AN INVENTORY OF LAND USE WITHIN THE LOWER MOBILE-TENSAW RIVER DELTA, 1981

Prepared by

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INTRODUCTION

The Mobile-Tensaw River Delta comprises approximately 70,000 acres of wetland habitats bisecting the northern third of Mobile and Baldwin Counties Alabama. Though unsuited for many land use categories, the Delta has hosted a lengthy history of human habitation which may date back as early as 10,000 B.C. Earliest indian utilization was for campsites, hunting, fishing and transportation.

French colonization of coastal Alabama in the early 1700's represents the first European use of the Delta. Bluffs, particularly along the western margins, were the sites of several French settlements. Individual farmsteds were probably located throughout the Delta on higher areas.

Following admission of Alabama as a state, in 1819, activities around the margins of the Delta increased with the expanding port use of both Mobile, to the west, and Blakeley, to the east. Subsequent history of land use in the Delta is tied to dock expansions, lumbering, recreation, and energy and utility corridors.

The current inventory surveys all 1981 land uses in the Lower Delta south of an east-west line through the L & N Railroad crossing at Hurricane and north of U.S. Highway 90. The inventory is limited to Delta lands at or below the 10-foot contour.

METHODOLOGY

Land use data was collected coincident with wetland habitat mapping of the same area. Color infra-red photographs with a scale of 1:15,000 were utilized for data recording, site location and aerial extent of each land use unit (NASA Mission JSC 411, Project 0839, October, 1979). All areas were surveyed by boat between January and December 1981. Where the land use unit was extensive, aerial extent was calculated on aerial photographs using a K & E Polar Planimeter (Model 620002, 99% accuracy).

RESULTS

A total of 17 land use categories were identified for the Lower Delta. These are summarized in Table 1 with the number of units of each tabulated.

The most frequently encountered land use was private camps, represented by 123 units. These are located along the margins of the rivers, creeks and bays throughout the Delta (see Figure 1). Camps consist of both houseboat type construction and raised wood-frame houses. Piers into the watercourses are often associated with the camps. Most camps use less than 0.25 acres each. Camps are rarely permanently occupied, but are used seasonally for fishing and hunting. Camps which showed extensive damage and disrepair were considered to be abandoned and were not included in the inventory.

Industrial/business land use units were the second most abundant category and because of their individual sizes cover the greatest area. This category includes businesses and industries as diverse as truck stops, lounges, tank farms, paper companies, and large port and wharehouse areas. These units are concentrated along U.S. Highway 90 and the banks of the Mobile River. Figure 1 shows each of these units. The intensity of use can be seen in Figure 2. Water use and water quality are more significant impacts of most of these units, than land use.

The Mobile-Tensaw River Delta acts as an intensive barrier to access between northern Mobile and Baldwin Counties. For this reason, it has been necessary to establish a number of corridors through the Delta. These are utilized for transportation (L & N Railroad), utilities (Alabama Power), and petroleum pipelines (United Gas), as examples. A total of 15 corridors are summarized in Table 1 and their descriptions and land use impact are noted in Table 2.

Only two oil exploration sites are currently located in the inventory area. Rig sites usually appear as T-shaped or L-shaped dredged canals into wetlands of the Delta. Dredged material is side-cast into clear-cut wetlands to one or both sides of the canal. The Exxon site was dredged in 1953 (Raft River) and Chevron on the Mobile River in 1975. Neither site has been reclaimed and both are abandoned. Acreage impacted is indicated in Table 2. This land use category will probably increase in the future due to critical energy demands and potential of the area.

Other smaller and infrequent land use categories are itemized in Table 1.

RELATED DOCUMENTS

Stout, J. P., M. T. Powers, H. M. Dowling and M. J. Lelong 1982. Inventory of wetland habitats of the Lower Mobile-Tensaw River Delta, 1981. Interim Report, Ala. Coastal Area Board, Contract No. CAB-81-49.

U.S. Department of the Interior, 1979(?). Study of Alternatives: Mobile-Tensaw River Bottomlands/Alabama. U.S.D.I., National Park Service, 109 p.

TABLE 1 . SUMMARY OF LAND USE IN THE LOWER MOBILE RIVER DELTA , 1981, BY CATEGORIES OF USE.

CATEGORY		NUMBER OF UNITS
Camps		123
Commercial Marina/Landing		7
Transportation		2
Dock/Anchorage		10
Spoil Disposal		15
Utility Corridors	Petro.& gas	3
	Power	4
Oil drilling sites		2
Industrial/Business		40
Sewage treatment		1
Alcoa settling ponds		
Pipe & Cable Crossings		2
Discharge Pipes		9
Dredged canals		3
Residential		1 area (10 Homes)
Motel		1
Bridge		1
Game Plots		3

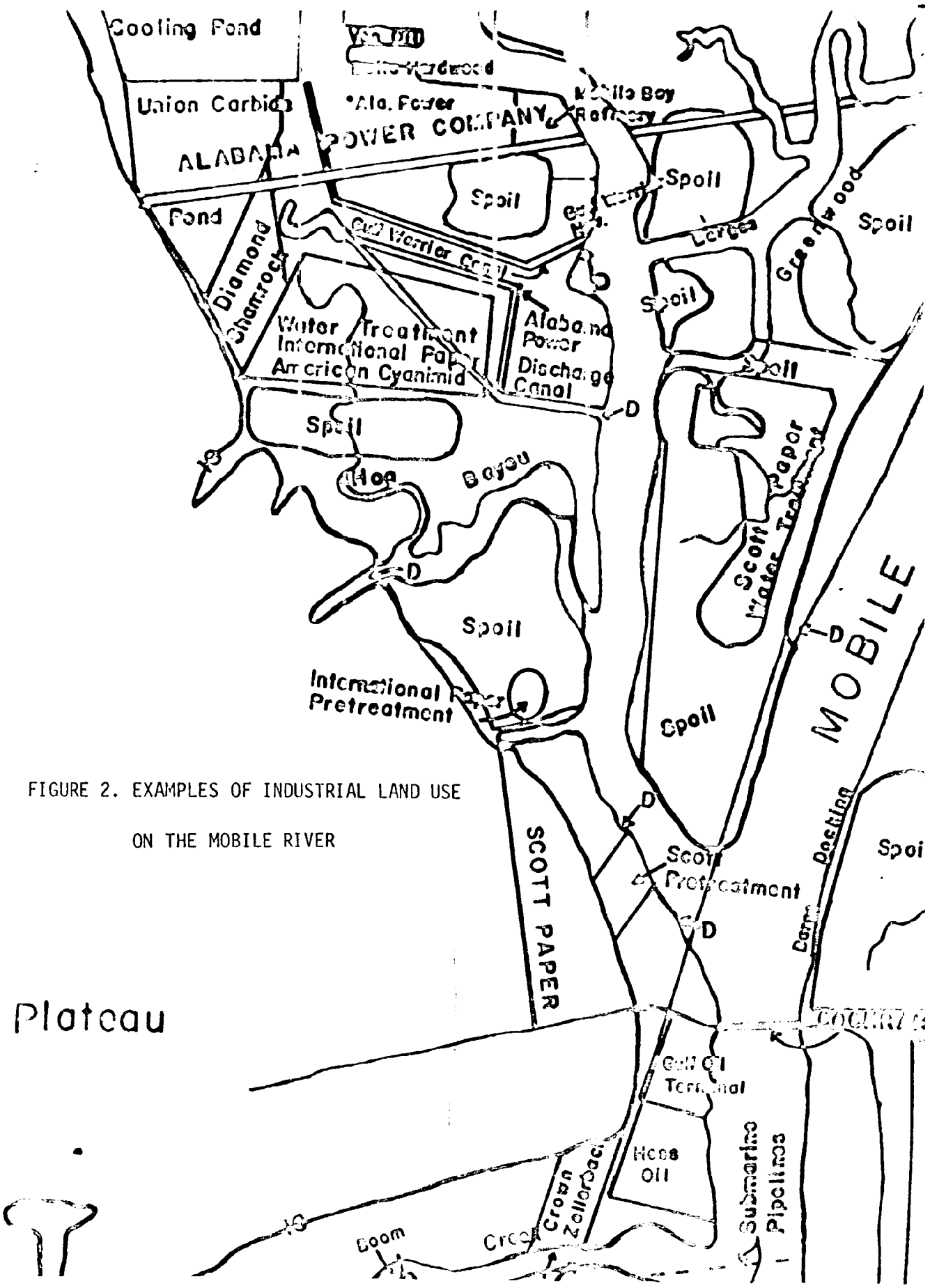

FIGURE 2. EXAMPLES OF INDUSTRIAL LAND USE

ON THE MOBILE RIVER

TABLE 2

ACREAGE OF WETLANDS IMPACTED BY VARIOUS LAND USES
WITHIN THE LOWER MOBILE RIVER DELTA, 1981.

TYPE CORRIDOR	WETLAND ACRES IMPACTED/DISTURBED
(1) L & N Railroad	149.3
Comments: (A) Calculated distance Hurricane to Scott Paper. (B) Impacted area mostly consists of railbed w/ fill ditch beside track. Ditch now low marsh (*Typha*) etc. (C) Power Line along road bed. (D) Twelve bridges 4 w/ turn house	
(2) United Gas Pipeline Canal	70.9
Comments: (A) Canal dredged to 5-6 ft (B) Pipe adjacent to canal (C) Canal navigable all the way across except log jams near Allicarp Bayou. (D) Spoil deposited on canal bank, creating weedy habitat. (*Ipomea*) (E) Runs from Hurricane to Chickasaw ck.	
(3) Ala. Power Right of Way	66.1
Comments: (A) Byrnes Lake-Grand Bay (B) Approx. 70 m wide (C) Clear-cut & sprayed (D) Veg. consists of shrubby low-intermediate marsh (*Baccharis*: *Sag.*) (E) Spray often drifts to adjacent areas.	
(4) Exxon Petroleum Pipeline	80.4
Comments: (A) Runs from Cloverleaf LDG on Tensaw to I-65 Chickasaw (B) Clear cut, pipe subterranean (C) Mostly through Tupelo swamp forest, not maintained, swamp species (woody) returning.	
(5) Alabama Power Canal	29.8
Comments: (A) Runs from Mobile R. (Below 12 mile Is.) to Chickasaw Cr. (N. of Halter Marine.) (B) Canal locked at both ends (C) Exxon Petroleum Pipeline runs along canal near Mobile River. (D) Spoil on canal banks.	

TYPE CORRIDOR	WETLAND ACRES IMPACTED/DISTURBED
(6) I-10 Work Canal	9.4

Comments: (A) Cuts thru small section of low Marsh SE of Chocalota Bay
(B) Work Canal navigable all the way across.

(7) Ala. Power & Natural Gas Lines	62.0

Comments: (A) Runs N-S Bayou Sara to Ala Power Canal Mobile R.

RIG SITES	ACRES DISTURBED
(1) Exxon 1963 (Raft River)	5.7
(2) Chevron (1975) Mobile R.	6.1

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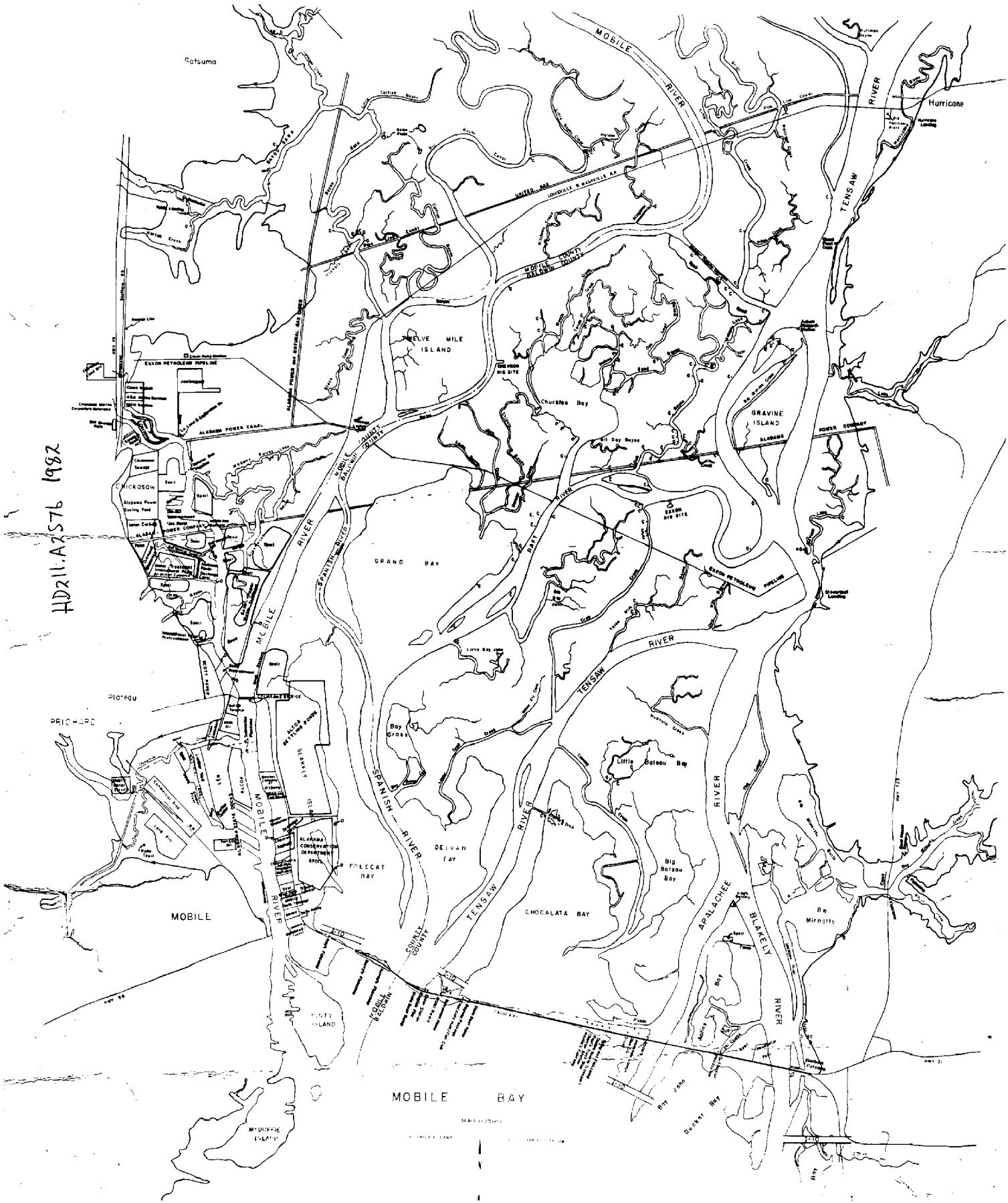
LAND USE
1981



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