Bureau of Reclamation is expected to receive the approval of the U.S. Department of the Interior prior to the U.S. congressional hearings on S. 103, H.R. 38, and H.R. 980, scheduled to be held February 20, 21, 22, and 23, 1962; and

Whereas under the terms of the said agreement the Bureau of Reclamation will sell to the Placer County Water Agency from the Auburn Reservoir up to 117,000 acre-feet of water annually for use by the Placer County Water Agency in Placer County; and

Whereas, all estimates of the future growth in Placer County indicate that the county and the cities within the county will need substantial amounts of water other than the quantities to be developed and diverted by the Placer County Water Agency from its Middle Fork American River project: Now, therefore, be it

Resolved by the Board of Directors of the Colfax Area Chamber of Commerce, That, with the approval of the agreement between the Placer County Water Agency and the regional office of the Bureau of Reclamation in Sacramento by the U.S. Department of the Interior, this board go on record as supporting the authorization of the Auburn-Folsom South unit of the Central Valley project, as provided for in S. 103, H.R. 38, and H.R. 980, and that the appropriate committees of the U.S. Congress be urged to give their immediate approval to such authorization.

RESOLUTION OF THE LINDEN-PETERS CHAMBER OF COMMERCE

Whereas the Secretary of the Interior of the United States has transmitted to the President of the United States his report on the Auburn-Folsom South unit of the Central Valley project; and

Whereas the President has transmitted said report to the Congress of the United States; and

Whereas the Linden-Peters Chamber of Commerce has had an opportunity to review said report; and

Whereas it is the opinion of the board of directors of the Linden-Peters Chamber of Commerce that the Auburn-Folsom South unit, and particularly the Folsom South Canal, a part of said project, is urgently needed by this area for the provision of vitally necessary supplemental water for agricultural and domestic use: Now, therefore, be it

Resolved, That this board of directors endorses the Auburn-Folsom South project as proposed in the aforementioned report and recommends that the Congress of the United States shall take all appropriate action in support of the early authorization and construction of the Auburn-Folsom South unit.

RESOLUTION OF THE FRENCH CAMP CHAMBER OF COMMERCE

Whereas the Secretary of the Interior of the United States has transmitted to the President of the United States his report on the Auburn-Folsom South unit of the Central Valley; and

Whereas the President has transmitted said report to the Congress of the United States; and

Whereas the French Camp District Chamber of Commerce board of directors, knowing the urgent need for the Auburn-Folsom South Canal to deliver the much-needed water supply to Stockton, Calif., and San Joaquin County for agricultural, industrial, and city requirements; also our military installations: Now, therefore, be it

Resolved, That this board of directors do hereby endorse and urgently recommend that the Congress and Senate of the United States support the early authorization and construction of the proposed Auburn-Folsom South Canal unit of the Central Valley project.

RESOLUTION OF THE RIPON CHAMBER OF COMMERCE, RIPON, CALIF.

Whereas the Secretary of the Interior of the United States has transmitted to the President of the United States his report on the Auburn-Folsom South unit of the Central Valley project; and

Whereas the Ripon Chamber of Commerce has had an opportunity to review said report; and

Whereas it is the opinion of the board of directors of the Ripon Chamber of Commerce that the Auburn-Folsom South unit and particularly the Folsom South Canal, a part of said project, is urgently needed by this area for the provision of vitally necessary supplemental water, not only for the Metropolitan Stockton area, agricultural, domestic, and industrial use, but for the potential use by the military bases in this county of San Joaquin: Now, therefore, be it

Resolved, That this board of directors endorses the Auburn-Folsom South unit.

RESOLUTION OF THE SAN JOAQUIN COUNTY CHAMBER OF COMMERCE

Whereas the Secretary of the Interior of the United States, with letter dated January 15, 1962, forwarded to the Congress of the United States reports recommending the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the facilities to be constructed are vitally needed to conserve and transport supplemental water to areas within Placer, Sacramento, El Dorado, and San Joaquin Counties; and

Whereas the additional water which will be made available by the Auburn Dam-Folsom South Canal project is urgently needed, in part, to preserve in use large acreages of highly productive farmland which is now endangered by a rapidly falling ground water table and by a lack of adequate surface water supply; and

Whereas these facilities are necessary for the full development of the American River as a working part of the Federal Central Valley project; and

Whereas these facilities will provide much-needed additional flood control protection within the Sacramento-San Joaquin Delta; and

Whereas substantial areas in San Joaquin County will be major beneficiaries of project benefits, primarily in terms of additional water supply: Now, therefore, it is hereby

Resolved, That this San Joaquin County Chamber of Commerce commends the Secretary of Interior for recognizing the urgent need for the Auburn-Folsom South Canal project; and be it further

Resolved, That this San Joaquin County Chamber of Commerce endorses the Auburn Dam-Folsom South Canal project as submitted to the Congress; and be it further

Resolved, That this San Joaquin County Chamber of Commerce urges all appropriate action, particularly by the U.S. Senate Interior and Insular Affairs Committee and the U.S. House of Representatives Interior and Insular Affairs Committee, directed toward the early authorization and construction of the Auburn Dam-Folsom South Canal project.

RESOLUTION OF THE GOLD TRAIL GRANGE, No. 452, COLOMA, CALIF.

Whereas a great amount of water originating in El Dorado County is now wasted and flows into the ocean; and

Whereas the construction of the Auburn Dam is important to the development of water resources in El Dorado County; and

Whereas the Malby unit which would pump water from Folsom Dam at an elevation of 500 feet for storage in the Deer Creek area in El Dorado County would provide municipal and industrial water for the west end of El Dorado County; and

Whereas the extension of this water to western El Dorado County appears to be the only factor which would bring about the development of that area; and

Whereas although the major areas to derive benefit would be eastern Sacramento County, this development would benefit all of this section of the State and therefore what benefits one benefits all: Now, therefore, be it

Resolved, That the Gold Trail Grange, No. 452, of Coloma have unanimously gone on record urging authorization of the Auburn Dam and the South Folsom Canal including the Malby area as units of the Central Valley project.

RESOLUTION OF THE CALIFORNIA BOATING COUNCIL, INC.

Whereas the Secretary of the Interior has under date of January 17, 1962, forwarded to the various affected committees of the Congress of the United States, reports which recommend the early authorization of the Auburn Dam-Folsom South Canal project and related units; and

Whereas the facilities to be constructed under this project are vitally needed to supply water to areas within Placer, Sacramento, El Dorado and San Joaquin Counties; and

Whereas these facilities are necessary for the full development of the American River as part of the Federal Central Valley project and they will also provide additional much-needed flood control along the lower reaches of the American River, the Sacramento River and within the Sacramento-San Joaquin Delta and will supply other benefits in addition; and

Whereas areas in Sacramento County will be major beneficiaries of project benefits primarily in terms of additional water supply, flood control, and recreation: Now, therefore, be it

Resolved, That the California Boating Council, Inc., a statewide, nonprofit organization go on record as commending the Secretary of the Interior for recognizing the urgent need for the Auburn Dam-Folsom South Canal project and related units, as evidenced by the Secretary's recent recommendation to the Congress of the United States; and be it further

Resolved, That the appropriate committees of Congress be urged to schedule early hearings in connection with the authorization of said project.

RESOLUTION NO. 86 OF THE CALIFORNIA WATER COMMISSION

Whereas numerous bills have been introduced in Congress requesting authorization of the Folsom South unit, American River division, Central Valley project in California; and

Whereas said project is necessary to utilize the waters made available by the construction of Folsom Dam and Reservoir on the American River as part of the Federal Central Valley project; and

Whereas water right permits have been issued by the State water rights board to the U.S. Bureau of Reclamation in furtherance of said Folsom South unit; and

Whereas assignment of the necessary State filings has also been made to the U.S. Bureau of Reclamation for the purposes of said Folsom South unit; and

Whereas the U.S. Department of Interior is expected to have released its report on Folsom South Canal prior to the commencement of the next session of the Congress of the United States; and

Whereas said Folsom South Canal as presently contemplated will serve lands in Sacramento, San Joaquin, and El Dorado Counties, which lands urgently need supplemental water supplies; and

Whereas negotiations are currently underway between the U.S. Bureau of Reclamation and various water agencies within said counties in anticipation of said water supplies being available; and

Whereas requests have been made to the California Water Commission by El Dorado, San Joaquin, and Sacramento Counties urging the commission to lend its support to early authorization of said project; and

Whereas the Folsom South Canal should be constructed to provide for future integration with the proposed east side division of the Central Valley project and should be authorized accordingly; and

Whereas the U.S. Bureau of Reclamation is preparing, in coordination with other Federal and State agencies, a report on the proposed east side division, including expansion and integration of the proposed Folsom South Canal; and

Whereas this commission recognizes that additional costs will be involved in providing for such future expansion and that appropriate measures must be taken to meet such added costs; and

Whereas by such integration, the best interests of the people of the State of California and the water users within the service areas of both the Folsom South and east side projects would be served; and under these conditions, San Joaquin Valley water users urge the commission to lend its support: Now, therefore, be it

Resolved, That the California Water Commission go on record as urging the Congress of the United States to authorize the Folsom South unit of the American River division of the Central Valley project essentially as proposed under H.R. 2496 of the 86th Congress, 1st session, to include the construction of Malby Canal as a part of the legislation, with appropriate modifications to provide for enlargement and integration with the proposed east side division of the Central Valley project.

RESOLUTION 100 OF THE CALIFORNIA WATER COMMISSION

Whereas California is in the midst of the third of a series of extremely dry water seasons; and

Whereas many streams in the Central Valley of California with discharge only 15 to 40 percent of their normal seasonal flows; and

Whereas serious water shortages have previously existed in these areas and the long-term outlook is critical; and

Whereas the U.S. Bureau of Reclamation and the State of California have planned water development facilities to deliver additional supplemental water to Central Valley areas through the Central Valley project works and the Feather River project works; and

Whereas these works include the San Luis unit, the Auburn Dam, the Folsom South Canal and the east side division; and

Whereas the State of California has approved the report of the regional director of the U.S. Bureau of Reclamation on Auburn Dam and Folsom South Canal units; and

Whereas legislation to authorize these proposed units of the Central Valley project is pending before the U.S. Congress: Now, therefore, be it

Resolved, That the California Water Commission hereby endorses the planned construction of the San Luis, Auburn Dam, and Folsom South Canal units and the east side division of the Central Valley project and urges and requests that the Congress of the United States take the necessary action to implement the early authorization and construction of the aforesaid additional facilities of the Central Valley project of California, in accordance with pending legislation.

RESOLUTION 117 OF THE CALIFORNIA WATER COMMISSION

Whereas on November 2, 1961, the Secretary of the Interior approved the report of the Bureau of Reclamation on the Foresthill Divide and Folsom-Malby features of Auburn-Folsom South unit of the American River division, Central Valley project, California; and

Whereas the California Water Commission, by Resolution 86, dated September 15, 1960, and Resolution 100, dated May 12, 1961, is on record in support of the Auburn-Folsom South unit as the first phase of the proposed east side division; and

Whereas the director of water resources, in his official comments dated November 2, 1961, recommended that Foresthill Divide and Folsom-Malby areas be authorized as outlined in the report of November 2, 1961, noted above: Now, therefore, be it

Resolved, That the California Water Commission reaffirms its previous endorsements of the Auburn-Folsom South unit as the first phase of the proposed east side division, and urges that its authorization include the Foresthill Divide and Folsom-Malby areas, integrated physically and financially with the Central Valley project as provided in the report of November 2, 1961.

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RESOLUTION 9-61 OF THE EL DORADO COUNTY WATER AGENCY

Whereas on January 29, 1960, the regional director, region 2, of the Bureau of Reclamation, U.S. Department of the Interior, made his feasibility report on the Auburn-Folsom South unit of the Central Valley project in California, recommending construction of said unit; and

Whereas on August 10, 1961, the regional director made a supplemental report on the Folsom-Malby area of the Folsom South unit, recommending the construction of the Malby Reservoir and related works as an integral part of the Auburn-Folsom South unit of the Central Valley project; and

Whereas lack of adequate water supplies in the southwestern portion of El Dorado County have prevented the development of this portion of the county, and construction of Malby Reservoir would provide a dependable source of water to a large part of this area, permitting these lands to develop to their highest and best use: It is hereby

Resolved by the board of directors of El Dorado County Water Agency, State of California, That the Congress of the United States be and it is hereby urgently requested to authorize the construction of the Malby Reservoir and related works as an integral part of the Auburn-Folsom South unit of the Central Valley project in California, and to make the appropriations necessary for the immediate construction of this project.

RESOLUTION 227-61 OF THE BOARD OF SUPERVISORS, EL DORADO COUNTY

Whereas on January 29, 1960, the regional director, region 2, of the Bureau of Reclamation, U.S. Department of the Interior, made his feasibility report on the Auburn-Folsom South unit of the Central Valley project in California, recommending construction of said unit; and

Whereas on August 10, 1961, the regional director made a supplemental report on the Folsom-Malby area of the Folsom South unit, recommending the construction of the Malby Reservoir and related works as an integral part of the Auburn-Folsom South unit of the Central Valley project; and

Whereas lack of adequate water supplies in the southwestern portion of El Dorado County have prevented the development of this portion of the county, and construction of Malby Reservoir would provide a dependable source of water to a large part of this area, permitting these lands to develop to their highest and best use: It is hereby

Resolved by the Board of Supervisors of the County of El Dorado, State of California, That the Congress of the United States be and it is hereby urgently requested to authorize the construction of the Malby Reservoir and related works as an integral part of the Auburn-Folsom South unit of the Central Valley project in California, and to make the appropriations necessary for the immediate construction of this project.

RESOLUTION 23,210 OF THE STOCKTON CITY COUNCIL

Whereas the city of Stockton is in an area of extensive and rapidly increasing urban, industrial, commercial, and agricultural development; and

Whereas in this area are important military and naval installations necessary to national defense; and

Whereas the water in this area is inadequate to meet the present need, much less the requirement for normal growth; and

Whereas the city of Stockton is now dependent on wells for its water supply; and

Whereas the quality of this underground water supply is threatened by the progressive intrusion of saline water; and

Whereas more than 2 years ago, the director of the California Department of Water Resources stated that "The ground water situation in Stockton is very critical"; and

Whereas the Folsom South Canal will provide water adequate to meet the present and projected needs of the city of Stockton; and

Whereas there is no feasible alternate to the Folsom South Canal as an adequate source of supply of supplemental water for this area; and

Whereas the Federal Bureau of Reclamation has included the city of Stockton as a prospective recipient of water from the Folsom South Canal: Now, therefore, be it

Resolved by the Council of the City of Stockton, as follows: That this city council hereby endorses the Auburn-Folsom South Canal project as proposed by the Secretary of Interior of the United States in his report to the President of the United States and shall take all appropriate action in support of the early authorization and construction of the Auburn-Folsom South unit.

Dated: February 13, 1962.



