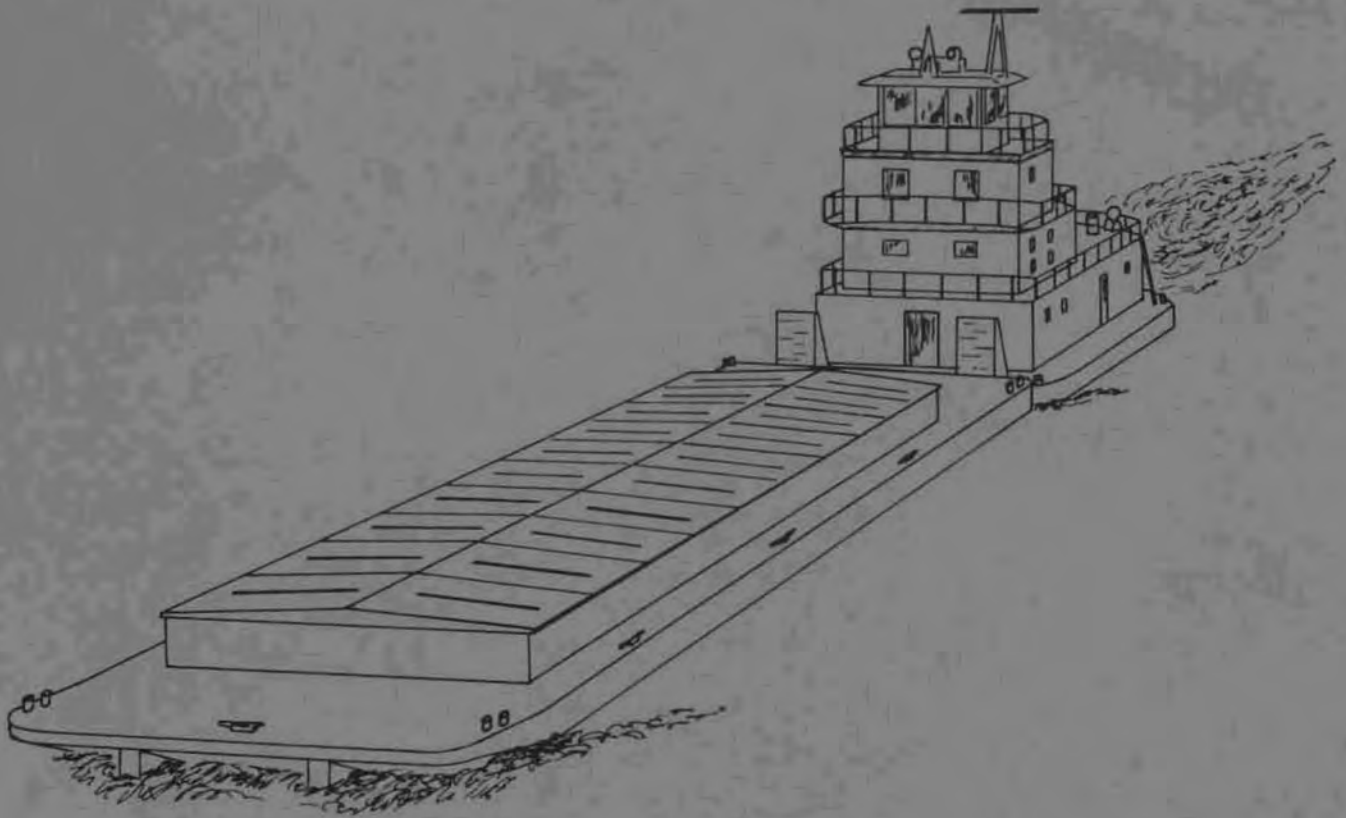


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THE GULF INTRACOASTAL WATERWAY IN TEXAS

1990



Prepared By
THE STATE DEPARTMENT
OF
HIGHWAYS AND PUBLIC TRANSPORTATION

THE GULF INTRACOASTAL WATERWAY
IN TEXAS

PRESENTED IN RESPONSE TO
THE TEXAS COASTAL WATERWAY ACT OF 1975
AND
SUBMITTED TO
THE SEVENTY-SECOND SESSION
OF THE TEXAS LEGISLATURE

PREPARED BY
THE STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION
TRANSPORTATION PLANNING DIVISION

1990



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Prior to 1975, the need existed for a single, local nonfederal sponsor of the Gulf Intracoastal Waterway in Texas. The Texas Coastal Waterway Act of 1975 filled that need by appointing the State Highway and Public Transportation Commission to act as agent for the State of Texas as the nonfederal sponsor of the Gulf Intracoastal Waterway in Texas.

The Act also instructed the Commission to evaluate the Gulf Intra-coastal Waterway as it related to Texas, including an assessment of the importance of the Waterway, an identification of principal problems and significant modifications to the Waterway, and specific recommendations for legislative action, if any.

The evaluation mandated by the Act has been conducted and a report prepared; it represents information based upon available data and reflects the current status of Waterway-related matters as well as the possible future of these matters. It also reiterates the desire of the Commission to foster the growth of shallow-draft navigation in Texas while simultaneously fostering the protection and enhancement of the coastal environment.

The report is hereby submitted to the Seventy-Second Legislature in accordance with the Texas Coastal Waterway Act of 1975.

Sincerely,

A handwritten signature in cursive script, appearing to read "Arnold W. Oliver".

Arnold W. Oliver, P. E.
Engineer-Director

T A B L E O F C O N T E N T S

	Page
EXECUTIVE SUMMARY	ix
PREFACE	xv
CHAPTER ONE THE TEXAS WATERWAY STORY	1
CHAPTER TWO THE ACQUISITION PROCESS	13
CHAPTER THREE ACQUISITION OF DISPOSAL SITES	23
CHAPTER FOUR LEGISLATIVE RECOMMENDATIONS	33
BIBLIOGRAPHY	37

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

In the performance of duties as nonfederal sponsor for the Gulf Intracoastal Waterway, the State Highway and Public Transportation Commission has, during the 1988-89 biennium, acquired by purchase or lease 718.88 acres of land to be used as upland disposal sites for materials dredged from the Gulf Intracoastal Waterway. Cost for the lands amounted to an expenditure of \$672,605. These sites are located in Brazoria County at Bryan Beach, south of Freeport, Texas, and in Matagorda County, south of Sargent, Texas, and adjacent to the East Matagorda Bay area. Funds for the purchase of these lands were allocated from the General Revenue Fund by the 70th Legislative Session. Purchase of four other sites, plus two accessway lots, was delayed until the 1990-91 biennium due to problems of clearing cloudy titles and removing legal obstacles. Cost for those 324.64 acres amounted to \$229,104, not including surveying, appraisal, and title clearance costs which raised the total amount to approximately \$303,500.

Work during the 1990-91 biennium is concentrating on acquiring disposal sites in the Laguna Madre and West Bay areas. At present, disposal in these areas is in open waters. This practice has caused concern that the valuable sea grass beds of the area are being destroyed. Accordingly, a task force of state and federal agencies has selected four new upland sites near Baffin Bay in the Laguna Madre area that are 250, 140, 160, and 200 acres in size. In West Bay, one site of 150 acres has been selected. An allotment of \$1,350,000 has been

budgeted from the undedicated highway fund for these purchases and the carryover purchases noted above.

Section seven of the Texas Coastal Waterway Act of 1975 states, "The legislature is hereby authorized to appropriate from the General Revenue Funds in the amount necessary to accomplish the purposes of this act." To comply with that directive, it is recommended that funding for sponsor activities be redirected from undedicated highway funds back to the General Revenue Fund.

After a State Highway and Public Transportation Commission Public Hearing is held authorizing the Department to begin negotiations for these sites, a new task force effort will search for additional sites in other areas of critical concern.

The U. S. Army Corps of Engineers has completed a one-year reconnaissance study into an erosion problem at Sargent, Texas, that threatens to interrupt the service of the waterway. That study has been accepted by a federal review board and approval for a four-year feasibility study to determine the best way to prevent breaching of the waterway has been given. Various methods to stop the erosion will be studied including an option to relocate the waterway. Costs of the studies are shared by federal funds and the Inland Waterway Trust Fund.

The State Highway and Public Transportation Commission, as directed by the Texas Coastal Waterway Act of 1975, continually evaluates the waterway with respect to the promotion and continuance of the waterway and the protection of coastal resources. In summation, a well-established program to perform the duties of nonfederal sponsor is being implemented.

To further enhance and utilize the program, certain recommendations are suggested for implementation by the Legislature:

- Continue to recognize and promote the Gulf Intracoastal Waterway as a valuable part of the State's multimodal transportation system.
- Continue to accept the responsibility of the nonfederal sponsorship for the Gulf Intracoastal Waterway.
- Support and return funding to the General Revenue Fund for sponsor duties as directed by the Texas Waterway Act of 1975.

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P R E F A C E

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PREFACE

Prior to 1975, the Gulf Intracoastal Waterway in Texas had no single local nonfederal sponsor. Various navigation districts, river authorities and port authorities located along the reaches of the Gulf Intracoastal Waterway attempted to coordinate local management efforts with those of the federal sponsor, the United States Army Corps of Engineers.

In 1975, the State Legislature passed the Texas Coastal Waterway Act. This Act authorized the State of Texas to act as local nonfederal sponsor to the Gulf Intracoastal Waterway in Texas and designated the State Highway and Public Transportation Commission to act as agent for the State in fulfilling the responsibilities of the nonfederal sponsor.

The nonfederal sponsor works closely with the United States Army Corps of Engineers to provide local cooperation and input into federal projects. Local sponsorship requirements may vary as different projects are authorized by the United States Congress. It is usually the responsibility of the nonfederal sponsor to provide all land needed for construction and maintenance of the project at no cost to the federal government. Many projects also require that the local sponsor make any necessary alterations to pipelines, cables and other utilities which may be located in the project area. The local sponsor also may be required to construct and/or maintain containment facilities for disposal material. Whatever the particular requirements of the local nonfederal sponsor may be, it is a general requirement that the federal government be held free from any damage that might result from construction and maintenance of the project. In the case of state

sponsorship, this requirement can be fulfilled only to the extent permitted by state law.

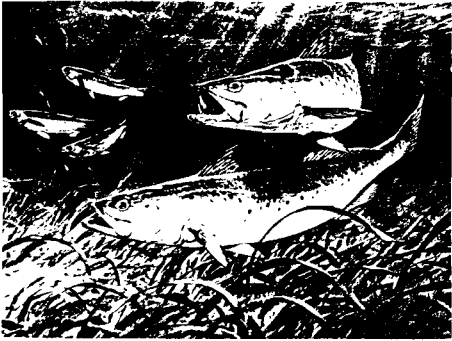
In addition to serving as the nonfederal sponsor of the Gulf Intracoastal Waterway, the State Highway and Public Transportation Commission received a legislative mandate to carry out the coastal policy of the State of Texas. The State has declared its support of the shallow-draft navigation of the state's coastal waterway in an environmentally sound fashion and will strive to prevent the waste of both publicly and privately owned natural resources while preventing or minimizing adverse impacts to the environment. The State has also pledged itself to maintaining, preserving and enhancing wildlife and fisheries. Much of the state's coastal policy emphasizes the importance of protecting the environment, while supporting navigation functions at the same time.

To carry out the mandate and to further discharge the duties of the nonfederal sponsor, the Commission was instructed to continually evaluate the Gulf Intracoastal Waterway as it relates to Texas. Such an evaluation involves the consideration of both tangible and intangible values. If the State is to prevent the waste of its coastal resources and minimize adverse environmental impacts, while simultaneously fostering an efficient system of navigation, it is first necessary to identify existing conditions and needs. This report, the eighth in the series as required by the Act, is submitted to the Seventy-Second Legislature to assist in achieving usage of the Gulf Intracoastal Waterway to its full potential, while protecting coastal resources.

CHAPTER ONE

THE TEXAS WATERWAY STORY

THE TEXAS WATERWAY STORY



INTRODUCTION

The Gulf Intracoastal Waterway is a canal that parallels the Gulf of Mexico's coastline from the southernmost tip of Texas at Brownsville to St. Marks, Florida. This man-made channel, authorized by the United States Congress, is maintained by the U. S. Army Corps of Engineers at a bottom width of one hundred twenty-five feet and a minimum depth of twelve feet. In nautical terms the waterway is defined as a shallow-draft canal because it is less than twenty-five feet deep; however, it capably carries a large variety and a great number of vessels and cargo. The Gulf Intracoastal Waterway is an integral part of the total inland transportation system of the United States, relative to the systems of the Atlantic Coast, Mississippi River and Antilles, Great Lakes, Pacific Coast, Alaska and Hawaii. The Gulf Intracoastal Waterway is a vital link in the transportation network that moves many of the commodities called for by this nation and foreign markets as well.

DEVELOPMENT OF THE GULF INTRACOASTAL WATERWAY IN TEXAS

The onset of an inland transportation system in Texas began in 1850, just five years after Texas was admitted to the Union. Local business interests, who pioneered inland navigation in Texas, connected portions of the state's coastline by dredging links between the natural bays, lakes, rivers and bayous. The construction of Texas' first navigable segment, the Galveston and Brazos Canal, was completed around 1853. This

canal's depth ranged from three to six feet and connected West Galveston Bay and the Brazos River. The Rivers and Harbors Act of 1873 was the first federal step toward construction of a continuous marine transportation system west of the Mississippi River. This Act appropriated funds for a survey to "connect the inland waters along the margin of the Gulf of Mexico from Donaldsonville, Louisiana, to the Rio Grande River in Texas by cuts and canals."¹

The expansion of the inland system throughout the coastline of Texas was not accomplished in one effort, but rather by the construction of segments through a series of congressional acts passed between 1925 and 1942. By 1941, the Gulf Intracoastal Waterway in Texas extended from the Sabine River to Corpus Christi and was 100 feet wide by 9 feet deep. Improvement of the canal to its current status was authorized by legislation passed in 1942, and construction was completed by 1949. The result was an extended route from the Sabine River to Brownsville, Texas, with the new dimensions of 125 feet wide by 12 feet deep.

THE PATH OF THE WATERWAY

The length of the Texas Gulf Intracoastal Waterway is 426 miles and its course encounters a variety of sights along the way. Dunes, flats, fishing cabins, bays, rivers and streams, farm and ranch lands, wetlands, wildlife and marine life, parks, refuges, and historic landmarks can be seen from the canal. Other widespread features along the waterway include industrial, recreational and residential developments.

The path of the waterway is etched through many shallow bays and

¹Rivers and Harbors Act of 1873, "House Document 1491, 62nd Congress," Volume 1.

often lies on the landward side of the natural barrier islands that protect most of the Texas coastline. This inward course gives the waterway its "inland" classification. Many creeks and streams empty into the Gulf Intracoastal Waterway, but only two major rivers flow directly into it, enroute to the Gulf of Mexico. These rivers, the Colorado and the Brazos, have currents strong enough to require protective flood control gates for the waterway during high-water stages.

The route of the Gulf Intracoastal Waterway leads through some of the most productive, yet sensitive, areas of the Texas coast. These areas, or "wetlands,"² are widely recognized as the nurseries for the commercially valuable finfish and shellfish. The environmentally delicate wetlands are also the nesting or feeding grounds for vast numbers of waterfowl, mammals and reptiles. The native vegetation of wetlands is important for its ecological contributions to the coastal system. The vegetation provides sustenance for the animal inhabitants and also retards erosion by holding onto the unstable soil that is common among coastal regions. Much has been learned in recent years about the importance of maintaining a balanced relationship between the delicate nature of wetlands and the effects on them from man-made water management projects. As a result, there are many state and federal agencies to administer the necessary regulations that protect the fragile wetlands and the coastal environment.

²The U. S. Fish and Wildlife Service defines "wetlands" in general terms as lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.

A BUSY TRANSPORTATION ARTERY

One of the initial functions of the Gulf Intracoastal Waterway was to provide protected inland transportation of goods and troops during World War II. It has since evolved into a multipurpose waterway with a wide assortment of users. To many individuals, the Gulf Intracoastal Waterway is largely associated with recreation. Sport fishing and boating are very popular along the Texas coast and many facilities have been established on or near the waterway. However, it is the commercial trade link that the waterway provides and the subsequent economic prosperity for the Texas coastal region and the State as a whole that should speak for much of the waterway's value.

Many industries have concentrated in the coastal region of Texas to capitalize on the economic benefits of water transportation efficiency. Thousands of jobs are directly and indirectly linked to the waterway, and almost 75% of all goods shipped in Texas are moved by water.³ The transfer of goods by water is second only to pipelines in cost efficiency but is not limited by specialization as pipelines are.⁴ The commercial trade between Texas ports and other port centers of the United States, as well as foreign trade markets, is strongly facilitated by the Gulf Intracoastal Waterway. The waterway is directly linked with Texas' twelve deep-draft port channels, and it greatly increases the level of access and level of service to many tributary channels and private channels.

³Sea Grant Program, Texas A & M University. Primary Economic Impact of the Gulf Intracoastal Waterway in Texas. College Station, Texas, 1974, p. 128.

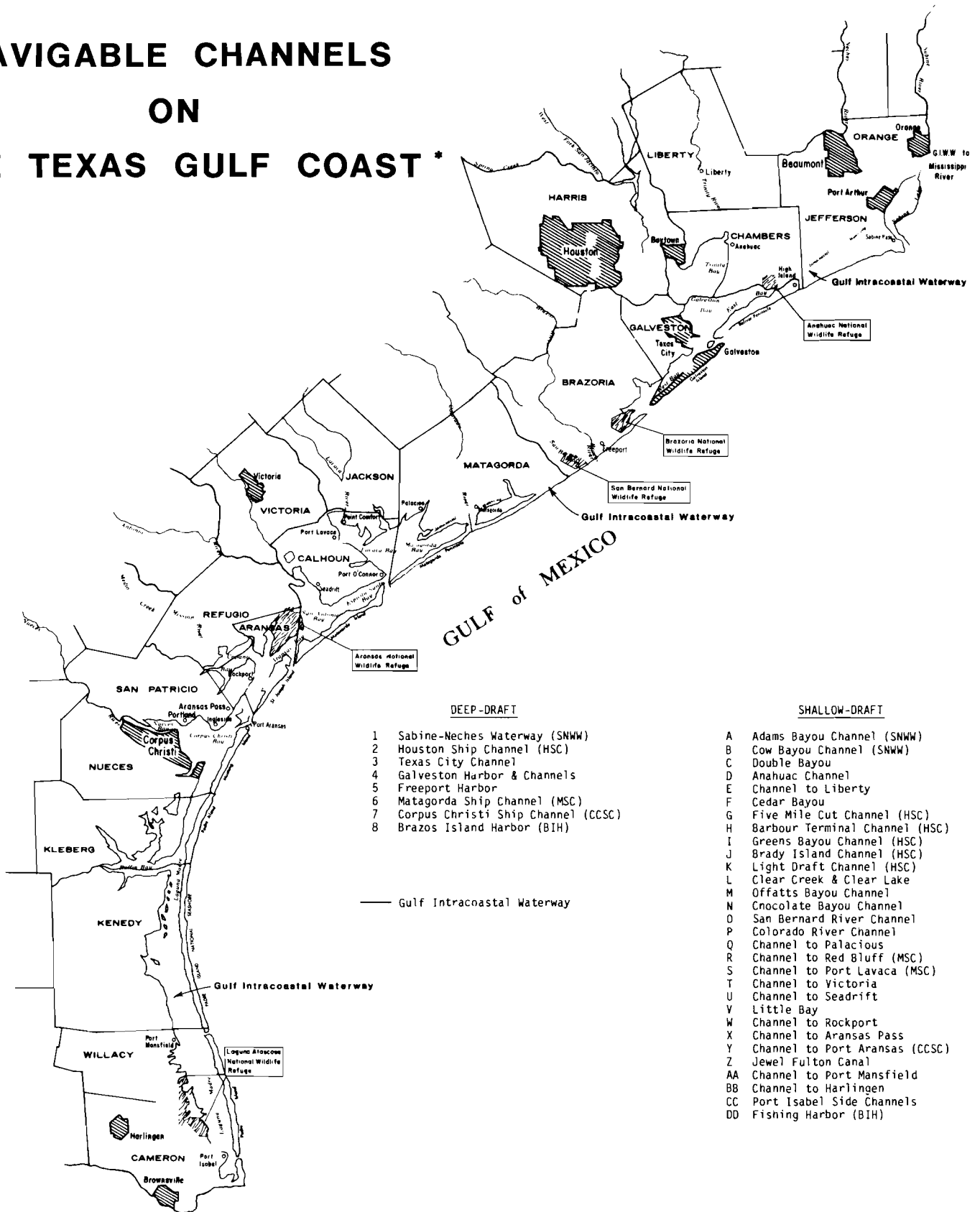
⁴State Department of Highways and Public Transportation, "The Gulf Intracoastal Waterway in Texas, 1976." p. 8.

The deep-draft port channels in Texas are Sabine Pass Harbor, Port Arthur Canal, Beaumont, Orange, Galveston Ship Channels, Houston Ship Channel, Texas City Channel, Freeport Ship Channel, Matagorda Ship Channel, Corpus Christi Ship Channel, Port Isabel Ship Channel and Brownsville Ship Channel. A map on page 6 depicts the Gulf Intracoastal Waterway in Texas and other channels maintained by the U. S. Army Corps of Engineers' Galveston District.

The Gulf Intracoastal Waterway is most effectively used by barge traffic, and according to waterborne commerce statistics compiled by the U. S. Army Corps of Engineers, an annual average of 68.4 million tons of goods has been barged along the Texas Gulf Intracoastal Waterway between 1980 and 1988. Petroleum products, chemicals and crude petroleum account for approximately 84% of the annual average tonnage moved on the waterway. Other bulk materials such as minerals, metals, grains, shell and miscellaneous materials account for the remaining annual percentage. Commercial fishing boats and various work boats associated with the oil and gas drilling industry in the Gulf of Mexico also use the waterway.

Recreation is another important factor contributing to the traffic on this busy canal. The gulf coast is one of Texas' largest playgrounds and boats are a favored access to coastal recreation. Not only is the Gulf Intracoastal Waterway used by boaters as a reliable highway to other coastal regions, but it is also used for skiing, fishing, and cruising. For small and less seaworthy vessels, the waterway offers protected passage from the stormy nature of the Gulf of Mexico and moorings are located periodically along the canal for those who may need them. Larger vessels use the waterway because it has sufficient depth for their deeper draft hulls. The various uses of the waterway have been studied by the

NAVIGABLE CHANNELS ON THE TEXAS GULF COAST *



- | DEEP-DRAFT | SHALLOW-DRAFT |
|--------------------------------------|----------------------------------|
| 1 Sabine-Neches Waterway (SNW) | A Adams Bayou Channel (SNW) |
| 2 Houston Ship Channel (HSC) | B Cow Bayou Channel (SNW) |
| 3 Texas City Channel | C Double Bayou |
| 4 Galveston Harbor & Channels | D Anahuac Channel |
| 5 Freeport Harbor | E Channel to Liberty |
| 6 Matagorda Ship Channel (MSC) | F Cedar Bayou |
| 7 Corpus Christi Ship Channel (CCSC) | G Five Mile Cut Channel (HSC) |
| 8 Brazos Island Harbor (BIH) | H Barbour Terminal Channel (HSC) |
| | I Greens Bayou Channel (HSC) |
| | J Brady Island Channel (HSC) |
| | K Light Draft Channel (HSC) |
| | L Clear Creek & Clear Lake |
| | M Offatts Bayou Channel |
| | N Crocodile Bayou Channel |
| | O San Bernard River Channel |
| | P Colorado River Channel |
| | Q Channel to Palacios |
| | R Channel to Red Bluff (MSC) |
| | S Channel to Port Lavaca (MSC) |
| | T Channel to Victoria |
| | U Channel to Seadrift |
| | V Little Bay |
| | W Channel to Rockport |
| | X Channel to Aransas Pass |
| | Y Channel to Port Aransas (CCSC) |
| | Z Jewel Fulton Canal |
| | AA Channel to Port Mansfield |
| | BB Channel to Harlingen |
| | CC Port Isabel Side Channels |
| | DD Fishing Harbor (BIH) |

*These are channels maintained by the U.S. Army Corps of Engineers, Galveston District, SWGCO-M, 1989.

State Department of Highways and Public Transportation, revealing that recreational use of the Texas Gulf Intracoastal Waterway is quite extensive.

In 1980, the Department conducted a random survey of recreational boat owners in Texas and determined that 2.4 million recreational boat trips originate in Texas coastal waters annually.⁵ The survey also revealed that 1.9 million, or 79% of the total 2.4 million recreational trips, utilize the Gulf Intracoastal Waterway. (These trip figures are used to describe the total number of trips made by each boat. If one boat is put in coastal waters ten times in a year, it would equal ten trips annually.) Over 65% of the recreationists surveyed reportedly use the Gulf Intracoastal Waterway as a major thoroughfare between coastal bays, and most of the trip lengths on the waterway are between 5 and 50 miles each.

OVERVIEW OF 1988

In 1988, 81.6 million short tons of goods moved on the Texas Gulf Intracoastal Waterway. The estimated value of those goods transported in a safe, efficient, and economic manner amounted to 23.6 BILLION DOLLARS.⁶ Texas handled 70% of the 1988 total of 117.1 million short tons moved between Texas and Florida on the waterway. The Department of the Army Corps of Engineers compiles tonnage statistics⁷ and also provides

⁵State Department of Highways and Public Transportation, "The Gulf Intracoastal Waterway in Texas, 1982."

⁶Texas Transportation Institute, Policy and Management Division, Texas A & M University System, College Station, Texas. 1988 values determined by updating a 1982 Data Resources, Inc. Study for the U. S. Army Corps of Engineers. (See Bibliography.)

⁷Department of the Army Corps of Engineers. Waterborne Commerce of the United States. Part 2 and Part 5, 1988.

estimates for evaluating the commercial impact of the waterway. Revised estimates for the average number of tons per barge, show that about 37,950 barges were used to move the 81.6 million tons in Texas during 1988. If the same volume of goods were moved via railroad transportation, approximately 569,700 railroad carloads would have been required. If moved via truck transportation on the state highway system, it would have required 2,276,750 semitrailer truckloads resulting in considerable wear and tear on the roadway surfaces.⁸ Safe transportation of barged materials, many of which are hazardous, is recorded in Table 2-23 of the U. S. Office of Technology Assessment's 1986 report, "Transportation of Hazardous Materials." For the period from 1976 to 1984, the total number of documented hazardous spills in Texas included 48 by air transportation, 2,854 by truck, 1,265 by rail, 6 by water transportation, and 18 by other.

In addition to safely transporting goods and serving recreational boaters, the Gulf Intracoastal Waterway also provides access to the prime fishing areas for the commercial industry and sport fishing boats. This group produced a 1986 catch of 115.9 MILLION POUNDS of shrimp, oysters, crabs, and finfish amounting to an ex-vessel value (value received at wholesaler's dock) exceeding 246 MILLION DOLLARS.⁹ The Gulf Intracoastal

⁸Average estimated number of tons per barge was provided by the Galveston District Corps of Engineers, Economic and Social Analysis Branch. 1988. Translations from barges to railroad cars and semi-trailer trucks calculated from figures given by Kelly, Brig. General Patrick, U. S. Army Corps of Engineers. Speech. Presented at the meeting of the American Military Engineers in Houston, Texas, September 22, 1988.

⁹Texas Parks and Wildlife Department, Trends in Texas Commercial Fishery Landings, 1977-1986.

Waterway itself is a prime fishing area as it is part of the migratory route of schools of fish as they move in, out, and between the different bay systems.

CONCLUSION

The early settlers of Texas colonized along natural water routes because they knew that a close proximity to water transportation would bring many advantages. Since the dredging of Texas' first segment, the waterway's service, value, and subsequent effect of economic prosperity have grown significantly. The Gulf Intracoastal Waterway is extensively used by a wide variety of people and imparts many benefits both directly and indirectly to the State. All these benefits, plus the waterway's importance to the nation's defense, account for the wisdom of protecting and maintaining this transportation mode.

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CHAPTER TWO

THE ACQUISITION PROCESS

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THE ACQUISITION PROCESS



INTRODUCTION AND GENERAL SUMMARY

For the 1990-91 biennium, the Texas Legislature appropriated 1.350 million dollars for acquiring disposal sites to facilitate maintenance dredging of the Gulf Intracoastal Waterway. Based on initial appraisal estimates, approximately 900 acres can be purchased with the current funding, dependent on the number of sites which may go to condemnation court. In order to support the waterway in an environmental manner, the State as nonfederal sponsor of the Gulf Intracoastal Waterway, will continue to acquire upland disposal sites. Efforts are underway to identify more new sites for acquisition in the 1992-93 biennium. Additional state funding will be needed to continue furnishing sites.

To acquire the needed disposal sites, the State Department of Highways and Public Transportation coordinates the appropriate divisions and districts to handle land acquisitions. Several items are important in making acquisitions for disposal sites, including an understanding of applicable state and federal laws, identification of suitable sites, coordination of required environmental clearances and public involvement, site-specific authorization, and promulgation of appropriate acquisition procedures. The Department's standard right-of-way acquisition procedures fully comply with the federal requirements for the nonfederal sponsor, and these procedures are followed in acquiring the sites.

By coordinating closely with the Corps of Engineers, the Department has access to information on dredging frequencies, volumes of materials removed, and various disposal methods that are environmentally and operationally suitable for maintenance of the Gulf Intracoastal Waterway in Texas. The Department also coordinates with natural resources agencies regarding disposal-related environmental concerns. Such factors determine the need for disposal, location, size, and design of disposal sites.

STEPS TO SITE-SPECIFIC AUTHORIZATION

Selection of Proposed Sites

The Department, acting as sponsor for the waterway, organized a state agency advisory committee, the Gulf Intracoastal Waterway Advisory Committee, to help address problems and recommend solutions concerning the waterway. To physically investigate coastal areas that need new or additional disposal capacity, the Department appointed members from the Advisory Committee and representatives from federal agencies, including the National Marine Fisheries Service, U. S. Army Corps of Engineers, and U. S. Fish and Wildlife Service, to serve on a task force. This task force of engineers and resource experts make preliminary selections of environmentally and operationally suitable sites in the areas of need. After this selection and with the concurrence of the Advisory Committee, the Corps of Engineers then coordinates the environmental clearance for disposal use of the proposed sites. Only after environmental clearance will the State Department of Highways and Public Transportation conduct the required public hearings on specific sites. As part of the public hearing process, the State Highway and Public Transportation Commission

must grant authorization to the Department for proceeding with site specific acquisitions.

Environmental Clearance

In order for any area to be used for disposal of dredged materials, there are federal and state laws which mandate that such use be environmentally acceptable. The National Environmental Policy Act sets federal guidelines which the Corps of Engineers must follow in making environmental evaluations on proposed sites. The Texas Coastal Waterway Act of 1975 requires that the State Highway and Public Transportation Commission determine whether proposed sites can be used without unjustifiable waste of publicly or privately owned natural resources and without permanent, substantial, adverse impact on the environment, wildlife, or fisheries.

Agencies concerned about the State's natural resources (the National Marine Fisheries Service, Texas General Land Office, Texas Parks and Wildlife Department, Texas Water Commission, and U. S. Fish and Wildlife Service) assist in developing facts and recommendations during the environmental evaluation. After the environmental evaluation is completed and the proposed site has been found to be acceptable for disposal use, the Corps of Engineers documents the analysis in the environmental assessment and issues a finding of no significant impact (EA/FONSI's). The environmental assessment and finding of no significant impact is filed with the Environmental Protection Agency.

A final review of the environmental assessment and findings is conducted by the State Department of Highways and Public Transportation. If the Department determines the disposal site can be used in an

environmentally acceptable manner, the environmental clearance process is complete, and the Department proceeds with the required public hearings on the site.

The environmental documents on clearing the use of a proposed disposal site are available for viewing at the State Department of Highways and Public Transportation and the Galveston District, U. S. Army Corps of Engineers.

Public Involvement

The 1975 Texas Coastal Waterway Act requires the State Highway and Public Transportation Commission to hold public hearings for the purpose of receiving evidence and testimony concerning the desirability of proposed dredged material disposal sites. If the Commission determines that use of the sites is acceptable, the Commission then authorizes the Department to implement the acquisitions. To better inform communities on the proposed sites, the Department often conducts public meetings before the official public hearings. Public meetings are held in cities located near the proposed sites. The public hearings are held in Austin.

Local public meetings and the required public hearings are both advertised as specified in the 1975 Texas Coastal Waterway Act. Legal notices are published in newspapers that are generally circulated in the involved counties for three consecutive weeks before the public meetings and hearings. Legal notices are similarly published in the Texas Register. In addition, landowners, local public officials, and radio stations are notified.

Environmental documents and aerial displays regarding the proposed sites are exhibited at the public meetings and hearings. The proceedings

of each are documented and become part of an official record. During these public forums, the Department explains the State's nonfederal responsibility to the Gulf Intracoastal Waterway, describes the waterway's maintenance program and disposal needs, and identifies the proposed sites. The public is given the opportunity to comment.

Commission Authorization

After due consideration of all evidence, testimonies, and environmental findings, the Commission determines whether each proposed site can be used without unjustifiable waste of publicly or privately owned natural resources and without permanent, substantial, adverse impact on the environment, wildlife, or fisheries. Acting through Commission Minute Orders, the Commission then authorizes the Department to proceed with acquiring the approved sites.

ACQUISITION STEPS

Surveying

After Commission authorization, the Department begins the acquisition process with surveys. Most landowners agree to allow access to their property, and the areas are then surveyed to accommodate the size and design needed for a site. Aerial surveys may be used if a landowner does not grant access to the property.

Surveyors draw plats of the sites, showing ownership, area, the disposal site perimeter, property access, and improvements, if any, such as pipelines or structures. The Department does not intend to encumber habitable structures or dedicated roads. Surveyors write field notes noting the exact acreage of surveyed sites, and prepare metes and bounds descriptions.

Since erosion is widespread along the Texas coastline, surveys of some properties may determine portions to be under water. To provide access for disposal operations, the State may acquire property to the Gulf Intracoastal Waterway's right-of-way line. Eroded acreage between the waterway right-of-way and the bank is considered in the appraisal process with the approved values for purchases reflecting this condition.

Appraisal

In the initial stages of the appraisal process, the Department notifies landowners of a proposed acquisition. The Uniform Relocation Assistance And Real Property Assistance and Real Property Acquisition Policies Act of 1970, as amended, requires such notice. Landowners are further notified by the Department of an appraiser's upcoming contact with the landowner. Landowners are entitled to accompany an appraiser's inspection of the site. Correct legal and appraisal procedures are strictly adhered to in determining the fair market value of the sites.

Negotiations

After appraisals are completed, a negotiator from the Department personally contacts landowners and furnishes them a written offer letter. A departmental negotiator explains the acquisition process and the landowners' alternatives should they not accept an offer. Details on the proposed use of the land as a disposal site are explained when requested. If landowners choose to donate the use of their property, they become eligible for ad valorem tax breaks under the Legislative Law, S. B. 982, while retaining title to their land.

Acquisition

The Department's preferred acquisition method is to purchase in fee, since the leasing of the land over an extended period would approach the fee cost. Landowners are given not less than one month to consider offers. If an owner is dissatisfied and chooses to refuse the offer, the State may negotiate, or may initiate condemnation or eminent domain proceedings.

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CHAPTER THREE

ACQUISITION OF DISPOSAL SITES

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ACQUISITION OF DISPOSAL SITES



Efforts to provide upland disposal sites for dredged materials during the 1988-89 biennium culminated with the acquisition of eight sites totaling 718.88 acres at a total cost of \$672,605. Two of these sites are still under condemnation procedure and could possibly necessitate additional costs. One other site of 225 acres was obtained from the General Land Office at no cost. Purchase of four other sites, plus two accessway lots, had to be delayed until the 1990-91 biennium due to problems of clearing cloudy titles and removing legal stumbling blocks. Cost for those 324.64 acres amounted to \$229,104, not including surveying, appraisal, and title clearance costs which raised the total amount to approximately \$303,500.

With a 1990-91 budget allocation of \$1,350,000, reduced by the carryover purchases, it was planned to acquire five sites in the Laguna Madre and West Bay areas. Total acreage for the five sites will be approximately 900 acres.

An investigative team of state and federal agency representatives visited the proposed new sites to ascertain whether they can be used without causing problem impacts to the environment of the area. The four sites in the Laguna Madre area had never before been used as disposal sites and were in an undisturbed condition and will require detailed environmental assessment. Initial visual assessment by the team was favorable, and it was recommended that further assessment proceed.

The single site in the West Bay area had been used previously as a

disposal site for materials removed when a flood control diversion channel was constructed for the area.

DESCRIPTION OF PROPOSED SITES

Laguna Madre - Point Penascal Site

A 250-acre site is located on Point Penascal at the intersection of the Gulf Intracoastal Waterway and the south side of Baffin Bay. The proposed site is owned by the Elena Suess Kenedy Estate. This site will replace presently used open water sites Nos. 197-200 (see Figure 1). By discontinuing open water disposal in the area, valuable sea grass and finfish spawning beds will be protected. This is one of the best sport fishing areas along the coast, and its value is attributed to the existence of the grass beds. However, the beds are diminishing and need to be protected as much as possible. Although some disturbance will occur by discharge pipes being placed over the grass areas, it will be much less than the deposition of dredged materials in the area. On the site, a levy system will contain the dredged materials so that sensitive upland wetland areas next to the disposal site can be preserved. It is estimated that the site will have a 30-year use life cycle. At that time the dried materials will be removed and the site recycled for use.

Laguna Madre - Point of Rocks Sites

Three sites, beginning at the intersection of the Gulf Intracoastal Waterway and the north side of Baffin Bay and extending up the coastline approximately six and one half miles, will replace open water disposal sites Nos. 191-197. Site A is approximately 140 acres; Site B is approximately 160 acres; and Site C is approximately 200 acres in size. (See Figure 1 for site location.) These sites will also be beneficial in

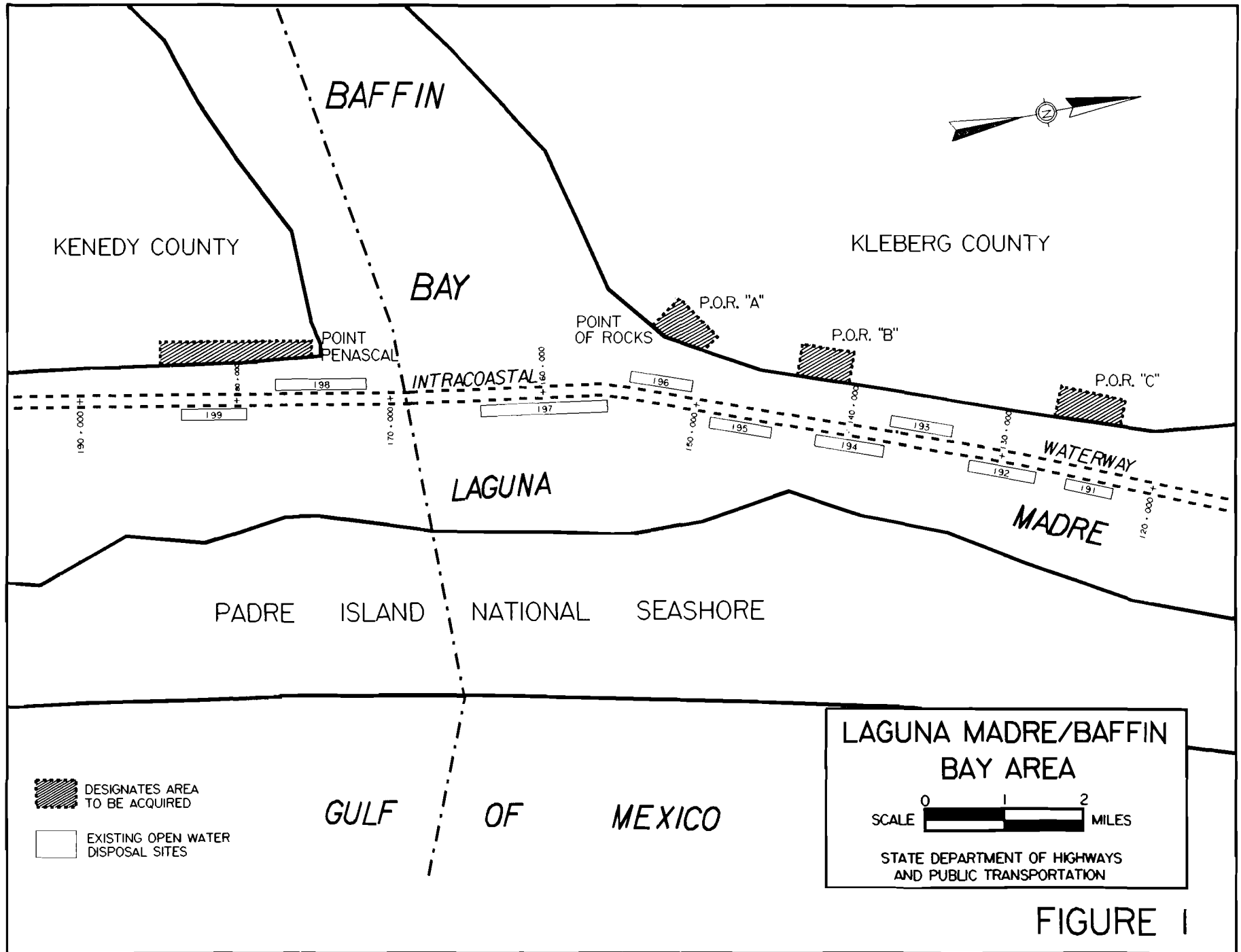


FIGURE 1

the protection of the sea grass beds in the area. The sites will be used as "sheet disposal" sites, or unconfined placement, letting the materials flow freely and seek their own level. It is estimated that these sites will be used for a minimum of 30 years. The topography of the sites does not at this time include the probability of a levy system and recycling of the sites. The property is owned by the King Ranch.

West Bay - Mecom/Hitchcock Tract

As previously mentioned, this approximately 150-acre site had been used before as a disposal site and will not present a new impact to the environment. Also the site is adjacent to a flood control channel and furnishes easy access for dredging pipelines from the waterway without any extra damage to the ecosystem. The site will replace open water sites Nos. 57-61. (see Figure 2) The site is owned by the National Loan Bank (a bank in liquidation) and is part of a 10,000 acre bankruptcy takeover by the bank. Initial inquiry to the bank on the availability of the site was made in March of 1988. The bank was at that time conducting an inventory on the property and could not discuss its sale. In addition, it was not possible for the Department at that time to pursue acquisition of the property as all appropriations for the 1988-89 biennium had been allocated for purchase of other properties.

The bank, in late 1989, found a buyer for the whole 10,000 acres and a multioccupancy development is now in the planning. According to the developer and the bank, the proposed disposal site is the first part to be developed and the pivot point for consumation of the sale. Much interest for the development to be constructed has been expressed by private business and political interests of the area. The Department is working

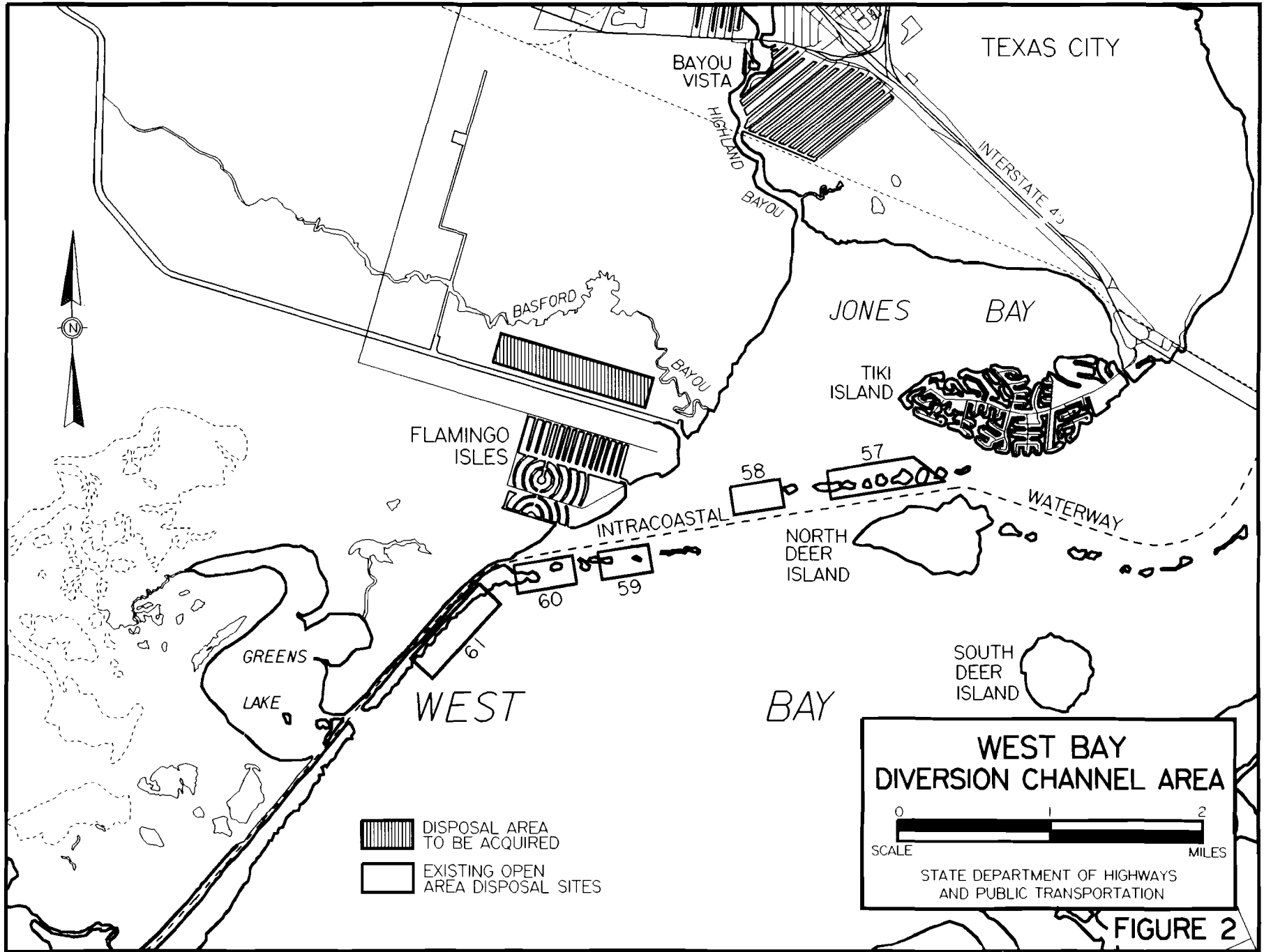


FIGURE 2

with the bank and the developer to find an alternate solution to the disposal problems in the area. However, satisfying the primary needs in the area in the best and most efficient manner will be the prime consideration for the Department in its final decision.

Erosion of the Waterway

The U. S. Army Corps of Engineers has determined that 60 percent of the Texas shoreline is erosional, 33 percent is in a stable condition, and the remaining 7 percent is accretionary. While erosion of the coastline is a continuous condition that has been occurring for thousands of years, it is becoming a threat to the waterway in the Sargent Beach area in Matagorda County. The waterway at that point is in imminent danger of being breached by Gulf waters. Some estimates indicate this could occur as soon as 1995. This could seriously disrupt the service of the waterway and have a detrimental effect on the economy of the state.

The Corps of Engineers has completed a yearlong reconnaissance study and is in the early part of a 4-year feasibility study to determine the best solution for protecting the waterway. The methods of protection "in place" are varied in their approach and responsibility of the sponsor. Should realignment be the solution chosen, the State could be asked to contribute funds as early as the 74th Legislative Session concerning the 1996-97 biennium.

A table of costs is shown that gives ball park figures for the expenditures necessary for each method being studied.

COMPARISON OF PLANS	
Protect Existing Alignment of GIWW	
Method	Cost
Riprap with cover stone	\$22,500,000
Seawall	50,000,000
Steel sheetpile wall	29,000,000
Prestressed Concrete Sheetpile Wall	21,000,000
Breakwaters	25,000,000 (would require nourishment)
Groinfield	17,000,000 (would require nourishment)
Beach Nourishment	4,000,000
Combination Breakwater and Nourishment	29,000,000
Combination Groinfield and Nourishment	21,000,000
Relocation GIWW Inland	
Method	Cost
Route #1 - 6,000 feet inland	\$19,000,000
Route #2 - 14,000 feet inland	23,500,000

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CHAPTER FOUR

LEGISLATIVE RECOMMENDATIONS

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LEGISLATIVE RECOMMENDATIONS

In the continuing effort to obtain upland disposal sites along the Gulf Intracoastal Waterway, it is becoming more evident that the need for new sites in some areas cannot be solved by simple purchase of suitable land within economical pumping reach of the waterway. In some areas where private and industrial development is extensive, land is no longer available or demands a prohibitive price to acquire. In other places, the presence of wetlands precludes developing a new site or of expanding an old site. Use of wetlands should only be considered if deposition by some other means is not feasible, or if using a low-grade wetland would cause less impact to the ecosystem than what is currently being done.

In the very near future, serious study must be given to devising and using alternate methods of disposal, rather than traditional open water methods. Existing filled sites can be purchased and excavated for reuse. Movement of materials longer distances from the waterway can be accomplished by use of booster pumps. Transportation of materials by hopper barge to deep water in the Gulf of Mexico can be employed. Should it be necessary, as a last resort, to impact wetlands, mitigation must be initiated. Each of these alternates will necessitate additional funding to accomplish the desired goal and will be a cost to the State as nonfederal sponsor. Investigative planning will be necessary to obtain the optimum desired results in the most economical way, as well as the most protective to the environment.

Section seven of the Texas Coastal Waterway Act of 1975 states, "The Legislature is hereby authorized to appropriate from the General Revenue Funds in the amount necessary to accomplish the purposes of this act." To

comply with that directive, it is recommended that funding for sponsor activities be redirected from undedicated highway funds back to the General Revenue Fund.

In summation, a well established program to perform the duties of nonfederal sponsor is being implemented. To further enhance and utilize the program, certain recommendations are suggested for implementation by the Legislature:

- Continue to recognize and promote the Gulf Intracoastal Waterway as a valuable part of the State's multimodal transportation system.
- Continue to accept the responsibility of the nonfederal sponsorship for the Gulf Intracoastal Waterway.
- Support and return funding to the General Revenue Fund for sponsor duties as directed by the Texas Waterway Act of 1975.

B I B L I O G R A P H Y

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