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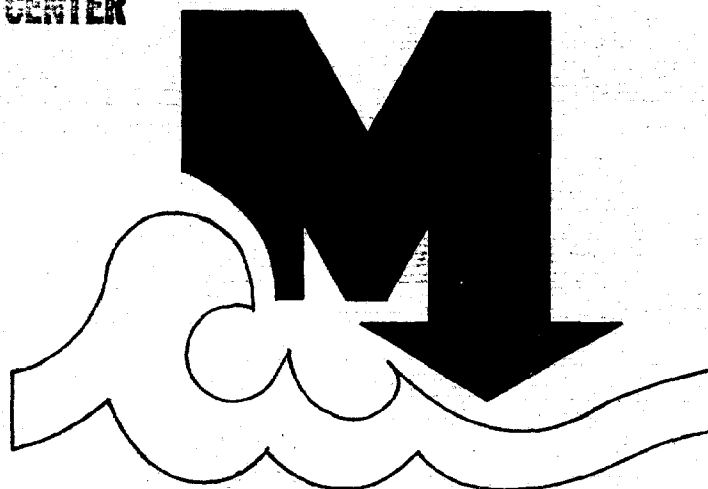
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PARAMETRIC OVERVIEW OF

Land Use and Socio-Economic Activities

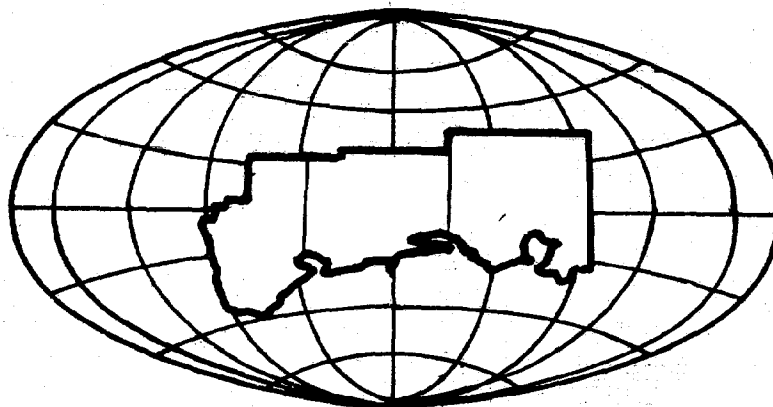
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MISSISSIPPI MARINE RESOURCES COUNCIL

BY



GULF REGIONAL PLANNING COMMISSION

Mississippi Marine Resources Council

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**COASTAL ZONE
INFORMATION CENTER**

**PARAMETRIC OVERVIEW OF
LAND USE AND SOCIO-ECONOMIC ACTIVITIES
Hancock, Harrison, Jackson, and Pearl River Counties, Mississippi**

by

Ralph E. Hode

GULF REGIONAL PLANNING COMMISSION

Suite 600, Securities/Markham Building

Gulfport, Mississippi

1976

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FOREWORD

This document constitutes the final report on the Socio-Economic Land Use Mapping Project prepared for the Mississippi Marine Resources Council by the Gulf Regional Planning Commission. The work was performed under the general supervision of Mr. Ned J. Boudreaux, Executive Director, and Mr. A. Paul Desmarais, Deputy Director.

Appreciation is expressed to the many state and local agencies for their assistance through the provision of technical and detailed information. These include the Port and Harbor Commissions and Industrial Development Commissions of Hancock, Harrison and Jackson Counties, the Jackson County Planning Commission, the Mississippi Power Company, the Mississippi Research and Development Center, the United States Geological Survey, the State Department of Education, and numerous personnel in municipal and county offices throughout the study area.

Acknowledgment is hereby given the Mississippi Marine Resources Council and its staff. Special appreciation is expressed to Mr. Jerry Mitchell, Coastal Zone Management Coordinator for MMRC for his assistance in the culmination of this work.

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
TASK I - AREAWIDE WATER SUPPLY, SANITARY SEWERAGE, & SOLID WASTE DISPOSAL	4
Water Supply	4
Wells	5
Storage	8
Water Demands & Forecasts	8
Sanitary Sewerage	10
Solid Waste Disposal	10
TASK II - INDUSTRIAL PARKS & INDIVIDUAL SITES	15
Individual Industries	15
Industrial Parks	15
Future Industrial Needs	19
TASK III - ARCHAEOLOGICAL & HISTORICAL SITES	22
Archaeological Sites	22
Historical Sites	24
TASK IV - REGIONAL & LOCAL COORDINATION	27
TASK V - FEDERAL & STATE LAND OWNERSHIP	28
TASK VI - TRANSPORTATION	31
Streets & Highways	31
Airports	32
Railroads	33
Ports & Harbors	35
Interior Navigation	36
TASK VII - HOUSING & POPULATION	40
Population	40
Housing	40
Current Population & Housing Overview	42
Detailed Population & Housing Characteristics	42
TASK VIII - LAND USE & THE MAPPING PROCESS	49
Hancock County	55
Harrison County	58
Jackson County	60
Pearl River County	62
Offshore Islands	64
TASK IX - PARKS & RECREATION	66

TABLE OF CONTENTS cont'd.

	<u>Page No.</u>
TASK X - ELECTRICAL ENERGY TRANSMISSION	74
Description of Existing Miss. Power Co.	
Generating Facilities	74
Description of Existing Miss. Power Co.	
Transmission Facilities	75
Statement concerning Miss. Power Co.'s	
Load Growth	76
Planned New Generating Facilities	79
Land & Water Requirements for Generating Plant Sites ..	81

LIST OF TABLES

Table No.	Title	Page No.
I-1	Regional Water Well Data	7
I-2	Water Well Use	8
I-3	Regional Water Storage Tank Data	9
I-4	Municipal Water Supply Demands & Forecasts	11
I-5	Municipal Sanitary Sewerage Volumes & Forecasts	12
I-6	Solid Waste Disposal Volumes & Forecasts	14
II-1	Regional Industrial Sites	16
II-2	Point Source Loadings - Biloxi Bay Watershed	17
II-3	Point Source Loadings - Pascagoula Escatawpa Estuary	18
II-4	Industrial Park Summary	20
III-1	Regional Archaeological Sites	23
III-2	Regional Historic Sites	26
V-1	Federal & State Land Ownership	29
VI-1	Selected Air Traffic Data for General Aviation Airports	34
VI-2	L & N Railroad Schedule	35
VI-3	Revenue Tonnage Maritime Ports of Pascagoula & Gulfport	37
VI-4	Navigable Inland Waterways	39
VII-1	Population Growth Patterns	41
VII-2	Housing Growth Patterns	41
VII-3	Population & Housing Density Coding System	44
VII-4	Municipal Population & Housing Existing & Forecasted	45
VII-5	Unincorporated Area Population & Housing - Existing & Forecasted	46
VII-6	Municipal Population - Five Year Intervals	47
VII-7	Countywide Population Estimates - Existing & Forecasted	48

LIST OF TABLES continued

Table No.	Title	Page No.
VIII-1	Existing Land Use Summaries	56
VIII-2	Harrison County Residential - Commercial Analysis	59
IX-1	Regional Parks & Recreation Areas	67
IX-2	Recreation Standards & Requirements Selected Activities - Hancock County	69
IX-3	Recreation Standards & Requirements Selected Activities - Harrison County	70
IX-4	Recreation Standards & Requirements Selected Activities - Jackson County	71
X-1	Electrical Energy Needs - Existing & Forecasted	79

LIST OF FIGURES

Figure No.	Title	Page No.
1	Township Code Key	2
I-1	General Location of Water Wells & Storage Tanks, Solid Waste Disposal Sites, & Sanitary Sewage Plants	6
III-1	General Location of Significant Archaeological & Historical Sites	25
V-1	Federal and State Owned Lands	30
VII-1	General Population Distribution	43
VIII-1	Existing Land Use	50
VIII-2	Future Land Use	51
VIII-3	Population Distribution	52
VIII-4	Federal and State Land Ownership	53
X-1	Electric System	77

INTRODUCTION

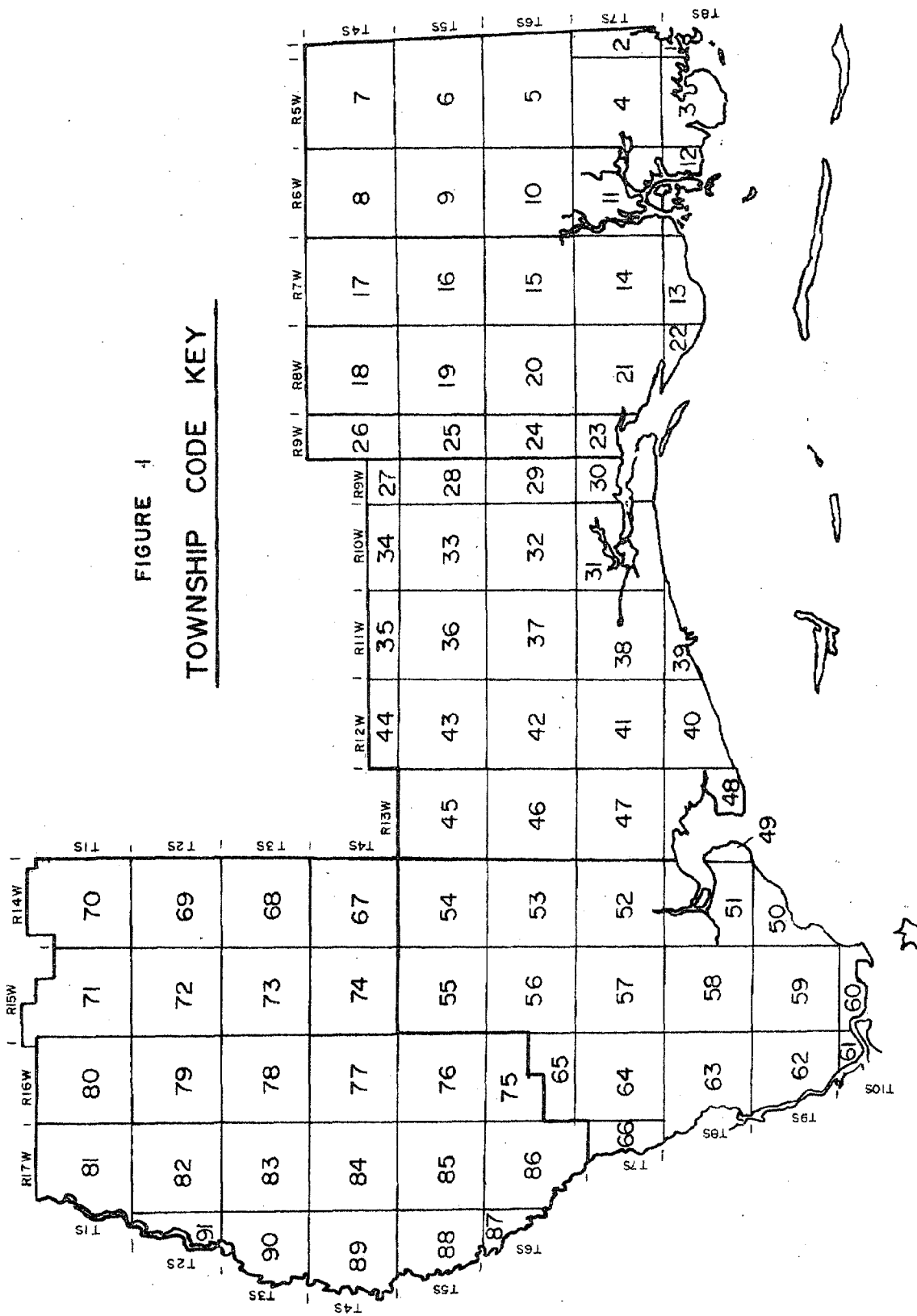
The development of a coastal zone management plan, as with all other planning processes, must first begin with an inventory of those assets within a given area. The purpose of this report, therefore, is to serve as a supplement to a land use mapping project prepared by the Gulf Regional Planning Commission for the Mississippi Marine Resources Council.

Existing land uses within the boundaries of Hancock, Harrison, Jackson, and Pearl River Counties, Mississippi, have been inventoried and the data stored for analytical purposes. The primary purpose of work to be performed under this contract is that of land use mapping. Specific mapping elements addressed include 1) existing land uses, 2) future land uses, 3) Federal and State owned lands and 4) distribution of existing and future housing and population.

Supporting data in the form of texts and tabulations are included herein to further explain and identify existing and future land use trends in the study area. Specific elements addressed in this text include areawide water supply, sanitary sewerage and solid waste disposal, industrial land uses, archaeological and historical sites of critical concern, an inventory of Federal and State owned lands, transportation, housing and population, general land uses and the mapping process, recreation and open space, and energy generation and transmission.

The land use mapping process was performed on 5 mill clear mylar overlays over 5 mill mylar base maps at a scale of 1:24000 or 1 inch equals 2000 feet. As illustrated by Figure 1, there are 91 base maps covering the four counties in the study area, with four overlays for each base map addressing the four land use mapping elements previously mentioned. Overlays have been color coded and they are further explained in this text to highlight various land use components. Since the project involved the

FIGURE 4
TOWNSHIP CODE KEY



preparation of 455 maps measuring 24" x 32", a sample township was selected, reduced and included with this report to assist in explaining the mapping process.

It was beyond the scope of the program to provide an analytical computerized model to either evaluate existing land use arrays or to predict changes in the future. But by being aware of these possibilities in the near future, the mapping process undertaken in this study was conducted to allow ultimate direct encoding of the data on to magnetic (computer) tape with minimum effort.

To facilitate the comprehension of the material involved, the data are presented by ten individual Tasks as follows:

- TASK I - Areawide Water Supply, Sanitary Sewerage, & Solid Waste Disposal,
- TASK II - Industrial Parks and Individual Sites,
- TASK III - Archaeological and Historical Sites,
- TASK IV - Regional and Local Coordination,
- TASK V - Federal and State Land Ownership,
- TASK VI - Transportation,
- TASK VII - Housing and Population,
- TASK VIII - Land Use and the Mapping Process,
- TASK IX - Parks and Recreation, and
- TASK X - Electrical Energy Transmission

TASK I

AREAWIDE WATER SUPPLY, SANITARY SEWERAGE, AND SOLID WASTE DISPOSAL

Because human health and well-being is so dependant on its water supply, proper disposal of sanitary sewerage, and solid waste management, these elements of regional land use must be carefully examined. In order to do this an Urban Systems Engineering Study (USE) was conducted for the Gulf Regional Planning Commission in 1972. The USE study, along with updated and standardized data, serves as a basis for the following text and tabulations. It must be understood, though, that as water, sewerage, and solid waste are individually discussed, they are only generally examined. More in-depth data can be obtained from the USE study or other sources.

Water Supply

Water demands have been increasing more rapidly than the population. It cannot be assumed, though, that such increases can continue indefinitely. Available supplies of good quality water are decreasing nationwide, and since ultimate supply is more or less fixed, more efficient use of existing waters is eminent. Many areas throughout the nation are experiencing serious water shortages, but Mississippi is one of the few remaining states having large potential supplies to offer the planner, developer, and manager of water resources.

Mississippi is endowed with abundant water resources which have, for the most part, been only partially developed. Except for the Mississippi River, which passes along the west boundary of the region with a minimum discharge of 99,900 cfs (observed on September 3, 1963, at Natchez, Mississippi) very little surface water is received from outside the State. Groundwater replenishment occurs primarily from rainfall. Mean annual runoff exceeds 15 inches throughout the State while runoff in the Gulf Coast Region ranges from 24 to 32 inches annually.

In order to address water needs and supply, data collection and mapping were restricted to existing water wells and storage facilities, and existing and forecasted water demands. Each are addressed as follows:

Wells: Collection and mapping of water well data was restricted to wells with pump rates of 350 gallons per minute or greater. Such restrictions are necessary to the mapping process due to the fact that approximately 5,000 wells are identified by the United States Geological Survey (USGS) in Harrison and Jackson Counties alone. Mapping of all wells under these circumstances would be a monumental task, even at the map scale being used, and provide limited significant data.

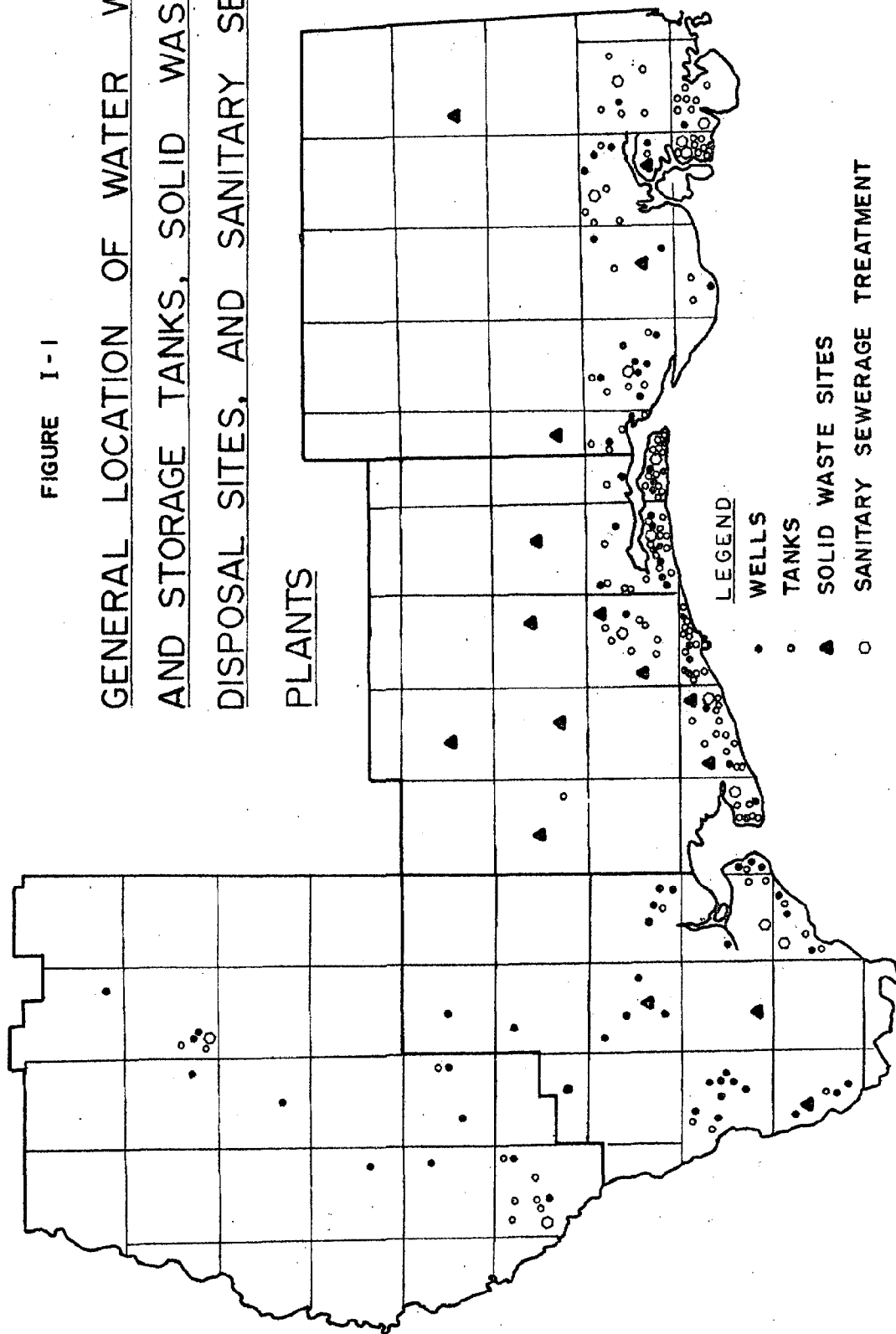
Of an estimated seven to eight thousand wells located throughout the four county study area, only 159 wells are mapped and identified. These constitute major wells being used by various political jurisdictions, individual residential developments, industrial sites and military installations.

Table I-1 contains identification of each well by owner and corresponding map codes on the existing land use overlays. Also shown are USGS identification codes, pump rates and related water well uses. Water uses are identified in Table I-2. Water well locations are generally located on Figure I-1, and as can be seen, most are situated within the urban strip along the coast.

FIGURE I-1

GENERAL LOCATION OF WATER WELLS
AND STORAGE TANKS, SOLID WASTE
DISPOSAL SITES, AND SANITARY SEWERAGE

PLANTS



REGIONAL WATER WELL DATA

SOURCE: United States Geological Survey Office, Jackson, Miss., 1975; and selected USGS Publications.

TABLE I-2
WATER WELL USE

Symbol	Water Use
C	Commercial
F	Fire Protection
H	Domestic
I	Irrigation
N	Industrial
P	Public Supply
T	Institutional
U	Unused
Z	Other

SOURCE: United State Geological Survey Office,
Jackson, Miss., 1975; and selected USGS
Publications.

Storage: Water storage is accomplished through ground storage facilities with associated pumping equipment or by the use of elevated tanks. Water is stored primarily to equalize water pressure during peak demand and for reserves when well supply is not sufficient to meet demands.

Storage facilities are identified in Table I-3. Tank numbers correspond to numbers located on existing land use overlays. This tabulation has been prepared in order to identify tanks by location, owner and capacity. There are 71 storage facilities in the region and 33 (or 46 percent) of these facilities are classified as ground storage.

Water Demands and Forecasts: Maximum daily demands for water are computed on the basis of standard requirements and known populations. Water demands for maximum daily use and for fire protection requirements have been computed on a basis fo 250 gallons per person. Actual needs may vary with municipality.

REGIONAL WATER STORAGE TANK DATA

SOURCE: U.S.G.S. Public & Industrial Water Supplies in Southern Miss., 1974, Bulletin No. 75-2, U.S.G.S. in cooperation with the Miss. Board of Water Commissioners.

Existing municipal demands and forecasts to year 2000 are shown in Table I-4. Daily demands range from 58,000 gallons per day for Poplarville (based on 1972 population estimates) to 13,070,000 gallons per day for Gulfport.

Sanitary Sewerage

Sewage is defined as a combination of liquid wastes conducted away from residences, businesses, buildings and institutions along with such ground and storm water as may be present. Sewage from residences, business buildings, and institutions is referred to as domestic or sanitary sewage while sewage from industrial establishments is commonly called industrial waste. A sewerage system is a collection of sewers with all their appurtenances, combined so as to operate together and serve a certain district. Separate sewerage systems collect only domestic sewage and/or industrial wastes while combined sewerage systems also accommodate storm run-off. The mapping phase of the inventory of existing sewerage treatment facilities in the region is restricted to systems operated by the municipal governments, (refer to Figure VIII-1). Sources indicate that in addition to the 15 municipal plants listed in Table I-5, numerous small independent systems are in operation throughout the region, but only the municipal plants are included in this study. Included in Table I-5 are treatment plant numbers and corresponding map codes on the existing land use overlays. Individual plants are identified by municipality, plant capacity and discharge points. Waste water volume-to-capacity ratios shown for 1975 and 2000 indicate that currently only Pass Christian is approaching plant capacity. However, by year 2000, five of the nine municipal systems will be overloaded.

Solid Waste Disposal

The location of solid waste disposal sites are identified on existing land use overlays, (for reference see Figure VIII-1). There are 16 sites throughout the region

TABLE I - 4

MUNICIPAL WATER SUPPLY DEMANDS AND FORECASTS
GULF REGION

County	Municipal System	Maximum Daily Demand (MGD)	
		1975	2000
HANCOCK	Bay St. Louis	1.71	2.73
	Waveland	1.15	1.61
HARRISON	Pass Christian	1.79	2.62
	Long Beach	2.31	3.05
	Gulfport <u>1 /</u>	13.07	17.04
	Biloxi <u>1 /</u>	10.76	18.12
JACKSON	Ocean Springs	3.54	5.09
	Moss Point	5.00	9.34
	Pascagoula	8.47	12.89
PEARL RIVER <u>2 /</u>	Picayune	2.72	-----
	Poplarville	0.58	-----

1 / Excludes Military Demands & Forecasts
2 / Daily Demand is based on 1972 population. Data for future demands are
not available.

TABLE I - 5

MUNICIPAL SANITARY SEWAGE
VOLUMES and FORECASTS

Map Code	Plant No.	Municipality	Plant Capacity (MGD)	Discharge Point	Waste Water Volumes		
					1975 (MGD)	Vol./Capacity Ratio (%)	2000 (MGD) Vol./Capacity Ratio (%)
50	1	Waveland	0.53	Edwards Bayou	0.46	87	0.64 121
51	2	Bay St. Louis	1.25	Watt's Bayou	0.69	55	1.09 87
48	3	Pass Christian	0.75	Sutter Bayou	0.71	95	1.05 140
40	4	Long Beach	1.20	Canal No. 1	0.92	77	1.22 102
38	5	Gulfport	8.25	Bernard Bayou	5.23	63	6.82 83
31	6	Biloxi	6.00	Back Bay			
30	7	Biloxi	5.00	Back Bay	4.30	39	7.25 66
21	8	Ocean Springs	2.00	Inner Harbor	1.41	71	2.04 102
11	9	Mass Point	0.50	Escatawpa River			
4	10	Mass Point	4.50	Escatawpa River	2.00	40	3.74 75
12	11	Pascagoula		Pascagoula River			
12	12	Pascagoula	4.30	Lake Ave. Lake	3.39	79	5.16 120
3	13	Pascagoula		Bayou Casotte			
72	14	Poplarville	0.35	Jump Off Creek	0.23	66	-----
86	15	Picayune	3.00	Mill Creek	1.09	36	-----

which may be classified as sanitary landfills. Three of these are located in Hancock County, nine are located in Harrison County and four are located in Jackson County. Landfill operations are normally performed by placing refuse in a natural or manmade trench, compacting it and then it is covered with a layer of earth and again compacted. In several instances open dumping was found within the region but because of the magnitude and low frequency of such occurrences, no effort was made to segregate these.

Solid waste volumes and forecasts are shown in Table I-6. Included are land area requirement ranges based on population. It is estimated that with current disposal methods, normal area requirements range between 1 and 2.5 acres per 10,000 population per year. Volumes, both existing and forecasts, are estimated on normal waste loads of 5.74 lbs. per person per day.

The Mississippi State Board of Health, in conjunction with the Mississippi Research and Development Center and the Gulf Regional Planning Commission are currently conducting an inventory and analysis of disposal sites within the study area. Volumes, operation and maintenance costs, and alternate methods of disposal will be evaluated in efforts to determine the feasibility of long range disposal through a central resource recovery station. Once completed, the results of this study should prove valuable in assessing present problems and addressing needs of the future.

TABLE I-6

SOLID WASTE DISPOSAL VOLUMES AND FORECAST

Area	1975				2000					
	Population	Solid Waste		Land Area Requirements Range (Acres/Yr.)	2 /	Population	Solid Waste		Land Area Requirements Range (Acres/Yr.)	2 /
		Lbs./Day	Tons/Year				Lbs./Day	Tons/Year		
MISSISSIPPI GULF REGION 1 /										
Total Population	313,605	1,800,150	328,526	31.4 - 78.8		490,092	2,813,100	513,390	48.8 - 122.2	
Urban Population	204,870	1,176,000	214,618	20.5 - 51.5		303,587	1,742,550	318,014	30.2 - 75.6	
Rural Population	108,735	624,150	113,908	10.9 - 27.3		186,505	1,070,550	195,376	18.6 - 46.6	
HANCOCK COUNTY										
Bay St. Louis	6,854	39,350	7,181	0.7 - 1.8		10,899	62,550	11,415	1.1 - 2.8	
Waveland	4,614	26,500	4,836	0.5 - 1.3		6,438	36,950	6,743	0.6 - 1.5	
Rural	9,732	55,850	10,193	1.0 - 2.5		27,053	155,300	28,342	2.7 - 6.8	
HARRISON COUNTY										
Pass Christian	7,149	40,050	7,492	0.7 - 1.8		10,488	60,200	10,987	1.0 - 2.5	
Long Beach	9,239	53,050	9,682	0.9 - 2.3		12,204	70,050	12,784	1.2 - 3.0	
Gulfport	52,291	300,150	54,777	5.2 - 13.0		68,156	391,200	71,394	6.8 - 17.0	
Sea Bee Base (NCBC) 3 /	1,563	8,950	1,633	0.2 - 0.5		1,563	8,950	1,633	0.2 - 0.5	
BiLoxi	43,025	246,950	45,068	4.3 - 10.8		72,471	416,000	75,920	7.2 - 18.0	
Keesler AFB 3 /	12,083	69,350	12,656	1.2 - 3.0		12,083	69,350	12,656	1.2 - 3.0	
Rural	51,419	295,150	53,865	5.1 - 12.8		78,986	453,400	82,746	7.9 - 19.8	
JACKSON COUNTY										
Ocean Springs	14,170	81,350	14,846	1.4 - 3.5		20,357	116,850	21,325	2.0 - 5.0	
Miss Point	20,008	114,850	20,960	2.0 - 5.0		37,362	214,450	39,137	3.7 - 9.3	
Pascagoula	33,874	194,450	35,487	3.4 - 8.5		51,566	296,000	54,020	5.2 - 13.0	
Rural	47,584	273,150	49,850	4.8 - 12.0		80,466	461,850	84,288	8.0 - 20.0	
PEARL RIVER COUNTY 4 /										
Picayune	10,889	62,500	11,406	1.1 - 2.8						
Poplarville	2,317	13,300	2,427	0.2 - 0.5						
Rural	17,026	97,750	17,839	1.7 - 4.3						

1 / Excludes Pearl River County

2 / Normal Area Requirements for Sanitary Land Fill dictate that from 1 to 2.5 acres of land be available for each 10,000 persons per year. This figure is based on a compacted refuse depth of about seven feet.

3 / Includes all personnel residing in on-base housing-including group quarters, single family units, multi-family units & mobile homes. Data are accurate only at time of the study. Projected data assumes complete occupancy of total on-base housing to the year 2000.

4 / Requirements for Pearl River County based on 1972 population.

TASK II

INDUSTRIAL PARKS AND INDIVIDUAL SITES

Land use surveys conducted in 1972 by the Gulf Regional Planning Commission indicated that approximately 12,600 acres in Hancock, Harrison, Jackson and Pearl River Counties were being utilized for industrial purposes. These uses ranged from small insignificant sites such as borrow pits and automobile junk yards to major industries like the Ingalls Division of Litton Shipbuilding in Pascagoula.

It is the purpose of this section to identify and explain the delineation of major industries and industrial parks as depicted on the land use overlays. Industrial land uses were mapped in two segments covering individual industries of major significance and both existing and proposed industrial parks, (refer to Figure VIII-1).

Individual Industries

Individual Industries were mapped on existing land use overlays and numbered so as to correspond to site numbers in Tables II-1. Only the most significant sites were numbered. All industries with 50 or more employees were identified as were all industries with point sources of industrial waste discharge. Included in Table II-1 are site names, number of employees, industrial products, corresponding standard industrial classification numbers, and known points of industrial discharge. More detailed point source loadings for the Biloxi Bay watershed and the Pascagoula-Escatawpa Estuary area are contained in Tables II-2 and II-3 respectively. Similar data are not presently available for the Bay St. Louis watershed.

Industrial Parks

The term industrial parks as used in this report has two connotations - industrial parks and industrial districts. Parks may be defined as those areas legally delineated and subdivided, cleared and made void of non-conforming land uses, equipped with various

TABLE II - I

REGIONAL INDUSTRIAL SITES

Map No.	Site No.	Site Name	No. Of Employees	Product	SIC Code	Discharge Point
HANCOCK COUNTY						
UNINCORPORATED						
23	1-1	J. L. Fabricating, Inc.	50	Steel Fabrication	3441	
62	1-2	Jackson Landing Shipyard	150	Petroleum Barges	3731	
PASS CHRISTIAN						
28	1-3	Pax Christian Industries, Inc.	495	Ladies Jeans & Slacks	2639	
48	1-4	Gulf Coast Pre-Stress Co., Inc.	77	Pre-stress concrete products	3272	
GULFPORT						
38	1-5	Masonite Corp. - Alpine Division	9	Phenol Formaldehyde resin	2821	Bernard Bayou
38	1-6	Bayou Steel Corp.	63	Reinforcing bars	3323	
38	1-7	Chattanooga Glass Company	234	Glass Bottles	3221	Brickyard Bayou
38	1-8	Chem-Fab, Inc.	41	Plastic Hydrocarbon Resin	2821	Bernard Bayou
31	1-9	Champion Components, Inc.	98	Wall & Roof Trusses	2422	
38	1-10	Coast Coca-Cola Bottling Co.	56	Soft Drinks	2086	
38	1-11	Coast Metals Co.	50	Ready-Mixed Concrete	3272	
38	1-12	Colonial Baking Co.	130	Breads & Rolls	2051	
38	1-13	Conoco - Oils Corporation	168	Aluminum extrusions	3354	
38	1-14	Glenbrook Laboratories - Sealing Drugs	85	Longevity	2854	
31	1-15	Gulf Coast Tool & Die Ltd.	100	Metal Stamping	3469	
38	1-16	Gulf Paving, Inc.	125	Custom Machine Tools	3554	
38	1-17	NAICO	231	Asphaltic Concrete	2951	Harrison Crty. Industrial Seaway
38	1-18	Gulfport Creosoting Co.	86	Treated Pine Poles	2491	Bernard Bayou
39	1-19	KUDA, Inc. No. 1	52	Ladies & Men's Apparel	2331	
31	1-20	Marine Systems	50	Metal Fabrication	3441	
39	1-21	Maybelle Dress Mfg. Co., Inc.	200	Wood Fabrication	2431	
38	1-22	PACECO	205	Ladies Apparel	2339	
38	1-23	Plastifab, Inc.	24	Heavy Steel Fabrication	3441	Harrison Crty. Industrial Seaway
31	1-24	Reichhold Chemicals, Inc.	71	Barges & Tugboats	3731	Harrison Crty. Industrial Seaway
31	1-25	Southern Precision Steel Co.	130	Chlorinated Paraffin	2865	Harrison Crty. Industrial Seaway
38	1-26	Sturges Wells - Gulfport, Inc.	117	Metal Soaps	2869	Tributary of Big Lake
38	1-27	Teledyne Inby Steel	200	Hydrocarbon resins	2821	
31	1-28	McElroy Machine & Mfg. Co.	23	Antioxidents	2869	Harrison Crty. Industrial Seaway
31	1-29	Mits. Power Co. - Plant Jack Watson		Cold-finished carbon & alloy bars	3316	
BILLOXI						
30	1-30	Borg's Bottling Co.	50	Sewage treatment equipment	3443	
30	1-31	Biloxi Pre-Stress	47	Pressure vessels & steel fabrication	3443	
30	1-32	Borden Company	90	Marine Winches	3443	Bernard Bayou
30	1-33	C. C. Company, Inc.	75	Marine Propeller Shafts	3443	
30	1-34	Clement Wire Mfg. Co.	51	Electrical Generating Plant	3443	
30	1-35	Du-Jean Packing Co., Inc.	60	Soft Drinks	2086	
30	1-36	Dell's Sewery Shrimp & Oyster Co.	130	Pre-stressed concrete products	3272	
30	1-37	R. Fournier & Sons	40	Dairy Products	2026	
30	1-38	C. F. Gollart & Son Seafood Co.	35	Canned Seafood	2071	
30	1-39	E. M. Gollart & Son Seafood Co.	18	Automotive Wire Harness	3714	
30	1-40	Gollart & Gussan Seafood Co.	15	Canned Seafood	2091	
30	1-41	The M. H. Graham Corp.	85	Cat Food	2067	Mississippi Sound
31	1-42	Gulf Publishing Company, Inc.	270	Frozen Shrimp & Oysters	2092	
30	1-43	Leckich & Foyard Seafood Co., Inc.	115	Shrimp, Crab & Crab meat	2092	Biloxi Bay
30	1-44	Moore Seafood Co.	100	Frozen Shrimp	2092	Biloxi Bay
30	1-45	Shrimp Seafood Co.	75	Frozen Shrimp	2092	Biloxi Bay
30	1-46	West Seafood Co.	30	Frozen Crabmeat & Oysters	2092	
30	1-47	Kull's Seafood & Ice Co.	30	Electrical Appliances	3654	
30	1-48	Sea Coast Company	30	Household Metal Products	3469	
30	1-49	Cruco Canning Company	30	Newspaper	2711	
30	1-50			Frozen Shrimp	2092	Biloxi Bay
				Canned Shrimp & Oysters	2091	Mississippi Sound
				Canned Shrimp	2091	Mississippi Sound
				Frozen Shrimp	2092	Mississippi Sound
				Frozen Seafood	2092	Mississippi Sound
				Seafood Products	2092	Mississippi Sound
				Seafood Products	2092	Mississippi Sound
				Canned Seafood	2091	Biloxi Bay
JACKSON COUNTY						
OCEAN SPRINGS						
21	1-39	Coco Cola Bottling Co., Inc.	49	Soft Drinks	2086	
21	1-40	Ferson Optics	211	Optical Equipment	3832	
21	1-41	E. R. Moore Co.	98	Ladies Gym Suits	2339	
21	1-42	Toche Enterprises, Inc.	82	Academic Gowns	2389	
21	1-43	Delta Creosoting Co., Inc.	42	Steel Sagoing Vessels	3732	
GAUTIER						
12	1-43			Creosote piling, poles, posts, etc.	2491	
MOSS POINT						
11	1-44	Cresfield Products Corp.	7	Latex Industrial Flooring	2881	Discharge Point Unknown
4	1-45	The Fishmeal Co., Inc.	70	Menhaden Fish Meal	2077	Escalante River
4	1-46	Halper Marine Fabricators, Inc.	350	Offshore Supply Ships	3731	Escalante River
4	1-47	International Paper Company	1504	Paper Products	2621	Escalante River
11	1-48	J. M. Rogers & Sons, Inc.	82	Lumber	2426	
4	1-49	Standard Products, Inc.	47	Wood Pellets	2448	
4	1-50	Thokol Corp.	178	Fish Meal & Oil	2077	Escalante River
				Polyamide rubbers & Polyacrylates	2822	Escalante River
NOTE: Sites 71 thru 79 were intentionally omitted because they do not meet parameters.						
PEARL RIVER COUNTY						
BILLOXI						
30	1-51	Bayou Crab Company	70	Processed Crabmeat	2091	
11	1-52	Cinderella Knitting Mills	400	Men & Boy's Knit Underwear	2322	
12	1-53	Continental Can Company, Inc.	135	Metal Battle Caps	3466	
3	1-54	Carbide Division of Carbide Refractories Co.	80	Magnesium Oxide & Dolomite	2819	Mississippi Sound
3	1-55	First Miss. Chemical Corp.	48	Orchardlime	2865	Bayou Casate
12	1-56	Frightemp Marine Division	550	Ship sheet metal work, furniture, etc.	2599	
12	1-57	Gulf City Fisheries	400	Fresh & Frozen Seafood	2092	
12	1-58	Ingalls Shipbuilding Division	19000	Naval & large commercial vessels	3731	
3	1-59	Mits. Chemical Corporation	535	Fertilizers	2873	
12	1-60	The Mits. Press Regulator	92	Sulfuric Acid	2819	
12	1-61	Pavco Industries, Inc.	140	Newspaper	2711	
12	1-62	The Quaker Oats Co.	175	Plywood paneling	2435	
3	1-63	Standard Oil Co.	620	Sanded hullboard	2426	Pascagoula River
12	1-64	F. B. Walker & Sons Shipyard	99	Canned cat & dog food	2047	
12	1-65	Clark Seafood		Petroleum Fuels	2911	
12	1-66	Graham Boats, Inc.		Boat Building	3732	Pascagoula River
12	1-67			Seafood Products	2092	
12	1-68			Boat Building	3732	Pascagoula River
PASCAGOULA						
3	1-69					
11	1-70					
12	1-71					
12	1-72					
12	1-73					
12	1-74					
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12	1-97					
12	1-98					
12	1-99					
12	1-100					
PASCAGOULA						
3	1-92					
12	1-93					
12	1-94					
12	1-95					
12	1-96					
12	1-97					
12	1-98					
12	1-99					
12	1-100					
PEARL RIVER COUNTY						
PASCAGOULA						
3	1-92					
12	1-93					
12	1-94					
12	1-95					
12	1-96					
12	1-97					
12	1-98					
12	1-99					
12	1-100					
PEARL RIVER COUNTY						
PASCAGOULA						
3	1-92					
12	1-93					
12	1-94					
12	1-95					
12	1-96					
12	1-97					
12	1-98					
12	1-99					
12	1-100					
PEARL RIVER COUNTY						
PASCAGOULA						
3	1-92					
12	1-93					
12	1-94					
12	1-95					
12	1-96					
12	1-97					
12	1-98					
12	1-99					
12	1-100					
PEARL RIVER COUNTY						
PASCAGOULA						
3	1-92					
12	1-93					
12	1-94					
12	1-95					
12	1-96					
12	1-97					
12	1-98					
12	1-99					
12	1-100					
PEARL RIVER COUNTY						
PASCAGOULA						
3	1-92					
12	1-93					
12	1-94					
12	1-95					
12	1-96					
12	1-97					
12	1-98					
12	1-99					
12	1-100					
PEARL RIVER COUNTY						
PASCAGOULA						
3	1-92					
12	1-93					
12	1-94					
12	1-95					
12	1-96					
12	1-97					
12	1-98					
12	1-99					
12	1-100					
PEARL RIVER COUNTY						
PASCAGOULA						
3	1-92					
12	1-93					
12	1-94					
12	1-95					
12	1-96					
12	1-97					
12	1-98					
12	1-99					
12	1-100					
PEARL RIVER COUNTY						
PASCAGOULA						
3	1-92					
12	1-93					

TABLE II-2
POINT SOURCE LOADINGS¹
BILOXI BAY WATERSHED AREA
EPA WASTE SOURCE SURVEY, JULY-AUGUST, 1972

Point Source	Receiving Water	0 MGD	BOD ₅ lbs/day	Total N lbs/day	Total P lbs/day	Total Solids lbs/day	Phenols lbs/day	Heavy Metals lbs/day ²	Oil and Grease lbs/day	Total coli /100ml	Fecal coli /100ml	pH	Temp. °C
DeJean Packing Co. ³	Biloxi Bay	0.32	4150	590	83	4220	--	--	--	210,000	2,150	6.3	29.0
Southern Shellfish Co. ³	Back Bay	0.19	1600	217	34	3960	--	--	--	1,370,000	40,200	9.1	28.5
Biloxi Canning and Packing Co. ³	Back Bay	0.30	2400	287	57	2840	--	--	--	50,300	32,500	9.4	30.0
Kuljis Seafood Co. ³	Back Bay	0.027	18	8	1	115	--	--	--	540,000	2,300	7.9	28.5
Suarez Seafood Co. ³	Back Bay	0.02	190	33	4	339	--	--	--	79,000	33,000	7.2	29.0
Sterling Drug Co	Brickyard Bayou	0.27	11	<2	<1	5100	--	0	--	--	--	9.2	51.5
Chattanooga Glass Co	Brickyard Bayou	0.19	13	<2	<1	563	--	0	42	--	--	8.8	35.0
Olin Corporation	Brickyard Bayou	1.21	17	4	3	2020	--	0	--	--	--	8.2	32.5
Plastifax	Industrial Seaway	0.10	10	<2	<1	1550	0.1	--	10	--	--	1.7	30.0
Reichhold Chemicals, Inc	Big Lake	0.52	161	16	2	1560	<1	<24	47	160,000	35,000	8.4	34.0
Biloxi STP (old)	Keegan Bayou	2.90	327	503	202	24300	0	<9	--	170	58	7.3	30.0
Ocean Springs STP	Ocean Springs Harbor	1.27	572	388	122	5300	0	--	--	2,880	391	7.5	30.0
Keesler AFB STP	Back Bay	2.82	549	325	124	7840	1.0	<10	--	190	32	7.1	30.0
Gulfport STP	Bayou Bernard	3.40	1410	686	188	11200	1.5	<17	142	272	42	7.2	29.0

¹loadings computed on a pounds added basis

²total of Cd, Cr, Cu, Hg, Ni, Pb, Zn

³may not be representative of average loadings

SOURCE: Water Resources Engineers, Inc.

TABLE II-3
POINT SOURCE LOADS¹
PASCAGOULA-ESCATAWPA ESTUARY AND CONTIGUOUS COASTAL AREAS
EPA WASTE SOURCE SURVEY, JULY-AUGUST, 1972

Point Source	Receiving Stream	Approximate River Mile	0 MGD	BOD, lbs/day	Total N lbs/day	Total P lbs/day	Total Solids lbs/day	Phenols lbs/day	Heavy Metals lbs/day ²	Oil and Grease lbs/day	Total coli /100ml	Fecal coli /100ml	pH	Temp °C
International Paper Co	Escatawpa	5	32.0	39,900	428	154	324,000	188	74	--	102,000	10,800	6.2	43.0
Thiokol Chemical Co	Escatawpa	4	3.0	24,600	39	6	216,000	6	<7	3,030	--	--	9.9	34.0
Standard Products Co ³	Escatawpa	4	2.0	1,300	18	6	3,910	--	--	112	--	--	5.7	44.0
Haynie Products ³	Escatawpa	4	5.0	2,370	410	22	--	--	--	306	--	--	6.5	37.0
The Fishmeal Co ³	Escatawpa	4	0.4	144	67	--	--	--	--	8	--	--	7.8	46.5
Gulf City Fisheries ³	Pascagoula	2	0.12	1,010	101	15	1,270	--	--	--	--	--	7.5	24.0
Quaker Oats Co ³	Pascagoula	2	0.29	5,000	325	54	4,380	--	2	229	--	--	8.2-6.5 ⁴	30.0
Ingalls Shipbuilding	Pascagoula	1	0.04	0	--	--	1,440	--	4	0	--	--	6.4-0.2 ⁴	32.0
Delta Creosoting	West Pasc.	1	0.02	973	--	--	904	24	0	15	--	--	4.1	28.5
Continental Can Co	Bayou Chico	--	0.06	0	--	--	305	--	0	--	--	--	7.7	35.0
First Chemical Co	Bayou Casotte	--	0.01	--	127	0	2,730	20	0	--	--	--	9.5	28.0
Mississippi Chemical Co	Bayou Casotte	--	66.2	82	11,580	3,120	--	--	<35	--	--	--	9.1-2.2 ⁴	40.0
Chorchem, Inc.	Miss. Sound	--	13.6	0	15	0	0	--	26	--	--	--	10.0	30.0
Standard Oil Co	Miss. Sound	--	27.5	2,110	570	42	--	10	139	0	233	30	8.1	32.0
Moss Point STP#1	Pascagoula	7	.15	44	35	10	--	--	--	--	4,870	1,480	7.2	31.0
Moss Point STP#2	Escatawpa	3	1.26	510	342	129	9,150	0.7	--	5.0	401	254	7.5	30.0
Escatawpa STP#1	Escatawpa	1	0.16	9	30	4	862	--	--	--	60	20	7.2	26.5
Escatawpa STP#2	Pascagoula	12	0.08	10	17	5.5	307	--	--	--	1,200,000	1,170,000	7.5	28.5
Pascagoula Main STP	Pascagoula	2	2.8	1,000	349	168	148,000	2.5	<18	10.0	33,300	6,970	7.2	30.0
Pascagoula Bayou Casotte STP	Bayou Casotte	--	0.86	678	387	141	6,980	--	--	--	748	483	7.4	29.5
Pascagoula East Side STP	Pascagoula	3	0.40	107	19	22	2,400	--	--	<5.0	354	43	7.2	28.5
Ingalls Shipbuilding STP	Pascagoula	1	0.35	41	73	9	2,980	--	--	--	114,000	65,200	7.8	26.0

¹Loadings computed on a pounds added basis

²Total of Cd, Cr, Cu, Hg, Ni, Pb, Zn

³May not be representative of average loadings

⁴pH from various outfalls

facilities, utilities and services optionally supplied in parks, and otherwise made ready for immediate occupancy by industrial firms. Industrial districts may be defined as those areas which have been legally set aside or zoned for industrial use. Unlike parks, districts, used in this context, may or may not have other land uses occupying space inside the district limits.

This distinction is made in order to explain industrial park delineation on land use overlays. Where parks exist in an area, they are delineated on the existing land use overlay. In most instances, parks are not totally occupied, but since the land within the park has been prepared for immediate occupancy, it must be shown as an existing land use. Examples of this are seen in all parks in Harrison and Hancock Counties.

Districts, on the other hand, because they are zoned industrial, are shown on the future land use overlay, (see Figure VIII-2). Existing land uses within these districts were mapped and identified as they exist. In essence, the existing land uses of an area regardless of the zoning classification, are shown on the existing overlay.

In Jackson County, many of the areas zoned industrial are totally occupied by industrial or manufacturing firms. Here the land use is shown on both existing and future overlays. Other areas which have been zoned industrial, but in fact presently exhibit other land uses are shown on the future overlay.

Industrial park data are summarized in Table II-4. Individual parks are identified by name, township codes, and owners. Other data include park size and available acreage, existing utilities and services, water use and discharge and types of available transportation. Also shown is the industrial park or district classification.

Future Industrial Needs

Future industrial area needs are shown on future land use overlays. In all instances, areas zoned or otherwise set aside for industrial uses exceed present land utilizations. Therefore, it may be said that future requirements (to the year 2000) for addi-

TABLE II-4
INDUSTRIAL PARK SUMMARY
Hancock, Harrison, Jackson and Pearl River Counties
Gulf Regional Planning Commission - January 1976

Map Code	Name	Ownership	Size (Acres)	Occupied Acreage	Available Acreage	UTILITIES			Water Used (gal/day)	Waste Discharge (gal/day)	Transportation			Remarks
						Water	Gas	Electric			Water	Rail	Roads	
HANCOCK COUNTY														
62	Port Bienville Ind. Park	Hancock County	1460	291	1169	x	x	x	x	8,000	2,000	x	x	Industrial Park
HARRISON COUNTY														
48	Pass Christian Ind. Park	Harrison County	190	94	96	x	x	x	x	10,500		x	x	Industrial Park
40	Long Beach Ind. Park	Harrison County	500	0	500	x		x	x				x	Industrial Park
39	Bayou Benard Ind. Park	Harrison County	1450	949	501	x	x	x	x		100,000	x	x	Industrial Park
30	East Harrison Co. Ind. Park	Harrison County	83	33	50	x	x	x	x	9,600		x	x	Industrial Park
JACKSON COUNTY														
21	Ocean Springs Ind. Park	Jackson County	15	6	9	x		x				x	x	Industrial Park
3	Bayou Casotte Public Terminals	Jackson County	25	0	25	x		x				x	x	Industrial Dist.
3	Bayou Casotte No. 1	Jackson County	242	0	242	x	x	x				x	x	Industrial Dist.
3	Bayou Casotte No. 2	Jackson County	649	4	645	x	x	x				x	x	Industrial Dist.
3	Greenwood Island Ind. Park	Jackson County	311	0	311	x	x	x	x			x	x	Industrial Dist.
12	West Bank Ind. Park No. 1	Jackson County	6	0	6	x	x	x				x	x	Industrial Dist.
12	West Bank Ind. Park No. 2	Jackson County	65	0	65	x		x				x	x	Industrial Dist.
PEARL RIVER COUNTY														
86	Palestine Rd., Site No. 1	Picayune	55	10	45	x	x	x	x			x	x	Industrial Dist.
86	Palestine Rd., Site No. 2	Picayune	53	0	53	x	x	x				x	x	Industrial Dist.
86	Thigpen Ind. Site	Private	50	0	50	x	x	x	x			x	x	Industrial Dist.
86	Stanfield Ind. Site	Private	140	20	120	x	x	x	x			x	x	Industrial Dist.
72	Poplarville-P.R.Co. Ind. Site	Pop./P.R.Co.	51	29	22	x		x					x	Industrial Park
			TOTALS	1436	3909									

SOURCE:

1. Miss. Research & Development Center, Long Beach - General Information
2. Hancock County Port & Harbor Commission - Water Use & Discharge
3. Harrison County Development Commission - Water Use & Discharge
4. Jackson County Planning Commission - General Siting Information

tional industrial areas are incorporated into present parks and/or districts. As shown in Table II-4, of 5,345 acres set aside for industrial use only 1,436 acres are currently being used. Future demands are expected to be absorbed by the remaining 3,909 acres.

TASK III

ARCHAEOLOGICAL AND HISTORICAL SITES

Historical and archaeological sites of significance exist in all three coastal Mississippi Counties. There are numerous structures or landmarks that have witnessed events of political or military importance. Many areas once existed as camps or villages of prehistoric cultures while other sites are important because of their association with personage of historic prominence.

Presently the National Park Service, U. S. Department of Interior, recognizes 11 historically significant sites on the Mississippi Coast.

The Mississippi Department of Archives and History not only recognizes those of the National Parks Service, but also lists approximately 100 archaeological sites and approximately 60 historical sites that are of importance to local and state heritage. It is the purpose, therefore, of this section to identify and explain the significance of each of these sites.

Archaeological Sites

Mississippi's archaeological site distinctions are the product of several decades of survey work done by various governmental agencies as well as private individuals. Many of the site locations are not exact, but rather are included within a known outer boundary. Archaeological sites listed date between 9500 B. C. and 1830 A. D. All of the sites have been subsequently explored and, to a limited extent, excavated. Individual sites are identified in Table III-1 and correspond to site numbers on existing land use overlays, (refer to Figure VIII-1). As shown, several sites have neither names nor degree of significance assigned by the Mississippi Department of Archives and History. However, they have been listed in the Mississippi Statewide Comprehensive Historic Preservation plan as significant sites. Because of this they too are identified on existing land use over-

TABLE III - I
REGIONAL ARCHAEOLOGICAL SITES

Map Code	Site No.	Site Name	Significance
HANCOCK COUNTY			
20	A-1	Campbell Bayou Site	Village site of early & mid woodland periods
51	A-2	Jackson Landing - Mulatto Bayou Site	Historic Indian shell midden - 400 B.C. to 200 A.D.
51	A-3	Joe Bayou Site	Shell midden
50	A-4	Lakeview Midden Site	Shell midden
60	A-5	Lost Site	Village site of woodland & Mississippi periods
56	A-6	Section 20 Site	No details available
HARRISON COUNTY			
48	A-7	Bayou Park Mound Site	No details available
48	A-8	No Name	No details available
48	A-9	No Name	No details available
48	A-10	No Name	No details available
48	A-11	No Name	No details available
48	A-12	Seminary Midden	Shell midden
31	A-13	Wilkes Site	Shell midden
48	A-14	Pine Hill Hotel Site	Shell midden
30	A-15	Back Bay Beach Site	Shell midden
30	A-16	Lopez Place	Shell midden
40	A-17	Tar Pits	No details available
31	A-18	Brodie Site No. II	No details available
31	A-19	Brodie Site No. I	No details available
31	A-20	O'Neal Site	No details available
31	A-21	Alcheson Site	No details available
31	A-22	Oak Lawn Site	No details available
31	A-23	Caron Site	No details available
37	A-24	Baldwin Site	No details available
29	A-25	Janus Site	No details available
30	A-26	Wilde Site	No details available
31	A-27	Fritz Site	No details available
31	A-28	Council Site	No details available
30	A-29	Brodie Site No. III	Occupied during Archaic period
31	A-30	William Site	Shell midden of Woodland period
48	A-31	Acadian Bayou Site No. I	No details available
48	A-32	Discovery Bay Site	No details available
48	A-33	Leon Site	No details available
48	A-34	De Metz Site	No details available
48	A-35	Sutter Site	No details available
48	A-36	Cedar Bayou Site	No details available
48	A-37	DeHite Site	No details available
48	A-38	Diane Site	No details available
JACKSON COUNTY			
12	A-39	Poquette Point Site	Shell midden of Woodland & Mississippi Period
13	A-40	Pointeux Chenes Site	Mounds
13	A-41	Green Site	Shell midden
21	A-42	Graveline Mounds	Shell midden
21	A-43	Magnolia Site	Shell midden
11	A-44	Martin's Bluff Site	Shell midden of Mississippi Period
12	A-45	Schultes Site	No details available
21	A-46	Gallotte Site	No details available
12	A-47	Delmas Place Site	Shell midden of Mississippi Period
12	A-48	Coast Guard Dock Site	Shell midden
9	A-49	Mound Field on Pascagoula	Two mounds
9	A-50	Long Lake Mound	Shell midden
17	A-51	Bradus Old Field Site	Mound
12	A-52	Gautier Site	Shell midden of Mississippi Period
3	A-53	Greenwood Island Site	Shell midden-Periods of Paleo Indian, Poverty Point, Tchula & Marksville
21	A-54	Tencksanya Site	No details available
10	A-55	Indian Site	No details available
10	A-56	Champaign Site	Mound
12	A-57	Shirley Site	No details available
11	A-58	Rudloff Site	No details available
3	A-59	Standard Oil Site	No details available
3	A-60	Coastal Chemical Site	No details available
12	A-61	Spanish Fort Site	No details available
11	A-62	Fulmer Site	No details available
13	A-63	Arquilles Site	No details available
13	A-64	Apple Site	No details available
13	A-65	North Street Site	No details available
21	A-66	Soy Capital Point Site	No details available
JACKSON COUNTY continued			
23	A-67	Griffon Site No. I	No details available
23	A-68	Lenon Site	No details available
10	A-69	Portico	Ceramics of Tchula period & large quantities of animal bone
3	A-70	Bone Yard Site	No details available
23	A-71	Fort Murepes Site No. I B	No details available
23	A-72	Fort Murepes Site No. II	No details available
23	A-73	Ocean Springs Site No. I	No details available
11	A-74	Ocean Springs Site No. II	Woodland period
23	A-75	French Vessel - Bilal Bay	No details available
4	A-76	Escanaba Sites I, II & III	No details available
5	A-77	Dumas Site	Shell midden of Mississippi Period
10	A-78	Dumas Site	Shell midden of Mississippi & Historic periods
11	A-79	Martin Bluff Site No. II	No details available
12	A-80	No Site	Mounds
3	A-81	Pt. Aux Chenes Site	No details available
12	A-82	Wallace Site	No details available
11	A-83	Griffin Point Site	No details available
13	A-84	Stone Site	No details available
13	A-85	Old Shell Landing Site	No details available
12	A-86	Shepard's Island Site	No details available
12	A-87	Mrs. C. M. Shepard Site	No details available
12	A-88	Steve's Site	No details available
13	A-89	Cedar Point Site	No details available
12	A-90	Camp Lamotte	No details available
11	A-91	McIntosh Bayou Site	No details available
2	A-92	Bayou Heron Site	No details available
10	A-93	Portcaw Site	No details available
2	A-94	Betty's Site	No details available
11	A-95	Bob's Site	No details available
9	A-96	Parker's Lake Site	No details available

SOURCE: Mississippi Statewide Comprehensive Historical Preservation Plan, Second Edition, Volume II, Mississippi Department of Archives & History, April, 1974.

lays. The general locations of archaeological sites are shown in Figure III-1.

Historical Sites

Fifty eight sites were identified by the Mississippi Department of Archives and History as areas of particular historic or cultural significance. These sites are of distinct historic, aesthetic or cultural value to both the State of Mississippi and the Gulf Coast. Many of the sites were also identified as historically important by local governments, civic organizations, and concerned citizens residing within the urbanized area. This is especially relevant as communities and private concerns often place a sentimental value on structures and sites which reflect past accomplishments deemed vital to the area's heritage.

Table III-2 identifies 58 historical sites in the coastal area. Each site number corresponds to numbers on existing land use overlays from which general locations and concentrations may be found. The general locations of historical sites are illustrated in Figures III-1.

FIGURE III-1

GENERAL LOCATION OF SIGNIFICANT
ARCHAEOLOGICAL AND HISTORICAL
SITES

HANCOCK, HARRISON & JACKSON COUNTIES

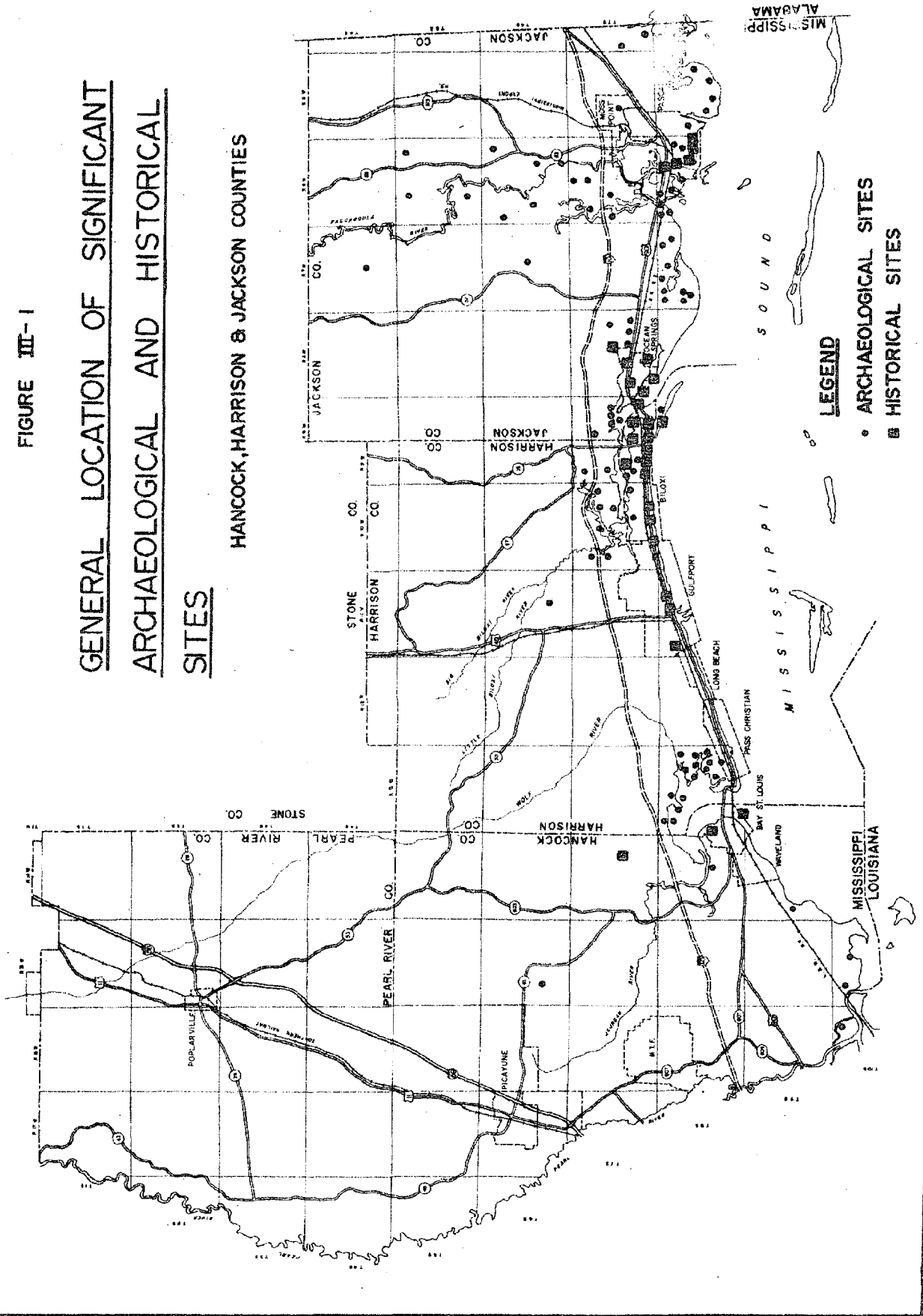


TABLE III - 2

REGIONAL HISTORIC SITES

Map Code	Site No.	Site Name	Significance	Map Code	Site No.	Site Name	Significance
HANCOCK COUNTY							
48	H-1	Our Lady of the Gulf Church	Largest Catholic Parish in Mississippi-Architecturally Unique	JACKSON COUNTY continued			
49	H-2	Elmwood Manor	2 story brick residential structure typical of many early Louisiana examples in its use of brick piers to support front & back galleries on ground level. Constructed during period when Pearlburg was a major logging town. From 1700's period - one of the oldest cemeteries on the Gulf Coast - contains graves of many early French settlers.	12	H-56	USS Cairo 1, 4	One of the original city-class-ironclad gunboats built in 1861; first U.S. warship sunk by electrically ignited torpedoes during Civil War. Colonial house said to be over 200 years old. Built prior to Civil War; fired upon by Admiral Farragut
62	H-3	Simon Favre House		12	H-57	Walter Denry House	
52	H-4	Karlen Bayou Cemetery		12	H-58	Washington Grant House	
HARRISON COUNTY							
31	H-5	The Anchorage	Built in 1830's; used as a children's home for eight years.	1 National Register of Historic Places			
30	H-6	Annebellen Howard & Wood Home	Cresle plantation cottage built with wooden piers in 1807.	2 Historical American Building Survey			
39	H-7	Barrett House	Oldest house in Gulfport; 1843 two-story Greek Revival style	3 National Historic Landmark			
31	H-8	Beauvoir 1, 2, 3	Last home of Jefferson Davis	4 National Park Service			
30	H-9	Blount First Baptist Church	Church organized in 1845	SOURCE: Mississippi Statewide Comprehensive Historical Preservation Plan, Second Edition, Volume II, Mississippi Department of Archives & History, April, 1974.			
30	H-10	Blount Garden Center	Built in 1840's; home of John Henley, Mayor of Biloxi during Civil War				
30	H-11	Blount Lighthouse	Historical lighthouse operated 1847-1931				
30	H-12	Chamber of Commerce Building	Brick in walls reclaimed from destroyed house of lighthouse keeper.				
30	H-13	Church of the Redeemer	Gothic Church built in 1854 & still in use; Jefferson Davis worshipped here				
30	H-14	Deer Island	Inhabitants have included Indians, Pirates, & Federal troops during Civil War				
30	H-15	Father Abram Ryan Home	Residence of Father Ryan, Civil War Priest, Soldier & Teacher - 1870's				
30	H-16	Tullos, Filbrick or Pradot House 2	1854 - two story Greek Revival Home				
31	H-17	Gillis House 1, 2	1838 - Greek Revival Home				
30	H-18	Grass Lawn 1	Built by Dr. Hiram Roberts in 1850's as Summer home.				
39	H-19	Gulfport Lutheran Church	Woodrow Wilson worshipped here in 1913				
30	H-20	Magnolia Estate 1	Last remaining pre-Civil War hotel (1847) on Mississippi Coast				
30	H-21	"Margaret Emile" Museum 1	Sailing schooner monument to schooner sailors & shipbuilders (1912)				
30	H-22	Maran Site - Original Biloxi	Site of the original Biloxi settlement & associated burial grounds				
30	H-23	Old Biloxi Cemetery	Active cemetery dating from the late 1700's				
30	H-24	Old Brick House	House built in 1790 now being restored				
30	H-25	Old Fort Lewis Site	No details available				
30	H-26	Old French House	Old French house built in 1737 with wine cellar & slave quarters in basement; currently a restaurant				
30	H-27	Old Spanish House	House built in 1790 by Spanish Army Captain when Spain controlled the area.				
30	H-28	Red Brick House	No details available				
39	H-29	St. Mark's Episcopal Church	1855 church attended by Jefferson Davis				
48	H-30	Wharton House	House completed in 1850; used to quarter Federal officers during the Civil War.				
JACKSON COUNTY							
21	H-31	Anderson Home	Built in 1839; presently location of Shearwater Pottery Industry				
12	H-32	Baker's Place	Old home originally used as a boarding house for Sea Captains				
12	H-33	Charpent - Furlito House (Warren Home)	Built by wealthy New Orleans plantation owner in 1852; writing on walls dates to Civil War period; Greek Revival details.				
15	H-34	Davey Site	Built by Dentier Lumber Company during late 1800's.				
12	H-35	Dames House	Greek Revival structure - 1823				
12	H-36	Dupont House	Built in 1836 by Admiral David Farragut; given to Elizabeth Farragut & Celeste Dupont as wedding present.				
12	H-37	Etnabrook House	Raised Cottage (1 1/2 story) from 1840-1860 period				
11	H-38	Farragut Home	Last home of Major George Farragut built in 1808; his son became first Admiral of U. S. Navy.				
23	H-39	French Vessel Site	1723 shipwreck remains; still present but original cargo removed				
12	H-40	Frentz House	Classic Revival home built in 1878				
12	H-41	Grant Cemetery	Old family cemetery.				
12	H-42	Hilaine Krebs House	Classic Revival structure built around 1850				
12	H-43	Krebs Cemetery	Oldest known cemetery still in use in the Mississippi Valley (1764)				
12	H-44	Lewis House	Classic Revival structure built in 1889; said to be the site of a battle between Pascagoula & Biloxi Indians				
3	H-45	Longfellow House 2	Constructed in 1854; questionable legend claims Longfellow wrote a poem here.				
21	H-46	Louis Sullivan House	Coodal retreat of Louis Sullivan until 1908; built around 1890.				
23	H-47	Morgan House	Colonial house built 1865-1867				
23	H-48	Old Fort Maurepas Site	First permanent settlement in Central U.S.; established by D'Bertrille in 1699.				
21	H-49	Old Indian Springs	Preliminary Springs used by Indians for health purposes.				
21	H-50	Old L & N Railroad Station	Old Station on L & N Railroad used from 1907-1935.				
12	H-51	Old Spanish Fort 1, 2	Oldest existing building in lower Mississippi Valley - 1710-1770.				
12	H-52	Parquet House	Classic Revival summer home for New Orleans Inventor.				
21	H-53	Presbyterian Church	Oldest church in Ocean Springs; used since 1889.				
21	H-54	Ruskin Oak	One of the oldest oak trees on the Gulf Coast				
21	H-55	St. John's Episcopal Church	Church unofficially organized in 1865, formally in 1891; building shows touch of Louis Sullivan architectural style.				

TASK IV

REGIONAL AND LOCAL COORDINATION

Coordination of planning activities with the local population is vital to the insured success of any proposed management project. Today, with the advent of federal requirements aimed at protection of the environment and general improvement of human health and well-being, there is skepticism on the part of smaller governmental bodies and private citizens. Such skepticism is seen as a fear of loss of personal rights and abolishment of the just compensation clause of the U. S. constitution.

Because of this it is imperative that the CZM planning process be coordinated with local agencies, public bodies and private citizens groups. Under this task, the GRPC is working on a continuing basis with the Mississippi Marine Resources Council in identifying concerned agencies and organizations and helping to establish question and answer sessions whereby public input to the planning process is achieved.

Under other elements of the CZM planning program, State and Regional agencies through which coordination can be achieved, have been identified. Currently local participation is being achieved by MMRC through planned public meetings and scheduled public hearings.

One major area of involvement concerns the ongoing Environmental Protection Agency Sec. 201 Facilities Plan for Harrison and Jackson Counties. Representatives of the MMRC have been attending the monthly meeting of participating engineering firms and the MMRC is kept abreast of all developments as they pertain to plans and programs to manage, on a regional basis, the point source waste discharges.

TASK V

FEDERAL AND STATE LAND OWNERSHIP

Land use analysis conducted by the GRPC in 1972 indicated that approximately 1,673,000 acres of land are contained within the jurisdiction of Hancock, Harrison, Jackson and Pearl River Counties, Mississippi. Of this acreage, it is estimated that as much as 6,365 acres are under state ownership and 247,421 acres belong to or are leased by the federal government, (refer to Figure V-1 for general distribution of Federal and State Lands).

As seen in Table V-1, federal and state land uses range from state parks to military bases. But, by far the greatest single federal or state land use is found within the National Space Technologies Laboratory (NSTL) buffer zone. Here 109,820 acres, or approximately 35 percent of the Hancock County land area, is under federal ownership or lease. Federal forests occupy another 84,799 acres in the four county area, and military bases and veteran hospital centers account for 2,802 acres. Of the total land area within the region, 14 percent is occupied by the federal government while less than one percent is owned by the State of Mississippi, most of which is university forest lands.

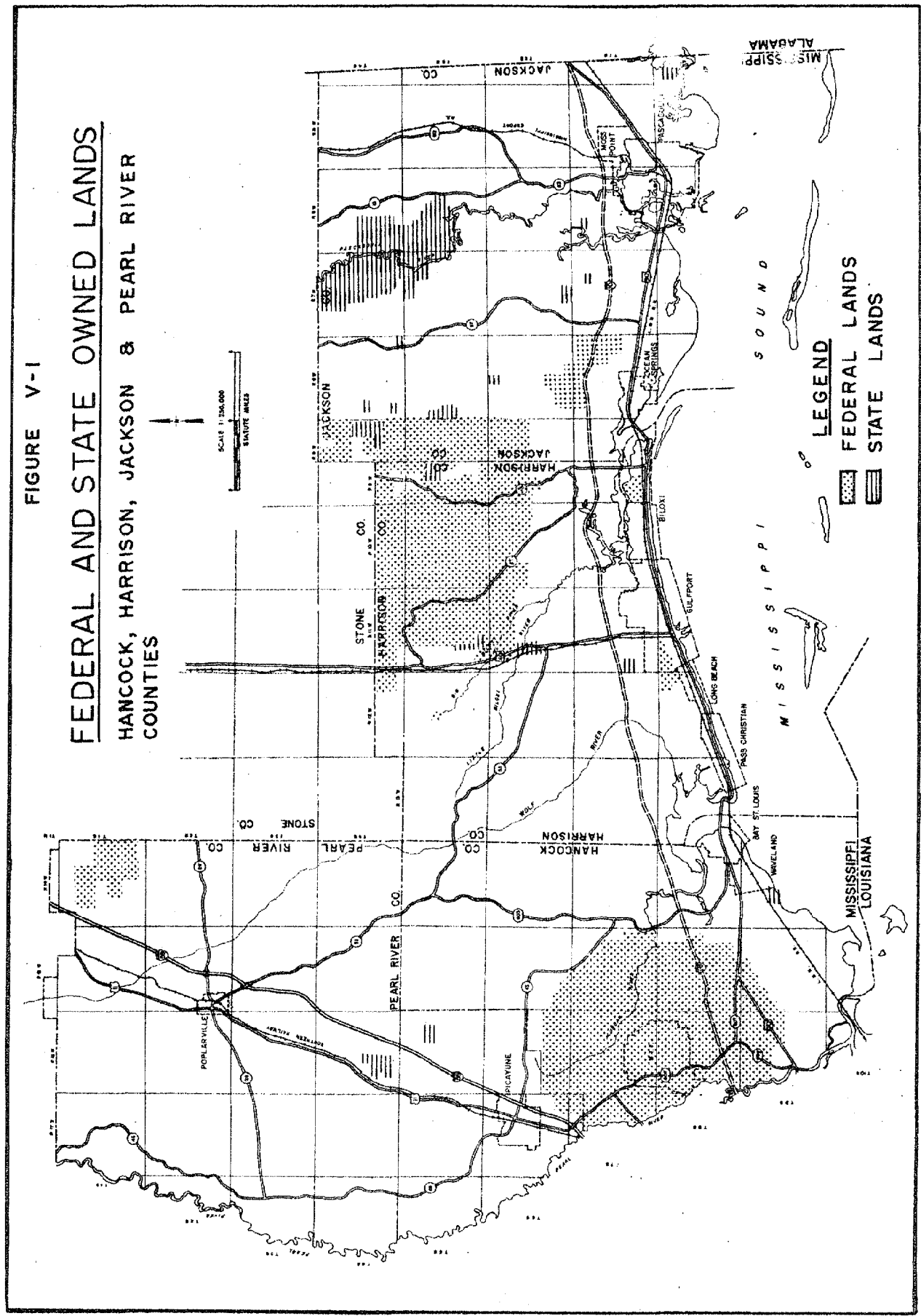
Federal and State land ownership is shown by township for each county on land use overlays, (refer to Figure VIII-4). An analysis of land use overlays will show that not all townships contain federal or state lands. Those that do are shown in Figure V-1. Where such lands are found, each parcel is identified by owner and, where possible, by land use. Abbreviations are often used to denote ownership and use and are defined as follows; USF - United State Forests; UML - University of Mississippi forest lands; US-Federally owned lands with use not known (aerial photography of these areas generally indicate that the land is presently in forest); STATE - state owned lands with use not known (as with US lands, these appear to be forest). Other federally or state owned lands such as VA Hospitals, military bases and state parks are usually identified by name.

TABLE V - 1
FEDERAL & STATE LAND OWNERSHIP

County	Acreage		Type of Land Use
	State	Federal	
HANCOCK	315	109,820	Buccaneer State Park NSTL Buffer Zone & Fee Area
HARRISON		59,209	Forrest Lands - DeSoto National Forrest
	450	2,802	Military Bases, V.A. Hospitals University Forrest Lands & Other
JACKSON		20,050	Forrest Lands - DeSoto National Forrest & Gulf Island's National Seashore
	5,200		University Forrest Lands & Other
PEARL RIVER		5,540	Forrest Lands - DeSoto National Forrest
	400		University Forrest Lands & Other
TOTALS	6,365	147,421	

SOURCE: Harrison County Mississippi Ownership Maps, 1972
 Jackson County Mississippi Ownership Maps, 1973
 Pearl River County Mississippi Ownership Maps, 1975
 Prepared by TAB Mapping Company, Lucedale, Miss.,
 from Offices of Tax Assessors and Land Rolls. Hancock
 Data were obtained by GRPC from in-house files and
 from County Land Rolls, 1975.

FIGURE V-1
FEDERAL AND STATE OWNED LANDS
 HANCOCK, HARRISON, JACKSON & PEARL RIVER
 COUNTIES



TASK VI

TRANSPORTATION

Transportation within the study area involves a series of networks and systems that occupy approximately 36,600 acres of land excluding those requirements of airports. An analysis of streets and highways, railroads, and utility rights-of-way such as pipelines and electrical power transmission lines reveals the following facts. Railroads occupy approximately 2,680 acres of land throughout the four county area; streets and highways account for 28,636 acres; and utility rights of way utilize 5,320 acres (GRPC 1972 Land Use). Air transportation facilities, including the airport of Gulfport, the air traffic section of Keesler AFB, Stennis International Airport in Hancock County, the Jackson County Airport, and the public air facility in Picayune utilize another estimated 2,500 acres or less than 3 percent of the region. Increases in transportation rights-of-way have amounted to approximately 4 percent since 1970 (GRPC 1972 Land Use).

The mapping process of this task has been summarized so that major existing transportation routes are highlighted on land use overlays, (refer to Figures VIII-1 and VIII-2). Routes of lesser importance are shown on the base maps accompanying each set of overlays. Other land uses which must be considered under this task are ports and harbors and navigable waterways. The following text and tabulations are included to explain and identify transportation routes and related systems as they are seen on the land use overlays.

Streets and Highways

A Gulf Coast Area Transportation Plan developed for the GRPC in 1971 identified and classified each transportation route within the urban area. Also included were projections and roadway classifications which would be needed to meet future demands. Routes within the urban area, both existing and future, were highlighted on overlays based on the Gulf Coast Area Transportation Plan and taking into account collectors, arterials

and freeways and expressways. Routes in rural areas were highlighted based on recommended county plans with minor modifications.

Major roadways shown on the existing land use maps are defined categorically as they relate to areas they serve. Collectors, identified as smaller dotted lines, move traffic within communities. They tie in with arterials, identified as solid lines, which transfer traffic over larger areas and between communities. These in turn may connect with freeways, interstates or expressways which are identified as larger dashed lines. Freeways, interstates and expressways, are controlled access routes designed to move larger volumes of traffic at maximum speeds.

Airports

The four county study area is comprised of three distinct types of airport facilities: Air Carrier Facilities, General Aviation Facilities and Military Installations. This grouping is necessary and significant in terms of the traffic levels handled by such installations, by the types of aircraft which make use of these various airfields, by the runway, airspace and terminal requirements, and by the degree and type of interaction with other fields in the area.

The air carrier airports are located to serve large concentrations of population and/or commerce, mainly because that is where the demand for their services exist. They require runways of considerable length, width, and some type of instrumentation and lighting, as well as passenger terminal and/or cargo handling facilities, and adequate ground access. These facilities do, however, accommodate and encourage operations by general aviation aircraft. Presently only the facility at Gulfport, serving most of the coastal area falls into this category.

General aviation airports may and frequently do serve smaller population centers or industrial or recreational areas. These airports generally require less runway width, length and strength. Some have runway lighting and a published VOR or ADF approach. Such

airports are owned and operated by municipalities as well as private individuals. Those in the study area which fall into this group include the one at Picayune, Stennis International Airport, Diamondhead Airport in Hancock County, the Gulf Park Facility east of Ocean Springs and the Jackson County Airport. Within the general aviation grouping, one must further distinguish between "public" and "private" use airports. The former (of interest in this study) serve aviation by offering services, charter, rental, instruction, etc. to the public. The latter are relatively few in number in the Gulf Coast Region and do not offer service to the public. Although patronage of the public is not solicited by private fields, they are available to any aircraft in case of emergency.

Finally, military installations must be considered in relation to operations of military flight missions within the study area. Here only Keesler Air Force Base need be considered.

This inventory, therefore, seeks to examine these facilities in terms of what exists and where they are located relative to other social and economic activities.

Airports are delineated and named on existing land use overlays by townships in which they are situated (refer to Figure VIII-1). With the exception of Jackson County, no known plans exist for construction of additional airport facilities. Plans have been made for the construction of a new general aviation terminal in Jackson County but at this time no definite location has been selected.

The Upper Gulf Coast Regional Air Transportation Study conducted in 1970 resulted in comparative data for selected air carrier airports in the Gulf Coast region from Mississippi to Florida. Data in Table VI-1 are included to emphasize activities at the Gulfport Airport and to provide comparative data between local air transportation and that of Mobile.

Railroads

Rail transportation lines have been delineated on existing and future land use overlays just as they are seen on individual base maps, (refer to Figure VIII-1). Research indicated that with the general decline in rail transport, no new facilities can be anticipated in

TABLE VI-1
SELECTED AIR TRAFFIC DATA FOR GENERAL AVIATION AIRPORTS
Gulfport and Mobile

HISTORY OF AVERAGE AND PEAK HOUR COMMERCIAL AIR MOVEMENTS					
Airport	Year	Annual Aircraft Movements	Average Hour Rate	Peak Hour Rate	Peak/Average Hour Ratio
Mobile	1960	20,149	2.3	11	4.8
	1965	18,165	2.1	9	4.3
	1967	18,225	2.1	8	3.8
	1968	17,407	2.0	9	4.5
Gulfport	1960	(3,400)	(0.4)	N/A	N/A
	1965	7,483	0.9	10	11.1
	1967	7,478	0.9	7	7.8
	1968	6,958	0.8	6	7.5

FORECAST OF AVERAGE AND PEAK HOUR COMMERCIAL AIR MOVEMENTS

1970 - 1995					
Airport	Year	Annual Aircraft Movements	Average Hour Rate	Peak Hour Rate	Peak/Average Hour Ratio
Mobile	1970	20,100	2.3	11.3	4.9
	1975	25,310	2.9	13.3	4.6
	1980	29,660	3.4	15.0	4.4
	1985	34,920	4.0	16.8	4.2
	1990	43,820	5.0	19.5	3.9
	1995	49,980	5.7	20.5	3.6
Gulfport	1970	10,000	1.1	7.3	6.6
	1975	10,422	1.2	7.8	6.5
	1980	12,100	1.4	8.1	5.8
	1985	13,986	1.6	9.1	5.7
	1990	15,874	1.8	9.9	5.5
	1995	16,666	1.9	10.3	5.4

FORECAST OF TYPICAL PEAK HOUR PASSENGERS (TPHP)

Airport	Year	Peak Hour Air Carrier Movements	Average Aircraft Size	Load Factor	Typical Peak Hour Passengers
Mobile	1970	11.3	85	28	270
	1975	13.3	103	30	410
	1980	15.0	124	33	610
	1985	16.8	150	35	880
	1990	19.5	180	35	1,230
	1995	20.5	220	35	1,580
Gulfport	1970	7.3	65	15	70
	1975	7.8	79	18	110
	1980	8.1	95	21	160
	1985	9.1	115	24	250
	1990	9.9	140	24	370
	1995	10.3	170	30	530

SOURCE: Upper Gulf Coast Regional Air Transportation Study, Vol. 1, 1970

the near future.

Data obtained from the L & N Railroad Central Office in Mobile, Alabama indicate that approximately 12 trains, all of which are freight service, pass through the coast between Mobile and New Orleans each day.

It was also determined that two switch trains operate in the area and may be seen passing through the area at various times. While schedules are subject to fluctuation, the following time periods account for most rail transportation movements.

TABLE VI-2
L & N RAILROAD SCHEDULE

South out of Mobile	North out of New Orleans
5:05 A. M.	1:00 A. M.
9:30 A. M.	5:30 A. M.
11:59 A. M.	8:30 A. M.
4:00 P. M.	10:00 A. M.
5:00 P. M.	12:30 P. M.
10:00 P. M.	8:00 P. M.

SOURCE: L & N Central Office, Mobile, Alabama, Dec., 1975

A general increase in rail passenger service in the area is not anticipated. However, efforts being sponsored by the Mississippi Coast Transportation Authority and other interested groups are currently underway to determine the feasibility of establishing passenger service between Ingalls Shipbuilding facility and strategic points along the Coast.

Ports and Harbors

Eight maritime ports are found in the three coastal counties of Mississippi. Of these, only two are given significant consideration relative to transportation. Included here are the port facilities of Pascagoula and the State Port at Gulfport. Because of their

commercial import and export capabilities these ports have been examined in terms of tonnage handled during the period July through September, 1975. It is realized that the following data provide little basis for determining trends in port activities. However, it is intended that this information provide some insight into the magnitude of current maritime transportation.

As shown in Table VI-3 the vast majority of Gulf Coast maritime transport activities occurred at the Pascagoula port facilities. Here the largest shipments were soybean and wheat; while in Gulfport the largest shipments were bananas. It must be noted that these figures represent a three month period and not the total year. In order to accurately assess ocean transport and shipping trends of the two ports, historical data over several years should be analyzed.

The remaining six harbors on the Mississippi Coast may be more accurately described as marinas. These serve the purpose of providing docking facilities, gas, oil and various other marine services as well as protection for small craft. These types of harbors are recreational in nature and are identified by name and number under the recreation section of this text. They are found in Bay St. Louis, Pass Christian, Long Beach, Gulfport, at the Broadwater Hotel, Biloxi, Ocean Springs and Pascagoula.

Interior Navigation

Ocean transportation routes, though not specifically identified, provide access to the two major commercial harbors previously mentioned. Interior navigation routes must be given special attention, however, because of their ability to provide access to an unlimited number of inland destinations.

TABLE VI- 3
REVENUE TONNAGE
MARITIME PORTS OF PASCAGOULA AND GULFPORT
July 1, 1975 through September 30, 1975

PASCAGOULA			GULFPORT		
Cargo	Tonnage		Cargo	Tonnage	
	Inbound	Outbound		Inbound	Outbound
Rolled Oats		771	Bananas	111,824	
Soybean Meal	6,093	6,093	Cocanuts & Pineapples	1,611	
Alumina Hydrate	6,030		Fishmeal	5,818	
Flour		6,461	Cotton Bagging	567	
			Misc. Cargo	207	
			Jute Fiber	20	
Copper Matte		429	Coil Steel	5,650	
Copper Conct.		1,393	Lumber	954	
Lead Dross		1,677	Linerboard		17,407
Lead Conct.		5,690	Frozen Meat		5,778
Molybdenum		4,911	General Cargo		4,543
Potash	40,070		Cowhides		2,084
Fertilizer		3,407	Cotton		4,459
Zinc Conct.	4,229		Military Cargo		101
Firebrick		1,150	Urea		15,300
			Fertilizer		16,617
			Misc. Cargo		109
			Scrap Metal		5,525
			Fishmeal		8,416
Rubber	18,237		Ammo. Phos.		9,898
				126,651	90,237
USDA Cargo		5,507		216,888	
Soybeans	107,693	126,401			
Wheat	283,105	445,171			
TOTAL	965,457	646,729			
		1,112,186			

SOURCE: Port of Pascagoula Tonnage Reports obtained through the Miss. Research & Development Center, Long Beach, Miss. and "Port of Gulfport Manifest", Third Quarter, 1975.

Mississippi State laws define navigable streams as follows;

All rivers, creeks and bayous in this state, twenty-five miles in length that have sufficient depth and width of water for thirty consecutive days in the year for floating a steamboat with carrying capacity of two hundred bales of cotton.....(Mississippi' Code 1972 - 51-1-1.)

While it appears that this definition is somewhat antiquated, it is in keeping with navigable limits as defined for the purpose of this report. Navigable limits as referred to herein mean those points on major streams beyond which it is hazardous for commercial fishing boats or industrial barges to proceed. Major streams and their navigable limits as identified by the U S. Corps of Engineers, Mobile, are shown in Table VI-4.

TABLE VI-4
NAVIGABLE INLAND WATERWAYS
MISSISSIPPI COASTAL COUNTIES

Stream	Navigable		Type of COE Maintenance
	from	to	
Pearl River West	mouth	Bogaloussa	Bar at mouth & river channel
Pearl River East	mouth	NSTL	Bar at mouth & river channel
Bayou Cadet	mouth	Lower limits	Bar at mouth & river channel
Jourdan River	mouth	8 miles inland	Bar at mouth
Wolf River	mouth	8 miles inland	Bar at mouth
Bay St. Louis	mouth	Mouth of Jourday	Channel & river bars
Harrison Co. Industrial Canal	mouth	Three Rivers Road	Maintained by the Harrison County Development Commission
Bayou Benard	mouth	Three Rivers Road	Bar at mouth
Biloxi River	mouth	Miss. Power Plant	Bar at mouth
Tchoutacabouffa River	mouth	1-10 bridge	Bar at mouth
Biloxi Bay	mouth	Mouth at Bayou Benard	Channel & river bars
Fort Bayou	mouth	5 miles inland	Bar at mouth
Pascagoula River			
Deep water	mouth	Railroad Bridge	Channel
Barge traffic	mouth	Moss Point	Channel
Shallow draft	mouth	Merrill	Snagging
Escatawpa River	mouth	Moss Point	Channel
* Intercoastal Waterway & Harbors			Channel

* Intercoastal Waterway - located off shore in the Mississippi Sound is maintained by the Corps of Engineers on a regular basis.

SOURCE: U. S. Corps of Engineers - Operations Division, Mobile Office, Jan. 1976.

TASK VII

HOUSING & POPULATION

Under this task population and housing have been considered concurrently. The reason for this lies in the fact that existing housing data has been used as a tool to estimate current population and, to a lesser extent, to forecast population growth. In making population forecasts, housing, as well as historic data, census information, and existing and proposed land use regulations, have been utilized. The following text and tabulations address population and housing separately, but it must be noted that they are inseparable when considering the socio-economic elements of land use.

Population

Population in the study area experienced considerable growth during the period 1940 to 1970. As shown in Table VII-1, the region experienced a growth of 163 percent over the 30 year period while the State of Mississippi experienced less than 2 percent growth. The largest individual county growth was seen in Jackson County where population increased by 327 percent.

It is obvious from these facts that the coastal area, particularly Harrison and Jackson Counties is growing at a rapid rate. Because of this, special attention must be given the area in providing services and meeting growing socio-economic demands brought on by these increases.

Housing

As with population, housing in the study area experienced considerable growth during the period 1940 to 1970. Table VII-2 indicates that housing in the region increased by 205 percent. It is interesting to note that the housing growth rate increased more rapidly than did the population growth rate for the same period. One explanation for this lies in the

TABLE VII-1
POPULATION GROWTH PATTERNS
1940 to 1970

Area	Population				Percent change
	1940	1950	1960	1970	1940 to 1970
Hancock Co.	11,328	11,891	14,039	17,387	53
Harrison Co.	50,799	84,073	119,489	134,582	165
Jackson Co.	20,601	31,401	55,522	87,975	327
Pearl River Co.	19,125	20,641	22,411	27,802	45
Region	101,853	148,006	211,461	267,746	163
State	2,183,796	2,178,914	2,178,141	2,216,912	2

SOURCE: GRPC, "1973 Housing Program" based on Census Data for the years 1940, 1950, 1960, and 1970.

TABLE VII-2
HOUSING GROWTH PATTERNS
1940 to 1970

Area	Housing				Percent Change
	1940	1950	1960	1970	1940 to 1970
Hancock Co.	3,602	4,505	6,413	7,330	103
Harrison Co.	14,062	23,164	35,227	41,579	196
Jackson Co.	5,451	9,838	16,226	27,513	404
Pearl River Co.	4,750	5,724	6,633	8,850	86
Region	27,883	43,231	64,499	85,272	205
State	557,246	609,329	628,445	699,178	25

SOURCE: GRPC "1973 Housing Program", based on Census Data for the years 1940, 1950, 1960, and 1970.

fact that family sizes decreased creating a greater demand for housing. To illustrate this, it was found that in 1940 there were 3.65 persons per household in the region. In 1950 the ratio had dropped to 3.42; in 1960, to 3.27; and in 1970 the ratio was 3.13.

Current Population and Housing Overview

Since 1970 few variations have been found in the pattern. In 1975 the GRPC conducted its annual housing inventory and analysis. Using data gathered through land use surveys in 1972 and building permits for 1973 and 1974, along with updated vacancy rates provided through postal surveys conducted by the Department of Housing and Urban Development (DHUD), several conclusions were reached. Foremost among these was that trends established between 1940 and 1970 were currently the same. It was found that presently there are between 2.89 and 3.13 persons per household. Such is in keeping with the general belief that family sizes are becoming smaller while the housing market is becoming over saturated.

These facts were emphasized in order that selected historical background data might be combined with population and housing estimates and forecast being provided under TASK VII of this program. Such information can be useful in analyzing forecasted growth in the study area, (for general population distributions, refer to Figure VII-1).

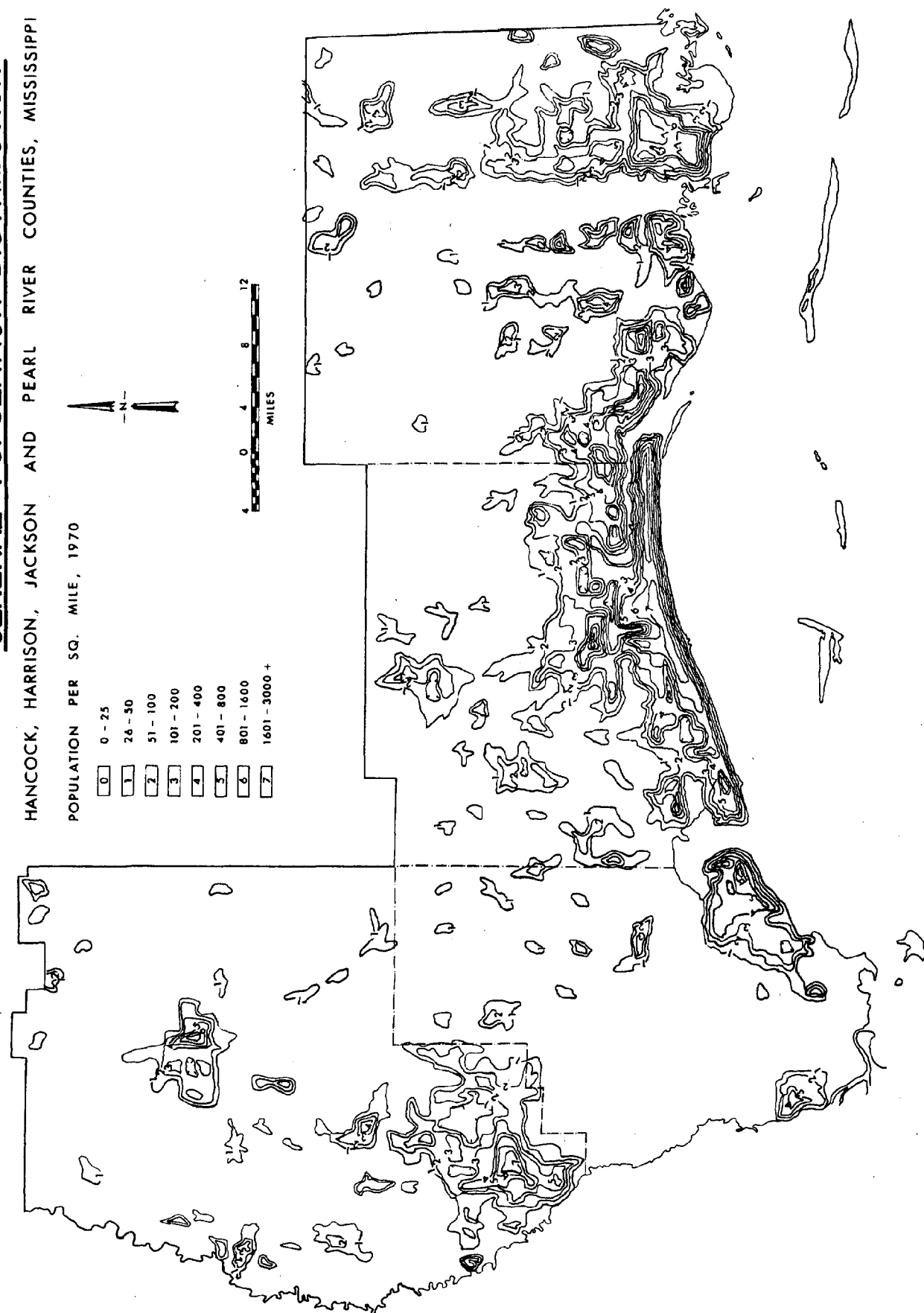
Detailed Population and Housing Characteristics

Population and housing characteristics as mapped on population density overlays, (Figure VIII-3), have been coded in order that various concentrations may be looked at rather than individual totals by geographical area. Codes were designed so that one code applies to both housing and population as well as present and future (to the year 2000) concentrations. Codes are defined in Table VII-3 and are explained as follows. Code 1 means that the density range for a particular area is between 0 and 500 people per square mile and between 0 and 160 houses per square miles. (NOTE: Housing density is based on the number of persons per household as defined by the 1970 census and varies between counties,

GENERAL POPULATION DISTRIBUTION

FIGURE VII-1

HANCOCK, HARRISON, JACKSON AND PEARL RIVER COUNTIES, MISSISSIPPI



Traffic Analysis Zones (TAZ) and townships throughout the study area.) For purposes of coding, however, a ratio 3.13 persons per household is uniformly applied. Actual housing counts by township and traffic zones are found in Tables VII-4 and VII-5.

TABLE VII-3
POPULATION AND HOUSING DENSITY CODING SYSTEM

Code	People Per Sq. Mile	Houses Per Sq. Mile
1	0- 500	0- 160
2	501-1000	161- 319
3	1001-2500	320- 799
4	2501-5000	800-1597
5	Over-5000	Over-1597

Each section in the unincorporated area and each TAZ in the municipalities is coded to define existing and future population and housing characteristics. For example, a code of 2/3 means that the present population density is between 501 and 1000 people per square mile (denoted by Code 2) and the future population density is expected to be between 1001 and 2500 people per square mile (denoted by Code 3). Likewise, present and anticipated housing densities by geographical areas may be found.

For more detailed population and housing characteristics, the following tabulations have been compiled in accordance with requirements under TASK VII of this project. Table VII-4 depicts existing and forecasted population and housing by selected areas (TAZ) identified on the population density overlays in which municipalities are found. Unincorporated area population and housing estimates are shown on Table VII-5. These estimates cover the total township for which corresponding township codes are shown.

Population estimates at 5 year intervals (Table VII-6) have been computed for each municipality in the Coast counties in order to address socio-economic demands where they are most frequently found. Countywide estimates and forecasts to the year 2000 are shown in Table VII-7.

TABLE VII-4

MUNICIPAL POPULATION & HOUSING
EXISTING AND FORECASTED

Municipality	IAZ	Population		Housing		Municipality	IAZ	Population		Housing		Municipality	IAZ	Population		Housing	
		1975	2000	1975	2000			1975	2000	1975	2000			1975	2000	1975	2000
BAY ST. LOUIS	288	34	232	14	98	GULFPORT cont'd.	192	927	1,680	287	520	BILOXI cont'd.	129	0	0	0	0 (A)
	289	40	447	25	197		193	2,161	2,913	669	901		130	1,725	2,322	594	719
	291	703	971	297	409		194	1,843	1,989	261	492		131	1,140	1,502	353	445
	292	821	1,228	346	518		195	1,205	1,957	373	606		132	0	0	0	0
	293	612	1,019	258	430		196	1,764	2,316	546	779		133	2,755	2,755	853	853
	294	870	898	347	379		197	1,757	2,504	544	775		134	1,941	1,941	601	601
	295	626	860	264	321		198	2,025	2,781	627	861		135	2,006	2,904	621	899
	296	309	309	130	130		199	4,596	5,356	1,423	1,658		135	0	0	0	0 (A)
	297	406	813	171	343		200	898	1,644	278	509		136	1,076	3,443	333	1,065
	298	1,574	1,982	664	836		201	527	1,102	163	341		137	1,770	4,144	530	1,282
	299	423	829	178	258		202	1,473	1,469	456	461		138	414	3,656	128	1,132
	300	204	611	86	258		203	924	1,137	286	352		139	1,686	2,413	522	1,747
WAVELAND	301	169	576	71	243	GULFPORT cont'd.	204	614	1,134	190	190	BILOXI cont'd.	140	2,281	3,282	706	1,016
	302	43	194	18	82		205	937	1,134	290	351		141	0	0	0	0
	Total	6,854	10,899	2,889	4,584		206	97	97	30	30		142	681	3,049	211	944
							207	23	23	7	7		143	2,067	4,428	640	1,371
PASS CHRISTIAN	299	17	183	7	77	MOSS POINT	208	65	65	20	20	OCEAN SPRINGS	143	2,067	4,428	640	1,371
	301	32	98	15	41		209	23	23	3	3		144	1,140	1,140	179	856
	303	321	576	135	243		210	0	0	0	0		145	3,779	1,669	245	525
	304	894	1,040	377	447		211	0	0	0	0		146	5,085	5,075	1,599	1,879
	305	606	771	255	325		212	0	0	0	0		147	88	5,085	5,075	1,599
	306	1,234	1,397	520	589		213	0	0	0	0		148	88	5,085	5,075	1,599
	307	619	749	250	316		214	52	52	16	16		149	88	5,085	5,075	1,599
	308	38	240	16	101		215	769	769	238	238		150	88	5,085	5,075	1,599
	309	0	166	0	70		216	2,161	2,161	802	1,036		151	88	5,085	5,075	1,599
	310	223	389	94	164		217	2,222	2,456	688	760		152	91	1,723	2,610	542
	311	640	809	271	341		218	2,019	2,771	625	858		153	91	1,723	2,610	542
	Total	4,614	6,438	1,934	2,714		219	1,618	2,370	521	734		154	91	1,723	2,610	542
LONG BEACH	248	588	827	182	250	Total	220	937	1,069	290	522	MOSS POINT	155	91	1,723	2,610	542
	249	1,550	1,700	480	554		221	1,069	1,299	331	402		156	91	1,723	2,610	542
	2501	264	503	82	155		222	1,137	1,886	352	584		157	91	1,723	2,610	542
	2502	26	265	8	82		223	2,590	3,347	802	1,036		158	91	1,723	2,610	542
	260	859	1,098	266	340		224	2,590	3,347	802	1,036		159	91	1,723	2,610	542
	261	517	756	160	234		225	2,177	2,926	674	906		160	91	1,723	2,610	542
	262	627	862	194	267		226	2,177	2,926	674	906		161	91	1,723	2,610	542
	263	775	1,011	240	313		227	1,622	1,622	50	50		162	91	1,723	2,610	542
	264	610	849	189	263		228	1,113	1,113	35	35		163	91	1,723	2,610	542
	265	391	630	121	195		229	52,291	52,291	16,188	21,932		164	91	1,723	2,610	542
	266	565	804	175	249		230	1,327	2,746	411	850		165	91	1,723	2,610	542
	267	565	804	175	249		231	733	981	227	304		166	91	1,723	2,610	542
GULFPORT	270	161	400	50	124	BILOXI	102	1,327	2,746	411	850	Keesler AFB	102	1,327	2,746	411	850
	271	168	406	52	126		103	733	981	227	304		103	733	981	227	304
	274	287	488	15	89		104	0	0	0	0		104	0	0	0	0
	Total	7,159	10,488	2,214	3,247		105	0	0	0	0		105	0	0	0	0
	223	71	517	22	160		106	1,447	2,174	448	673		106	1,447	2,174	448	673
	2411	1,940	2,404	607	744		107	788	1,448	244	448		107	788	1,448	244	448
	2412	103	155	32	48		108	1,176	1,983	344	614		108	1,176	1,983	344	614
	242	1,337	1,779	414	551		109	1,870	2,807	579	859		109	1,870	2,807	579	859
	243	572	572	177	177		110	1,582	1,582	490	490		110	1,582	1,582	490	490
	244	507	778	157	241		111	1,157	1,157	358	358		111	1,157	1,157	358	358
	245	1,547	1,990	479	616		112	1,273	1,273	394	473		112	1,273	1,273	394	473
	246	1,850	2,261	573	700		113	1,07	1,07	33	33		113	1,07	1,07	33	33
	248	1,292	1,748	400	541		114	149	149	46	46		114	149	149	46	46
	Total	9,239	12,204	2,861	3,778		115	91	91	28	28		115	91	91	28	28
GULFPORT	175	2,578	2,578	798	798	Total	116	29	29	9	9	Keesler AFB	116	29	29	9	9
	176	2,164	2,913	670	902		117	29	29	9	9		117	29	29	9	9
	177	439	1,189	136	368		118	0	0	0	0		118	0	0	0	0
	181	0	0	0	0		119	110	110	34	34		119	110	110	34	34
	182	1,118	1,867	346	578		120	19	19	6	6		120	19	19	6	6
	183	853	853	264	264		121	1,101	1,101	341	341		121	1,101	1,101	341	341
	184	1,777	2,599	590	783		122	1,841	2,591	570	802		122	1,841	2,591	570	802
	185	2,263	3,066	682	742		123	1,076	3,036	333	940		123	1,076	3,036	333	940
	186	2,303	3,004	713	930		124	1,127	1,712	349	530		124	1,127	1,712	349	530
	187	1,670	2,419	517	749		125	1,221	1,221	378	378		125	1,221	1,221	378	378
	191	1,324	1,763	410	546		126	652	862	202	267		126	652	862	202	267
	Total	1,324	1,763	410	546		127	917	1,127	284	349		127	917	1,127	284	349
							128	1,379	1,379	427	427		128	1,379	1,379	427	427

(A) Keesler AFB

1/ Population and Housing Data reflect 1973 counts for total municipalities in Piquette and Poplarville. No forecasts to 2000 are available.

UNINCORPORATED AREA POPULATION AND HOUSING
EXISTING AND FORECASTED
Gulf Region

South Region						North Region						
County	Township Code	Population		Housing		County	Township Code	Population		Housing		
		1975	2000	1975	2000			1975	2000	1975	2000	
HANCOCK COUNTY	66	0	0	0	0	JACKSON COUNTY	26	16	16	5	5	
	65	164	164	69	69		25	156	156	49	49	
	64	0	0	0	0		24	1,673	3,161	526	994	
	63	0	0	0	0		23	8,350	12,224	2,626	3,844	
	62	976	1,369	412	577		22	1,066	2,605	335	819	
	61	0	0	0	0		21	3,672	10,846	1,154	3,411	
	60	0	0	0	0		20	774	774	243	243	
	59	510	1,285	214	542		19	124	124	39	39	
	58	147	147	62	62		18	184	184	58	58	
	57	236	619	100	261		17	134	134	42	42	
	56	514	514	217	217		16	698	892	219	281	
	55	348	348	146	146		15	2,559	2,814	805	885	
	54	481	481	203	203		14	4,969	10,348	1,562	3,254	
	53	672	672	283	283		13	4,786	8,217	1,505	2,584	
	52	1,634	15,467	690	6,526		12	1,022	1,905	321	599	
	51	2,096	13,923	884	5,871		11	5,186	7,883	1,631	2,479	
	50	1,235	2,013	521	849		10	2,653	4,342	837	1,365	
	49	Urban Area - See Municipal Population & Housing					9	1,599	2,063	503	648	
	County Total	9,013	37,002	3,801	15,606		8	594	594	186	186	
HARRISON COUNTY	48	2,526	5,898	782	1,826	7	1,354	1,294	426	407		
	47	1,225	2,639	379	817	6	820	820	258	258		
	46	646	646	201	201	5	2,989	4,490	940	1,412		
	45	351	351	110	110	4	1,928	4,309	605	1,355		
	44	79	79	24	24	3	32	32	10	10		
	43	709	709	220	220	2	239	239	75	75		
	42	999	999	311	311	1	0	0	0	0		
	41	2,444	5,372	736	1,663	County Total	47,584	80,466	14,960	25,302		
	40	5,937	8,944	1,847	2,769							
	39	32	184	10	57							
	38	17,843	22,167	5,586	6,873							
	37	2,238	4,138	693	1,296							
	36	1,158	1,158	360	360							
	35	180	180	56	56							
	34	9	9	3	3							
	33	100	100	31	31							
	32	1,600	1,600	497	497							
	31	5,974	13,908	1,847	4,306							
	30	6,575	8,779	2,036	2,718							
29	600	1,059	186	328								
28	12	35	4	11								
27	32	32	10	10								
County Total	51,451	78,986	15,929	24,487								

Population			Housing		
1972			1972		
PEARL RIVER COUNTY	91	29	9		
	90	517	163		
	89	526	166		
	88	469	148		
	87	105	33		
	86	3,261	997		
	85	2,184	689		
	84	748	236		
	83	374	118		
	82	181	57		
	81	232	73		
	80	162	51		
	79	1,173	370		
	78	653	206		
	77	659	208		
	76	1,252	395		
	75	1,164	366		
	74	276	87		
	73	466	147		
72	278	88			
71	434	137			
70	482	152			
69	205	64			
68	276	87			
67	392	122			
County Total	16,498	5,082			

TABLE VII-6
MUNICIPAL POPULATION
FIVE YEAR INTERVALS
1975 through 2000
Gulf Region

Municipality	1975	1980	1985	1990	1995	2000
(Population)						
HANCOCK COUNTY						
Bay St. Louis	6,854	7,654	8,454	9,254	10,054	10,899
Waveland	4,614	4,979	5,344	5,709	6,074	6,438
HARRISON COUNTY						
Pass Christian	7,149	7,828	8,507	9,208	9,908	10,488
Long Beach	9,239	9,353	9,467	10,252	11,037	12,204
Gulfport 1 /	52,291	54,081	55,870	60,557	65,243	68,156
Biloxi 1 /	43,025	49,387	55,749	61,295	66,840	72,471
JACKSON COUNTY						
Ocean Springs	14,170	15,078	15,985	17,771	19,557	20,357
Moss Point	20,008	23,986	27,964	31,091	34,218	37,362
Pascagoula	33,874	36,251	38,628	42,949	47,271	51,566

1 / Figures for Gulfport & Biloxi do not include population residing in on-base housing at Keesler Air Force Base & the Naval Construction Battalion Center.

SOURCE: Existing population figures are based on current housing accommodations. Forecasted populations are straight line projections based on historical data.

TABLE VII-7
COUNTYWIDE POPULATION ESTIMATES
EXISTING & FORECASTED

County	Population	
	1975	2000
<u>HANCOCK</u>		
Total County	20,481	54,339
Total Unincorporated	9,013	37,002
Total Municipal	11,468	17,337
Bay St. Louis	6,854	10,899
Waveland	4,614	6,438
<u>HARRISON</u>		
Total County	163,155	242,305
Total Unincorporated	51,451	78,986
Total Municipal	111,704	163,319
Pass Christian	7,149	10,488
Long Beach	9,239	12,204
Gulfport	52,291	68,156
Biloxi	43,025	72,471
<u>JACKSON</u>		
Total County	115,636	189,751
Total Unincorporated	47,584	80,466
Total Municipal	68,052	109,285
Ocean Springs	14,170	20,357
Moss Point	20,008	37,362
Pascagoula	33,874	51,566
<u>COASTAL REGION</u>		
Total Region	299,991	476,446
Total Unincorporated	108,767	186,505
Total Municipal	191,224	289,441

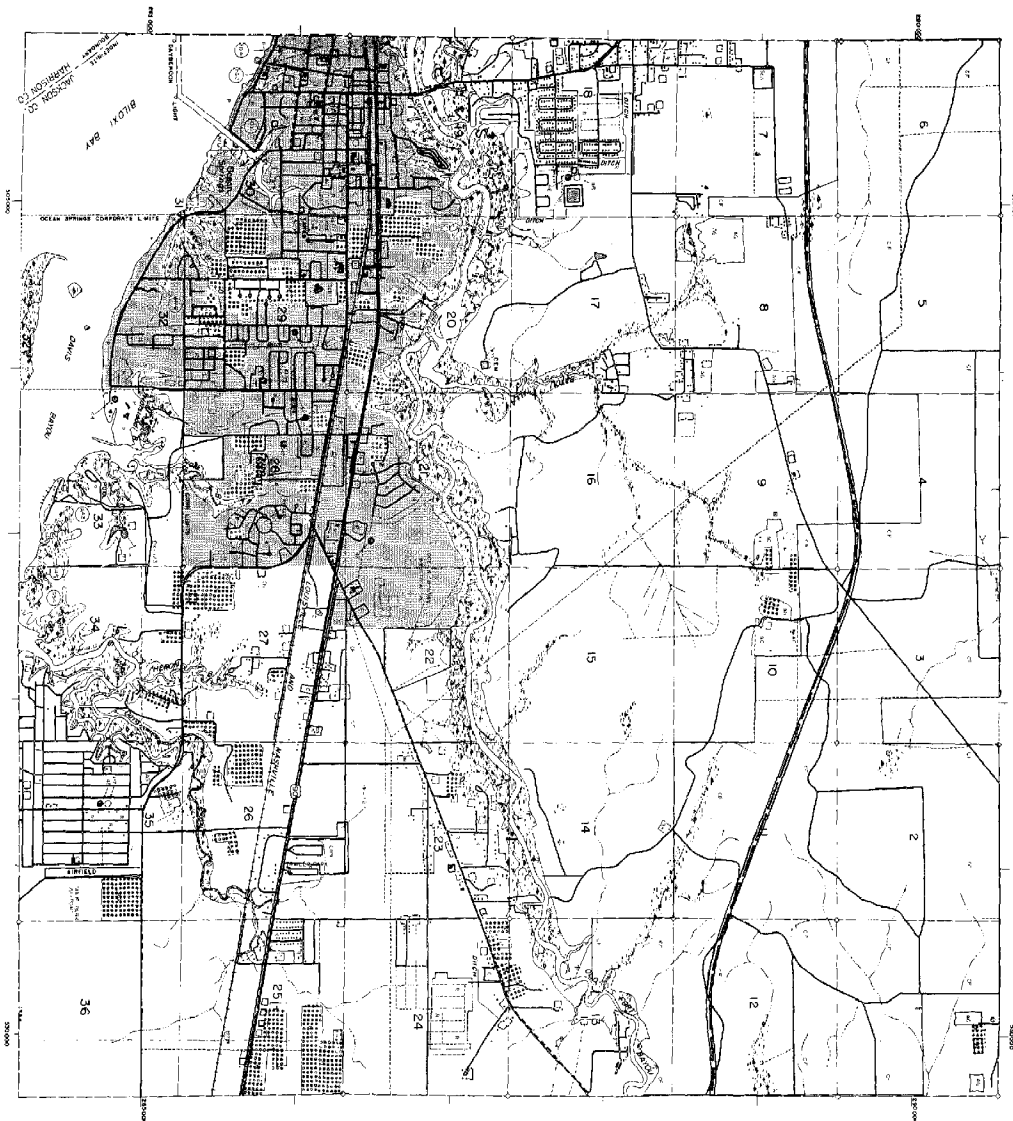
TASK VIII

LAND USE & THE MAPPING PROCESS

Land use in the Gulf Region may be broadly grouped into eight classifications. These classifications, along with accompanying mapping explanations are addressed below. For reference purposes, a representative map has been reproduced, reduced, and included with this report, (see Figures VIII-1 and VIII-2). Figures VIII-3 and VIII-4, also included for reference purposes cover population densities by Section and TAZs and Federal and State land ownership by township and range. A total of 91 base maps and 364 accompanying overlays depicting existing land use, future land use, population distributions and Federal and State land ownership were prepared under this task.

1. Residential contains five sub-categories; single family, mobile home, duplex, multi-family and mobile home parks. For mapping purposes, residential land uses may be identified as those areas in existing and future land use overlays outlined in yellow and designated residential by the symbol "R" (refer to Figures VIII-1 and 2). All five sub-categories are grouped under one heading for residential.
2. Commercial, covering all types of commercial activity including central business districts, neighborhood commercial, community and regional shopping centers, and general highway commercial are outlined in existing and future land use overlays in red and denoted commercial by the symbol "C" (Figures VIII 1 and 2).
3. Industrial classifications embrace all existing industries including all forms of manufacturing, open storage of raw materials, semi-finished and finished products, salvage yards and excavation activities. Industrial land uses are outlined in blue and symbolized by the letter "I" (Figures VIII 1 and 2).
4. Public and semi-public land uses cover all governmental activities including schools, colleges, fire stations, courthouses, city halls, libraries, and tax supported institutions, churches, non-profit hospitals, community centers, public recreation, parks,

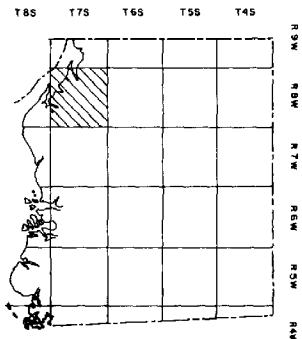
FIGURE XII-1 EXISTING LAND USE



OVERLAY LEGEND

AGRICULTURAL	1
FOREST	2
WATER	3
WETLANDS	4
URBAN	5
INDUSTRIAL	6
TRANSPORTATION	7
RECREATION	8
UNDEVELOPED	9
COASTAL	10
WETLANDS	11
WATER	12
WETLANDS	13
WATER	14
WETLANDS	15
WATER	16
WETLANDS	17
WATER	18
WETLANDS	19
WATER	20
WETLANDS	21
WATER	22
WETLANDS	23
WATER	24
WETLANDS	25
WATER	26
WETLANDS	27
WATER	28
WETLANDS	29
WATER	30
WETLANDS	31
WATER	32
WETLANDS	33
WATER	34
WETLANDS	35
WATER	36

SHEET INDEX



TTS - R8W

SCALE 1:4000



BASE MAP LEGEND

WETLANDS	1
WATER	2
WETLANDS	3
WATER	4
WETLANDS	5
WATER	6
WETLANDS	7
WATER	8
WETLANDS	9
WATER	10
WETLANDS	11
WATER	12
WETLANDS	13
WATER	14
WETLANDS	15
WATER	16
WETLANDS	17
WATER	18
WETLANDS	19
WATER	20
WETLANDS	21
WATER	22
WETLANDS	23
WATER	24
WETLANDS	25
WATER	26
WETLANDS	27
WATER	28
WETLANDS	29
WATER	30
WETLANDS	31
WATER	32
WETLANDS	33
WATER	34
WETLANDS	35
WATER	36

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PLANNING MAP

JACKSON COUNTY MISSISSIPPI

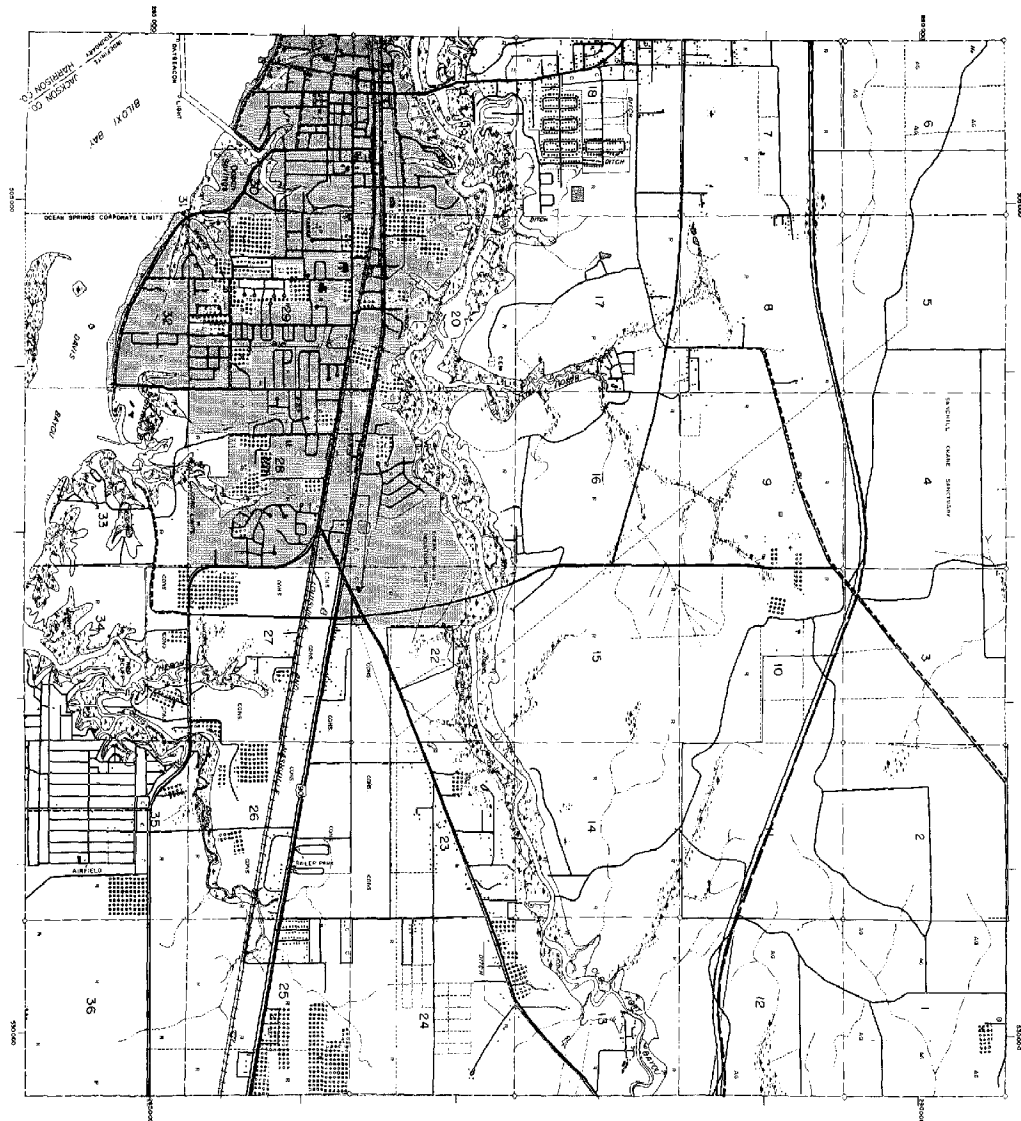
MISSISSIPPI MARINE RESOURCES COUNCIL

Gulf Regional Planning Commission

GULF COAST AREA MAPS AND CO., INC.

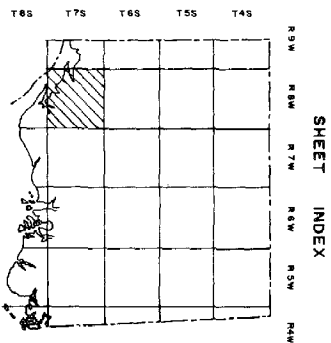
TOWNSHIP NUMBER TTS RAW OVERLAY NO. 1
TITLE EXISTING LAND USE CODE 21

FIGURE XII-2 FUTURE LAND USE
(Same as Township)

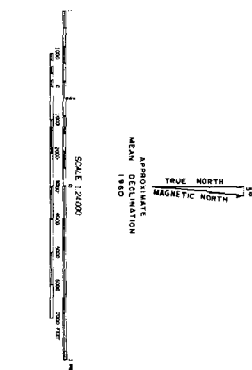


OVERLAY LEGEND

AGRICULTURE	1
AGRICULTURE - CROPLAND	2
AGRICULTURE - PASTURE	3
AGRICULTURE - WOODLAND	4
AGRICULTURE - WETLANDS	5
AGRICULTURE - WETLANDS - WETLANDS	6
AGRICULTURE - WETLANDS - WETLANDS	7
AGRICULTURE - WETLANDS - WETLANDS	8
AGRICULTURE - WETLANDS - WETLANDS	9
AGRICULTURE - WETLANDS - WETLANDS	10
AGRICULTURE - WETLANDS - WETLANDS	11
AGRICULTURE - WETLANDS - WETLANDS	12
AGRICULTURE - WETLANDS - WETLANDS	13
AGRICULTURE - WETLANDS - WETLANDS	14
AGRICULTURE - WETLANDS - WETLANDS	15
AGRICULTURE - WETLANDS - WETLANDS	16
AGRICULTURE - WETLANDS - WETLANDS	17
AGRICULTURE - WETLANDS - WETLANDS	18
AGRICULTURE - WETLANDS - WETLANDS	19
AGRICULTURE - WETLANDS - WETLANDS	20
AGRICULTURE - WETLANDS - WETLANDS	21
AGRICULTURE - WETLANDS - WETLANDS	22
AGRICULTURE - WETLANDS - WETLANDS	23
AGRICULTURE - WETLANDS - WETLANDS	24
AGRICULTURE - WETLANDS - WETLANDS	25
AGRICULTURE - WETLANDS - WETLANDS	26
AGRICULTURE - WETLANDS - WETLANDS	27
AGRICULTURE - WETLANDS - WETLANDS	28
AGRICULTURE - WETLANDS - WETLANDS	29
AGRICULTURE - WETLANDS - WETLANDS	30
AGRICULTURE - WETLANDS - WETLANDS	31
AGRICULTURE - WETLANDS - WETLANDS	32
AGRICULTURE - WETLANDS - WETLANDS	33
AGRICULTURE - WETLANDS - WETLANDS	34
AGRICULTURE - WETLANDS - WETLANDS	35
AGRICULTURE - WETLANDS - WETLANDS	36



T7S - R8W



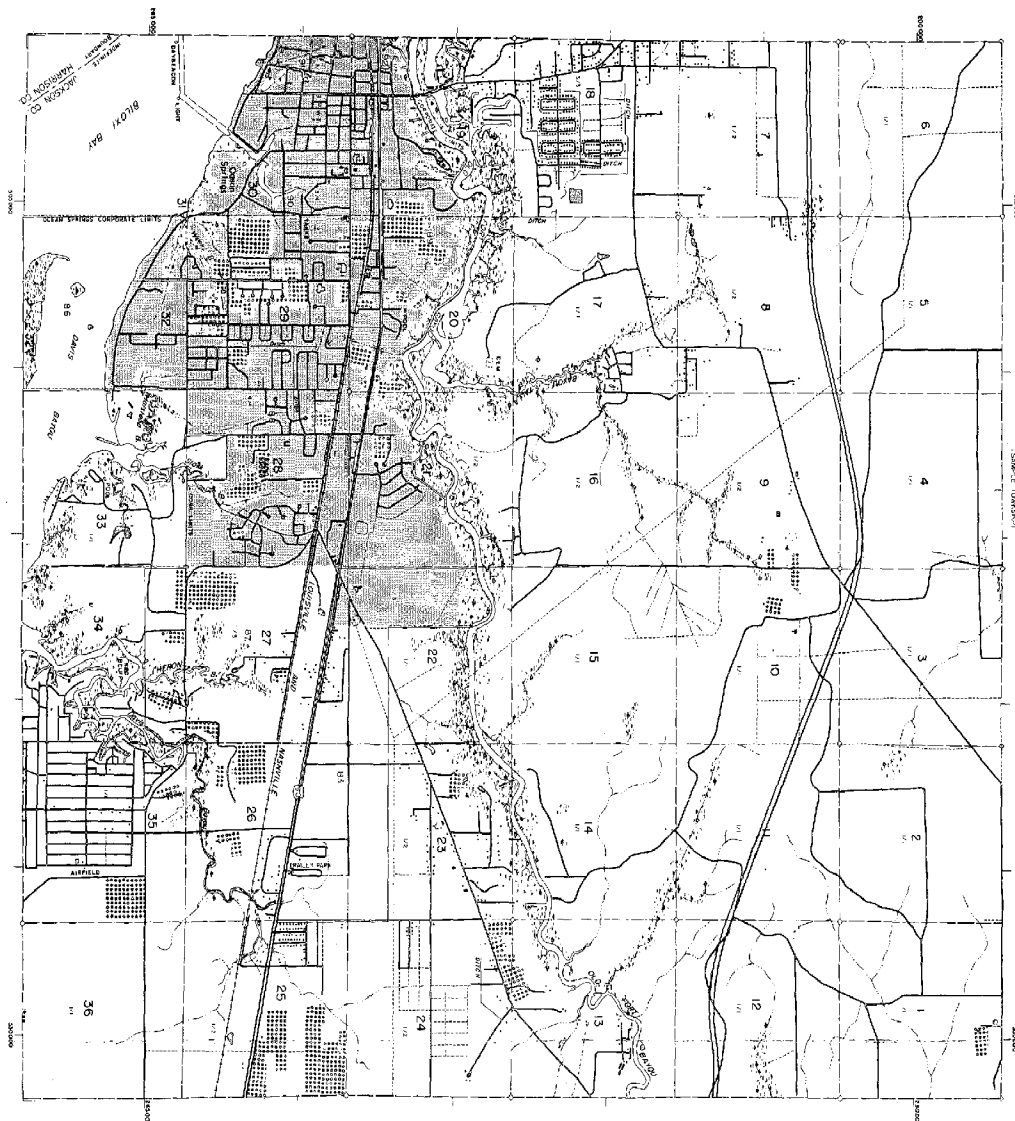
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JACKSON COUNTY MISSISSIPPI
MISSISSIPPI MARINE RESOURCES COUNCIL

by
Gulf Regional Planning Commission
GULF COAST AERIAL MAPPING CO., INC.

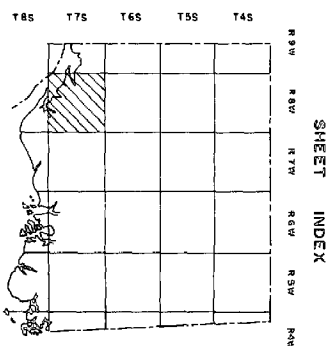
TOWNSHIP NUMBER T7S-R8W OVERLAY NO. 2
TITLE FUTURE LAND USE CODE Z1

FIGURE VII - 3 POPULATION DENSITY
(Source: Township)

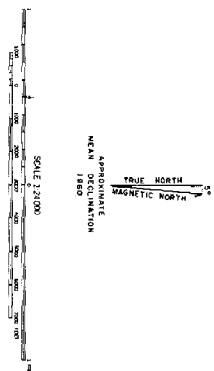


OVERLAY LEGEND

POPULATION DENSITY	1
POPULATION DENSITY	2
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POPULATION DENSITY	36



T75 - RBW



BASE MAP LEGEND

INTERESTING HIGHWAY	1
U.S. HIGHWAY	2
STATE HIGHWAY	3
ROAD	4
RAILROAD	5
RAILROAD	6
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THE PREPARATION OF THIS DOCUMENT WAS PARTIALLY FINANCED THROUGH A FEDERAL GRANT FROM THE DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, UNDER THE AUTHORITY OF SECTION 305 OF THE COASTAL ZONE MANAGEMENT ACT OF 1972.

JACKSON COUNTY MISSISSIPPI

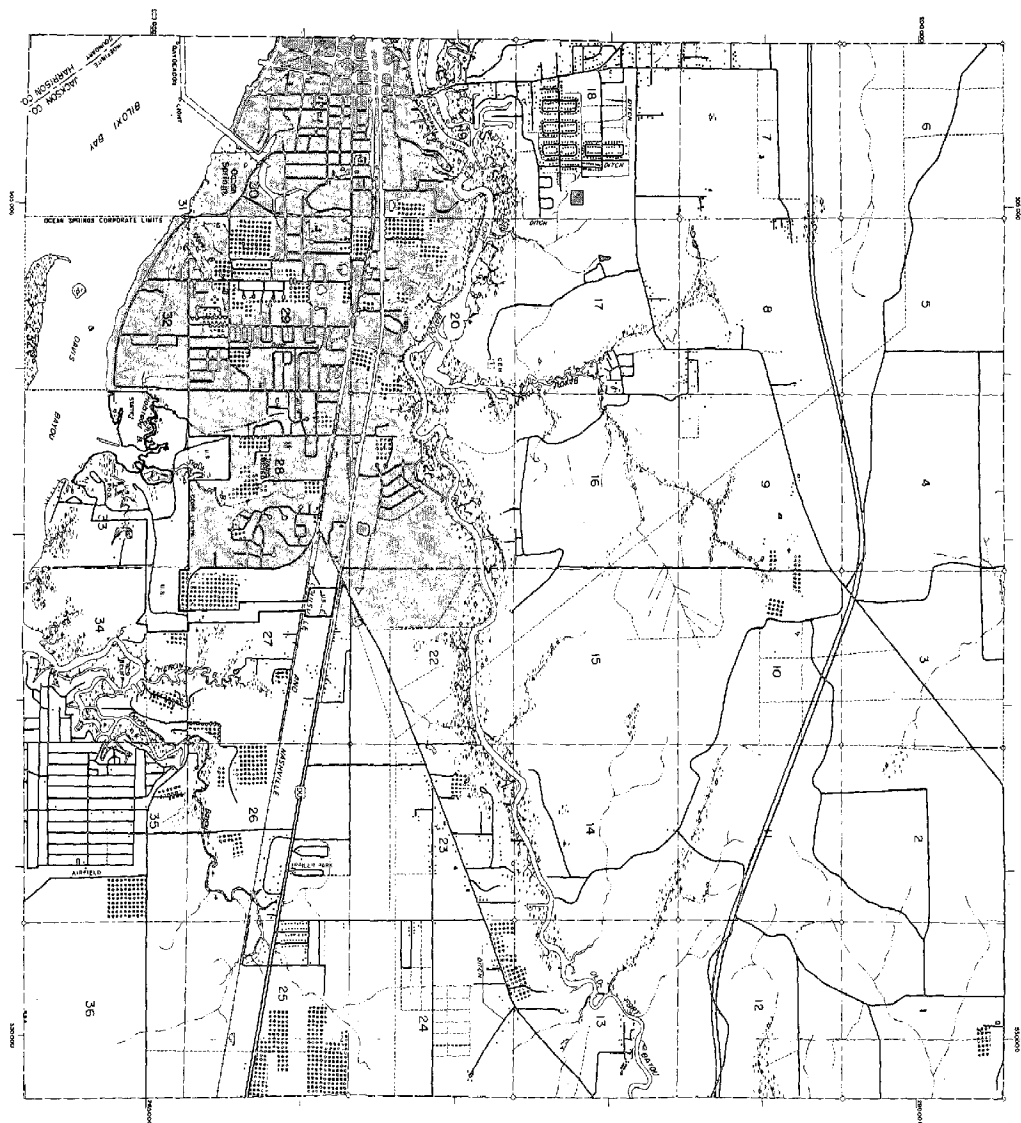
MISSISSIPPI COASTAL RESOURCE COUNCIL

Chief Regional Planning Commission

Gulf Coast Aerial Mapping Co., Inc.

TOWNSHIP NUMBER T75 - RBW OVERLAY NO. 3
TITLE POPULATION DENSITIES CODE 21

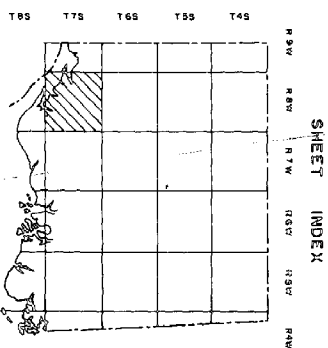
FIGURE VII-4 FEDERAL-STATE OWNERSHIP
(SHORELINE 1972)



OVERLAY LEGEND

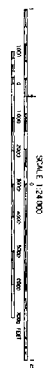
1	RESIDENTIAL
2	COMMERCIAL
3	INDUSTRIAL
4	AGRICULTURAL
5	FOREST
6	WATER
7	WETLANDS
8	WETLANDS
9	WETLANDS
10	WETLANDS
11	WETLANDS
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36	WETLANDS

TOWNSHIP NUMBER T7S-R8W OVERLAY NO. 4
TITLE FEDERAL - STATE OWNERSHIP CODE 21



T7S - R8W

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE
MEAN DECLINATION
1980



USE MAP LEGEND

1	INTERSTATE HIGHWAY
2	U.S. HIGHWAY
3	STATE HIGHWAY
4	PROPOSED INTERSTATE
5	RAILROAD
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PLANNING DIV
JACKSON COUNTY MISSISSIPPI
prepared by
MISSISSIPPI PLANNING COMMISSION
by
East Regional Planning Commission
map made by
ONE COAST AERIAL MAPPING CO. INC.

THE PREPARATION OF THIS DOCUMENT WAS PARTIALLY FINANCED THROUGH A FEDERAL GRANT FROM THE ARID AND SEMI-ARID LANDS PROGRAM, ADMINISTERED BY SECTION 306 OF THE COASTAL ZONE MANAGEMENT ACT OF 1972.

stadiums, public beaches and similar uses. These are outlined in green and are denoted by a series of symbols identified on the overlay legend on accompanying base maps (see Figures VIII-1 and 2).

5. Rights-of-way identify lands delineated for streets, roads, highways, railroads, and utility lines. Major routes are identified by brown lines and correspond to symbols shown on the overlay legend (Figures VIII 1 and 2).
6. Resource production activities include all types of farming, crops, pastures, dairies, orchards, commercial forests, national forests and tidal marshes. These are identified in black and are classified according to symbols contained on the overlay legend (Figures VIII- 1 and 2).
7. NASA-Military lands include the National Space Technologies Laboratory, Keesler Air Force Base and the Naval Construction Battalion Center (NCBC). As public institutions, these are shown in green and usually named accordingly (Figures VIII-1 and 2).
8. Water and Unclassified make up the remainder of land uses within this classification. These areas are usually left void of any classification and may be generally identified by lack of activity.

Land use surveys conducted by the GRPC in 1969 and 1972 serve as a basis for determining trends in land use activities. In the following paragraphs each county is addressed separately relative to land use changes between the years 1969 and 1972. Such comparisons may be used to analyze current activities and to plan future land uses within the study area.

Hancock County

Hancock County has two incorporated cities within its boundaries, Bay St. Louis and Waveland, both having comprehensive community plans by which growth may be guided. Between 1969 and 1974, Bay St. Louis updated its zoning regulations while Waveland adopted a completely new zoning ordinance. Hancock County has adopted subdivision regulations and is considering a county zoning plan.

The County's economy is directly linked with tourism but the degree of linkage is uncertain. With the opening of Interstate 10 during 1973, the urban areas (Bay St. Louis and Waveland) were by-passed by this major thoroughfare. The extent of economic consequences is undetermined at this time; however, an I-10 Impact Study conducted by GRPC in 1973 predicted minimum long term adverse impact.

Initial data for Hancock County was collected in 1969 while data for updating purposes was accumulated in 1972. A comparative analysis of these data revealed some interesting findings that are discussed below.

Residential land use showed an over-all increase of 47% from 1969 to 1972 (see Table VIII-1). An increase of this magnitude could possibly have had an undesirable effect on the County as a whole, due to the overloading of existing public facilities, such as streets, sewage, water systems, police and fire departments, schools and libraries. Fortunately, deficiencies have not been too severe, although sewage collection and water systems constituted somewhat significant problems. More recently efforts have been made to alleviate these deficiencies, the results of which are found in a new treatment plant for Waveland and experiments with new treatment concepts in the form of water hyacinths in Bay St. Louis. At present, Hancock County is utilizing only 19% of the total residential acreage that will be needed by 1990. To date, subdivision regulations have not been adequate to prevent or resolve most of the major deficiencies. County-wide zoning should, when adopted, alleviate many of the land use conflicts.

TABLE VIII-1
EXISTING LAND USE SUMMARIES
With Percent Changes from 1969 - 1972

County	Residential		Commercial		Industrial		Public, Semi-Public		Rights-of-Way		Resource Production		NASA Military		Water and Unclassified	
	Acreage	% Change	Acreage	% Change	Acreage	% Change	Acreage	% Change	Acreage	% Change	Acreage	% Change	Acreage	% Change	Acreage	% Change
Hancock	3,865.9	47	231.6	18	4,442.6	1	1,480.3	95	6,835.8	4	59,018.1	50	109,820.7	0	122,165.6	-15
Harrison	14,239.3	18	1,434.2	13	2,389.3	15	5,366.6	0	10,193.4	3	187,449.3	3	2,802.1	0	155,467.4	-4
Jackson	11,403.3	17	938.7	13	5,181.8	8	6,401.3	3	10,407.2	3	178,230.4	20	00.0	0	253,325.1	-10
Pearl River	5,291.8	44	288.3	18	601.5	0	2,662.0	-1	9,346.1	7	252,334.2	0	2,678.3	0	246,792.4	-1
REGION	34,800.3	--	2,892.8	--	12,665.2	--	15,910.2	--	36,782.5	--	677,032.1	--	115,301.1	-	777,750.5	--

SOURCE: GRPC - Regional Land Use Plan, 1973.

Commercial acreage showed an over-all gain of 18% from 1969 to 1972. The increase was necessary to adequately provide goods and services for the large residential influx. Although the rise in commercial property is inevitable, it is vital that commercial zones be closely monitored in the future to guard against "spot zoning" and "strip commercialism".

Industrial land use increased only slightly over the past three years; nevertheless, a great amount of progress was accomplished in this category. Considerable development occurred at the Industrial Park and Seaway (Port Bienville) located south of Pearlington near the mouth of Pearl River. By means of this development, Hancock County, under the direction of the Port and Harbor Commission, is attempting to further diversify the County's economic base. Industrial development also occurred at Stennis International Airport which is located adjacent to the eastern boundary of the Buffer Zone (NASA-MTF).

Public and Semi-Public acreage grew enormously over the period of analysis (1969-1972). Actual increase of this category was almost 100%. Two facilities were primarily responsible for this increase. First was the addition of Stennis International Airport which was not considered in the initial survey since the facility was not then in operation. The other major addition came with the donation of several hundred acres as a Boy Scout Camp which is placed in the Semi-Public category. The Boy Scout facility is now completed and includes a large lake providing additional recreational activities. These facilities, combined with the construction of Buccaneer State Park in Waveland, constitute three very substantial assets for Hancock County.

Resource Production land use reflected an increase of 50% from 1969 to 1972. The actual increase was a result of Tidal Marsh becoming a protected resource, thus allowing tidelands to be placed in Resource Production. Tidal Marsh and its nutrients serve as spawning ground and feeding areas for many species of fishes that are vital to the seafood industry. Many acres of these marshes had been reclaimed for uncontrolled development purposes, mak-

ing it necessary to adopt restraining legislation. Agricultural and orchard acres remained stable with very little variation demonstrated in survey statistics.

Water and Unclassified decreased by 15% with several townships revealing a decrease of over 30%. Primary responsibility for the dramatic loss is due to the removal of Tidal Marsh from this category, which was recommended by the Regional Land Use Plan. Unclassified areas sustained the loss with water remaining the same.

Harrison County

As stated previously, base figures for Harrison County were obtained in 1969 with later statistics being accumulated in 1972. Harrison County has four incorporated cities; Biloxi, Gulfport, Long Beach, and Pass Christian, accounting for a major portion of the County's urban area. A comparison of base figures with present computations revealed no extraordinary trends (see Table VIII-1). The county, while appearing to be economically diversified, is at present highly dependant on military activities.

Residential acreage showed an overall increase of 18% from 1969 to 1972 with the urban area showing the greatest increase (22%). This growth was considered healthy and in accordance with the regional plan. The Regional Land Use Plan (1971) provides for a greater growth rate within the urban area to maintain a balanced land use pattern. Rural residential acreage increased significantly due to the increase of non-farm residences and the influx of mobile home dwellers.

Commercial acreage increased 13% through the County with a 9% gain in the urban area and a 29% gain in the rural area in the past three years (see Table VIII-2). Commercial acreage increased at a faster rate than anticipated in the land use plan, particularly in the rural area.

TABLE VIII-2
HARRISON COUNTY
RESIDENTIAL-COMMERCIAL ANALYSIS

<u>URBAN (incorporated area)</u>			
	<u>No. of Acres</u>		<u>Percent Increase</u>
	<u>1969</u>	<u>1972</u>	
Residential	6,500.16	7,907.55	22
Commercial	997.73	1,084.50	9
 <u>RURAL (unincorporated area)</u>			
Residential	5,564.94	6,331.78	14
Commercial	270.88	349.71	29

Industrial land use rose substantially in three years (15%). The main addition came with the development of the Long Beach Industrial Park.

Public and Semi-Public land use show no appreciable increase; however, this does not indicate a lack of constructive activity in the category. New parks were constructed and others received much needed restoration efforts. Other public and semi-public activities involve plans for construction of the Coast Coliseum on Highway 90 in Biloxi and a new County Courthouse in Gulfport.

Resource Production acreage increased by 3%. This figure is substantial when the amount of acres involved is considered, amounting to an actual increase of more than 5,000 acres. The tremendous increase is attributable to the addition of Tidal Marsh. Tide lands or those lands below ordinary mean high tide are now protected and regulated under 1973 state legislative action, which had been recommended by the initial GRPC land use plan. Commercial and National forests remained constant with no noticable variance in the land use.

Water and Unclassified areas decreased 4% primarily because of tidal marsh being reclassified and placed in Resource Production. As other land uses expand, unclassified areas will obviously decrease. The rate of decrease will be rapid as all unclassified lands are programmed to be integrated with productive land uses, as illustrated by tidal marsh being reclassified as Resource Production. By 1990 all land in the County should be in a productive status.

Jackson County

Jackson County was the first County in the Region to adopt a County-wide zoning ordinance and subdivision regulations. Each of the three cities, Moss Point, Ocean Springs, and Pascagoula, have comprehensive plans and corresponding zoning ordinances. It was important that Jackson County be completely zoned because of the rapid growth over the past decade. Early action in land use controls has already made it possible to anticipate and avert potential problems.

Survey data obtained in 1969 and again in 1972 revealed, as suspected, that Jackson County is growing rapidly in most areas. However, monitoring of certain indicators revealed that accelerated growth has probably reached its peak and is now continuing at a more normal rate.

Residential land use had a tremendous increase of 44% between 1969 and 1972. Survey findings also revealed a 30% increase in the total number of dwelling units within the same period. One explanation for a larger increase in residential acreage than in number of dwelling units is that a greater number of homes were being built in the County where lot sizes tend to be larger than within the cities. The County economy has expanded rapidly and in an effort to keep up with this expansion, developers have worked vigorously to provide a supply of residential property adequate to meet current demands. During 1972 and early 1973 residential construction became so intensive that oversaturation resulted. More recent data, however, indicate some stabilization is beginning to take place.

The Pascagoula City Planning Commission previously took action to prevent excessive development in the city by requesting a moratorium on the issuance of building permits for multi-family rental dwellings. The proposed moratorium was to last only until the City could be reasonably sure that the total number of rental units would not exceed occupancy demands. As of this writing the moratorium is still in effect; however, indications are that it may soon be lifted due to declining vacancies in apartments.

Commercial land uses showed an increase of approximately 13 percent. This increase was essential in order to supply the rapid residential growth with goods and services. Even with comprehensive zoning to regulate and guide commercial expansion, portions of this increase are seen as "strip commercialism" resulting from the continuing development of commercial property along U. S. Highway 90 between the cities of Ocean Springs and Pascagoula.

Industrial land use increased by 8% as the County continued to broaden its economic base. To the already existing industrial areas around Bayou Casotte, Moss Point and Ingalls shipyards, other plans were developed for additional industrial acreage. The City of Ocean Springs made preparations to create an Industrial Park that will provide job opportunities for residents of the western segment of the County and efforts are being initiated to make optimum use of land already set aside for industrial purposes.

Public and Semi-Public land use was 3% over the previous survey computations of 1969. The creation of the Gulf Islands National Seashore Park, although not appreciably increasing land area, was a monumental change. The headquarters for the National Park was formerly the Magnolia State Park located adjacent to Ocean Springs and bordering the Mississippi Sound. Other areas where increases occurred were in public utilities and services.

River.

The construction of a reservoir that would provide recreation and supplement existing water supplies has been the subject of continuing deliberation. There is already documented need for a new source of water in the Pascagoula-Moss Point area.

The City of Ocean Springs has undertaken a project to have Fort Maurepas (erected by D'Iberville in 1699) reconstructed to serve as a museum and historic attraction as a part of the National Bicentennial. The Fort will be a tremendous asset to the cultural and tourist interests of the Gulf Coast region and the State.

Plans are also in the initial stage for a major recreational facility to be built on Bluff Creek near the community of Vancleave. As population increases in Jackson County, a concentrated effort will be needed to obtain more recreational facilities for residents of the County as well as the region. The Regional Plan for Open Space, Recreation and Environmental Appearance has a number of recommendations to aid the County in acquiring more recreational facilities.

Resource Production remained a stable land use with the exception of the addition of Tidal Marsh which amounted to over twenty-seven thousand acres (20%), emphasizing the timeliness of recent state legislation to preserve coastal wetlands in the region.

Water and Unclassified areas had an over-all decrease of 9%, with the largest loss attributed to the removal of Tidal Marsh from this category. Increased residential land use also accounted for a portion of the decrease. The reduction of acreage in this land use was not unexpected, but predicted, in order to remain consistent with the Regional Land Use Plan. Unclassified areas incurred the decrease, while water areas remained virtually the same.

Pearl River County

Pearl River County has two cities, Poplarville and Picayune, which contain almost half of the County's population. Both cities have comprehensive plans and zoning ordinances. Zoning regulations for the county are still under advisement at this time.

Picayune has a stable economy with a number of industries to provide jobs and maintain a diversified economy. Picayune, located immediately north of NSTL, suffered an economic depression as did Hancock County when the Test Facility experienced operational cutbacks in 1970. The city has now overcome the setback due to its diversity and stability. Poplarville contains industry as well as a two-year college to compliment its industry. Plans are now in process whereby the city of Poplarville, in cooperation with the County, will construct a general aviation airport to be used by local industries for transport and by Pearl River Junior College for educational purposes.

Data obtained in 1969 and again in 1972 prove that Pearl River County is growing steadily and, barring any unforeseen changes, it should continue to do so.

Residential acreage proved to be the most rapidly expanding land use in the County, having an increase of 44% (see Table VIII-1). Survey statistics indicated that Picayune had a significant increase in residential acreage of 31%, but the major increase occurred in subdivisions located outside of Picayune. This additional growth will place a greater demand on supporting land uses, especially commercial and industrial. Public utilities will also need to be expanded, with emphasis upon water and sewage facilities.

Commercial land use increased by 18% over a period of three years. Survey data revealed that the greatest amount of commercial increase occurred within the cities of Poplarville and Picayune. This increase was essential in order to provide adequate retail trade facilities for the area, as required by the large residential expansion.

Industrial acreage had a zero percent change over-all; however, there was decisive activity in this category. Several townships reveal an increase, while others show a decrease. "Borrow Pits" were abandoned in some instances and a sawmill in the McNeil Community was vacated and removed. Picayune constructed an Industrial Park in addition to other industries that located elsewhere in Picayune. Although the County had no actual increase in Industrial acreage its capacity to produce has increased substantially.

Public and Semi-Public acreage increased by only 1%. Plans for public and semi-public uses have been recommended in the Regional Plan for Open Spaces, Recreation and Environmental Appearance. By virtue of the sharp rise in residential acreage the county should consider implementing a number of the proposals set forth by the aforementioned Regional Plan. Pearl River County has numerous potential sites for recreational areas that would enhance the County's environment as well as its economy.

Resource Production had no appreciable change, which was not unexpected. However, survey findings did indicate one very important change with this category: the conversion of orchards to farmland. Acreage in orchards, primarily tung groves, diminished 93% during the survey analysis period.

There were a number of reasons for this gross reduction in orchards. Many orchards in the initial survey were in a dormant or non-productive status. Even though winters are mild they were often too severe for tung trees. Hurricanes also dealt severe damage to this crop in the past decade. Less expensive synthetic products replaced tung oil on the market, thus delivering another crucial blow to the tung industry.

Water and Unclassified acreage decreased by 1% due to the large increase in residential and commercial land use (water area remained the same). The decrease was consistent with the Future Land Use Plan for Pearl River County and can be noted as a favorable reduction.

Offshore Islands

There are six islands located in the Mississippi Sound which must be given consideration in light of the purpose of this project. Petit Bois, Horn, Round, Deer, Ship and Cat Islands. Of these islands only Deer Island was placed in the existing and future land use computations, due to its proximity to the mainland and the City of Biloxi.

Petit Bois, Horn, and Ship Islands have been placed in the National Park system by congressional action; these islands are now part of the Gulf Islands National Seashore. Plans

are being prepared now to develop the islands for recreational purposes including over-night camping, fishing, swimming and related activities, with visits to Ship Island and historic Fort Massachusetts.

Round Island, one of the smaller and less significant islands, serves as an ideal area to be preserved in its natural state with no development necessary other than a small park with a minimum harbor and docking space.

Cat Island, though privately owned, has seen limited development in recent years. The area has been subdivided into lots for summer home dwellings and includes a series of dredged canals for residential docking facilities. More recently, there has been some interest in the inclusion of this island in the Gulf Islands National Seashore. At this time no definite action has been taken, however.

TASK IX

PARKS AND RECREATION

Recreational movements and activities are profoundly affected within any given area by trends in growth and development. Industrialization, commercialization, population concentrations and shifts, and urban and sub-urban development are most often accomplished by the absorption of open space. This being true, it can be said that growth patterns are directly influenced by availability of open space. It follows logically that planned and managed open space in turn can influence growth patterns, adding further emphasis to the importance of a regional plan for open space management and conservation.

Recreational trends also reflect patterns of increasing personal income, and an increasing involvement of the private sector in recreation-oriented development.

Other more subtle factors which exert an influence on recreation desires, activities, and potentials include governmental policies and on going recreation programs.

Concern on the part of public officials is reflected in the numerous park and playground commissions active in most municipalities throughout the region.

In order to provide an overview of existing public recreation facilities, Table IX-1 was developed. Data reflected therein are the results of work performed in the summer of 1975 by GRPC.

Because of map limitations only public recreation and major semi-public and commercial activities are identified.

Recreation areas and facilities, identified in Table IX-1 and corresponding to facility numbers on existing land use overlays, have been divided into six major classifications. These include, as shown in Tables IX-2 through IX-4, large community parks,

TABLE IX-1

REGIONAL PARKS & RECREATION AREAS

Map Code	Facility	Name	Type of Facility	Ownership	Acreage
BAY ST. LOUIS					
31	PK-1	Boy High School	School Playfield	City School System	15
49	PK-2	Boy Jr. High	School Playfield	City School System	4
49	PK-3	North Bay Elem. School	School Playfield	City School System	5
49	PK-4	Christ Episcopal	Parochial School Playfield	Church	3
49	PK-5	Devine Ward Seminary	Parochial School Playfield	Church	4
49	PK-6	Our Lady of the Gulf	Parochial School Playfield	Church	2
49	PK-7	St. Joseph Academy	Parochial School Playfield	Church	4
49	PK-8	St. Stanislaus College	Parochial School Playfield	Church	25
49	PK-9	Ingram Elem. School	School-City Playfield	City of Bay St. Louis	1
49	PK-10	Dunbar & Union Field	City Playfield	City of Bay St. Louis	2
49	PK-11	Julia & Dunbar Park	City Mini-Park	City of Bay St. Louis	1
49	PK-12	Main & Nicolise Park	City Mini-Park	City of Bay St. Louis	1
49	PK-13	St. Francis & Bookier Park	City Mini-Park	City of Bay St. Louis	1
WAVELAND					
50	PK-14	Waveland Elem. School	School Playfield	City School System	3
50	PK-15	St. Clares' Elem. School	Parochial School Playfield	Church	3
50	PK-16	Elmwood Park	City Playfield & Park	City of Waveland	5
UNINCORPORATED AREA					
53	PK-17	Hancock North Central School	School Playfield & Playground	County School System	30
62	PK-18	C. B. Murphy School	School Playfield	County School System	3
50	PK-19	Hancock Co. Beaches	Public Beach	County	135
50	PK-20	Buccaneer St. Park	State Park	State of Miss.	394
PASS CHRISTIAN					
48	PK-21	Pass Christian High School	School Stadium	City School System	---
48	PK-22	Parish Memorial Park	Community Playfield	City of Pass Christian	---
48	PK-23	Small Craft Harbor	Small Craft Harbor	City of Pass Christian	---
48	PK-24	Pass Christian Harbor	Community Park	City of Pass Christian	3
48	PK-25	Camp Robinson Park	Community Park	City of Pass Christian	25
48	PK-26	Church St. Park	Neighborhood Playfield	City of Pass Christian	1
48	PK-27	Wax Memorial Park	Neighborhood Playfield	City of Pass Christian	5
48	PK-28	Pass Christian Yacht Club	Neighborhood Playfield	City of Pass Christian	4
LONG BEACH					
40	PK-29	Long Beach High School	School Playfield, Gym, Tennis Courts & Stadium	City School System	---
40	PK-30	O'Malley Park	Community Playfield	City of Long Beach	10
40	PK-31	Church Street Park	Community Playfield	City of Long Beach	6
40	PK-32	Skullie Park	Neighborhood Playfield	City of Long Beach	3
40	PK-33	Railroad St. Park	Neighborhood Playfield	City of Long Beach	2
40	PK-34	Long Beach Basketball Court	Neighborhood Playfield	City of Long Beach	1
40	PK-35	Long Beach Recreation Center	Recreation Center	City of Long Beach	1
40	PK-36	Small Craft Harbor	Small Craft Harbor	City of Long Beach	2
GULFPORT					
31	PK-37	Hondaburo School	School Playfield	City School System	4
31	PK-38	Amistado Avenue School	School Playfield	City School System	2
39	PK-39	Mississippi City School	School Playfield	City School System	4
38	PK-40	28th Street School	School Playfield	City School System	8
39	PK-41	Gulfport High School	Gym & Related Facilities	City School System	---
38	PK-42	Gulfport East High School	Gym, Tennis Courts & Related Facilities	City School System	---
38	PK-43	Boyau View Jr. High School	Gym, Playfield & Related Facilities	City School System	---
38	PK-44	Gulfport East Jr. High	Gym, Tennis Courts & Related Facilities	City School System	---
39	PK-45	Walter Stadium	School Playfield	City School System	---
39	PK-46	Miner Stadium	Stadium	City of Gulfport	---
39	PK-47	Fairgrounds Playfield	Playfields & Fairgrounds	City of Gulfport	---
39	PK-48	33rd Avenue Playfield	Community Playfield	City of Gulfport	26
38	PK-49	Boyau View Playfield	Community Playfield	City of Gulfport	14
39	PK-50	Beach Blvd. Playfield	Community Playfield	City of Gulfport	8
38	PK-51	Boyau View Park	Community Park	City of Gulfport	18
39	PK-52	Wetlands Community Park	Community Park & Center	City of Gulfport	19
39	PK-53	Gaston Point Playfield	Neighborhood Playfield	City of Gulfport	3
38	PK-54	North Gulfport Playfield	Neighborhood Playfield	City of Gulfport	2
39	PK-55	2nd Street Playfield	Neighborhood Playfield	City of Gulfport	3
39	PK-56	19th Street Playfield	Neighborhood Playfield	City of Gulfport	37
31	PK-57	Hill Park	Neighborhood Park	City of Gulfport	4
39	PK-58	Jones Park	Memorial Park	City of Gulfport	---
39	PK-59	Broadmore Place Park	Neighborhood Mini-Park	City of Gulfport	---
GULFPORT continued					
39	PK-60	East Side Mini-Park	Neighborhood Mini-Park	City of Gulfport	---
39	PK-61	Hewes Recreation Center	Community Center	City of Gulfport	15
39	PK-62	East Side Community Center	Community Center	City of Gulfport	---
39	PK-63	Moses Pier	Public Fishing Pier	City of Gulfport	---
39	PK-64	Small Craft Harbor	Public Marina	City of Gulfport	30
39	PK-65	Gulfport Yacht Club	Yacht Club - Private	City of Gulfport	4
38	PK-66	Boyau View Golf Course	Golf Course	Private-lease from City	140
38	PK-67	Gulfport Par-Three Course	Par-Three Golf Course	Commercial	39
31	PK-68	Broadwater Golf Course	Golf Course	Commercial	160
39	PK-69	Marine Life	Marine Aquarium	Commercial	2
BILOXI					
30	PK-70	Biloxi High School	School Playfield & Related Facilities	City School System	---
30	PK-71	Central Jr. High School	School Gym & Related Facilities	City School System	---
30	PK-72	Fenwood School	School Gym & Related Facilities	City School System	---
30	PK-73	Michael Jr. High School	School Gym & Related Facilities	City School System	---
30	PK-74	Biloxi Municipal Stadium	Municipal Stadium	City of Biloxi	---
31	PK-75	Hillier Park	Community Park	City of Biloxi	75
31	PK-76	Tanglewood	Community Park	City of Biloxi	2.5
30	PK-77	Brian Park	Community Park & Center	City of Biloxi	---
30	PK-78	Biloxi Community Center	Community Center	City of Biloxi	---
30	PK-79	Division Street Community Center	Community Center	City of Biloxi	---
30	PK-80	Meadow Center	Community Center	City of Biloxi	---
30	PK-81	West Biloxi Center	Community Center	City of Biloxi	---
30	PK-82	East End Center	Community Center	Lutheran Church	---
30	PK-83	Back Bay Little League Park	Little League Playfield	City of Biloxi	---
30	PK-84	Lee Street Baseball Park	Neighborhood Playfield	City of Biloxi	5.5
30	PK-85	McDonnell Playfield	Neighborhood Playfield	City of Biloxi	5
30	PK-86	Rose Street Playfield	Neighborhood Playfield	City of Biloxi	7
30	PK-87	St. Michael Playfield	Neighborhood Playfield	City of Biloxi	3.3
30	PK-88	West End Park	Neighborhood Playfield	City of Biloxi	3.5
30	PK-89	Business Men's Club Playground	Neighborhood Playfield	City of Biloxi	2.5
30	PK-90	St. Mary's Playground	Neighborhood Playfield	City of Biloxi	3
31	PK-91	Biloxi International Plaza	Neighborhood Plaza & Park	City of Biloxi	1.5
30	PK-92	Atlantic Mini-Park	Neighborhood Plaza-Park	City of Biloxi	2
30	PK-93	Guise Park	Neighborhood Plaza-Park	City of Biloxi	1
30	PK-94	Biloxi Small Craft Harbor	Small Craft Harbor & Marina	City of Biloxi	12
30	PK-95	Biloxi Fishing Bridge	Fishing Bridge	City of Biloxi	---
30	PK-96	Biloxi Yacht Club	Yacht Club & Marina	Private	5
30	PK-97	Broadwater Beach Marina	Amusement Park	Private-Commercial	10
31	PK-98	Amusement Park	Amusement Park	Commercial	7
31	PK-99	Deer Island	Amusement Park	Commercial	2
31	PK-100	Golfy Golf	Golf Course	Commercial	160
31	PK-101	Broadwater Sun-Golf Course	Golf Course	Commercial	125
31	PK-102	Edgewater Golf Course	Golf Course	Commercial	120
31	PK-103	Sunkist Golf Course	Golf Course & Club	Private	---
31	PK-104				
UNINCORPORATED AREA					
35	PK-105	Airway Lake Recreation Area	Camping & Picnic	U. S. Forest Service	6
36	PK-106	Big Biloxi River Recreation Area	Camping & Picnic	U. S. Forest Service	27
35	PK-107	Big Foot Horse Trail	Riding Trail	U. S. Forest Service	17
35	PK-108	Towheehis Hiking Trail	Hiking Trail	U. S. Forest Service	---
31	PK-109	Ship Island Park	Nature Park	National Park Service	120
30-48	PK-110	Harrison County Beach	Public Beach	Harrison County/Miss.	---
36	PK-111	Saugier Little League Field	Little League Playfield	Unknown	2
46	PK-112	D'Barville Little League Field	Little League Playfield	Unknown	2
38	PK-113	Lizanna Little League Field	Little League Playfield	Unknown	2
40	PK-114	Orange Grove Little League Field	Little League Playfield	Unknown	2
39	PK-115	Prineville Little League Field	Little League Playfield	Unknown	2
31	PK-116	Harrison County Fishing Pier	Public Fishing Pier	Harrison County	89
31	PK-117	Camp Wilkes	Boy Scout Camp	Boy Scout Council	32
31	PK-118	Biloxi Par-Three Golf Course	Golf Course	County School System	---
36	PK-119	Harrison Central High School	School Playfield & Related Facilities		
OCEAN SPRINGS					
21	PK-120	Freedom Field	School Playfield	City School System	4
21	PK-121	Vernon St. Playground	School Playfield	City School System	1
21	PK-122	Grayhound Stadium	Stadium	City School	19
21	PK-123	Magnolia Park	Community Park	City of Ocean Springs	20
21	PK-124	Pecan Park	Community Park	City of Ocean Springs	21
21	PK-125	Little Children's Park	Neighborhood Playground	City of Ocean Springs	4
JACKSON COUNTY					

TABLE IX-1

REGIONAL PARKS & RECREATION AREAS (CONTINUED)

Map Code	Number	Facility Name	Type of facility	Ownership	Acreage
OCEAN SPRINGS continued					
21	PK-126	Ocean Springs Recreation Center	Community Center	City of Ocean Springs	1
21	PK-127	Parklawn East	Neighborhood Park	City of Ocean Springs	3
21	PK-128	Clayboy Park	Neighborhood Playfield	City of Ocean Springs	5.5
21	PK-129	Hallstead Rd., Tennis Courts	Tennis Courts	City of Ocean Springs	8
21	PK-130	Ocean Springs Small Craft Harbor	Small Craft Harbor	City of Ocean Springs	---
MOSS POINT					
4	PK-131	Mayo Elementary School Playground	School Playground	City School System	2
11	PK-132	Bellview Park	Community Park	City of Moss Point	19
11	PK-133	Magnolia Park	Community Park	City of Moss Point	9
4	PK-134	Curt Street Playfield	Community Playfield	City of Moss Point	13
4	PK-135	Frederick St. Playfield	Community Playfield	City of Moss Point	10
11	PK-136	Mass Point Recreation Center	Community Center	City of Moss Point	1
4	PK-137	Gautier Field	Semi-Public Playfield	Dixie Youth Baseball League	4
4	PK-138	St. Joseph Church Playfield	Semi-Public Playfield	Church	2
PASCAGOULA					
3	PK-139	Colmer Jr. High Playfield	School Playfield	City School System	10
12	PK-140	Pascagoula City Park	Community Park	City of Pascagoula	8.5
12	PK-141	Davenport Playfield	Neighborhood Playfield	City of Pascagoula	2
12	PK-142	Flanegan Playfield	Neighborhood Playfield	City of Pascagoula	2
12	PK-143	Gibson Playfield	Neighborhood Playfield	City of Pascagoula	2
12	PK-144	Ingalls Playfield	Neighborhood Playfield	City of Pascagoula	2
12	PK-145	John Ingalls	Neighborhood Playfield	City of Pascagoula	2
12	PK-146	War Memorial Stadium	Stadium	City of Pascagoula	4
12	PK-147	Pansy St. Mini-Park	Neighborhood Mini-Park	City of Pascagoula	1
12	PK-148	Live Oak Mini-Park	Neighborhood Mini-Park	City of Pascagoula	.5
12	PK-149	Pascagoula Recreation Center	Recreation Center	City of Pascagoula	7
12	PK-150	Pascagoula Inner Harbor	Harbor & Marina	City of Pascagoula	4
3	PK-151	Longfellow House & Gardens	Pool, Golf & Tennis	Litton Industries	70
12	PK-152	Pascagoula Country Club	Golf Course	Private - Club	200
12	PK-153	Aquatic Club Pool	Swimming Pool	Private - Club	1
3	PK-154	Coastline Pool	Swimming Pool	Private - Club	1
4	PK-155	Fun Spot	Miniature Golf	Commercial	4
UNINCORPORATED AREA					
7	PK-156	Softball Field	Community Playfield	County-Community	10
22	PK-157	Gulf Park Estates	Marina, Golf Course & Pool	Private Corporation	---
11	PK-158	Hickory Hills Country Club	Golf Course & Pool	Private Corporation	---
13	PK-159	St. Andrews on the Gulf	Golf Course, Tennis & Pool	Private Corporation	---
23	PK-160	Gulf Hills Dude Ranch	Golf Course, Tennis & Stables	Private Corporation	1000
PEARL RIVER COUNTY					
PICAYUNE					
85	PK-161	Picayune Memorial High School	School Playfield & Related Facilities	City School System	---
86	PK-162	Picayune Jr. High	School Playfield & Related Facilities	City School System	---
86	PK-163	Roseland Park	Neighborhood Playfield	City of Picayune	9
86	PK-164	Railroad Park	Neighborhood Park	City of Picayune	4
86	PK-165	YMCA	Semi-Public Recreation Center	YMCA	---
POPLARVILLE					
72	PK-166	Pearl River Jr. College	School Playfield & Related Facilities	County/State	---
72	PK-167	Poplarville Jr./Sr. High School	School Playfield & Related Facilities	City School System	---
72	PK-168	Poplarville Community Park & Center	Community Playfield & Center	Semi-Public Organization	10
72	PK-169	Raine Street Recreation Center	Community Center	Semi-Public Organization	13
UNINCORPORATED AREA					
87	PK-170	Walkich Bluff Park	State Park	State-Pearl River Basin Development District	18
76	PK-171	Anchor Lake	Fishing Lake	Private Camp	400
76	PK-172	Hidaway Lake	Fishing Lake	Private Corporation	200
71	PK-173	Hilldale Lake	Fishing Lake & Golf Course	Private Corporation	150
85	PK-174	Millbrook Country Club	Lake, Pool, Clubhouse & Picnic area	Private Corporation	150

TABLE IX-2
RECREATION STANDARDS & REQUIREMENTS
SELECTED ACTIVITIES
HANCOCK COUNTY

Community Facilities	Standards		Supply	Requirements	
	Units	Units per 1000 Pop.	1975	1975	2000
Large Community Parks	Acres	5.00	394	106	222
Community Parks	Acres	1.25	5	27	56
Community Playfields	Acres	1.25	74	27	56
Neighborhood Parks	Acres	1.00	22	21	44
Neighborhood Playfields	Acres	1.00	8	21	44
Sub-Neighborhood Mini-Parks	Acres	0.25	3	5	11
<u>Selected Activities</u>					
Basketball Courts	Courts	1.00	10	21	44
Tennis Courts	Courts	0.50	11	11	22
Baseball Fields	Fields	0.20	3	4	9
Football Fields	Fields	0.10	4	2	4
Softball Fields	Fields	0.20	4	4	9
Boat Launching Ramps	Ramps	0.20	7	4	9
Golf Courses (18 hole)	Course	0.02	1	1/	1
Swimming Pools	Sq. Feet	500.00	0	10,600	22,195

1/ Semi-Public Course at Diamondhead. Note: Other Facilities include only those which may be termed public use.

SOURCE: GRPC - The Regional Plan for Open Space, Recreation, and Environmental Appearance, 1971. Updated by Selected Activities, Summer 1975.

TABLE IX-3
RECREATION STANDARDS & REQUIREMENTS
SELECTED ACTIVITIES
HARRISON COUNTY

Community Facilities	Standards		Supply 1975	Requirements	
	Units	Units per 1000 Pop.		1975	2000
Large Community Parks	Acres	5.00	166	815	1,212
Community Parks	Acres	1.25	119	204	303
Community Playfields	Acres	1.25	98	204	303
Neighborhood Parks	Acres	1.00	73	163	242
Neighborhood Playfields	Acres	1.00	59	163	242
Sub-Neighborhood Mini-Parks	Acres	.25	3	41	61
<u>Selected Activities</u>					
Basketball Courts	Courts	1.00	42	163	242
Tennis Courts	Courts	0.50	38	82	121
Baseball Fields	Fields	0.20	27	33	48
Football Fields	Fields	0.10	13	16	24
Softball Fields	Fields	0.20	19	33	48
Boat Launching Ramps	Ramps	0.20	29	33	48
Golf Courses (18 hole)	Course	0.02	7 1/2	3	5
Swimming Pools	Sq. Feet	500.00	9,900	81,550	121,150

1 / Semi-Public Courses at various hotels. Note: Other facilities include only those which may be termed public use.

SOURCE: GRPC, The Regional Plan for Open Space, Recreation, & Environmental Appearance, 1971;
Updated by Selected Activities, Summer 1975.

TABLE IX-4
RECREATION STANDARDS & REQUIREMENTS
SELECTED ACTIVITIES
JACKSON COUNTY

Community Facilities	Standards		Supply 1975	Requirements	
	Units	Units per 1000 Pop.		1975	2000
Large Community Parks	Acres	5.00	3,449 1 /	578	949
Community Parks	Acres	1.25	78	145	237
Community Playfields	Acres	1.25	55	145	237
Neighborhood Parks	Acres	1.00	18	116	190
Neighborhood Playfields	Acres	1.00	60	116	190
Sub-Neighborhood Mini-Parks	Acres	0.25	0	29	47
<u>Selected Activities</u>					
Basketball Courts	Courts	1.00	13	116	190
Tennis Courts	Courts	0.50	23	58	95
Baseball Fields	Fields	0.20	8	23	38
Football Fields	Fields	0.10	9	12	19
Softball Fields	Fields	0.20	16	23	38
Boat Launching Ramps	Ramps	0.20	35	23	38
Golf Courses (18 hole)	Courses	0.02	7	2	4
Swimming Pools	Sq. Feet	500.00	40,100	57,800	94,850

1 / Includes the Gulf Island National Seashore & Related Areas.

SOURCE: GRPC, The Regional Plan for Open Space, Recreation & Environmental Appearance, 1971; Updated by Selected Activities, Summer 1975.

community parks, community playfields, neighborhood parks, neighborhood playfields, and sub-neighborhood mini-parks. These may be generally defined as follows:

Large community parks are semi-active recreation facilities which offer a variety of activities aimed at serving a cross section of age groups. Land requirements are high (5 acres per 1000 people) and as a result few such facilities are seen. Here are found such facilities as Buccaneer State Park and the Gulf Islands National Seashore headquarters.

Community Parks are semi-active recreation facilities aimed at serving major portions of the city. Numerous age groups may be served but on a smaller scale than large community parks. Land requirements are low (1.25 acres per 1000 people); however, many cities are deficient in community parks.

Community playfields are active recreation facilities serving major portions of the city. These are playfields for organized baseball and softball. As with other recreation classifications, community playfields, though more numerous than community parks, are also in short supply.

Neighborhood parks are semi-active areas designed to provide recreation facilities to smaller areas or neighborhoods. Often times school playgrounds fall into this category; however, the majority of such parks are non-school associated. Land area requirements are relatively low and where population densities are high, usually school facilities are utilized.

Neighborhood playfields are active recreation areas that usually require larger tracts of land. Most neighborhood playfields are associated with neighborhood school facilities. As a result, multiple use of land reduces total citywide recreation costs and provides, to a limited extent, needed facilities.

Sub-neighborhood mini-parks, the smallest of all facilities, are designed as close to home passive (low activity as compared to high activity baseball fields) recreation facilities. Many times such facilities are provided solely for use by small children and are sometimes referred to as tot-lots.

Major recreation facilities are identified in Table IX-1. While not intended as a comprehensive listing, it is felt that this tabulation identifies all major public facilities as well as high public use commercial and semi-public recreation areas. Included are facility names and corresponding map numbers, the type of facility, its owner and estimated acreage.

Supplemental to Table IX-1 are recreation standards and requirements. Here are listed the standard requirements per 1000 population, the existing supply, and the requirements for acreage or units needed to bring the existing supply up to standards. As shown in Table IX-2 through IX-4 few counties (including municipalities) currently have sufficient facilities. Also included are requirements for the year 2000, based on estimated population.

Selected activities, or those activities which are currently most popular throughout the region, have also been analyzed. As can be seen in Tables IX-2 through IX-4, most county supplies fall below the standards based on units per 1000 population. Such information can be useful in predicting future needs and to a lesser extent, determining trends in recreation development.

TASK X

ELECTRICAL ENERGY TRANSMISSION

The following information was prepared by the Mississippi Power Company for purposes of this task at the request of GRPC. The Power Company is to be commended for their participation.

Description of Existing Mississippi Power Company Generating Facilities

Mississippi Power Company owned and operated at December 31, 1974, three steam-electric generating stations and one combustion turbine generating station and related equipment. The Company also has a 200,000 kilowatt share of a 500,000 kilowatt steam-electric generating plant on the Black Warrior River in Greene County Alabama, owned by Mississippi Power Company and Alabama Power Company as tenants in common in the proportions of 40% and 60% respectively. The total installed capacity of these generating plants, excluding the portion owned by or leased to others is 1,465,760 kilowatts, (for reference see Figure X-1).

Plant Sweatt, located near Meridian, has two 40,000 kilowatt steam electric turbine generators and one 39,400 kilowatt combustion turbine in service. At Plant Eaton, near Hattiesburg, there are three 22,500 kilowatt steam electric turbine generators in service. At Plant Jack Watson, located near Gulfport and Biloxi, there are two 75,000 kilowatt units, one 112,000 kilowatt unit, one 250,000 kilowatt unit, and one 500,000 kilowatt unit, all of which are steam electric turbine generators, and one 39,360 kilowatt combustion turbine in service. In the Standard Oil Generating Station near Pascagoula, there are two 13,750 kilowatt combustion turbines, which are a part of the aggregate installed capacity stated above. In addition, the Company owns two combustion turbines in the Standard Oil location with an installed capacity of 32,200 kilowatts which are leased to the Standard Oil Refinery and are operated by Mississippi Power Company under an agreement with Standard. The entire output of the leased units is used by the customer

and the capacity of these units is not included in the above statement of Mississippi Power Company's generating capacity. All four of the units at Standard Oil have heat recovery boilers to supply process steam.

Primary and alternate fuels used in the Company's generating stations vary in the different plants. Plant Sweatt is equipped to utilize natural gas as the primary fuel for the steam units and the combustion turbine. The boilers of the steam units are equipped to burn No. 6 oil for short periods of time and to supplement gas fuel. The combustion turbine utilizes No. 2 oil as the alternate fuel. Natural gas has been curtailed by the supplier.

The three units at Plant Eaton operated for many years with natural gas as the primary fuel and No. 6 oil as the alternate fuel. The gas contract at this location has been terminated by the supplier.

At Plant Jack Watson the two 75,000 kilowatt units and the one 112,000 kilowatt steam units and the 39,360 kilowatt combustion turbine utilize gas as the primary fuel and No. 2 oil as the alternate fuel. The 250,000 kilowatt unit uses coal as the primary fuel with natural gas as the alternate fuel and the 500,000 kilowatt unit uses coal as its fuel with no alternate provided. Natural gas at this location is being increasingly curtailed by the supplier.

All units in the Greene County, Alabama plant utilize coal as the primary fuel and no alternate fuel is provided. Combustion turbines in the Standard Oil Generating Station near Pascagoula utilize natural gas exclusively as fuel.

Description of Existing Mississippi Power Company Transmission Facilities

At December 31, 1975, the Company's transmission system consisted of 2,042 circuit miles of high voltage transmission lines. This total consisted of 518 miles of 230,000 volt lines, 997 miles of 115,000 volt lines and 528 miles of 46,000 volt facilities.

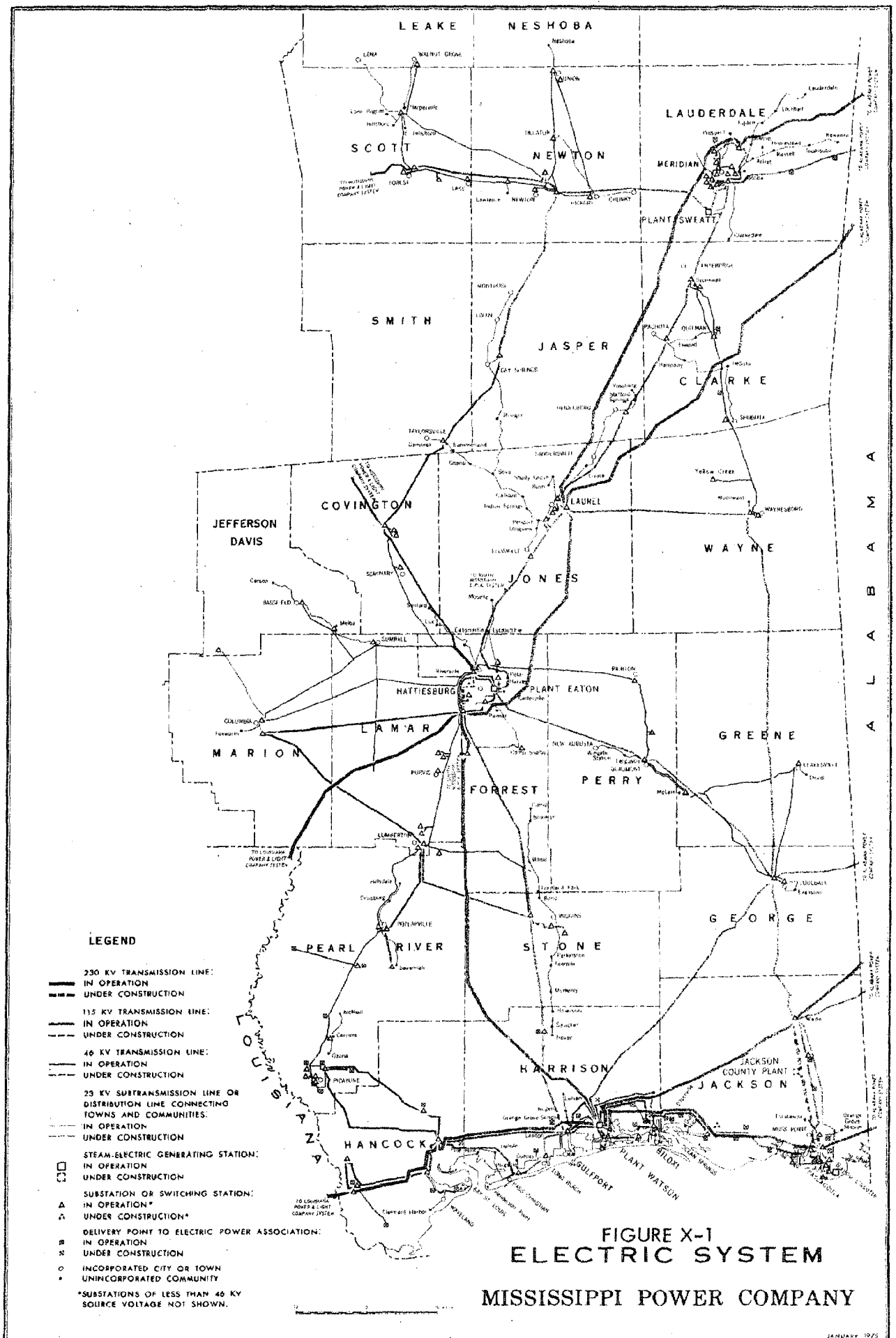
The Company's generating and transmission system is operated in parallel with the interconnected systems network. The interconnected systems network is made up of essentially all of the electric power systems in the United States and part of Canada east of the Rocky Mountains, with the exception of parts of Texas. The Mississippi Power Company has four 230,000 volt interconnections and three interconnections operated at 115,000 volts each with the Alabama Power Company to the east, and on the western side of its system, there are in operation two 230,000 volt interconnections with Louisiana Power & Light Company and two 115,000 volt interconnections with Mississippi Power & Light Company. In addition, one 230,000 volt and one 115,000 volt interconnection are provided with the South Mississippi Electric Power Association in the Purvis and Moselle areas for the purpose of providing firm power sales and emergency backup power supply to that system.

Since December 31, 1974, the Company has completed or presently has under construction 21 miles of transmission line rated at 230,000 volts and 6.6 miles of transmission line rated at 115,000 volts. The location of these new facilities, as well as existing transmission facilities of the Company, can best be seen by referring to the attached Map entitled "Electric System - Mississippi Power Company" dated January 1975.

Operating in conjunction with the Company's generation and transmission system are 177 substations with an aggregate installed capacity of 5,779,587 kilovolt amperes.

Statement Concerning Mississippi Power Company's Load Growth

The annual rate of growth of Mississippi Power Company's territorial peak hour load was reasonably uniform for many years. In 1969 a slight loss of load was experienced as a result of Hurricane Camille, and in the years 1970 and 1971, the Company's load was further reduced from its normal trend due to the loss of approximately 100 megawatts of REA Cooperative loads to the South Mississippi Electric Power Association. The growth rate, corrected for REA load transfer, was approximately 12% per year compounded over the 20 year period, 1952 - 1972.



For the years 1973, 1974 and 1975, the total growth in system demand was only 8.4% and in energy use only 12.06%. This is far below the historic growth rate which would be about 40% for three years. The lower growth rate is believed to be the result of economic conditions and conservation efforts of consumers in our service area. Lower than normal summer temperatures associated with above normal rainfall has also tended to reduce loads in recent years.

During the last three years, the cost of energy has increased faster than other segments of the economy, with the cost of oil and natural gas leading the way. Coal has also increased dramatically in price. Other factors in the increased cost of electricity are additional construction requirements to meet environmental standards, escalation of construction costs and higher cost of invested capital needed to finance the construction. Due to the short period of time in which the cost of electric power has been significantly rising and because of the other forces acting at the same time, it is impossible to determine the exact degree to which price elasticity, conservation, the state of the economy and the weather have contributed individually to the abrupt change in growth rate.

For planning purposes, load growth is projected for ten years beyond the current year. A tabulation of actual peak hour demands for the years 1972 - 1975, inclusive and estimated demands for the years 1976 - 1985, inclusive, is given in Table X-1.

TABLE X - 1
ELECTRICAL ENERGY NEEDS
EXISTING AND FORECASTED

	Peak Hour Demand In Megawatts	% Increase Over Previous Year
1972	1070	10.5
1973	1120	4.67
1974	1154	3.04
1975	1162	.69
1976	1235	6.28
1977	1346	8.99
1978	1405	4.4
1979	1475	4.98
1980	1554	5.36
1981	1636	5.28
1982	1731	5.81
1983	1840	6.3
1984	1961	6.58
1985	2100	7.09

Planned New Generating Facilities

The Mississippi Power Company has underway the construction of two new 500 MW steam-electric generating units stationed in Jackson County. The Company's designation of the initial units is Jackson County Steam Plant - Unit No. 1 and Unit No. 2.

The site is located approximately 11 to 12 miles north of the city of Pascagoula and lies on the east bank of the Pascagoula River. The site encompasses approximately 3000 acres.

Site investigation and clearing was initiated in 1972 and construction of the facilities began in 1973. Construction is scheduled for completion of Unit No. 1 in 1977, and completion of Unit No. 2 is scheduled for 1979.

Present estimated cost for the construction of the units and related facilities is approximately \$300 million. These costs include acquiring the site, clearing, purchasing and installing two complete 500,000 Kw steam-electric generating units with all auxiliaries including a step-up substation having spaces for four (4) 230 Kv transmission lines.

The turbine units are to be 500,000 Kw, 3,600 rpm, tandem compound, four (4) flow reheat steam turbines with 25-inch last stage blades designed for steam conditions of 2,400 psig, 1000° F, with reheat of 1000° F, 3.5" Hg. Abs. exhaust pressure and 3% make-up, extracting for seven (7) stages of feedwater heating and auxiliary turbine drive of the boiler feed pumps.

The generator ratings are 645 MVS, 18 Kv, 3,600 rpm, 60 cycle, 0.85 power factor and 0.5 short circuit ratio.

The boilers will be controlled circulation, radiant reheat, pressurized steam generating units having a capability of producing continuously 3,611,242 lbs. of steam per hour at full load at a steam pressure of 2,500 psig and temperature of 1000° F at the superheater header outlet and steam pressure of 516 psig and temperature of 1000° F at the reheater outlet.

Cooling water for the steam condensers will be provided by a closed system utilizing a cooling water reservoir for recycling the water.

For the operation of the plant, average monthly water balance studies indicate that 11.45 MGD of make-up water for the closed cooling system will be withdrawn from the Pascagoula River. This make-up will be needed in addition to the water added by rainfall and watershed to equate the losses due to evaporation and seepage.

The ultimate plant site generating capacity would require an estimated withdrawal rate from the Pascagoula River of 74.55 MGD of which 14 MDG will be returned.

The boilers will be arranged to have the capability of being fired with either fuel oil until late 1978, after which coal would become the primary fuel. Unit No. 2 is expected to use coal as the primary fuel when it begins operation in early or mid 1979.

The boilers and their auxiliaries will be so designed and constructed to include, to the extent of technological means reasonably available, such facilities as may be necessary for compliance with all valid and lawful air quality regulations that may ultimately be applicable to such operation. A tall stack of 350 feet height will be employed to disperse flue gases at high level to meet the currently proposed ground level ambient air regulations.

It should be noted that plant construction was delayed for most of 1975 because of financing difficulties, and although construction has resumed, Mississippi Power Company is still seeking a long-range solution to its financing requirements.

Land and Water Requirements for Generating Plant Sites

With the total load demand of customers served by electric utilities historically doubling every ten (10) years nationally, the industry is faced with increasing requirements of installing larger generating facilities to meet these loads. Technological advancements in providing better materials and manufacturing techniques permit the fabrication of larger, more efficient, and economical units to be installed in various size ranges up to 1000 Mw each to meet this load growth.

In view of the increasing Federal and State environmental requirements, industry practices, today, dictate the location of new generating facilities remote from urban areas whenever possible and to acquire the site for the ultimate facility development. With planned generating stations total installed capabilities approaching 3,000 to 4,000 Mw

each, land requirements as compared to past practices, are increasing proportionately. The major reasons that demand the increased land and water requirement at new plant sites are:

1. Each turbo-generating unit of a given nominal rating has a definite physical size. Therefore, as a unit increases in size there is a corresponding incremental increase in its physical dimensions. Correspondingly, as the turbo-generating unit sizes increase, so must the boiler, condenser, and their related auxiliary equipment increase in size to meet the operating steam requirements.
2. With decreasing availability of natural gas supplies for use as a boiler fuel, utilities are relying more and more on other types of fossil fuels for firing its steam-electric generating facilities. Coal and oil are thus the basic fossil fuels presently being utilized due to their being more readily available at reasonable costs. With the customary means for delivering coal and oil being by rail, barge, or pipeline it is necessary to stockpile adequate quantities of fuel at a plant site to insure continuity of service. There are several methods used to determine the quantities of fuel to be stored. As an example, the Mississippi Power Company presently maintains a normal 450,000 ton supply of coal at its Plant Jack Watson. This quantity represents a 90 day supply for its Units No. 4 and 5. If fuel oil were the primary fuel, on the same basis, it would require the storage of approximately 1,770,000 barrels of oil at 42 gallons per barrel for 750 Mw of capacity.

Regardless of which of the two fuels are used, large areas of land are required at a plant site for unloading, storage and, in the case of coal, disposal of the ashes on the site. These fuel facilities must, by necessity, be reasonably remote from the generating plant facilities to insure added protection in case of fire.

3. As turbo-generating unit and plant sizes increase to meet the loads the water requirements of a steam-electric generating station increase in a like manner.

To meet the increasingly restrictive Federal and State regulations limiting the temperatures and dissolved oxygen content of cooling waters discharged into public bodies of water it is becoming necessary to plan on-site facilities for cooling and recycling the water.

Devices such as cooling towers and ponds are being employed for this purpose since they minimize the amount of make-up water required and the amount of water discharged into a public body. Regardless of which on-site system is employed for cooling and recycling the plant's cooling water, large areas of land are required to accommodate the facilities to effectively transfer the heat from the cooling water to the ambient air.

REFERENCES

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