PORTS AND WATERWAYS

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TxDOT RESOURCE LINKS
Scan the QR codes with your mobile device or click on the resource link buttons located here and at the bottom of every page of this document to direct you to additional resources and more details on the information provided in this document.

Texas Department of Transportation
TxDOT’s public website for agency information and resources focused on meeting the needs of drivers, businesses, government officials, and those who want to learn more about TxDOT.

TxDOT 2021-2022 Educational Series
TxDOT’s complete 2021-2022 Educational Series that focuses on a range of transportation issues affecting TxDOT and the state of Texas.

Visual Dictionary
TxDOT’s Visual Dictionary is designed to provide better understanding of transportation elements, words, and concepts.
PORTS AND WATERWAYS

OVERVIEW
Texas seaports (ports) and waterways are important transportation hubs to both the United States and Texas for domestic and international freight and cargo. Texas ranks second in the nation in total waterborne commerce by state. Texas ports handle almost 25 percent of all waterborne cargo moved in the United States. The United States Army Corps of Engineers’ most recent waterborne tonnage data shows that in 2018 more than 569 million tons of cargo moved through Texas ports. Texas is also home to several recreational ports primarily used for fishing, boating, and other water-centric activities.

Texas ports are vital components of the Texas economy. According to an economic impact analysis performed by the United States Army Corps of Engineers in 2019, Texas ports generate over $5 billion in local and state tax revenue and over $9 billion in federal import tax revenue each year.

The United States Homeland Security Council has designated 10 of the 21 Texas ports as foreign trade zones. The United States government considers foreign trade zones as outside United States customs territory, and shippers may bring merchandise into foreign trade zones without formal customs entry, import quotas, or most other import restrictions. Texas’ largest international waterborne trading partners by value are Japan, Mexico, and China. These three countries account for nearly 30 percent of the waterborne trade with Texas.

The petrochemical sector dominates international waterborne imports and exports in Texas. Other key imports and exports in Texas are machinery, chemicals, and plastics.

June 2016 marked the completion of the Panama Canal expansion project. The expansion project included the construction of two new sets of locks that allow larger container ships, bulk vessels, and a new fleet of liquefied petroleum gas vessels to transit the canal. These larger vessels enable domestic producers and shippers to more competitively export Texas’ energy, chemical, and agricultural products worldwide. One of the greatest opportunities from the canal expansion is the export of liquefied natural gas (LNG). Previously, only eight percent of the world’s liquefied natural gas carriers could use the canal. Because of the expansion, the canal can accommodate approximately 88 percent of existing liquefied natural gas vessels. Texas currently has two liquefied natural gas export facilities at Port Freeport and the Port of Corpus Christi. Several other liquefied natural gas export facilities, including facilities in Brownsville, Port Arthur, and Sabine Pass, have recently received federal approval for operations.

Another important aspect of Texas maritime trade is the volume of its intrastate movements, which occur mostly along the Gulf Intracoastal Waterway (GIWW). Texas leads the nation in intrastate maritime commerce with more than 77 million tons of cargo shipped between Texas ports in 2018. Cargo carried on Texas waterways, including the Gulf Intracoastal Waterway, reduce congestion on state and local highways and private rail systems, decreases maintenance costs of those transportation systems, and extends their useful life. In addition, water transportation is the most fuel-efficient mode of transportation, producing the smallest amount of air pollutants per ton of cargo carried. Waterborne transportation is also the safest mode of transportation compared to other cargo and freight shipping modes, and using waterways can reduce the risks associated with transporting hazardous materials.
Maritime transportation and port facilities are important parts of the Texas transportation system. Texas is home to 11 deep-draft commercial ports, which have channels depths of at least 30-feet, and eight shallow-draft commercial ports, which have channels depths of less than 30-feet. Texas is also home to two additional shallow-draft ports that are used for commercial fishing and recreational purposes and do not handle commercial cargo.

As of 2019, ten Texas ports ranked among the top 100 United States ports in total tonnage exported and imported, with five of those ranking in the top 20. An overview of all Texas ports and their port profiles is available on the TxDOT website and below for a direct link.

In terms of tonnage, Port Houston handles more imports, exports, and total international cargo than any other port in the United States. Additionally, Port Houston handled more than 3 million shipping containers in 2019, which represents more than two-thirds of all containerized cargo on the United States Gulf Coast. This figure includes 8 million tons of raw plastic resin, making Port Houston the top United States port for resin exports. Port Houston leads the United States resin export market with 48 percent of the total market share.

The Port of Beaumont ranks fourth in total tonnage and serves as the number one military outload port in the world. The Port of Corpus Christi, an energy hub, ranks fifth in total tonnage while the Port of Texas City, a privately-owned facility, ranks fifteenth in total tonnage. Additionally, the Port of Galveston is the fourth busiest cruise embarkation port in the United States, serving more than 1.9 million cruise passengers in 2019.

Since 2015, Texas ports have invested more than $1.3 billion for capital improvement projects necessary to meet the needs of existing and future customers. Texas ports finance their capital improvements through various mechanisms, such as internal revenue generated from their operations, local taxing authorities, and bond revenues. Currently, many Texas ports are heavily leveraged and may have to reduce infrastructure investments in the coming years to maintain appropriate revenue-to-debt ratios if no changes are made to their revenue streams.

For detailed information on individual Texas ports, please see TxDOT’s Port Profiles page.

The Gulf Intracoastal Waterway is a 1,100-mile, man-made, shallow-draft, protected waterway that connects ports along the Gulf of Mexico from St. Marks, Florida, to Brownsville, Texas. As the nation’s third-busiest inland waterway, it is an essential component of the nation’s transportation network. The Texas segment of the main channel covers 379 miles of the Texas coastline and handles more than 70 percent of the Gulf Intracoastal Waterway’s total traffic.

Originally constructed to handle dry bulk commodity trade between ports and to facilitate defense traffic during World War II, the Gulf Intracoastal Waterway has become an integral component of the extensive supply chains of Texas petrochemical and manufacturing industries. The importance of the Gulf Intracoastal Waterway to the Texas economy is reflected in its high levels of vessel traffic. In 2018, shippers moved 77 million tons of cargo on the waterway, 92 percent of which were petroleum and chemical products.

The Gulf Intracoastal Waterway is part of the United States Maritime Administration’s designated navigable waterways known as the Marine Highway System. To receive the Marine Highway designation, the waterway routes must demonstrate the ability to provide additional capacity to relieve congested landside routes serving freight and passenger movements. In June 2016, the United States Department of Transportation designated the Texas segment of the Gulf Intracoastal Waterway as the Marine Highway 69 (M 69) corridor. This designation makes Marine Highway projects along the Gulf Intracoastal Waterway eligible for federal funding, intending to increase waterborne transportation and simultaneously improving mobility on I 69 and other highways along the Texas Gulf Coast by reducing freight roadway and rail traffic.

Though designed to be 125 feet wide and 12 feet deep, lack of federal funding prevents the United States Army Corps of Engineers from maintaining the Gulf Intracoastal Waterway to those dimensions. There has been a rapid escalation in dredging costs over the last few decades, and since the United States Army Corps of Engineers budget has not increased to offset these costs, it has deferred or downsized many dredging projects. As a result, the Gulf Intracoastal Waterway’s operating depth is only 9 feet and carriers must load barges at less than their rated capacities to ensure that barges do not scrape bottom at any point during transit. This practice raises the cost of shipping goods on the waterway on a per-unit basis because additional trips are required to move cargo.

Additionally, outdated structures along the waterway present navigational challenges. The Brazos River Floodgates, near Port Freeport, present by far the greatest challenge in terms of safety and efficiency along the entire Gulf Intracoastal Waterway. Navigational difficulties for tow operators, due to the narrow width of the lock and gate structures and the proximity of the structures to the river, account for most of the problems at the floodgates. The narrow structures force towboat operators to stop and break down their barges, meaning operators must move barges one at a time, making multiple trips across the river to get the entire tow through the floodgates. This results in significant time delays and additional costs to the operators and ultimately to the consumer. Furthermore, each year, an average of 65 collisions occur at the Brazos River Floodgates. The damages to the floodgates due to these strikes by towboats and barges cost the United States Army Corps of Engineers an estimated $12.2 million annually in repairs.
To address these problems, TxDOT partnered with the United States Army Corps of Engineers to conduct a study to develop various alternatives to determine whether and how to undertake modifications to the Brazos River and Colorado River crossings. The study recommends key improvements to the guide walls and gate structures. Congress included authorization for the modifications recommended in the study in its Water Resources Development Act of 2020, which was signed into law on December 27, 2020. Now authorized, the modifications can compete for limited federal funds.

STATE SUPPORT FOR TEXAS PORTS AND WATERWAYS

Given the importance of Texas ports and waterways to the Texas economy and overall transportation system, TxDOT works to promote the development and intermodal connectivity of Texas ports, waterways, and marine infrastructure and operations. TxDOT also serves as a resource to increase the use of the Gulf Intracoastal Waterway and promote waterborne transportation to maintain Texas’ economic competitiveness.

NON-FEDERAL SPONSOR OF THE GULF INTRACOASTAL WATERWAY

Maintenance of the Gulf Intracoastal Waterway is the responsibility of the United States Army Corps of Engineers. In 1975, the Texas Legislature enacted the Texas Coastal Waterway Act and named TxDOT as the official non-federal sponsor of the Gulf Intracoastal Waterway. As the non-federal sponsor, TxDOT’s primary responsibility is the provision of lands, easements, right of way, relocations, and necessary disposal areas for the maintenance and operation of the Gulf Intracoastal Waterway. The law requires TxDOT to provide the land for placement areas that will accommodate the ongoing needs of the United States Army Corps of Engineers dredging program in Texas. Federal law requires TxDOT to cooperate with the United States Army Corps of Engineers and other federal and state agencies, navigation districts, port authorities, counties, and other appropriate entities.

As the official non-federal sponsor of the Gulf Intracoastal Waterway TxDOT has the following responsibilities:

- Evaluate, plan, maintain, preserve, enhance, and improve the Gulf Intracoastal Waterway;
- Evaluate and select sites for the disposal of dredged material;
- Coordinate with the United States Army Corps of Engineers and other federal and state agencies for environmental impact studies; and
- Host public meetings on Texas ports and waterways.

Additionally, TxDOT continuously evaluates the impact of the Gulf Intracoastal Waterway on Texas and reports the findings to the Texas Legislature. The most recent Gulf Intracoastal Waterway Legislative Report is available on the TxDOT website (www.txdot.gov), keyword search “Gulf Intracoastal Waterway.”

GULF INTRACOASTAL WATERWAY

For more information about Gulf Intracoastal Waterway.

PORT AUTHORITY ADVISORY COMMITTEE

For more information about the Port Authority Advisory Committee.

https://www.txdot.gov/inside-txdot/division/maritime/port-committee.html

PORT AUTHORITY ADVISORY COMMITTEE AND PORT REPORTS

The Port Authority Advisory Committee (PAAC) is a state legislatively created, nine-member committee that advises the Texas Transportation Commission and TxDOT on matters relating to port authorities and provides a forum for the exchange of information between the Texas Transportation Commission, TxDOT, and representatives of the Texas maritime and port industry. The Port Authority Advisory Committee regularly updates plans, establishes goals, strategies, and objectives to address the forecasted needs of Texas ports, and identifies port improvement projects requiring immediate investment.

The Texas Transportation Commission appoints seven members of the Port Authority Advisory Committee. The Speaker of the Texas House of Representatives and the Lieutenant Governor of Texas each appoint one additional public member. Of the Texas Transportation Commission appointments, one member represents Port Houston, three members represent ports along the upper Texas coast, and three members represent ports along the lower Texas coast. Except for the Port Houston representative, which has a permanent seat, Port Authority Advisory Committee members serve staggered three-year terms at the discretion of the Texas Transportation Commission.

State law requires the Port Authority Advisory Committee to develop a Port Mission Plan for Texas maritime ports, which TxDOT submits to the governor, lieutenant governor, and speaker of the Texas House of Representatives by December 1 of even-numbered years. The Port Mission Plan outlines trends and issues impacting Texas ports at a system-wide level, identifies key challenges and opportunities for Texas ports, and provides critical strategies that the state and the ports must pursue to improve their competitive position. The 2022-2023 Texas Port Mission Plan comprises three distinct sections focused on different types of port infrastructure:

1. Port Capital Investment Report;
2. Ship Channel Improvement Report; and

By bringing together these three components, the Texas Port Mission Plan will provide a more comprehensive assessment of the challenges and opportunities that the port industry faces with public roadways connecting ports, ship channels, and capital projects located “inside the gates” at each port.

The Investment Report of the Texas Port Mission Plan provides a listing of high priority port projects of statewide significance recommended for funding if funding from an eligible source becomes available. All public maritime ports and navigation districts in Texas are eligible to apply to include projects in the Investment Report. The Investment Report identifies the state’s maritime needs by outlining capital projects, plans, and studies that:

- Enhance international trade;
- Promote cargo growth and cruise passenger movement;
- Enhance security;
- Increase maritime port revenues;
- Provide an economic benefit to the state; and
- Connect maritime ports to other transportation modes.
The Ship Channel Improvement Report of the Texas Port Mission Plan identifies and summarizes projects and feasibility studies that have been authorized by the United States Congress and are therefore also eligible for the funding, should funding become available, from the state Ship Channel Improvement Revolving Fund. Project details include current and proposed channel depths, channel improvement features (e.g. widening, and turning basins), design vessels and key commodities targeted by improvements, and project benefits. This section also includes an overview of Texas ship channels, how Texas ship channels impact the Texas economy, and the process of obtaining authorization and funding for making improvements along the ship channels.

The Port Connectivity Report of the Texas Port Mission Plan aims to develop a more comprehensive understanding of all port connectivity needs, including both waterside connections within the port and landside connections such as roadway, railway, airport, and pipeline that extend outside of the ports. The section documents existing port connections, assesses system demand, and identifies mobility needs and opportunities to improve multi-modal port connectivity. It also identifies potential funding and financing options, such as state funding and federal grant or loan opportunities, for connectivity projects included in different port’s plans.

STATE FUNDING FOR MARITIME PORTS

Currently, the State of Texas does not provide direct funding for port capital improvements. However, for the past three legislative sessions (2016-2021), the Texas Legislature has included budget riders in the state budget (the General Appropriations Act) authorizing the use of a total of $100 million from TxDOT’s budget for public roadway projects improving connectivity to Texas ports. The Port Authority Advisory Committee selects the candidate projects, and the Texas Transportation Commission must vote to approve the projects funding. Since 2016, TxDOT has provided funding for thirty-four port connectivity projects under these legislative directives.

In 2017, the Texas Legislature established the Ship Channel Improvement Revolving Fund, which required the Texas Transportation Commission to establish a revolving loan program to finance qualified projects for navigation districts to deepen or widen ship channels. Only projects with authorization from the United States Congress that meet the standards in Texas Transportation Commission rules are eligible for consideration. However, to date, the Texas Legislature has not provided money to capitalize the fund.

Other states along the Gulf of Mexico and the east and west coasts of the United States are actively funding ports to improve their competitiveness. Many of the ports competing with Texas receive state government-funded subsidies to attract new tenants and have access to grants or low-interest loans for capital improvement projects. These programs, established by each state, make revenue available through various mechanisms, such as economic development funds, general revenues, tax incentives, or transportation programs. Ports in other states have used this revenue to subsidize projects for channel deepening and widening, dockside infrastructure, warehouses, cruise terminals, security enhancements, and intermodal transportation to reduce congestion. These subsidized port enhancements are a competitive advantage for non-Texas ports.

TEXAS PORT MISSION PLAN

For more information on Texas Port Mission Plan.

FEDERAL SUPPORT AND FUNDING FOR TEXAS PORTS AND WATERWAYS

In 2014 the United States Congress passed the Water Resources Reform and Development Act of 2014 (WRRDA). The Act included reforms to the United States Army Corps of Engineers programs and instituted streamlining provisions to certain agency processes. Most significant of these changes for Texas ports and waterways are a mandated increase in expenditures from the Harbor Maintenance Trust Fund for the coming years. Eventual full use of the fund should increase maintenance dredging of Texas’ channels and waterways. Water resources bills in 2016 and 2018 built upon and amended the reforms undertaken in the Water Resources Reform and Development Act of 2014. In addition to United States Congress’ focus in recent years on the Harbor Maintenance Trust Fund, the water resources bills of 2014, 2016, and 2018 authorize the United States Army Corps of Engineers to carry out several projects of interest to Texas, including the authorization for new dredging projects for the following:

- Sabine Neches Waterway Channel (2014);
- Freeport Harbor (2014);
- Port of Brownsville Brazos Island Harbor (2016); and

The Water Resources Reform and Development Act of 2014 also provided for an increase in the authorized funding level for dredging the Corpus Christi Ship Channel. The 2018 Water Resources Development Act includes several positive measures meant to inform Congress for future water resources bills, including:

- National Academy of Sciences study on the future of the United States Army Corps of Engineers;
- Additional requirements for transparency and the involvement of non-federal interests;
- General Accountability Office study on the differing benefit-cost calculation procedures of the United States Army Corps of Engineers and the Office of Management and Budget; and
- United States Army Corps of Engineers report on the Harbor Maintenance Trust Fund, which must include on a project-by-project basis the most recent fiscal year for which operations and maintenance activities have been carried out and the cost of those activities.

Most recently, as part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the United States Congress passed a provision removing the Harbor Maintenance Trust Fund from the Congressional budget process, referred to as taking the fund off-budget. In practical terms, this means that Harbor Maintenance Trust Fund receipts can no longer be diverted for other purposes and will be used for its stated purpose, to fund the United States Army Corps of Engineers operation and maintenance activities.

For more information on TxDOT Maritime operations.

https://www.txdot.gov/inside-txdot/division/maritime.html
TxDOT is committed to your safety and to the reliability of the information contained on this site. While road conditions can change rapidly, DriveTexas.org is an industry leader in providing some of the most accurate and up-to-date travel-related information currently available to drivers in Texas. Information presented here is as close to real time as possible. For those who use our roads, please do not use this site while operating a motor vehicle.

Be Safe. Drive Smart. Thank you!

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