



Highlights of the Texas Gulf Intracoastal Waterway Master Plan

TxDOT Project 0-6807

Product 0-6807-P1

Published: March 2016

URL: <http://tti.tamu.edu/documents/0-6807-P1>



The Gulf Intracoastal Waterway

- 1,100 miles from Brownsville, Texas, to St. Marks, Florida
- Third-busiest U.S. inland waterway
- Essential component of transportation network
- Maintained by the U.S. Army Corps of Engineers
- Most fuel-efficient, safest, environmentally friendly way to move freight



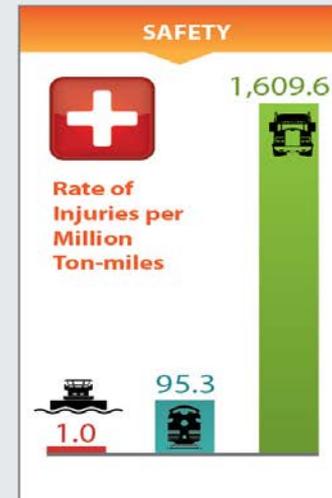
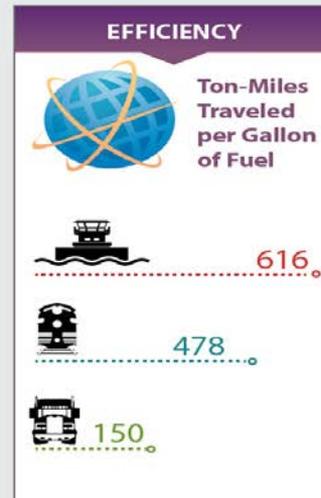
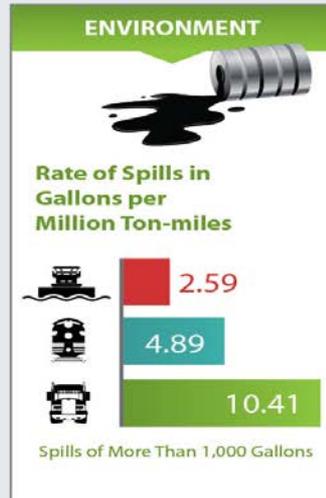
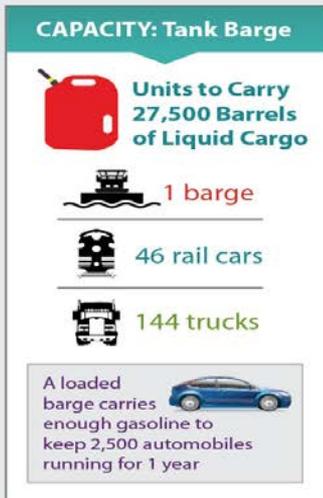


The Gulf Intracoastal Waterway

Waterborne Transportation



In virtually every way measurable, waterborne transportation is superior to moving freight by truck or rail.





The GIWW-T

- 379 miles long (main channel)
- Completed in 1949
- Handles 69 percent of all GIWW freight traffic
- Links 11 deep-draft ports and 13 shallow-draft channels
- Benefits coastal counties and entire state
- Designed at 125 feet wide, 12 feet deep



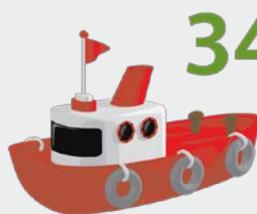
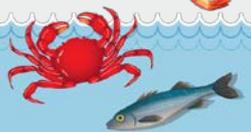
The GIWW-T

GIWW-T QUICK FACTS



Texas' rank in total U.S. waterborne **tonnage moved** (2012)

\$31M estimated wholesale **value of seafood** enabled by the GIWW-T



34,000

number of **towboat trips** on the GIWW-T (2012)



90% freight classified as **petroleum and chemical-related** (2012)



1 tank barge carries enough **gasoline** to meet the needs of ~2,500 people for 1 year



78M tons

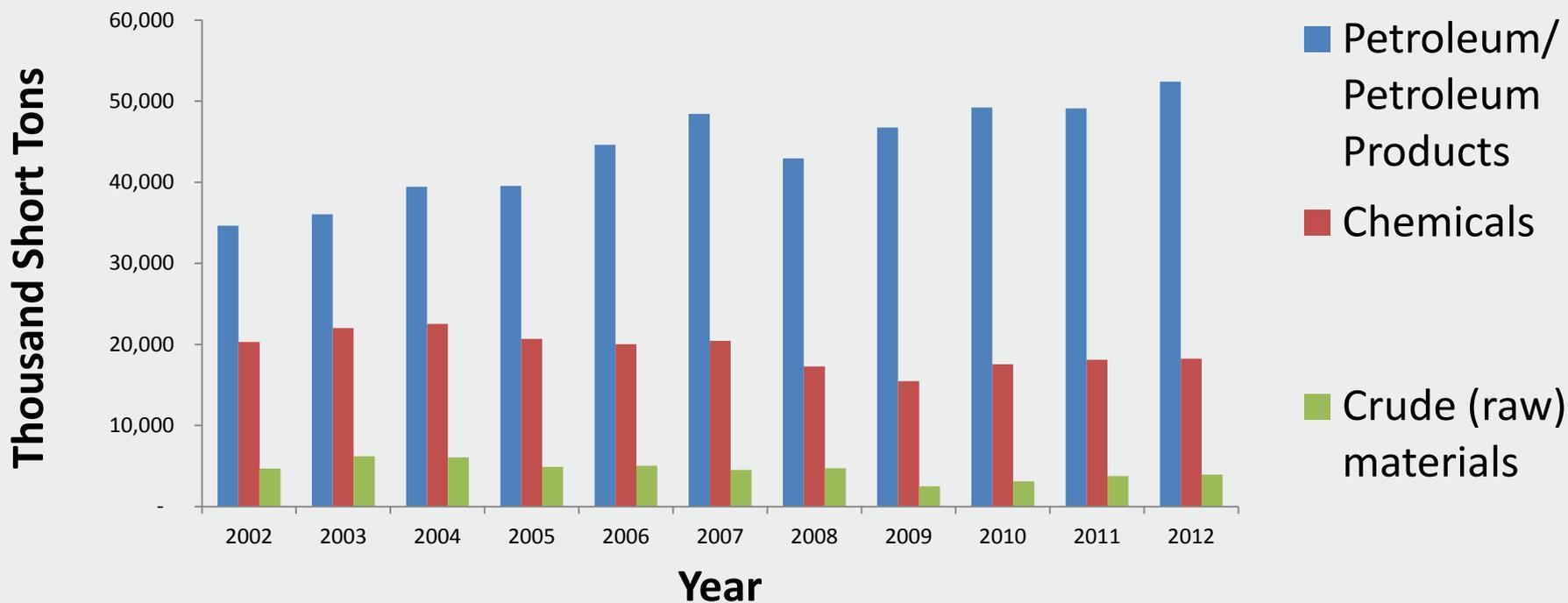
freight moved on GIWW-T (2012)



#3 waterway for **tonnage** only the Mississippi and Ohio Rivers ship more tonnage



Predominant Cargoes on the GIWW-T





Coastal Development Means Economic Opportunity for Texas

- Shippers invest capital for developing Texas coast
- Provides employment, local spending, tax dollars
- Eagle Ford Shale play
 - Producing crude oil/natural gas
 - 2014 peak production (comparable to 1970) at 9.6 million barrels per day
 - Could need 1.2 million tons (445 barges) additional GIWW-T transport capacity by 2022



Coastal Development Means Economic Opportunity for Texas

Investor	Investment \$	Locations
Chevron Philips	\$5 billion	Baytown (Cedar Bayou)
Cheniere Energy	\$10 billion	Corpus Christi
M&G Group	\$900 million	Corpus Christi
Tianjin Pipe Corporation	\$1 billion	Corpus Christi
Voestalpine	\$700 million	Corpus Christi
Kinder Morgan Energy Partners LP	\$430 million at the company's Bostco site; \$245 million at the company's Galena Park site	Houston, Galena Park
Targa Resources Partners	\$480 million	Houston, Galena Park



TxDOT's Role in the GIWW-T

- 1975: named official non-federal sponsor
- Prescribed by Texas Coastal Waterway Act
- Regulated by Chapter 51 of the TTC
- Acquires land for disposal of dredging material
 - Maritime Division
 - ROW Division



Options for Increased Participation in Maintenance

- TxDOT could take over maintenance/dredging activities
- Option 1: Take Over Maintenance Completely
- Option 2: Become a Subcontractor to the Corps
- Option 3: “Symbiotic Partnership” Approach
 - Presents fewest legislative obstacles
 - Key: Coordinating partnerships with port authorities



The Most Pressing Maintenance Issues

- Replace Brazos River Floodgates: **#1 Problem**
- Maintaining authorized dimensions
- Build/enlarge fleeting areas
- Expedite replacement of the Caney Creek Bridge
- Curb further encroachments
- Expand mooring areas
- Acquire placement areas



Transit through East Floodgates



Entering from the river



In the floodgates

Exiting to GIWW east





Closing the Floodgates





From the Wheelhouse



Westbound in the Brazos River



The GIWW-T's #1 Problem

FACTS OF THE FLOODGATES



\$800,000

average annual
damage cost due to
facility inadequacy



\$11M

annual **cost of
delays** due to
facility inadequacy



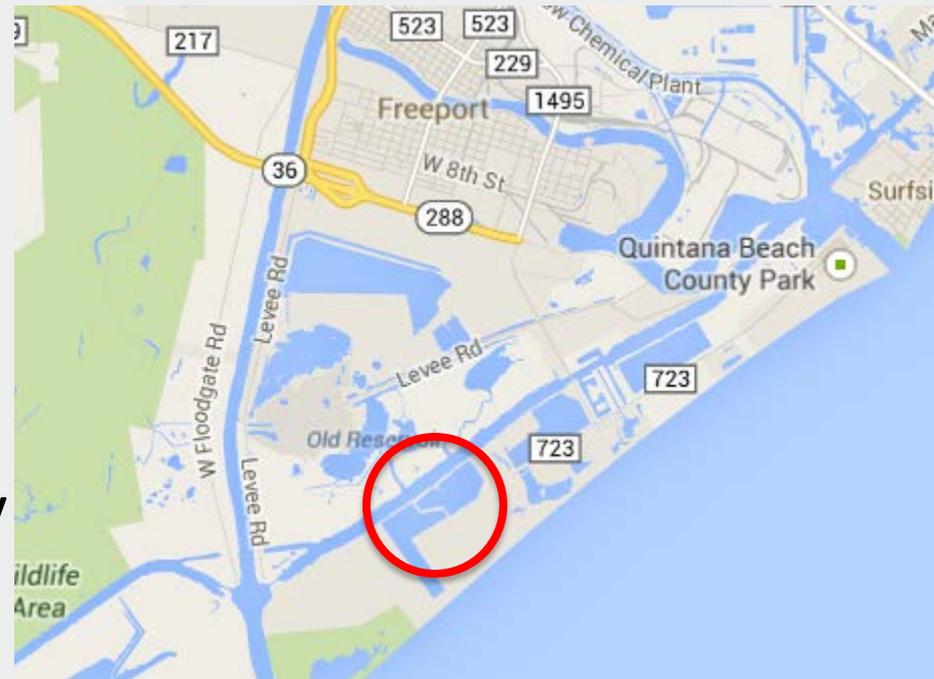
36

average number
of **accidents**
per year



Acquiring Placement Areas

- 6.2M cubic yards dredged annually from main channel
- Most stored in open-water bay sites
- Obtaining new sites is challenging
- PA 86: less than 12 years of remaining life
- Lack of capacity could delay necessary dredging





Funding Needs



- Cost to replace floodgates: \$60M?
- O&M budget shortfall
 - Average is \$34M less than requested amount
- Fleeting areas: \$16M?
- Mooring expansion: \$7M for 8,115 linear feet.
 - Corps completing study now
- Placement area: ??



Funding Strategies

- Elevate priority of GIWW-T projects to the Corps and Congress
- Apply for Marine Highway project designation
- Apply for federal discretionary grants (TIGER)
- Use approach used by Florida Inland Navigation District
 - Special tax levy dedicated to maintenance



Funding Strategies

- Use CEPRA funds
- Explore ending state diesel tax exemption
- Pursue public-private-partnership opportunities
 - Will need some type of associated revenue stream
- Explore tapping Rainy Day Fund
- Consider Panama Canal approach (tolling)



Recommendations

- Request expedited feasibility study for the Brazos River Floodgates
 - Possibly fund and/or conduct the study
- Find funding to replace the Brazos River Floodgates
- Combine efforts with entities (e.g., Ducks Unlimited) to place revetments along placement areas
- Provide funding assistance to create new fleeting areas open to all barge traffic
- Stay actively involved in reviewing permit applications for development along the GIWW



Recommendations

- Keep replacement of the Caney Creek Bridge on a fast track
- Initiate placement area acquisition process for PA 86 in Brazoria County (12-year remaining life)
- Create a web presence to periodically update and publish selected metrics
- Continue pursuing funding through the USDOT's TIGER grant program
- Apply for Marine Highway project designation



For more information

