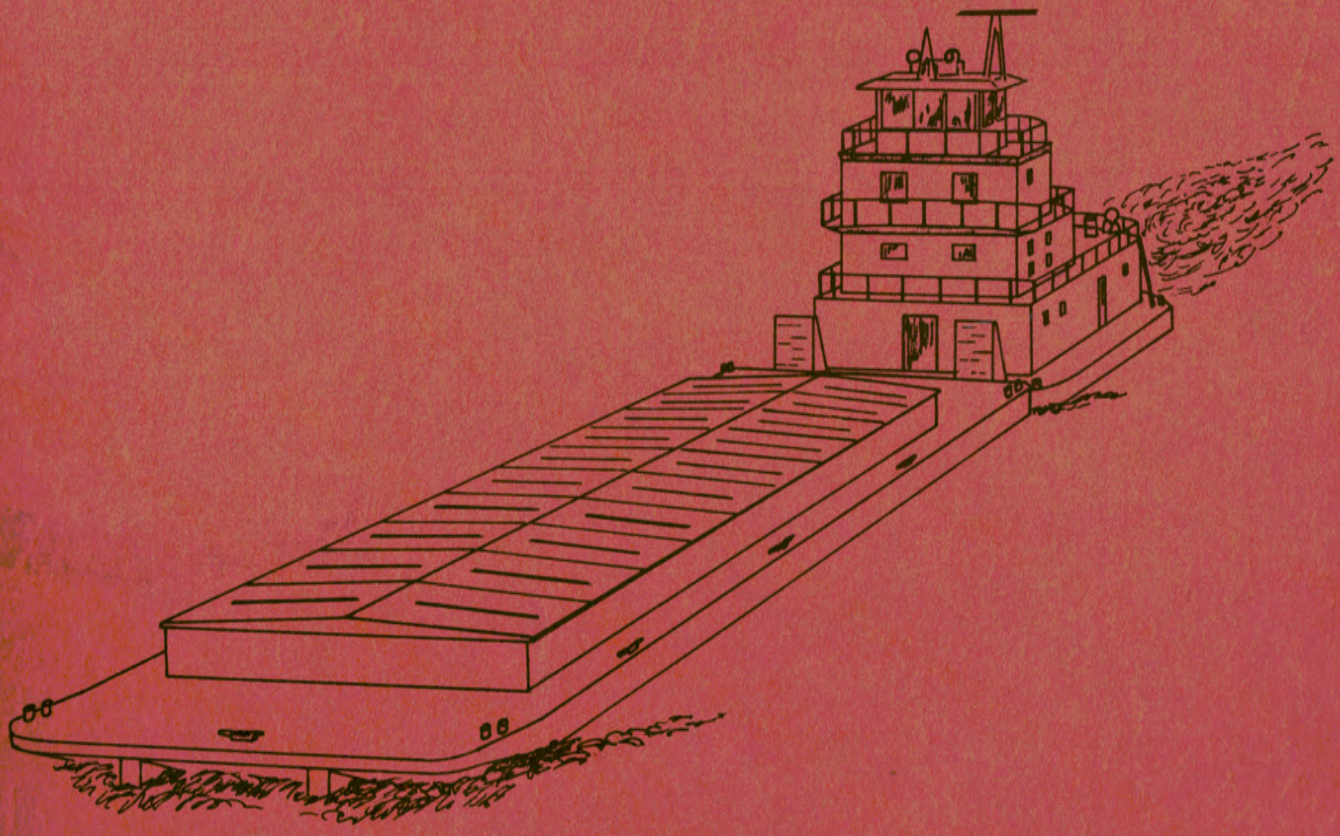
# THE GULF INTRACOASTAL WATERWAY IN TEXAS

## 1986



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 SEVENTIETH SESSION

OF THE TEXAS LEGISLATURE

PREPARED BY

THE STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

TRANSPORTATION PLANNING DIVISION

1986

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Governor William P. Clements

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Members of the Seventieth Legislature

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 Intracoastal 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 Seventieth Legislature in accordance with the Texas Coastal Waterway Act of 1975.

Sincerely,

R. E. Stotzer, Jr.
Engineer-Director

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# FOREWORD

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It is not by chance that the cover of this report is the color that it is. Everyone recognizes that the color red denotes danger and to ignore its warning is to court disaster. The Gulf Intracoastal Waterway is flying a red flag, not due to approaching bad weather but rather to mounting problems facing the continued maintenance of the waterway.

When the Texas portion of the waterway was completed in the mid-1940's, adequate reserves of disposal sites promised a forty to fifty year period whereby the maintenance of the waterway was considered secure. Forty years have passed and many areas designated for disposal of waterway dredged materials are nearly filled, while changing environmental concerns are eliminating the use of other sites that still have useable capacity.

Traffic along the waterway, both commercial and recreational, is continuing to increase thereby compounding the probability of collisions that would play havoc with the environment for years to come.

The State Department of Highways and Public Transportation is charged as nonfederal sponsor for the waterway to provide the necessary sites for disposal of the dredged materials. Unfortunately, the State Legislative appropriations have not included the necessary funds to perform this task and the need for more storage areas increases each passing year. It is the purpose of this report to present the programs inaugurated by the nonfederal sponsor in its effort to fulfill its assigned duties.

The waterway is a multibillion dollar asset to the State that annually generates more than seventy million dollars of taxes and creates over 145,000 jobs for the people of Texas. To maintain the viability of the waterway the decision makers of the State must honor the responsibility that they accepted when they signed into law the Texas Coastal Waterway Act of 1975. Continued prosperity of the State and its coastal region is dependent upon this acceptance.

# PREFACE

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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 of the Gulf Intracoastal Waterway in Texas and designated the State Highway and Public Transportation Commission to act as agency 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 may also 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 waters in an environmentally sound fashion and its desire to prevent the waste of both publicly and privately owned natural resources while at the same time preventing or minimizing adverse impacts on 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 legislative 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 sixth in a series required by the Act, is submitted to the Seventieth Legislature to assist in achieving usage of the Gulf Intracoastal Waterway to its full potential while protecting coastal resources.

# CHAPTER ONE

# THE TEXAS WATERWAY

# THE TEXAS WATERWAY

## INTRODUCTION

The Gulf Intracoastal Waterway is a canal that interfaces 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 width of one hundred twenty-five feet and a 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 facilitates 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. Although the use of the Gulf Intracoastal Waterway for movement of goods is not as widely recognized as other modes of transportation, it is a vital link in the transportation network that moves much 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 complete by 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. Farm and ranch lands, national wildlife refuges, state parks and historic landmarks can be seen from the canal. Other widespread features along the waterway

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

include industrial, recreational and residential developments.

The path of the waterway is etched through many shallow bays and often lies on the landward side of the natural barrier islands that protect most of the entire 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

[2] The 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 commmunities living in the soil and on its surface.

projects. As a result, there are many state and federal agencies to administer the necessary regulations to protect the fragile wetlands during water management projects.

## A BUSY TRANSPORTATION ARTERY

One of the major functions of the Gulf Intracoastal Waterway was to provide protected inland transportation of goods and troops during World War II. It has evolved into a multipurpose waterway with a wide assortment of users. To many individuals, the Gulf Intracoastal Waterway is largely associated with recreation, due to the popularity of sport fishing and boating which has generated many marinas on or near the waterway. However, it is the commercial trade link that the waterway provides and the subsequent economic growth in the Texas coastal region 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. The transfer of goods by water is second only to pipelines in cost efficiency but is not limited by specialization as pipelines are.[3] 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 System. This system is directly linked with Texas' ten deep-draft[4] port channels, twenty-six shallow-draft channels

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

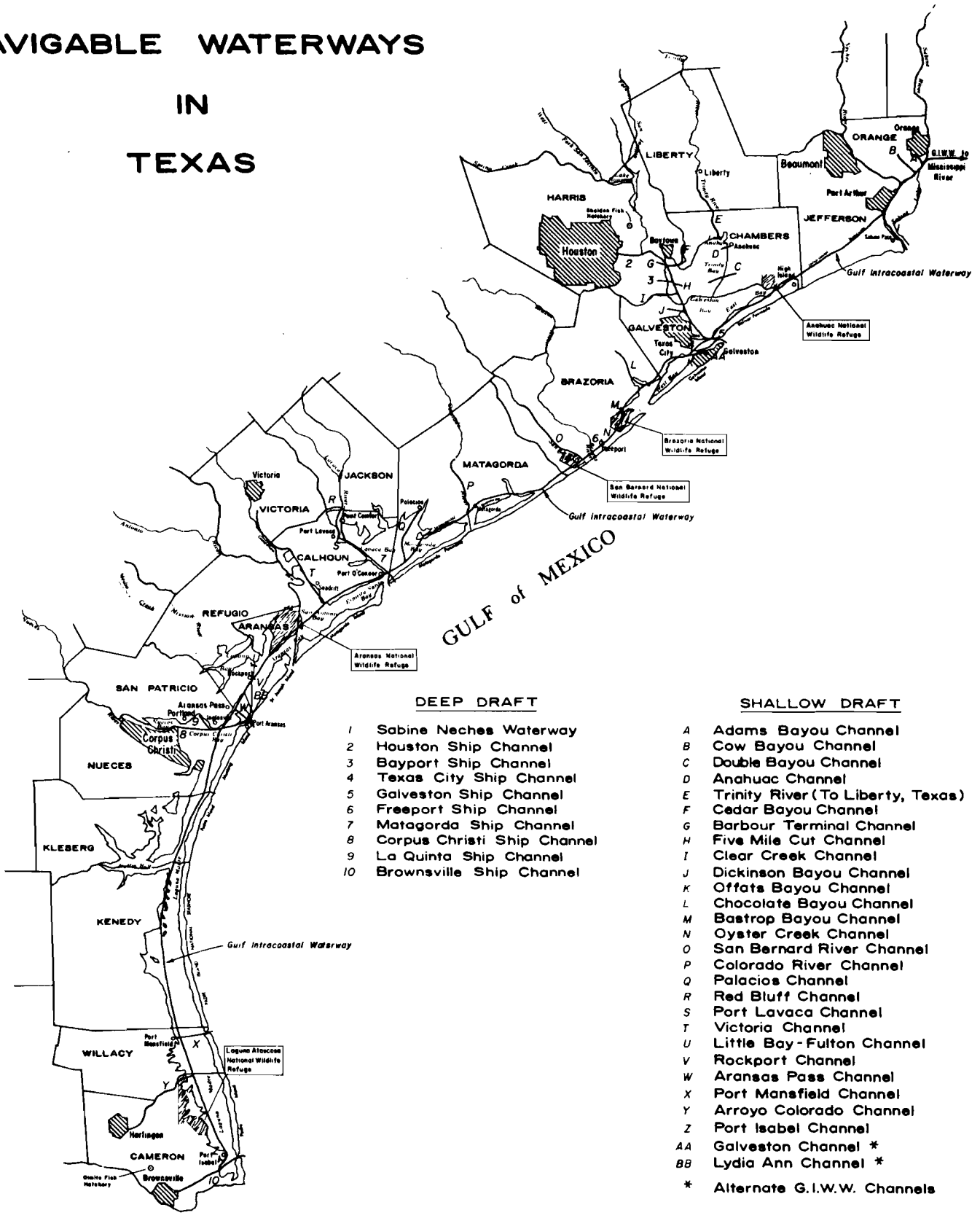
[4] Deep-draft channels are described as having depths of 25 feet or more.

and many private channels, thus increasing the level of access and the level of service offered by the individual channels. A map that depicts the Gulf Intracoastal Waterway and port channels system in Texas is on page 6.

The Gulf Intracoastal Waterway is most effectively utilized by barge traffic and according to waterborne commerce statistics compiled by the U. S. Army Corps of Engineers, an annual average of 65 million tons of goods has been barged along the Texas Gulf Intracoastal Waterway since 1968. The commodities that account for the highest number of tonnages are predominately bulk materials and are either crude oil and natural gas, petroleum products, or chemicals and allied products. A significant volume of traffic on the Intracoastal Waterway is due to commercial fishing boats and various work boats that are associated with the oil and gas drilling industry in the Gulf of Mexico.

The commercial users of the Gulf Intracoastal Waterway are an important part of the marine transportation picture but the large numbers of recreationists are another major factor in the traffic density of this busy canal. The gulf coast may be regarded as Texas' largest playground and boats are a favored access to coastal recreation. Although the Gulf Intracoastal Waterway is largely used by boaters as a reliable highway to other coastal regions, it is not unusual to see someone skiing, fishing, or simply cruising down the canal. 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

# NAVIGABLE WATERWAYS IN TEXAS




## DEEP DRAFT

| | |
|---|---|
| 1 | Sabine Neches Waterway |
| 2 | Houston Ship Channel |
| 3 | Bayport Ship Channel |
| 4 | Texas City Ship Channel |
| 5 | Galveston Ship Channel |
| 6 | Freeport Ship Channel |
| 7 | Matagorda Ship Channel |
| 8 | Corpus Christi Ship Channel |
| 9 | La Quinta Ship Channel |
| 10 | Brownsville Ship Channel |

## SHALLOW DRAFT

| | |
|---|---|
| A | Adams Bayou Channel |
| B | Cow Bayou Channel |
| C | Double Bayou Channel |
| D | Anahuac Channel |
| E | Trinity River (To Liberty, Texas) |
| F | Cedar Bayou Channel |
| G | Barbour Terminal Channel |
| H | Five Mile Cut Channel |
| I | Clear Creek Channel |
| J | Dickinson Bayou Channel |
| K | Offats Bayou Channel |
| L | Chocolate Bayou Channel |
| M | Bastrop Bayou Channel |
| N | Oyster Creek Channel |
| O | San Bernard River Channel |
| P | Colorado River Channel |
| Q | Palacios Channel |
| R | Red Bluff Channel |
| S | Port Lavaca Channel |
| T | Victoria Channel |
| U | Little Bay - Fulton Channel |
| V | Rockport Channel |
| W | Aransas Pass Channel |
| X | Port Mansfield Channel |
| Y | Arroyo Colorado Channel |
| Z | Port Isabel Channel |
| AA | Galveston Channel * |
| BB | Lydia Ann Channel * |

* Alternate G.I.W.W. Channels

sufficient depth for their deeper draft hulls. The various usages of the waterway have been studied by the State Department of Highways and Public Transportation, showing that recreational use of the Texas Gulf Intracoastal Waterway is quite extensive.

The study analyzed a 1980 survey of recreational boat owners in Texas and determined that 2.4 million recreational boat trips originate in Texas coastal waters annually.[5] It 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 reportedly used the Gulf Intracoastal Waterway as a major throughfare between coastal bays and most of the trips lengths on the waterway are between 5 and 50 miles each.

OVERVIEW OF 1985

In 1985, 37,303 barges moved 67.6 MILLION TONS of goods on the Texas Gulf Intracoastal Waterway.[6] The average estimated value of those goods transported in a safe, efficient, and economic manner amounted to 35.5 BILLION DOLLARS. If the same volume of goods were moved via the railroad transportation system it would have required the use of 942,899 railroad cars. If moved via truck transportation on the state highway system it would have required 3,404,911 trucks resulting in considerable wear and

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

[6] Department of the Army Corps of Engineers. Waterborne Commerce of the United States. Part 5, 1985.

tear on the roadway surfaces. Safe transportation of those goods, which include many hazardous materials, is recorded in a new report published by the U.S. Office of Technology Assessment, "Transportation of Hazardous Materials." For a period from 1976 to 1984, the total number of documented spills included 22 spills by air transportation, 4,418 by truck, 250 by rail, four by pipeline, and none by water transportation.

In addition to being a valuable mode of transportation, serving as a highway for the more than 2.4 MILLION annual recreational boat trips made by the coastal boating public, the Gulf Intracoastal Waterway (GIWW) also serves as a highway to the prime fishing areas for the commercial industry and sport fishing boats. These boats produced a 1985 catch of 100.3 MILLION POUNDS of shrimp, oysters, crabs, and finfish amounting to an ex-vessel value (value received at wholesaler's dock) exceeding 176 MILLION DOLLARS.[7] The GIWW 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. In times of stormy and inclement weather, the GIWW provides a protected, safe path for small vessels to travel rather than venturing out into the turbulent gulf waters.

The commercial and recreational impacts of the GIWW justify the protection and maintenance of this valuable resource. In these times of economic shortages and rising unemployment it is especially important to protect the over 145,000 jobs provided by this mode of transferring goods to the marketplace.

[7] Texas Parks and Wildlife Department, Trends in Texas Commercial Fishery Landings, 1977-1985.

## SUMMARY

The early settlers of Texas colonized near natural water routes because they knew of the many advantages that close proximity to water transportation could bring. The forefathers of the Gulf Intracoastal Waterway would be astonished at the tremendous usage which has resulted. The earliest estimates of commercial movements on this waterway were projected to be 7 million tons annually and recreational use was not even imagined. However, since the dredging of the first segment, the service and the value of the Gulf Intracoastal Waterway and the subsequent economic prosperity of local communities have grown at a very fast rate.

Today, the Texas coastal region is flourishing because of the availability of industrial and trade opportunities, coupled with the enhancement of the aesthetic value of coastal natural resources. The Gulf Intracoastal Waterway is a common factor to the entire Texas coastline and the vital link that allows its users to contribute to the region's success. Whether they are commercial fishers heading for distant bays, leisurely sailors on afternoon jaunts, or tug and barge rigs hauling goods to domestic or foreign trade centers, their value to the nation is extremely important.

# CHAPTER TWO

# THE STRUGGLE FOR DISPOSAL SITES

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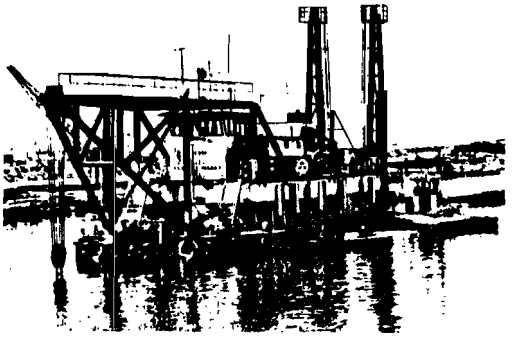


## INTRODUCTION

Between 1975 and 1983 a required federal indemnity policy prevented the State's participation as nonfederal sponsor in maintenance dredging projects of the Gulf Intracoastal Waterway. For those nine years, the impasse restricted the State as designated sponsor from spending monies budgeted to acquire the necessary property for needed disposal sites of dredged materials. During that period the Texas Legislature reduced funding to the amount necessary to cover only administrative costs. Although the federal government and the State resolved the impasse in March 1983, the Texas Legislature has continued to omit appropriations needed for fulfilling the responsibilities accepted when the Texas Coastal Waterway Act of 1975 was signed into law. Due to this lack of appropriations, the State Highway and Public Transportation Commission, as acting agent for the State's sponsorship, has been forced to seek methods of acquiring disposal sites other than outright purchases of property. In the past, the U. S. Army Corps of Engineers has negotiated for disposal site easements, but are now requesting the State of Texas to assume its responsibilities.

Extended study and increased coordination between the State and the Corps of Engineers have defined the importance and the needs of the Gulf

Intracoastal Waterway. Several factors note the waterway's importance and therefore merit its continued maintenance:

Texas Coastal Waterway Act of 1975, wherein the State assumed the nonfederal sponsorship

An annual, multibillion dollar impact to Texas' economy

Annual multimillion dollar tax income to Texas

A viable, alternative, low-cost mode of transportation

Extensive recreational opportunities and usage

Enhanced freshwater circulation in many bays

National defense

Protected marine passage

The 1975 Coastal Waterway Act also requires the State to provide for the waterway's shallow draft navigation in an environmentally sound fashion. Outright purchase of property for development of upland storage sites is the most advantageous means of acquiring disposal right-of-way while at the same time providing the best protection for the environment. The State would then own the deposited materials that could be sold as uses of the materials are developed. By removing the materials, the site could then be reused. Materials deposited on land where the landowner retains title become the landowner's property and cannot be used or sold without his permission. Environmental resource agencies, both state and federal, support the acquisition of upland disposal sites to eliminate the use of open water sites. Unfortunately, nearly seventy percent of the Gulf Intracoastal Waterway's current disposal sites are open water. Lacking funds for outright purchase or leasing of upland sites has forced the sponsor to seek other methods of acquiring disposal sites.

ALTERNATIVES

To date, alternative methods of acquiring without cost, either new disposal sites or additional capacity for existing sites, have included the use of donated state and federally owned lands and donations of land from private landowners. The U. S. Fish and Wildlife Service has donated the use of 155 acres in the Big Boggy National Wildlife Refuge near East Matagorda Bay, and the Texas Parks and Wildlife Department has donated a thirty year easement for 355 acres of Bryan Beach State Park near Freeport, Texas. Several land holdings of the General Land Office are desired as disposal sites, but unfortunately the General Land Office by state law must charge fees for the use of their land. Even if the fees were only one dollar an acre it could not be paid by the nonfederal sponsor because of the lack of funding.

Recently, the nonfederal sponsor has started a new program asking landowners to donate the use of their coastal properties for the waterway's disposal needs. Some small success has been achieved with this new program. One donation has provided about 250 acres in the East Matagorda Bay area, and five other donations appear promising in the High Island and West Bay areas. Private donations are highly regarded, especially during a time of fiscal strains, but the sponsor cannot depend on the private sector to fulfill the extensive needs for all of the required disposal sites for the Gulf Intracoastal Waterway's maintenance. Private donations are often limited to one-time use or for some short period of time and, therefore, cannot be included in any long range plan for solving the disposal problems.

## IDENTIFYING PROSPECTIVE SITES

Before attempting to solicit new disposal easements, the sponsor had to know the locations where disposal capacity was needed and which areas were environmentally and operationally acceptable. The Corps of Engineers assisted the nonfederal sponsor by identifying several stretches of the waterway that needed immediate additional disposal acreage:

| | |
|---|---|
| High Island area | 300 acres |
| Bolivar area | 300 acres |
| West Bay area | 400 acres |
| Freeport area | 400 acres |
| East Matagorda Bay area | 500 acres |

The Bolivar area was quickly addressed and removed from the critical list after the Corps of Engineers renewed previous real estate leases in the area. The Freeport area also received quick action when the Texas Parks and Wildlife Department donated the use of 355 acres in the nearby Bryan Beach State Park.

To identify additional sites of an environmentally acceptable nature, the sponsor and an interagency task force of naturalists and historical experts conducted field investigations in the other critical areas. The task force then made recommendations of specific sites for the additional disposal capacity needed. Upland sites, or dry land areas, were strongly preferred over bay disposal sites because dredged materials could be contained in less productive areas preventing valuable bay bottoms from being removed from active production.

After the field investigations were conducted the Corps of Engineers was asked to determine which of the task force's recommended areas were operationally feasible. Using sites selected as potentially acceptable to

the task force and the Corps of Engineers, the nonfederal sponsor developed a list of state property and private property owners to contact for soliciting the donated use of their land.

## SOLICITING PRIVATE DONATIONS

To contact the private landowners, the sponsor obtained names and addresses from county appraisal districts. Certified letters were then mailed to each landowner soliciting donations for disposal easements. If necessary, repeated attempts were made to contact the landowners. Efforts were discontinued if the owners still did not respond or if a negative response was made. The letters briefly related the struggle to furnish disposal sites, described the need for additional sites, and explained the inability to monetarily compensate the landowners for the use of their land. In addition, the letters listed several benefits, including one with financial possibilities, that the landowner could realize from donating an area for disposal use.

## INCENTIVES TO ACCEPT DREDGED MATERIALS

Few incentives to the coastal landowner are as immediately attractive as money, but some physical benefits which are desirable and important can be realized from disposal of dredged materials onto upland properties. Dredged materials can improve the value of a property by increasing the elevation or by enhancing agricultural productivity. Dredged materials from the Gulf Intracoastal Waterway are rich in organic materials and sands, and most are free of pollutants thereby making them suitable for

placement on land. Another incentive to coastal land owners is the realization that each acquisition of an upland site reduces undesirable environmental impacts by lowering the number of bay disposals.

On the financial side of incentives, profits appear promising for practicing mariculture of shrimp, redfish, and crawfish in enclosed disposal sites between dredging cycles. Currently, the Corps of Engineers, Texas A&M University, and a commercial mariculture operator are undertaking a $2.7 million dollar, four year study to see if mariculture use of disposal areas can return a steady profit.

In the future, to provide more monetary benefits for landowners who donate easements, the State Department of Highways and Public Transportation is proposing new legislation to amend the 1975 Waterway Act to include ad valorem tax breaks on properties donated for disposal sites. The need was justified upon hearing landowners lament, "I pay property taxes; if I donate the use of my land to the State, why must I continue to pay taxes?"

## LAND OWNERS' RESPONSES

The nonfederal sponsor wrote to thirty landowners soliciting the use of their land: fifteen owners in the High Island area, six in the West Bay area, four in the East Matagorda Bay area, and five in the Freeport area. This solicited the use of all the sites recommended by the interagency task force. Unfortunately, most responses were negative. Some sites were denied either because of current binding leases or because the owners desired some monetary compensation such as lease fees or ad valorem tax

exemptions. Other sites were denied because the owners had past conflicts with the Corps of Engineers regarding disposal easements.

There were some positive responses to the sponsor's requests. One site was donated and immediately put to use in the East Matagorda Bay area. The owners of five other areas expressed interest in donating the use of their land and negotiations are underway to further investigate these possibilities. However, one of the sites may be impossible to use due to environmental considerations.

The landowners who have expressed interest in donating the use of their land have often stipulated that certain conditions be met before granting an easement for their property. Working closely with the landowner, the nonfederal sponsor and the Corps of Engineers coordinate the owner's conditions with the Corps' operational standards of developing a new disposal area. Some conditions can not be met and the opportunity to acquire a site is lost.

Not all landowners request the same treatment of their property. One landowner may wish to raise the elevation of his property and thus improve the land's value for some type of future development. This requires a contained site. A completely contained disposal site, enclosed by levees, fills quickly but takes much longer to dry. To speed the drying of materials in contained sites, the Corps of Engineers dewaters the sites using drawdown weirs and trenching techniques.

Some owners desire a site to dry quickly to return the area to its previous use. A thin distribution of materials over a large area dries quickly. To accomplish this, the Corps of Engineers constructs a low levee

along the waterway's bank to prevent dredged materials from returning to the channel. The materials are then sprayed over the levee onto the site and allowed to flow naturally to a thin covering that will dry quickly. Elevating property with this disposal method takes much longer, but the landowner can have the use of his property between dredging cycles.

## STEPS TO ACQUIRE DONATED EASEMENTS

When a landowner agrees to donate the use of his land for a disposal site, the nonfederal sponsor and the Corps of Engineers must complete several steps before the owner actually signs the easement document. First, the Corps of Engineers must conduct a field survey of the property to determine any environmental conditions that might restrict or curtail use of the area. During the initial land survey, the Corps of Engineers also determines the operational conditions for using the site such as the placement of levees, frequency of use, and number of acres to be used.

An environmental assessment of the area identifies the presence of any historically significant artifacts or any federally protected wildlife and plantlife. If the environmental assessment has a finding of no significant impact, the use of the real estate is cleared. Whenever historically significant artifacts are detected, the Corps of Engineers has three options: avoid using the site; use the site, but protect the integrity of the artifacts; or use the site and impact the artifacts, but mitigate the impact. If sufficient environmentally sensitive species are identified, the Corps of Engineers must conduct a more indepth environmental impact study, which often takes twelve to eighteen months. In light of the

current disposal capacity shortage and pending need, the Corps of Engineers will usually avoid a lengthy environmental impact study and look for an alternative site.

The Corps of Engineers uses engineering criteria to determine the operational conditions for each disposal site project. Levee heights may vary from four to twenty-five feet high. Disposal sites should be a least fifty acres large, but smaller areas when added to existing sites may greatly increase the disposal sites' useful life.

Once an area has been environmentally cleared and all operational conditions are agreed upon between the owner and the Corps of Engineers, the State Department of Highways and Public Transportation completes the real estate easement. The Corps of Engineers prefers a minimum five years easement to cover costs of construction; however, a more lengthy easement such as thirty years is desired to facilitate long range planning. The Department of Highways and Public Transportation draws up the legal document for the landowner's final approval and signature. After acquiring the signed legal easement, if for a period of five or more years, the Department of Highways and Public Transportation assigns the easement to the Corps of Engineers and construction of the site can begin. Although this process of acquiring donations and transferring easements is rather piecemeal, without adequate funding the nonfederal sponsor currently has no other method of acquiring the needed disposal sites.

TYPICAL EXAMPLE OF A DONATION

In the East Matagorda Bay area, one landowner gave an easement for the one-time use of 259 acres to receive 90,000 cubic yards of dredged

materials taken from the Gulf Intracoastal Waterway. An environmental assessment cleared the site's use for dredged materials disposal thus eliminating the environmentally undesirable practice of disposing into the nearby open water bay system. East Matagorda Bay, a valuable fisheries habitat, has been the subject of previous heated dredging and environmental disputes.

At the owner's request, only low front levees along the waterway were constructed and the materials distributed thinly so the area used could dry more quickly. This will allow the area to return sooner to its normal use of grazing. Donations of this disposal capacity provide only a short term solution for an area of the channel that needs frequent dredging. If this disposal operation causes no damages to the property, and as expected, increases the grazing productivity, the owner may be amenable to future disposals onto his property.

The Galveston District Corps of Engineers and the Texas A&M Sea Grant Program have begun a study of this 259 acre site to determine dredged materials impacts on upland sites in Texas. Monitoring through two growing periods, the researchers will determine how dredged materials affect the soil and the plant communities. A technical report, which is scheduled for completion in about two years, will document the results while a summary report, in more general terms, will be distributed to other landowners who may consider donating land for disposal sites. By explaining disposal impacts and benefits, the report may help the sponsor to acquire more donations of sites.

PROSPECTIVE DONATIONS

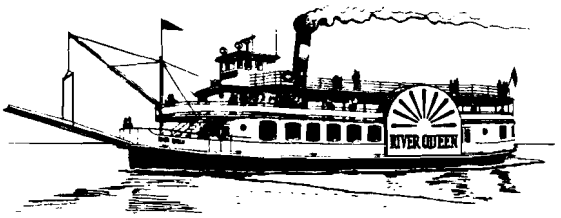
In the High Island area, the use of three donated sites may soon be possible. The landowners, or managers of estates, have expressed interest in either elevating their land or getting involved in mariculture farming. More disposal capacity is neded in the High Island area, because many current sites are becoming full, while others require renewed real estate easements. Two of the three possible donations near High Island are small and will provide only short term capacity. The third site could provide additional long term relief, but the property is located further away from the truly critical section of the waterway's High Island segment. Once again, the lack of funding impairs the nonfederal sponsor's ability to furnish needed disposal sites for long term security.

In the West Bay area, two landowners are interested in donating the use of their upland properties to help eliminate some of the open water disposal in the area. The main problem area using open water disposal in West Bay is at the Chocolate Bayou intersection with the Gulf Intracoastal Waterway where the bay is more shallow. Open water disposal removes valuable bay bottom from production, but often some sites become emergent providing important habitat for birds and other wildlife. Frequently a conservation organization or government agency will then want to preserve the emergent land as a wildlife habitat and halt future disposal use of the area. As another disposal alternative for the West Bay area, a deep water disposal site has been approved by the interagency task force. Resource experts have agreed that dredged materials impacts are not as significant in deeper waters.

# CHAPTER THREE

# LEGISLATIVE RECOMMENDATIONS

## LEGISLATIVE RECOMMENDATIONS




In 1975, the members of the Sixty-fourth Legislative Session recognized the importance of the waterway to the economy of the state and moved to support its continuance. In accepting the nonfederal sponsorship, the State pledged to support the waterway and to also be instrumental in the protection of our natural coastal resources.

But unfortunately, that pledge has not yet been honored. It has been stated in previous reports to the Legislature that the sponsor must be funded to accomplish the goals set forth in the Texas Coastal Waterway Act of 1975. Protection of our environment and the continuance of the waterway depends on having adequate, safe, and economical sites to dispose of the dredged materials. Although state land is available, there is normally some leasing fee required by state law for its use, and it has been demonstrated in this report that private donations will not be able to provide the number of disposal sites required. The State can ill afford to lose the income from the estimated 35.5 billion dollars of goods moved on the Gulf Intracoastal Waterway, as well as the loss of the 145,000 jobs in the workforce.

Section 7 on funding in the Waterway Act of 1975 states, "the legislature is hereby authorized to appropriate from the General Revenue Fund, funds in the amount necessary to accomplish the purposes of this Act." This clearly signifies that the use of monies from any

other tax, fund, or appropriated budget is not authorized for waterway use and to do so would require amending the waterway act.

The State Department of Highways and Public Transportation, named by legislative action as the agent for the state, stands ready to fulfill the duties of the nonfederal sponsor for the waterway. Transportation and planning engineers, right-of-way engineers, field personnel, and all easement and legal papers necessary are ready to accomplish the required tasks. Coordination between the Corps of Engineers, environmental, archeological, and historical agencies is in effect and pre-planning for acquisition of property in the most critical areas of the waterway has been accomplished. It is, therefore, recommended:

- The Legislature should approve adequate funding as requested by the State Department of Highways and Public Transportation to provide for the minimal necessary staff and the purchase of disposal sites for the Gulf Intracoastal Waterway.

- The Legislature should consider implementing a user tax to provide the necessary funds for future maintenance of the Gulf Intracoastal Waterway.

- The Legislature should adopt an amendment to the Texas Coastal Waterway Act of 1975 that would exempt from all ad valorem taxation land donated by private individuals for use as disposal sites for the main channel of the Gulf Intracoastal Waterway.

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