

LOUISIANA'S PUBLIC PORTS SYSTEM

COMPARISON TO OTHER SOUTHERN COASTAL STATES AND RECOMMENDATIONS FOR IMPROVEMENT

PERFORMANCE AUDIT SERVICES

**Informational Report
Issued January 31, 2024**

**LOUISIANA LEGISLATIVE AUDITOR
1600 NORTH THIRD STREET
POST OFFICE BOX 94397
BATON ROUGE, LOUISIANA 70804-9397**

LEGISLATIVE AUDITOR
MICHAEL J. "MIKE" WAGUESPACK, CPA

FIRST ASSISTANT LEGISLATIVE AUDITOR
BETH Q. DAVIS, CPA

DIRECTOR OF PERFORMANCE AUDIT SERVICES
KAREN LEBLANC, CIA, CGAP, MSW

PERFORMANCE AUDIT MANAGER
GINA V. BROWN, MPA, CIA, CGAP, CRMA

AUDIT TEAM
IRINA HAMPTON, MS, MPA, CIA, CGAP
AMANDA G. SANFORD, PHD

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January 31, 2024

The Honorable J. Cameron Henry, Jr.,
President of the Senate
The Honorable Phillip R. DeVillier,
Speaker of the House of Representatives

Dear Senator Henry and Representative DeVillier:

This report is intended to provide timely information related to an area of interest to the legislature or based on a legislative request. I hope this report will benefit you in your legislative decision-making process.

We would like to express our appreciation to the Department of Transportation and Development, Louisiana Department of Economic Development, and all of Louisiana's public ports for their assistance during the course of our work.

Respectfully submitted,



Michael J. "Mike" Waguespack, CPA
Legislative Auditor

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PUBLICPORTSSYSTEM



Informational Report

Louisiana's Public Ports System Comparison to Other Southern Coastal States and Recommendations for Improvement

Audit Control# 40200033
 Performance Audit Services – January 2024

This report provides information on Louisiana's public ports system and how it compares to other southern coastal states. Ports are catalysts for economic development as they enable trade and support supply chains. Louisiana has 32 active public ports and 10 developing¹ public ports. A public port is different than a private port (i.e., private terminal) because private ports are not established in state law and do not qualify for state funding.² There are three types of active ports in Louisiana based on geographic characteristics: deep-water, coastal, and inland. A port authority is the governing body of any port area or port, harbor, and terminal district.³ Port authorities govern all⁴ 42 of Louisiana's public ports. State law⁵ also establishes the territorial limits and jurisdiction of each public port authority in Louisiana. Exhibit 1 provides a picture of each type of port, a brief description, and an example.

There is not an established definition of "port" in Louisiana state law. For the purposes of this report, we defined a **port** as any port area; port, harbor, and terminal district; waterway district; or economic development district, acting by and through its board of commissioners that is authorized in state law to purchase, establish, operate, and/or maintain industrial parks, ports, harbors, terminals, and associated facilities.

Source: Prepared by legislative auditor's staff using information from state law and the Department of Transportation and Development.

Exhibit 1: Types of Ports in Louisiana



Deep-water Port
Nine Active Public Ports

A port capable of accommodating vessels of at least 25 feet of draft* and engaging in foreign commerce.

-Port of New Orleans



Coastal Port
11 Active Public Ports

A port operating within the Louisiana Coastal Zone that is not a deep-water draft port.

-Port of Morgan City



Inland Port
12 Active Public Ports

A port that is located on inland waterways or an area with large intermodal freight facilities that are not near navigable water.

-Central Louisiana Regional Port

*The distance the hull of a ship extends beneath the surface of the water.

Source: Prepared by legislative auditor's staff using information from DOTD, state regulations, and federal and industry publications.

¹ A developing port is a port that has been established in state law but does not operate on a commercial waterway or has not yet been developed beyond the authorizing statute. Developing ports also include certain economic development districts and waterway maintenance commissions.

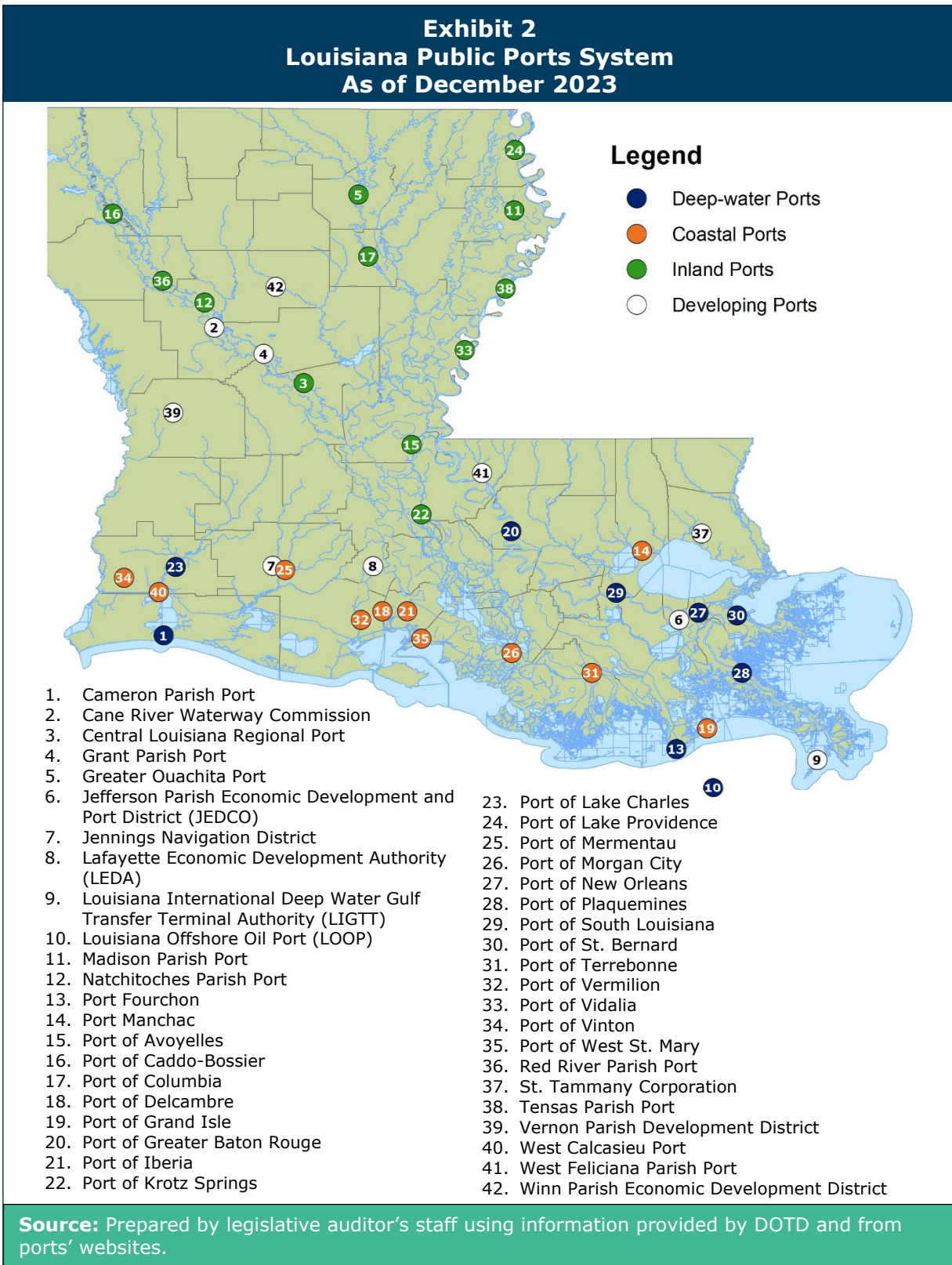
² For example, some private companies, such as ExxonMobil Baton Rouge, have their own private terminals.

³ Louisiana Revised Statutes (R.S.) 34:3451.

⁴ Boards of Commissioners govern 41 (97.6%) of Louisiana's 42 ports, while the Louisiana Offshore Terminal Authority is overseen by an executive director appointed by the governor.

⁵ R.S. 34:1, *et seq.* and R.S. 33:133.401, *et seq.*

Exhibit 2 provides a map of all public ports in Louisiana.



Louisiana Public Ports Classification. Public ports can be classified by the type of cargo they can handle, their activities (i.e., freight and non-freight activities⁶), and their management model (operating, landlord, or a hybrid of both). Waterborne cargo consists of goods carried on a ship or barge, including any packaging, pallets, containers, or other items that move with the goods on water. Exhibit 3 provides a list of main cargo types and summarizes cargo types moved by Louisiana public ports obtained from the responses to our survey of all 32⁷ active public ports in Louisiana. Our survey asked general questions about each port's staffing, funding, cargo type, capacity, etc. We present the results of the survey throughout the report. Appendix C further discusses port classification.

Exhibit 3 Ports by Cargo Type, All Ports Calendar Years 2018-2022					
Cargo Type	Deep-water (8)	Coastal (11)	Inland (11)	Total Respondents by Cargo Type (30)	Percent (%)
Dry Bulk (e.g., coal, iron ore, and grain)	6	4	10	20	66.7%
Project Cargo (e.g., wind turbines, large cranes, factory equipment)	6	7	2	15	50.0%
Breakbulk (e.g., iron, steel, machinery, linerboard, and wood pulp)	7	2	6	15	50.0%
Liquid Bulk (e.g., oil and petroleum products, liquid natural gas)	7	2	6	15	50.0%
Roll-on/Roll-off (e.g., automobiles)	2	3	4	9	30.0%
Containers (large variety of goods)	3	2	2	7	23.3%
Note: Numbers in parentheses indicate the total number of survey respondents for each port type. 30 of 32 active public ports responded to our survey for a 93.8% response rate. Source: Prepared by legislative auditor's staff using unaudited survey responses from Louisiana's active public ports.					

According to our survey results, the most common type of cargo moved through Louisiana's public ports is dry bulk, with 20 (66.7%) of the 30 respondents stating that they handle cargo of this type. However, top cargo categories vary by port type. Inland ports primarily traffic in dry bulk, with breakbulk and liquid bulk as their next largest forms of cargo. Coastal ports' most common cargo category was project cargo, with dry bulk coming in second. For deep-water ports, cargo

⁶ Freight activities include cargo movement and handling, and non-freight activities include tourism, commercial fishing, community development, etc.

⁷ 30 ports responded to our survey for a 93.8% response rate.

types are almost evenly split between liquid bulk and break-bulk, as well as dry bulk and project cargo.

Port Authority. State law⁸ establishes separate port authorities to govern each of Louisiana's 32 active⁹ public ports, with 31 (96.9%) governed by a board of commissioners.¹⁰ State law¹¹ empowers all 32 active ports to regulate commerce and port traffic within their jurisdictions in the best interest of the state, the port area, and/or the public. Because ports function as individual entities, they determine their own infrastructure projects and development strategies and have to coordinate their efforts on their own or through groups like the Ports Association of Louisiana (PAL).

A **port authority** is a government entity that either owns or administers the land, facilities, and adjacent bodies of water where cargo is transferred between transportation modes.

Source: U.S. Department of Transportation

Report Objective. The objective of this report was to provide information about Louisiana's public ports and how they compare to other southern coastal states. Because no centralized information on Louisiana ports exists, we obtained information by surveying all 32¹² active public ports, requesting information from the Louisiana Department of Transportation and Development (DOTD), and from individual port websites. We also researched eight¹³ other southern coastal states. *Profiles of Louisiana's Public Ports* report, also issued by our office on January 31, 2024, provides profiles of each of Louisiana's public ports.

An executive summary of our results can be found on page six of this report, and our results are discussed in detail throughout the remainder of the report. The report has the following appendices:

- Appendix A provides a list of Matters for Legislative Consideration.
- Appendix B provides our scope and methodology.
- Appendix C describes port classifications and functions.
- Appendix D provides 2021 Container Port Rankings by Number of Twenty-foot Equivalent Units (TEUs) Moved.

⁸ R.S. 34: 1, *et seq.* and R.S. 33: 130.401, *et seq.*

⁹ State law also establishes port authorities for all 10 developing ports, but developing ports do not operate on commercial waterways, and some developing ports do not currently exist outside of statute.

¹⁰ The Louisiana Offshore Terminal Authority (LOTA), which oversees the deep-water Louisiana Offshore Oil Port (LOOP), does not have a board of commissioners. LOTA is a state agency overseen by an executive director appointed by the governor. LOOP is a private entity.

¹¹ R.S. 34: 1, *et seq.* and R.S. 33: 130.401, *et seq.*

¹² Thirty of Louisiana's 32 active public ports responded to our survey, for a 93.8% response rate.

¹³ Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Texas, and Virginia

- Appendix E provides descriptions of state port authorities, as well as other state-level entities responsible for port system planning and coordination in the eight other southern coastal states we evaluated.
- Appendix F provides a summary of the key contents of the master and strategic plans in the eight other southern coastal states we evaluated.
- Appendix G summarizes the ports that were awarded funds through the Port Construction and Development Priority Program from fiscal years 2018-2023.
- Appendix H shows the 17 ports that received capital outlay appropriations during fiscal years 2018-2023.
- Appendix I provides examples of dedicated funding programs for ports in Louisiana and the eight other southern coastal states we evaluated.
- Appendix J provides examples of federal grant opportunities available to ports.
- Appendix K provides a map of the announced Bipartisan Infrastructure Law Investments in Louisiana for Ports and Waterways.
- Appendix L provides examples of ongoing investments in ports in Louisiana and the eight other southern coastal states we evaluated.
- Appendix M describes the challenges facing Louisiana's public ports.
- Appendix N provides examples of economic impact studies in 2022 and 2023 for four southern coastal states we evaluated.
- Appendix O discusses factors impacting Louisiana public ports' competitiveness.
- Appendix P provides air draft restrictions for bridges over main channels for Louisiana active ports.

Executive Summary

Section 1: Louisiana Public Ports' National Rankings

- As of 2021, Louisiana had five of its 32 active public ports ranked in the top 15 ports nationwide by waterborne tonnage (i.e., cargo moved by water) and eight in the top 100, according to the U.S. Bureau of Transportation Statistics. In 2019, Louisiana lost the number one ranking in waterborne tonnage to Port Houston. However, some ports have increased their rankings since 2011.
- As of 2022, Louisiana ranks second in total freight moved, just behind Texas, when compared to eight other southern coastal states, with pipelines, trucks, and waterways carrying the most inbound and outbound freight.
- In 2021, the Port of New Orleans was ranked 17th among U.S. container ports by twenty-foot equivalent unit (TEU) volume, as it is currently the only international container terminal in Louisiana.

Section 2: Governance Structure of Louisiana Public Ports

- Unlike six¹⁴ (75.0%) of the eight southern coastal states¹⁵ we evaluated, Louisiana does not have a state port authority to oversee or advise its active public ports. Instead, each of Louisiana's 32 active public ports has its own port authority established in state law.
 - Most ports stated on the survey that they do not support the creation of a single, state port authority.
 - While Texas and Florida do not have state port authorities, they do have state-level organizations that assist with port system planning and coordination and advise other state agencies.
- Louisiana does not have a state master or strategic plan for Louisiana's ports system. According to our survey, most Louisiana ports support having some type of state master plan for the ports system. All eight southern coastal states we evaluated have some type of long-range plan, such as a master or strategic plan, to help guide the economic development of the ports in those states.

¹⁴ As demonstrated in Exhibit 8 of this report: three southern coastal states have port authorities that oversee all public ports in their respective states, while another three states have port authorities that oversee only some public ports in their respective states.

¹⁵ Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Texas, and Virginia.

- Act 459 of the 2023 Regular Legislative Session established the Office of Port Development within the Louisiana Department of Economic Development (LED) to foster the growth of ports in Louisiana. While the office must be established by July 1, 2024, it is not yet funded, and the legislation does not include a deadline for developing a state strategic plan for ports.

Section 3: Louisiana Public Ports' Funding and Infrastructure Investments

- From fiscal years 2018-2023, the state invested \$323.6 million (an average of \$53.9 million per year) in Louisiana ports' infrastructure through the Port Priority Program and capital outlay funds.
 - The state invested \$229.9 million in ports from the Port Construction and Development Priority Program (Port Priority Program) and \$93.7 million from state capital outlay funds.
- Compared to the eight other southern coastal states we evaluated, Louisiana's dedicated funding to ports is higher than in Alabama, Georgia, and South Carolina, but less than the five other states – Florida, Mississippi, North Carolina, Texas, and Virginia – for fiscal years 2022 through 2024.
- Louisiana's public ports do not have a state entity to help provide support in obtaining grants, developing cooperative agreements, or identifying cost-sharing opportunities. While some large ports have sizable staff and may employ in-house grant writers, small ports may only have a few or even no full-time employees, which can make it challenging for them to apply for federal funding. The legislature may wish to require the Office of Port Development within LED to provide technical assistance to ports in obtaining funding.
- To remain competitive, infrastructure investments are key to ports' operations. Increased funding opportunities or loan programs may help ports obtain additional funding for improvements and help increase economic activity.

Section 4: Louisiana Public Ports' Challenges

- Louisiana has the second-largest¹⁶ inland navigable waterway system in the nation, but according to a study completed in cooperation with DOTD in 2023, waterborne transportation is currently underutilized in terms of unrealized potential and capacity.

¹⁶ According to the Bureau of Transportation Statistics, Alaska has the largest inland waterway system.

- Louisiana has almost a \$20 billion backlog of transportation needs, which is hindering Louisiana's multimodal transportation system.
- Louisiana's ports face various challenges, including needs related to funding and infrastructure, channel deepening, waterway maintenance, and intermodal connectivity.

Section 5: Economic Impact of Louisiana Public Ports

- Louisiana does not systematically measure the economic impact of the Louisiana public ports system.
 - The Port Priority Program evaluates the projected economic feasibility and economic impacts of the proposed individual port projects, but does not track actual economic impacts of all completed projects.
 - Louisiana could improve its ability to measure the economic impact of the Louisiana public ports system by creating a state database containing specific information about Louisiana's ports.

Section 6: Competitors to Louisiana Public Ports

- There are multiple factors that impact the competitiveness of Louisiana's ports, including port and waterway capacity, intermodal connectivity, and specialized port services.
- Port competitiveness among deep-water ports is currently driven by the containerization of international trade, the diversification of cargo types and equipment, intermodal transport, and information technologies.¹⁷
- The Port of New Orleans is currently Louisiana's only international container port, and according to the Port of New Orleans, the Ports of Mobile, Savannah, and Charleston are its greatest competitors for container volume. In terms of total tonnage, the Port of South Louisiana's greatest competition is Port Houston.
- Louisiana's coastal ports along the Gulf Intracoastal Waterway (GIWW) primarily compete against other GIWW ports in Texas, Mississippi, Alabama, and Florida, while for several of Louisiana's inland ports, competition depends primarily on location.

¹⁷ However, according to the survey results, the majority of cargo moved through Louisiana's deep-water ports is not containerized.

Section 7: Suggested Improvements for Louisiana's Ports

According to the survey responses, improving the Louisiana public ports system requires collaboration among ports, governmental agencies, and relevant stakeholders. By acknowledging and addressing challenges, Louisiana ports can enhance their competitiveness, improve operational efficiency, and ensure sustainable growth in the face of evolving market conditions and environmental risks.

Section 1: Louisiana Public Ports' National Rankings

Because ports are catalysts for economic development, the higher Louisiana ports are ranked for the amount of cargo moved compared to other states indicates growth and economic development in the state. From 2011 through 2018, Louisiana held the No. 1 ranking for the amount of waterborne tonnage (i.e., cargo moved by water) passing through its ports but lost its position to Texas in 2019. However, eight Louisiana ports were ranked in the top 100 in 2021. In addition, in 2022, Louisiana ranks second for total freight moved (land, air, water), only behind Texas. The Port of New Orleans is currently Louisiana's only international container terminal. In 2021, the Port of New Orleans was ranked 17th among U.S. container ports by twenty-foot equivalent unit (TEU) volume, as shown in Appendix D.

As of 2021, Louisiana had five of its 32 active public ports ranked in the top 15 ports nationwide by waterborne tonnage (i.e., cargo moved by water) and eight in the top 100, according to the U.S. Bureau of Transportation Statistics. In 2019, Louisiana lost the number one ranking in waterborne tonnage to Port Houston. However, some ports have increased their rankings since 2011.

Cargo tonnage¹⁸ is the amount of cargo actually moved through a port over a given period and is one of the statistics used to rank the nation's top maritime ports. Cargo tonnage is the most fundamental measure of port and terminal throughput. Cargo tonnage includes the weight of dry bulk and liquid bulk cargo, breakbulk cargo, roll-on/roll-off vehicles and industrial equipment, project cargo, and the contents of shipping containers.

Port Fourchon and four public ports on the Lower Mississippi River constitute the world's largest port complex, including the Port of Greater Baton Rouge, Port of New Orleans, Port of South Louisiana, and Port of St. Bernard.

Source: Louisiana State University

Louisiana had eight of its 32 active public ports ranked in the top 100 ports nationwide by waterborne tonnage (i.e., cargo moved by water) as of 2021, according to the U.S. Army Corps of Engineers. Specifically, Louisiana had five public ports ranked in the top 15 ports by waterborne tonnage as of 2021. While Louisiana lost the number one ranking in waterborne tonnage to Port Houston

¹⁸ Cargo tonnage is measured in short tons, where one short ton is equal to 2,000 pounds.

in 2019, some ports have increased their national rankings since 2011, as shown in Exhibit 4.

Exhibit 4 Top 100 Ranking of Louisiana Public Ports Waterborne Tonnage Calendar Years 2011 - 2021							
Port Name	2011	2013	2015	2017	2019	2021	2011 vs 2021 Trend
Port of South Louisiana	1	1	1	1	2	2	↓ 1 spot
Port of New Orleans	5	6	4	4	6	6	↓ 1 spot
Port of Greater Baton Rouge	10	8	8	8	8	8	↑ 2 spots
Port of Plaquemines	14	10	13	12	13	11	↑ 3 spots
Port of Lake Charles	13	11	12	13	11	13	No Change
Port Fourchon*	Not Ranked	66	55	68	64	65	↑ 1 spot
Port of West St. Mary	Not Ranked	Not Ranked	Not Ranked	Not Ranked	Not Ranked	89	Newly Ranked
Central Louisiana Regional Port*	Not Ranked	Not Ranked	Not Ranked	91	116	99	↓ 8 spots

*The ranking comparison year is 2013 for Port Fourchon and 2017 for Central Louisiana Regional Port because these ports were not ranked in 2011.
Source: Prepared by legislative auditor's staff using information obtained from the U.S. Army Corps of Engineers.

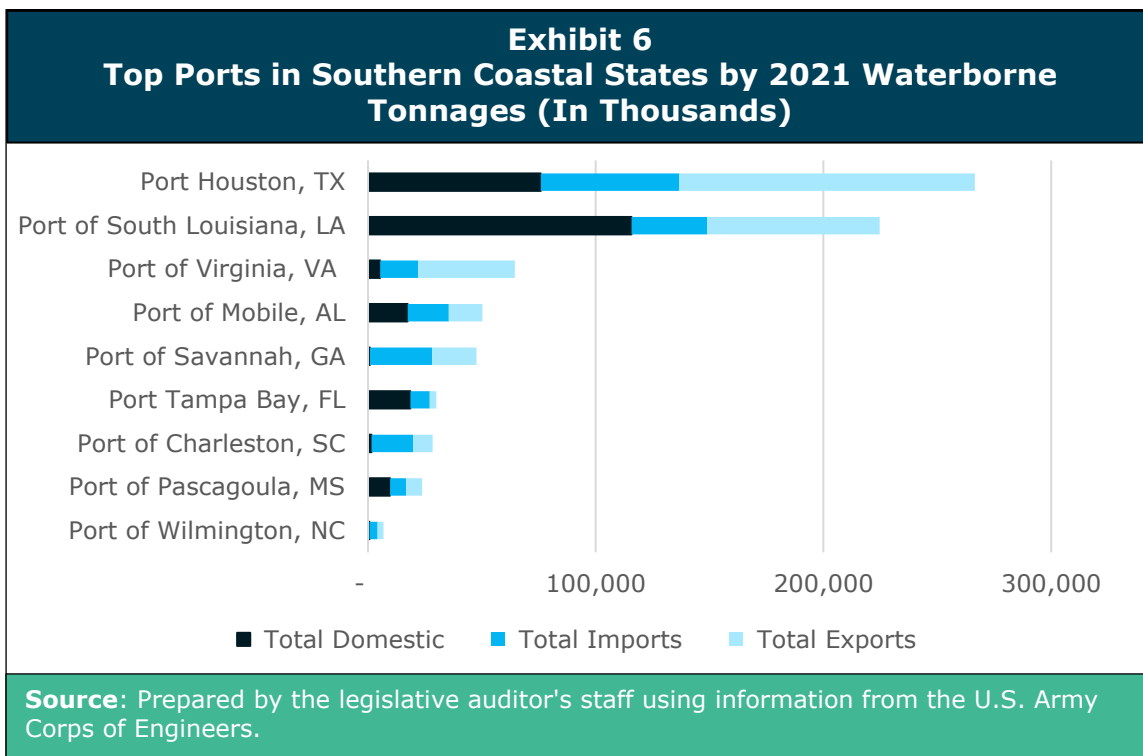
Exhibit 5 summarizes the top 15 ports in the U.S. by waterborne tonnage, as well as their ranking and total waterborne tonnage moved.

Exhibit 5 Top 15 United States Ports Total Waterborne Tonnage Calendar Year 2021					
Rank	Port Name	Total	Domestic	Foreign Imports	Foreign Exports
1	Port Houston, TX	266,524,394	75,862,507	60,859,595	129,802,292
2	Port of South Louisiana, LA	224,695,741	115,706,421	33,348,220	75,641,100
3	Port of Corpus Christi, TX	164,448,393	22,612,378	15,429,041	126,406,974
4	Port of New York, NY & NJ	142,340,216	40,749,664	85,961,606	15,628,946
5	Port of Long Beach, CA	91,501,826	14,846,574	56,051,551	20,603,701
6	Port of New Orleans, LA	89,511,808	45,254,813	19,032,458	25,224,537
7	Port of Beaumont, TX	74,555,488	18,238,925	16,355,729	39,960,834
8	Port of Greater Baton Rouge, LA	71,222,675	44,464,034	6,936,594	19,822,047
9	Port of Virginia, VA	64,518,045	5,323,046	16,747,201	42,447,798

Exhibit 5 Top 15 United States Ports Total Waterborne Tonnage Calendar Year 2021					
Rank	Port Name	Total	Domestic	Foreign Imports	Foreign Exports
10	Port of Los Angeles, CA	64,270,296	3,147,083	45,761,015	15,362,198
11	Port of Plaquemines, LA	52,698,083	28,556,389	4,446,932	19,694,762
12	Port of Mobile, AL	50,268,633	17,453,467	18,063,921	14,751,245
13	Port of Lake Charles, LA	48,320,953	21,888,295	2,750,019	23,682,639
14	Port of Savannah, GA	47,656,391	839,431	27,352,535	19,464,425
15	Port Freeport, TX	42,243,269	4,781,243	4,754,176	32,707,850

Source: Prepared by legislative auditor’s staff using information obtained from the U.S. Army Corps of Engineers.

As of 2021, Port Houston is the top U.S. port by total waterborne tonnage, according to the U.S. Army Corps of Engineers. In addition, when comparing ports in southern coastal states based on the 2021 total waterborne tonnage reported by the U.S. Army Corps of Engineers, Port Houston is the top port by waterborne commerce, with approximately 266.5 million tons. The Port of South Louisiana ranks second, moving more than 224.7 million tons of waterborne commerce, as shown in Exhibit 6.

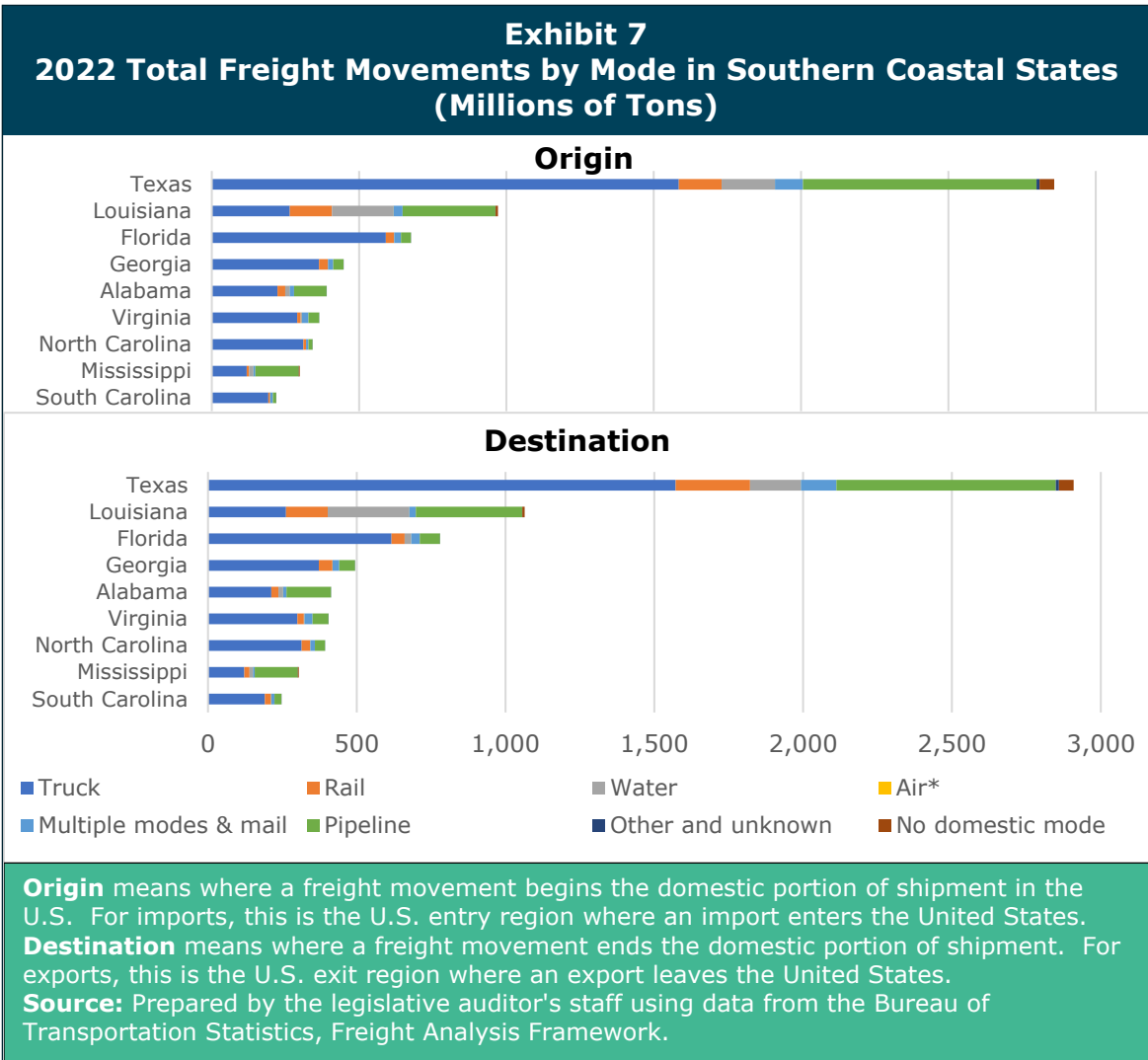


As of 2022, Louisiana ranks second in total freight moved, just behind Texas, when compared to eight other southern coastal states, with pipelines, trucks, and waterways carrying the most inbound and outbound freight.

When comparing total tons of freight moved by all modes of transportation (land, air, water) with eight other southern coastal states,¹⁹ Louisiana ranks second, just behind Texas, with pipelines, trucks, and waterways carrying the most inbound and outbound freight. Tons of freight is an important indicator for a port because it shows the cargo weight a port handles annually. However, some Louisiana ports are service ports (e.g., barge fleetings, value-added services,²⁰ etc.); therefore, their impact is not captured by tonnage. Exhibit 7 shows how Louisiana compares to eight other southern coastal states by tons of freight moved.

¹⁹ We evaluated the port systems of eight other southern coastal states: Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Texas, and Virginia.

²⁰ Value-added services include improvements made to raw materials before they are used in manufacturing or fabrication, such as adding coating to pipes or steel coils.



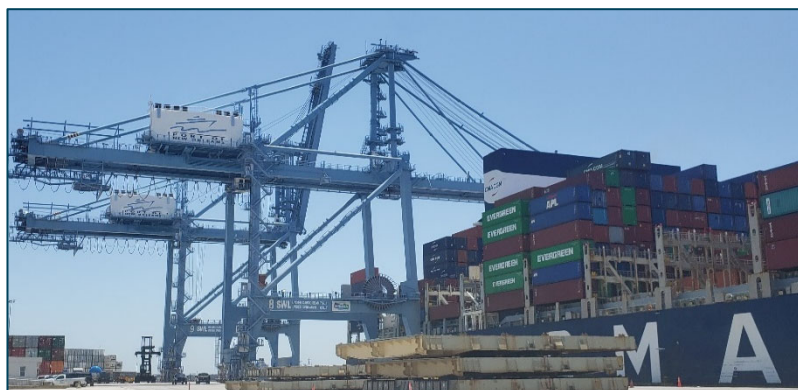
In 2021, the Port of New Orleans was ranked 17th among U.S. container ports by twenty-foot equivalent unit (TEU) volume, as it is currently the only international container terminal in Louisiana.

While other deep-water ports in Louisiana move cargo in containers, the Port of New Orleans is currently Louisiana's only international container terminal. In 2021, the Port of New Orleans ranked 17th among U.S. container ports by TEU volume. TEUs are used to rank container ports both nationally and globally. These rankings are important because international trade continues to rely more and more on container shipping.

A **TEU**, or twenty-foot equivalent unit, is a unit of measure for container traffic equal to a standard 20-foot shipping container. The more common 40-foot container is equal to two TEUs.

Source: U.S. Department of Transportation Bureau of Transportation Statistics

In Louisiana, three (37.5%) of eight deep-water ports said on our survey that they move cargo in containers. While the Port of New Orleans currently has the only international container terminal in Louisiana, both the Port of Greater Baton Rouge and the Port of Lake Charles also move containers. The Port of Greater Baton Rouge, for example, receives empty



A container ship waiting to be unloaded by crane at the Port of New Orleans. According to the port, this ship was carrying approximately 9,500 TEUs.

Source: Photograph taken by the audit team.

shipping containers from Memphis, Tennessee, and other locations outside of Louisiana by either rail or barge. These empty, repositioned containers are then loaded with cargo from regional manufactures, and placed onto barges for transport down the Mississippi River to the Port of New Orleans to be loaded onto container ships with other commodities for export. This was the first Container on Barge service on the Mississippi River

funded by the U.S. Department of Transportation through the U.S. Maritime Administration (MARAD). According to the survey, the Port of New Orleans moved an average of 545,462 TEUs annually during calendar years 2018-2022, while the Port of Greater Baton Rouge moved an average of 26,771 TEUs annually during the same time period. In addition, the Port of Lake Charles stated that it has the ability to handle containers.

The Port of New Orleans can also accommodate the largest container vessels of any deep-water port in the state. Currently, the port can receive Post-Panamax container ships, which typically carry between 4,000-10,000 TEUs. According to the Port of New Orleans, however, the planned Louisiana International Terminal²¹ will be able to accommodate even larger vessels carrying up to 20,000 TEUs.

²¹ Port of New Orleans is proposing to build a new \$1.8 billion container terminal (the Louisiana International Terminal) in St. Bernard Parish. According to the Port of New Orleans, the Louisiana International Terminal is projected to create more than 18,000 new direct and indirect jobs, generate over \$1 billion in new state tax revenue, and create \$97.3 billion gained in industry sales by 2050.

Section 2: Governance Structure of Louisiana Public Ports

Louisiana public ports' governance structure differs from the six other southern coastal states we evaluated. Six (75.0%) of the eight other states we evaluated have a state port authority, while the other two (25.0%) have a dedicated state-level organization that assists with port system planning and coordination and advises other state agencies. While Louisiana does not have a state port authority that owns and/or operates its own ports or an active port advisory commission, having some type of state coordinating entity could help infrastructure development and planning for ports in Louisiana. In addition, unlike all eight other southern coastal states we evaluated, Louisiana does not have a state master or strategic plan for its ports system. Having some type of state master or strategic plan could help the port system coordinate its efforts to drive economic development in the state.

Unlike six²² (75.0%) of the eight southern coastal states²³ we evaluated, Louisiana does not have a state port authority to oversee or advise its active public ports. Instead, each of Louisiana's 32 active public ports has its own port authority established in state law.

While the composition and membership of each port authority varies, port authorities are generally empowered to regulate commerce and port traffic within their jurisdictions, enter contracts and lease agreements, issue bonds and levy taxes, and generally oversee port operations. Louisiana does not have a state port authority to oversee or advise its 32 active public ports. Because each Louisiana port is unique and has its own infrastructure challenges and funding needs, one possible benefit of a state port authority is to help align individual port plans with broader state goals. However, a state port authority could also mean individual ports lose some of their autonomy.

Each of Louisiana's 32 active²⁴ public ports has its own port authority established in state law,²⁵ with 31 (96.9%) governed by a board

²² As demonstrated in Exhibit 8 of this report: three southern coastal states have port authorities that oversee all public ports in their respective states, while another three states have port authorities that oversee only some public ports in their respective states.

²³ Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Texas, and Virginia.

²⁴ State law also establishes port authorities for all 10 developing ports, but developing ports do not operate on commercial waterways and some developing ports do not currently exist outside of statute.

²⁵ R.S. 34: 1, *et seq.* and R.S. 33: 130.401, *et seq.*

of commissioners.²⁶ State law empowers all 32 active public ports to regulate commerce and port traffic within their jurisdictions in the best interest of the state, the port area, and/or the public. Appendix C provides further detail on ports' functions. Because ports function as individual entities, they determine their own infrastructure projects and development strategies and have to coordinate their efforts on their own or through groups like the Ports Association of Louisiana (PAL).

Most ports stated on the survey that they do not support the creation of a single, state port authority. According to the survey results, 23 (76.7%) of 30 ports do not support the creation of a single, statewide port authority.

Only three (10.0%) respondents – one deep-water port, one coastal port, and one inland port – said that the state would benefit from having a unified port authority.²⁷ Of the 20 ports that provided an explanation for their response, nine (45.0%) stated that ports' needs were too different to have a single, statewide port authority, and seven (35.0%) were concerned about the impact of creating additional bureaucracy for ports. One port said that a statewide port authority would politicize the flow of cargo in the state instead of allowing market forces to govern decisions, while another said that such an authority would end up picking winners and losers based on politics and region. Another port stated that ports have major economic impacts in the communities they serve, and decisions about port strategies should not be made by people outside of those areas.

In contrast, respondents that said there should be a statewide port authority, or were unsure whether there should be, did highlight some possible benefits. Two ports explained that a unified port authority could help coordinate port planning and development, facilitate greater knowledge-sharing among ports, and represent the ports collectively for federal opportunities, including for federal grant funding. However, both of these ports also emphasized that even with a statewide port authority, individual ports need to retain their autonomy to make port-specific decisions and manage their own affairs.

Six²⁸ (75.0%) of the eight southern coastal states we evaluated have a state port authority to oversee and coordinate port functions in their states. These port authorities own and/or operate ports in their jurisdiction, but

Quote from Survey Against State Port Authority

"Many of our ports have local, state, and national economic impacts. Note, I mentioned local first. These ports, especially the smaller ones mean everything to these jurisdictions. They are overseen by folks that have a vested interest in the betterment of the communities they inhabit and serve. Dictation by others who are not in those locales daily is doing a disservice to the community."

Source: 2023 Louisiana Public Ports Survey

²⁶ The Louisiana Offshore Terminal Authority (LOTA), which oversees the deep-water Louisiana Offshore Oil Port (LOOP), does not have a board of commissioners. LOTA is a state agency overseen by an executive director appointed by the governor. LOOP is a private entity.

²⁷ The remaining four (13.3%) of the 30 respondents said they were "unsure" whether a statewide port authority would be beneficial. These included two deep-water ports, one coastal port, and one inland port.

²⁸ Alabama, Georgia, Mississippi, North Carolina, South Carolina, and Virginia.

this may not include all public ports in each state. Exhibit 8 summarizes the number of active ports for the eight southern states we evaluated and whether the state has a state port authority. Descriptions of state port authorities, as well as other state-level entities responsible for port system planning and coordination are summarized in Appendix E.

Exhibit 8				
State Port Authorities in Southern Coastal States				
State	Total Active Public Ports	State Port Authority	Number of Active Public Ports in State Port Authority's Jurisdiction	Percent of Total Active Public Ports in State Port Authority's Jurisdiction
Alabama	16	Alabama State Port Authority	9	56.3%
Florida ¹	14	None	N/A	N/A
Georgia ²	4	Georgia Ports Authority	4	100.0%
Louisiana	32	None	N/A	N/A
Mississippi ³	16	Mississippi State Port Authority <i>and</i> Yellow Creek State Inland Port Authority	2	12.5%
North Carolina	3	North Carolina Ports Authority	3	100.0%
South Carolina	3	South Carolina Ports Authority	3	100.0%
Texas ⁴	19	None	N/A	N/A
Virginia ⁵	2	Virginia Port Authority	1	50.0%

¹ The number of active public ports in Florida only includes active seaports in the Florida Seaport System. It does not include the four existing inland intermodal logistics centers in Florida.

² The Georgia Ports Authority currently owns, either solely or jointly, four active public ports in Georgia. A fifth public port is currently under construction and expected to open in 2026. This developing port is also owned by the Georgia Ports Authority.

³ Mississippi has two state port authorities, though each operates only one port. All other active public ports in Mississippi are owned and/or operated by county or municipal port authorities.

⁴ The number of active public ports in Texas only includes active ports in the Texas Maritime Port System. It does not include inland intermodal logistics centers or other land ports of entry into the United States.

⁵ The Virginia Port Authority owns and/or operates six port facilities located across the state. However, the Virginia Port Authority refers to all six facilities collectively as the single Port of Virginia.

Source: Prepared by legislative auditor's staff using information from state port authority, state department of transportation, state port association, and individual port websites.

While Texas and Florida do not have state port authorities, they do have state-level organizations that assist with port system planning and coordination and advise other state agencies. For example, the Seaport Office in the Florida Department of Transportation (FDOT) is responsible for statewide seaport system planning, coordinating with statewide freight planning, project management, and coordinating seaport infrastructure projects with Florida's seaports. The Florida Seaport Transportation and Economic Development (FSTED) Council in FDOT implements seaport capital improvement projects at the local level and administers the FSTED program, which finances seaport transportation

projects. The Texas Port Authority Advisory Committee advises the Texas Transportation Commission on port and maritime issues and makes recommendations to the Texas Department of Transportation (TxDOT) to consider formulating policies concerning the Texas ports system. The Texas Port Authority Advisory Committee also develops the Texas Port Mission Plan, subject to approval by the Texas state legislature; promotes Texas ports for economic development opportunities; and identifies federal, state, and other funding opportunities for maritime investment.

Act 461 of the 2023 Regular Session created the Southeast Louisiana Port Authority Advisory Commission to provide a forum for the exchange of information between the legislature, DOTD, and commission members representing the maritime port industry located in 11²⁹ parishes located along and near the lower Mississippi River. The commission is responsible for preparing a comprehensive one-year, five-year, and 10-year maritime port mission plan, reviewing and recommending for approval or disapproval of projects eligible for the Port Construction and Development Priority Program (Port Priority Program) to the legislature, and providing a broad perspective to the legislature and DOTD on matters relating to the Louisiana port system along and near the lower Mississippi River.

Louisiana does not have a state master or strategic plan for Louisiana's ports system. According to our survey, most Louisiana ports support having some type of state master plan for the ports system. All eight southern coastal states we evaluated have some type of long-range plan, such as a master or strategic plan, to help guide the economic development of the ports in those states.

Because ports operate as individual entities, they can develop their own individual master and/or strategic plans, though not all ports have adopted such plans. According to the survey results, 24 (80.0%) of 30 active port respondents say they have their own port master plan. Louisiana does not have a state master or strategic plan for Louisiana's ports system.

A **master plan** is a plan that lists a port's future infrastructure and major capital equipment needs. It is focused on tangible assets.

A **strategic plan** is a business plan that focuses on a port's long-term goals and objectives, including investments, future growth, attracting and retaining customers, etc.

Source: Prepared by legislative auditor's staff using information from DOTD.

²⁹ Ascension, East Baton Rouge, Iberville, Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John, and West Baton Rouge.

Even though Louisiana currently does not have a state master plan or strategic plan specifically for ports, the Louisiana Department of Transportation and Development (DOTD) has several other transportation plans that incorporate needs and goals for ports and waterways.

For example, the *2015 Statewide Transportation Plan* summarizes key facts and issues concerning Louisiana's transportation (e.g., highways, trucking, ports and waterways, etc.), including a summary of projected growth in waterborne freight shipments through 2040. The *2017 Louisiana Freight Mobility Plan* identifies several issues affecting port access, performance, and capacity, including limited landside infrastructure to support freight handling, the need for improved intermodal connections, and waterway maintenance needs. The *2020 Louisiana State Rail Plan* describes the state's existing rail network and rail-related economic and socioeconomic impacts, including plans for increased connectivity with the state's ports. Additionally, the *2023 Future of Louisiana Waterways Transportation System* study, conducted in cooperation with DOTD, identified several port, waterway, and intermodal-related projects that could be completed to improve port capabilities and help optimize the use of Louisiana's waterways.

Even though 23 (76.7%) of 30 public ports that responded to our survey do not support a state-level port authority, 22 (73.3%) of the 30 believe there should be some type of state master plan.

Source: 2023 Louisiana Public Ports Survey

According to the survey, 22 (73.3%) of 30 ports believe there should be some type of state master plan for ports. Among these 22 ports, 12 (54.5%) said that there should be one state master plan, but the needs of deep-water, coastal, and inland ports should all be considered separately. Seven (23.3%) of 30 ports explicitly said that there should not be a state master plan. These results also vary by port type:

- **Deep-water ports:** Seven (87.5%) of eight deep-water ports indicated that there should be some type of master plan, but they were also evenly split between whether a single plan should consider the needs of ports types separately or whether there should be separate master plans for each port type. None of the deep-water ports believed that there should be a single master plan for the entire port system.
- **Coastal ports:** Eight (72.7%) of 11 coastal ports also agreed that there should be some type of state master plan, but two (25.0%) of the eight supporters stated that there should only be one plan for all ports combined. Three (27.3%) of 11 coastal ports outright opposed a state master plan.
- **Inland ports:** Seven (63.6%) of 11 inland ports support a state master plan, but five (71.4%) of these supporters said that there should be one plan that considers the needs of each port type separately. Only one (14.3%) of the seven supporters said that there

should be one plan for the entire port system combined. Three (27.3%) of the 11 inland ports outright opposed the creation of a state master plan.

Quotes from Survey

"The best way to develop a state master plan for the ports is to establish funds to develop individual master plans for each port with a standardized outline. This method ensures that each port's unique characteristics, needs, and potential are thoroughly assessed and addressed while maintaining a consistent framework for planning and coordinating."

"Each port should develop its own master plan and let supply and demand dictate the flow of cargo."

Source: 2023 Louisiana Public Ports Survey

If a state master plan were developed, survey respondents indicated that it should have a wide range of contents and not be "one size fits all." For example, multiple ports said that any plan should focus on investments in port infrastructure and development and also identify a reliable source of state funding for the future. Several ports emphasized that any state plan has to address the variety and diversity of Louisiana's ports, as well as provide opportunities to all of them. As one port stated, it should not be a "one size fits all" plan.

All eight of the southern coastal states we evaluated have some type of state master or strategic plan. Except for Georgia³⁰ and South Carolina,³¹ these states' plans have all been developed or updated since 2019, and they generally include the following:

- An inventory of current port or port system assets,
- Projected growth or port demand for a specified future period (e.g., five years, 10 years, etc.),
- A summary of the port system's economic impact on the state and/or nation,
- A summary or list of planned capital projects,
- A summary or list of needed waterway improvements, and

According to several stakeholders, Louisiana is inconsistent in its vision for the future of the state's ports, which is partly attributable to playing "catch-up" with infrastructure. The resources that ports receive help them to solve the problems of the day, but do not allow them to adapt to trends in modernization or strategically invest in their future.

Source: Stakeholder interviews

³⁰ The date for Georgia's master plan is unknown because the plan is not publicly available. The audit team contacted the Georgia Ports Authority to request a copy of their most recent master plan, but did not receive a response.

³¹ The South Carolina Ports Authority last updated its strategic plan in 2011.

- A summary of investment and funding needs to achieve stated goals and objectives.

Appendix F provides a summary of the key contents of the master and strategic plans in the eight other southern coastal states we evaluated.

Act 459 of the 2023 Regular Legislative Session established the Office of Port Development within the Louisiana Department of Economic Development (LED) to foster the growth of ports in Louisiana. While the office must be established by July 1, 2024, it is not yet funded, and the legislation does not include a deadline for developing a state strategic plan for ports.

The Office of Port Development within LED will be tasked with cataloguing the facilities, capacities, and capabilities of ports and intermodal infrastructure in the state; developing and implementing a statewide port strategic plan; providing for the attraction, retention, and expansion of industrial and business investments at ports and in near-port communities; identifying obstacles to port growth and developing remedies for these obstacles; identifying sources of non-state funds for economic development and implementing a plan to increase access to non-state funds; and cooperate and coordinate with regional and local economic development entities throughout the state with regard to port development. The office is expected to become effective on July 1, 2024. As of December 2023, LED stated that it had not hired a commissioner for the Office of Port Development because it was not funded this fiscal year.

While Louisiana does not have a state port authority that owns and/or operates its own ports or an active port advisory commission, the Office of Port Development could provide the state with a coordinating entity to help infrastructure development and planning for ports in Louisiana. This office could also help align individual port plans with broader state goals. While PAL serves as a forum for Louisiana's ports to share information and discuss key port issues, it does not formulate or implement port policies and does not recommend any specific port infrastructure projects because it advocates for all ports generally.

In addition, while there is no current master or strategic plan at the state level, Act 459 of the 2023 Regular Legislative Session charged the office with developing a state strategic plan for ports. The Act requires the Port Development Advisory Commission, established within the Office of Port Development, to submit an operational plan for this office to the Senate Committee on Commerce, Consumer Protection, and International Affairs and the House

Committee on Commerce no later than February 1, 2024. However, there is no deadline for this office to develop a state strategic plan for ports.

Matter for Legislative Consideration 1: The legislature may wish to consider fully funding the Office of Port Development to accomplish the goals set forth in legislation and also help align individual port needs with statewide development goals.

Matter for Legislative Consideration 2: The legislature may wish to consider setting a deadline for the Office of Port Development to create a state strategic plan for Louisiana ports.

Section 3: Louisiana Public Port's Funding and Infrastructure Investments

While Louisiana has an established program to help fund its ports, Louisiana could increase its investments in ports to keep up with other southern coastal states. This could include dedicating resources to help smaller ports apply for federal funding or create dedicated loan programs for ports.

From fiscal years 2018-2023, the state invested \$323.6 million (an average of \$53.9 million per year) in Louisiana ports' infrastructure through the Port Priority Program and capital outlay funds.

The \$323.6 million the state invested from fiscal years 2018-2023 includes \$229.9 million from the Port Construction and Development Priority Program (Port Priority Program) and \$93.7 million from state capital outlay funds. The funding needs vary between the three types of ports: deep-water, coastal, and inland. For example, the financial needs of deep-water ports are different than inland and coastal ports because the scale of their operations (e.g., port size, number of shipping services, annual cargo throughput, etc.) are larger.

According to our survey results, only 12 (40.0%) of 30 active port respondents said they receive revenue from port-levied ad valorem taxes. Seven (58.3%) of these 12 responding ports are coastal ports.

Source: 2023 Louisiana Public Ports Survey

Operating revenue is the revenue that a port generates from its primary business activities, such as dockage fees and leases for ports.

Source: Prepared by legislative auditor's staff using information from ports' annual financial statements.

Operating revenues are generally the main funding source for Louisiana public ports, with deep-water ports generating a total of \$248.8 million, coastal ports generating \$10.1 million, and inland ports generating \$19.7 million in revenue during fiscal year 2022.

Each port is different both in how it functions (i.e., landlord port, operational port, or hybrid of both) and how it generates revenues to pay for its operations. Port revenues may come from freight activities (e.g., harbor fees, switching fees, dockage fees, wharfage fees, etc.) and non-freight activities (e.g., leases, warehousing, storage, farming, tourism, fleeting, etc.). In addition, ports may levy special ad valorem taxes on their properties and issue public bonds for the purposes of obtaining funding for the maintenance, operation, and improvement of port facilities; however, this varies by state laws specific to each port. All but one port reported receiving self-generated revenue from port operations during calendar years 2018-2022. According to our survey results, the most common form of self-

generated revenue was lease income for port-owned land and/or facilities, with 27 (90.0%) of 30 ports reporting this type of income for all three port types.

The second most common source of self-generated revenue among responding ports was dockage fees (according to 14 of 30 respondents, or 46.7%). The third most common sources of self-generated revenue were loading/unloading fees, storage fees, and port-levied ad valorem taxes, with 12 (40.0%) of 30 respondents reporting each type of revenue. Exhibit 9 shows the range of operating and total revenues by port type for fiscal year 2022.

Exhibit 9 Operating Revenue Ranges by Port Type Fiscal Year 2022		
Port Type	Operating Revenues Ranges	Total Revenues Ranges
Deep-water*	\$1.0 million to \$111.1 million	\$1.0 million to \$162.0 million
Coastal	\$0.09 million to \$3.3 million	\$0.3 million to \$13.2 million
Inland**	\$42.5 thousands to \$931.0 thousands	\$46.0 thousands to \$2.2 million

*Does not include the Louisiana Offshore Oil Port (LOOP) since this port does not submit financial statements to LLA.
 **One inland port's operating revenue was \$16.5 million in fiscal year 2022. However, this port is an outlier among other inland ports and was not included above.
Source: Prepared by legislative auditor's staff using information from the ports' annual financial statements.

During fiscal years 2018-2023, the Port Priority Program awarded a total of \$229.9 million to 22 ports for their infrastructure needs. The DOTD Port Priority Program allocates appropriations from the Transportation Trust Fund (TTF) to port authorities for capital improvement projects. DOTD administers this program through an application process and any Louisiana public port authority may apply for funding on a quarterly basis. Since fiscal year 2017, the legislature has appropriated \$39.4 million³² annually for Port Priority Program projects. State law³³ authorizes any port authority to apply to the Port Priority Program for funding of any port construction or development project, subject to approval by the Joint Legislative Transportation Committee (JLTC). DOTD currently limits the amount of program funds that may be provided for any one project to \$15 million, and no port may receive more than \$5 million per year, regardless of how many projects are approved for funding.

Each port must provide a local match of at least 10.0% of the cost of construction for the project and is responsible for maintenance of the project to receive port priority funds. In addition, only projects that have a benefit-cost ratio equal to one or more and the minimum rate of return for the state's investment equal to 2.375 are eligible to participate in the port priority program.

Source: Louisiana Administrative Code, Title 56, Part III, § 2107

³² For fiscal year 2021, the legislature appropriated \$35.5 million to the Port Priority Program.

³³ R.S. 34:3451 *et seq.*

Beginning in fiscal year 2017, the legislature increased the amount appropriated to the Port Priority Program from the TTF to \$39.4 million³⁴ annually. Prior to this, it had been \$19.7 million since at least fiscal year 2010. During fiscal years 2018-2023, DOTD has awarded funding through this program to 22 of Louisiana's 32 public active ports for a total of \$229.9 million. Appendix G summarizes the ports that were awarded funds through the Port Priority Program from fiscal years 2018-2023.

During fiscal years 2018-2023, 17 public ports were appropriated a total of \$93.7 million for their infrastructure needs in state capital outlay funds, including \$11.8 million in State General Funds and \$81.9 million in General Obligation Bonds. In order to receive capital outlay funding, ports can submit capital outlay requests through the senator or representative in whose district the proposed capital project is located. These requests must contain the signature of or an endorsement letter from such senator or representative, and be submitted on the form established by the Office of Facility Planning and Control. Ports are also required to include a match of at least 25.0% of the total requested amount of capital outlay funding and certify to the Division of Administration that bond funding or other means of financing for these requests are not otherwise available. Appendix H shows the 17 ports that received capital outlay appropriations during fiscal years 2018-2023.

Compared to the eight other southern coastal states we evaluated, Louisiana's dedicated funding to ports is higher than in Alabama, Georgia, and South Carolina, but less than the five other states – Florida, Mississippi, North Carolina, Texas, and Virginia – for fiscal years 2022 through 2024.

Ports' success relies on good port infrastructure and intermodal connectivity, and Louisiana ports are critical to economic growth in Louisiana. In 2021, Louisiana ranked second nationwide for total waterborne tonnage handled. Eight of Louisiana's ports ranked among the top 100 U.S. ports by total waterborne tonnage, including five ports ranked in the top 15. However, according to the 2023 *Future of the Louisiana Waterways Transport System* report,³⁵ while marine transportation is an essential component of Louisiana's transportation system, it is currently underutilized. To fully utilize the competitive advantage of Louisiana's abundant navigable waterways, investments in Louisiana's ports and waterways are needed. Of the eight southern coastal states we evaluated, Louisiana invests more than three of these states: Alabama, Georgia, and South Carolina. Appendix I

³⁴ For fiscal year 2021, the legislature appropriated \$35.5 million to the Port Priority Program.

³⁵ <https://rosap.ntl.bts.gov/view/dot/67338>

provides examples of the dedicated funding programs for ports in Louisiana and the eight other southern coastal states we evaluated.

To assist ports with infrastructure needs, some states, including Louisiana, invest in their ports through dedicated funding programs. For example, Louisiana's Port Priority Program, which is administered by DOTD, provides \$39.4 million annually in competitive grants for funding port construction and development projects. DOTD applies objective standards, such as technical and financial feasibility, as well as expected economic impacts, to select projects that have the highest probability of success.

Projects resulting from these competitive grants include \$15.0 million for the Port of St. Bernard's Rehabilitation of Chalmette Slip A & F, \$15.0 million for the Port of Columbia's "First of Its Kind" (FOIK) Infrastructure Project, and \$4.8 million for the West Calcasieu Port's Mid-Port Dock Infrastructure Improvement project.

Louisiana's public ports do not have a state entity to help provide support in obtaining grants, developing cooperative agreements, or identifying cost-sharing opportunities. While some large ports have sizable staff and may employ in-house grant writers, small ports may only have a few or even no full-time employees, which can make it challenging for them to apply for federal funding. The legislature may wish to require the Office of Port Development within LED to provide technical assistance to ports in obtaining funding.

While some large ports have sizable staff and may employ in-house grant writers, small ports may only have a few or even no full-time employees, which can make it challenging for them to apply for federal funding. Many federal agencies provide grants, cooperative agreements, and cost-sharing opportunities to ports. Appendix J provides examples of federal grant opportunities available to ports. During federal fiscal year 2022, ports across Louisiana received several federal grants from various federal agencies. For example, the U.S. Department of Transportation Maritime Administration granted the Port of Morgan City \$10.0 million for its western dock expansion project, and the Port of St. Bernard received \$2.0 million from the U.S. Department of Commerce to build a connector road.

Most ports (24 out of 30, or 80.0%) stated that they would benefit from assistance with federal grants.

Source: 2023 Louisiana Public Ports Survey

According to our survey, all eight deep-water ports rated their ability to find federal grants as excellent or good. Most of the coastal ports (seven out of 11, or 63.6%) rated their ability to find federal grants as excellent or good, but only five (45.5%) out of 11 of inland ports rated their ability to find federal grants as excellent or good. Overall, most ports (24 out of 30, or 80.0%) stated that they would benefit from assistance with federal grants. The legislature may wish to require the Office of Port Development within LED to provide technical assistance to ports in obtaining funding.

Different local and regional agencies and organizations provide funding opportunities to ports for various purposes, and ports might also be eligible to apply for different funding opportunities offered by different state agencies, such as the DOTD's Airport Construction and Development Priority Program, DOTD's public rail funding, and LED grants.

For example, the Delta Regional Authority provides investments to promote and encourage the economic development of the shallow-draft lower Mississippi River and Alabama Black Belt regions, such as providing Central Louisiana Regional Port with \$1.0 million to retrofit and expand existing facilities and infrastructure to support organic biotechnology research and development and manufacturing for sustainable products, activating the foreign trade zone. In November 2022, DOTD used its public rail funding to award \$1.5 million to the New Orleans Public Belt Railroad Commission³⁶ for the Port of New Orleans in grant funding under the Class II and III Rail Infrastructure Improvement Program to construct the Transloading Industrial Park in New Orleans East. In addition, LED helped Madison Parish Port secure \$8.1 million for the installation of an 8-inch natural gas pipeline to serve port facilities along the Mississippi River, including \$3.6 million from LED and \$4.0 million from Complex Chemical, the port's anchor tenant. Smaller ports may also benefit from assistance in identifying and applying for these different in-state funding opportunities.

Ports and LED are critical partners because ports are "economic engines" in their communities – they have infrastructure, bonding authority, and land on which private businesses can operate, while LED uses different incentives to attract and recruit private businesses.

Source: Louisiana Economic Development (LED) interview.

Matter for Legislative Consideration 3: The legislature may wish to consider requiring the new Office of Port Development within LED to provide technical assistance to ports for applying for federal grants in order to help maximize the funding available to Louisiana ports.

³⁶ The New Orleans Public Belt Railroad Commission for the Port of New Orleans is an independent political subdivision that operates the railroad as a separate legal entity, in cooperation and conjunction with the Port of New Orleans.

To remain competitive, infrastructure investments are key to ports' operations. Increased funding opportunities or loan programs may help ports obtain additional funding for improvements and help increase economic activity.

In 2021, Congress passed the Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act), dedicating \$16.7 billion to improve infrastructure at coastal ports, inland ports and waterways, and land ports of entry. As of August 2023, \$545.7 million has been announced for Louisiana's ports and waterways. Exhibit 10 shows the announced Bipartisan Infrastructure Law Investments in southern coastal states for ports and waterways as of August 2023. Appendix K provides a map of the announced Bipartisan Infrastructure Law Investments in Louisiana for ports and waterways.

Exhibit 10 Announced Bipartisan Infrastructure Law (Federal) Investments to Southern Coastal States for Ports and Waterways As of August 2023		
State	Number of Projects	Funding (\$)
Alabama	6	\$66,513,438
Florida	21	143,570,120
Georgia	11	68,152,007
Louisiana*	22	545,713,803
Mississippi	17	49,417,225
North Carolina	20	51,324,252
South Carolina	5	21,544,010
Texas	26	344,686,968
Virginia	10	192,742,963
Total	138	\$1,483,664,786

*Only one port was funded through the Infrastructure Investment and Jobs Act. The majority of funding went to waterway projects.
Source: Prepared by the legislative auditor's staff using information from the Bipartisan Infrastructure Law (BIL) Maps Dashboard (<https://d2d.gsa.gov/report/bipartisan-infrastructure-law-bil-maps-dashboard>).

In addition, Louisiana also received an infusion of federal funds in 2021 from the U.S. Department of Treasury for the Louisiana Port Relief Fund³⁷ to provide relief to Louisiana port authorities for revenue loss and reimbursement of expenses related to COVID-19 and port security measures. Louisiana ports that applied for these funds received \$47.2 million, as summarized in Exhibit 11.

³⁷ R.S. 39:100.44.2

Exhibit 11 Louisiana Port Relief Fund Fiscal Year 2022	
Port	Amount
Central Louisiana Regional Port	\$470,513
Jefferson Parish Economic Development and Port District (JEDCO)	66,922
Natchitoches Parish Port	292,499
Port Fourchon	10,094,806
Port of Avoyelles	215,389
Port of Lake Charles	6,240,765
Port of Morgan City	598,006
Port of New Orleans	27,800,589
Port of South Louisiana	746,466
Port of St. Bernard	530,398
Port of West St. Mary	173,766
Total	\$47,230,119
Source: Prepared by legislative auditor's staff using information from the Louisiana Division of Administration.	

To remain competitive, infrastructure investments are key to ports' operations. The Louisiana Port Relief Fund and the Infrastructure Investment and Jobs Act provided some help with negative economic impacts of the pandemic and for ports infrastructure, but other states have larger ongoing capital investments than Louisiana, as shown by the examples in Appendix L. Investments are used either to expand the geographical extent and/or the capacity of a port, to maintain its operations, or to improve efficiency of its operations. The efficiency of a port can be improved through dredging and deepening of waterways, land reclamation and development, betterment of intermodal connections and transportation capacity, as well as equipment acquisition, all of which require substantial capital investments and constant maintenance.

The Texas DOT administers a Ship Channel Improvement Fund Loan program to enhance the funding capabilities of entities responsible for the non-federal share of qualified project costs. During the 88th Legislative Session (2023), the Texas Legislature appropriated \$400 million to this fund to provide for low-interest loans to widen or deepen a ship channel. Appendix L provides examples of ongoing investments in Louisiana and the other eight southern coastal states we evaluated. These include \$1.5 billion to Port Houston over the next five years, \$366.0 million for the Mobile Ship Channel, and \$1.2 billion to Port Miami.

Matter for Legislative Consideration 4: The legislature may wish to consider increasing its funding for ports in Louisiana to ensure Louisiana ports remain competitive.

Matter for Legislative Consideration 5: The legislature may wish to consider working with DOTD to investigate the possibility of adopting the equivalent of an Infrastructure Loan Program in collaboration with the Port Priority Program to help address the different infrastructure challenges facing Louisiana's ports.

Section 4: Louisiana Public Ports' Challenges

Many challenges impact ports' development. These challenges include a backlog of transportation needs (such as funding for intermodal connectivity, port infrastructure, channel deepening, waterway maintenance, etc.), natural disasters, disruptions from extreme high- and low-water levels, the high cost of property insurance, and others. These challenges are summarized in the section below and further discussed in Appendix M.

Louisiana has the second-largest³⁸ inland navigable waterway system in the nation, but according to a study completed in cooperation with DOTD in 2023, waterborne transportation is currently underutilized in terms of unrealized potential and capacity.

Maritime shipping is entirely dependent on the performance of the inland freight transportation system as it ensures continuity in movement of cargo. Louisiana needs to consider the infrastructure of intermodal transportation when identifying ways to increase port activity.

No matter how efficient or effective port operations may be "inside the gate," that efficiency is lost if cargo is delayed due to road or rail congestion "outside the port gate." DOTD's *Louisiana Freight Mobility Plan*³⁹ outlines truck, rail, port, and air bottleneck⁴⁰ issues affecting the Louisiana freight transportation network, including ports. This plan cites issues and constraints facing Louisiana ports and waterways, such as routine dredging maintenance, aging infrastructure, etc. In addition, the 2023 *Future of the Louisiana Waterways Transport System: A System Analysis and Plan to Move Commerce by Water* report⁴¹ concluded that while Louisiana has the second largest inland navigable waterway system in the nation, waterborne transportation is currently underutilized in terms of unrealized potential and capacity.

An example of intermodal transportation use by ports

Boxes of hot sauce from Louisiana are stuffed into metal boxes called containers at the factory. That container is put onto a truck chassis (or a railroad flat car) and moved to a port. There the container is lifted off the vehicle and lifted onto a ship. At the receiving port, the process is reversed. Intermodal transportation uses few laborers and speeds up the delivery time.

Source: *EPA Ports Primer for Communities: An Overview of Ports Planning and Operations to Support Community Participation* (2020).

³⁸ According to the Bureau of Transportation Statistics, Alaska has the largest inland waterway system.

³⁹ <https://bit.ly/47U4UVN>

⁴⁰ Constraints that cause a significant impact on freight mobility and reliability.

⁴¹ <https://rosap.ntl.bts.gov/view/dot/67338>

The majority of Louisiana's ports also have access to railways, highways with at least four lanes, and airports for the purpose of moving cargo, as demonstrated in Exhibit 12.

Exhibit 12 Louisiana Ports Multimodal Access	
Transportation Mode	Survey Results
Commercial Waterways	<ul style="list-style-type: none"> All active ports operate on commercial waterways.
Rail	<ul style="list-style-type: none"> 20 (66.7%) of 30 ports reported having access to rail, and 15 (75%) of these 20 ports report having rail connections directly on their port property. Rail access is the most limited for coastal ports, as only 5 (45.5%) of these 11 respondents reported having rail access. The Port of New Orleans has the most rail access, with connections to all six Class I Railroads* and the New Orleans Public Belt Railroad located directly on the port's property.
Highway with at least four lanes	<ul style="list-style-type: none"> 20 (66.7%) of 30 ports reported having access to highways with at least four lanes. Four (36.4%) of the 11 coastal ports and four (36.4%) of the 11 inland ports stated they had no four-lane highway access.
Airport	<ul style="list-style-type: none"> 17 (56.7%) of 30 ports reported having access to an airport to move cargo. Two (11.8%) of these 17 ports said they had an airport directly on port property, and both are deep-water ports. Across all three port types, inland ports have the least airport access, with only four (36.4%) of 11 inland ports reporting a nearby airport.
<p>Note: We received survey responses from 30 (93.8%) of the 32 active public ports. *A Class I Railroad is defined as a rail carrier with annual operating revenues of at least \$900 million after adjustment to the Railroad Freight Price Index established by the Bureau of Labor Statistics. There are currently six Class I Railroads operating in the United States. Source: Prepared by legislative auditor's staff using information from unaudited survey responses.</p>	

Louisiana has almost a \$20 billion backlog of transportation needs, which is hindering Louisiana's multimodal transportation system.

Lack of state funding negatively impacts the maintenance and development of the state's multimodal transportation system, including ports. For example, the *Future of Louisiana Waterways Study*⁴² identified a need for additional rail improvements and equipment for the Port of Morgan City to improve current capabilities to substantially increase the opportunity to provide handling and storage of unit trains for export of agricultural products to Caribbean and Central American customers. Additional rail capacity would provide benefits for handling of materials for the shipbuilding/repair and oil/gas industries. Exhibit 13 summarizes the backlog of transportation needs in Louisiana.

⁴²Cruz, R.; Hird, J.; Barnes, S. (April 2023). *The Future of the Louisiana Waterways Transport System: A System Analysis and Plan to Move Commerce by Water*. <https://rosap.nrl.bts.gov/view/dot/67338>

Exhibit 13 Backlog of Transportation Needs in Louisiana		
Transportation Program	Year	Amount (\$, Million)
Highway and Bridges	Calendar Year 2021*	\$18,771.0
Port Construction and Development Priority Program	Fiscal Year 2024	\$144.6
Airport Construction and Development Priority Program**	Fiscal Year 2024	\$738.6
*The most recent available information.		
** Includes \$28.7 million for the 2024-2025 Aviation Priority Program and \$709.9 million for the 2025-2031 long-range unfunded program.		
Source: Prepared by legislative auditor's staff using information from DOTD.		

In our September 2022 report, *Sufficiency of the Transportation Trust Fund in Meeting the State's Transportation Needs*,⁴³ we found that other states have approved alternative funding measures to provide diversified, dedicated, predictable, and sustainable revenues for statewide roads and bridges. Diversifying Louisiana's revenue sources for transportation needs is important because, even accounting for the new road usage fees passed in the 2022 Regular Legislative Session, TTF revenues will still be insufficient to address Louisiana's current and future transportation needs. We recommended that the legislature consider diversifying state revenue sources for transportation needs beyond gas taxes and vehicle-related fees. This may help reduce the Port Priority Program's backlog and help Louisiana's multimodal transportation system.

Matter for Legislative Consideration 6: As recommended in our September 2022 report, *Sufficiency of the Transportation Trust Fund in Meeting the State's Transportation Needs*, the legislature may wish to consider diversifying state revenue sources for transportation needs beyond gas taxes and vehicle-related fees. This may help reduce the Port Priority Program's backlog and help Louisiana's multimodal transportation system.

Louisiana's ports face various challenges, including needs related to funding and infrastructure, channel deepening, waterway maintenance, and intermodal connectivity.

Some challenges faced by Louisiana's ports, like channel depth, are common in other states, and other states have implemented programs to help address these challenges. For example, during the 88th Legislative Session (2023), the Texas Legislature appropriated \$400 million to a fund to provide for low-interest loans to widen or deepen a ship channel. Also, the Florida Ports Financing Commission implemented a bond funding program for FSTED projects where the commission bonds intermodal transportation projects on a group basis, and then acts as a

⁴³ <https://bit.ly/3SWxAJh>

lender for individual ports. Identifying ways to address Louisiana's port challenges may help Louisiana ports operate at their full capacity and not miss economic growth opportunities. Exhibit 14 summarizes challenges to Louisiana's ports. More detail on each of these challenges is summarized in Appendix M.

Exhibit 14 Louisiana Ports Challenges	
Challenges	Infrastructure Funding
	Channel Depth
	Routine Waterway Maintenance
	Intermodal Congestion
	Natural Disasters
	Disruptions from Extreme High- and Low-Water Levels
	High Cost of Property Insurance
	Cyberattack Risks
Other Challenges (e.g., an extensive regulatory environment and labor shortages)	
<p>Note: This exhibit summarizes the most frequently mentioned challenges from the 2023 Louisiana Public Ports Survey.</p> <p>Source: Prepared by legislative auditor's staff using information obtained from unaudited survey responses.</p>	

Section 5: Economic Impact of Louisiana Public Ports

No state entity in Louisiana is responsible for systematically measuring the economic impact of Louisiana's public ports. Measuring this impact would give legislators additional information on ports when making decisions on port funding. Four states we evaluated assessed the economic impact of their ports in 2022 and 2023. Even though the Port Priority Program evaluates projected economic feasibility and economic impacts of the proposed individual port projects, it does not track actual economic impacts of all completed projects.

Louisiana does not systematically measure the economic impact of the Louisiana public ports system. The Port Priority Program evaluates the projected economic feasibility and economic impacts of the proposed individual port projects, but does not track actual economic impacts of all completed projects. Louisiana could improve its ability to measure the economic impact of the Louisiana public ports system by creating a state database containing specific information about Louisiana's ports.

Louisiana does not systematically measure the economic impact of the Louisiana public ports system. The most recent economic impact study of Louisiana ports was prepared for LED in 2018. However, this study only assessed the economy-wide impacts of the DOTD Port Priority Program funding for proposed approved and shovel-ready projects, meaning that only those public ports with approved Port Priority Program funding were included in the study. In addition, public ports cited multiple events (such as hurricanes, the COVID-19 pandemic, and under-maintained waterways, etc.) that have impacted their operations since 2018 by changing the market and economic environment in the state. Four other southern coastal states we evaluated have completed economic impact studies of their public ports in 2022 and 2023, as summarized in Appendix N.

The Port Priority Program evaluates the projected economic feasibility and economic impacts of the proposed individual port projects, but does not track actual economic impacts of all completed projects. Port authorities applying for the Port Priority Program funding are required to demonstrate the immediate market need and the feasibility of proposed port projects. DOTD conducts technical feasibility studies and contracts with a state economist to evaluate the economic feasibility and economic impacts of the proposed port projects to determine which projects have the highest prospects of

success. Information from quarterly port project applications, along with the results of technical feasibility, economic feasibility, and projected economic impact evaluations, is tracked in a cumulative spreadsheet, which is used to create the port priority list submitted to JLTC for approval. However, state law does not require DOTD to track and report the actual benefits following project completion. While DOTD requires port authorities to submit monitoring reports for five years after completion of their projects and to include the actual benefits derived, DOTD does not compile this information into a spreadsheet for analytical purposes. According to DOTD, since projects are often done in phases and can take multiple years to complete, DOTD may not begin receiving ports' monitoring reports for over 10 years after a project begins. Another concern is that the DOTD Ports and Waterways Division is understaffed, with only three people handling all of the workload, such as reviewing specifications and plans for projects in design and construction phases, making it difficult to streamline and organize the monitoring process.

Louisiana could improve its ability to measure the economic impact of the Louisiana public ports system by creating a state database containing specific information about Louisiana's ports. According to our survey, 21 (72.4%) of 29 ports that responded to this question stated that Louisiana would benefit from having a statewide database of port statistics and other relevant information, such as the information presented in the ports profiles in the *Profiles of Louisiana Public Ports* report issued by our office on January 31, 2024. The Office of Port Development, established in LED by Act 459 of the 2023 Legislative Regular Session, could be tasked with the collection of port-relevant data (such as infrastructure and equipment inventory, port throughput, and measurements similar to those found in industrial sites) for all 32 active ports. Some of the survey respondents stated that such a database can be used as a:

- database of port assets
- marketing tool for developing projects
- basis for investment in future infrastructure needs
- support for grant funding
- tool to provide information to businesses interested in investing in Louisiana ports
- tool for potential ports users, maritime stakeholders, and the general public to easily obtain information on the ports in Louisiana

Although numerous reasons were given in our survey as to why a port database would be useful, some survey respondents cautioned that a database is not a sufficient form of communicating a port's capacity.

According to some survey respondents, the database should include information collected for all ports, ensuring that inland and coastal ports have equal representation.

Source: 2023 Louisiana Public Ports Survey

- way to have publicly available data that would allow users to identify successful strategies for moving the port industry forward
- tool for operations and logistics to use in regional/statewide planning
- tool to tackle logistics inquiries pertaining to attraction of business
- tool to track progress and or changes in trends
- tool allowing comparative analysis of ports of similar sizes
- tool demonstrating how important ports are to the state and to others looking to invest in Louisiana

Some deep-water ports commissioned their own economic impact studies to demonstrate economic impacts and benefits from investments into port infrastructure. For example, according to the *Economic Impacts of the Calcasieu Ship Channel* study issued in November 2021 by Martin Associates, marine cargo activity along the Calcasieu Ship Channel supported about 13.2% of Louisiana Gross Domestic Product (GDP) in 2020 and about 67.0% of the Lake Charles Metropolitan Statistical Area GDP in 2020. The *Economic Impact of the Port of New Orleans* study issued in August 2018 by the Louisiana State University E.J. Ourso College of Business stated that the annual tax impacts of the Port of New Orleans include \$1.9 billion in federal taxes, \$76.8 million in state taxes, and \$91.5 million in local taxes for the three-parish region (Orleans, St. Bernard, and Jefferson Parishes) in the port's jurisdiction. The Port of South Louisiana is currently conducting an updated economic impact study.

Matter for Legislative Consideration 7: The legislature may wish to task the newly established Office of Port Development in LED with collecting port-relevant data for all 32 active public ports for a state database.

Matter for Legislative Consideration 8: The legislature may wish to consider working with LED to commission a study evaluating the economic impact of Louisiana's 32 active public ports, which should not be based only on Port Priority Program data.

Matter for Legislative Consideration 9: The legislature may wish to consider requiring DOTD to track the actual economic benefits of the Port Priority Program instead of relying only on information self-reported by the ports.

Section 6: Competitors to Louisiana Public Ports

Competition varies by port type, cargo/services, and location. In addition, several factors, such as waterway capacity and maintenance, port capacity and infrastructure, and access to robust distribution networks, can impact a port's overall competitiveness. Generally, deep-water ports see the most competition over containerized cargo; however, according to the survey results, the majority of cargo moved through Louisiana's deep-water ports is not containerized. The Port of New Orleans currently operates Louisiana's only international container terminal, and its greatest direct competition comes from the Ports of Mobile (Alabama), Savannah (Georgia), and Charleston (South Carolina). In terms of total tonnage, the Port of South Louisiana's greatest competition is Port Houston. Coastal ports along the Gulf Intracoastal Waterway (GIWW) are most competitive with other GIWW ports in Texas. Inland port competition depends primarily on the ports' specialties and geographic locations. For example, the Port of Vidalia is directly across the Mississippi River from the Port of Natchez (Mississippi), which makes these ports competitors simply due to their proximity.

There are multiple factors that impact the competitiveness of Louisiana's ports, including port and waterway capacity, intermodal connectivity, and specialized port services.

While port and waterway infrastructure are both critical for port success, multiple other factors work in combination to determine whether ports will remain competitive. Exhibit 15 lists some of the key factors that can affect ports' competitiveness. Appendix O further explains these factors and their application to Louisiana's ports.

Exhibit 15 Factors Affecting Port Competitiveness	
Factors	Examples
Costs to shippers	Transport and operating costs are major factors impacting a port's competitiveness because shippers have a responsibility to establish and maintain profitable routes. All else equal, shippers opt for routes that minimize their costs.
Waterway and port capacity	It is critical for competitiveness that waterway capacity and both water- and landside port infrastructure be adequate and appropriate for the port and port customer needs. Without the necessary infrastructure to support customer needs, businesses will seek opportunities at other ports.
Population centers	Louisiana's total population is smaller than some metropolitan areas in competitor states, and Louisiana is losing population while competitor states are growing.

Exhibit 15 Factors Affecting Port Competitiveness	
Factors	Examples
Distribution and logistics networks	Louisiana has a smaller number of distribution and logistics establishments than some competitor states like Texas, Florida, and Georgia, but if the totals are adjusted for population, Louisiana fares similarly or better than many southern coastal states.
Intermodal connectivity	As of 2017,* Louisiana has fewer intermodal facilities connecting to the National Highway System than several other southern coastal states.
Port specialties	Port specialties include activities, services, industries, or commodities that are unique.
Other	Other factors, such as access to labor, the regulatory environment, or intangible features like a port's reputation, can also impact a port's competitiveness.
<p>* The most recent Federal Highway Administration data on intermodal connectivity were published in 2017.</p> <p>Source: Prepared by legislative auditor's staff using information from port management, transportation, and economics studies; the U.S. Census Bureau; and the Federal Highway Administration.</p>	

Port competitiveness can best be understood by following a supply chain approach. Standalone port features, such as individual ports' terminal infrastructure, equipment, and location, can help make ports more attractive to industry and shippers, but ports themselves are only individual links in global supply chains. Overall, shippers choose destinations, ports, and routes that minimize their out-of-pocket costs across the entire transportation and distribution network. However, shippers might opt for more expensive ports or routes if they can achieve higher quality outcomes because of other physical or intangible port advantages. For example, a more expensive port with greater connectivity to inland markets may attract more cargo than a less expensive port with lower connectivity. Intangible traits like reliability and reputation, and historical, psychological, political, and personal factors can also impact shippers' decisions.

A **supply chain** includes a sequence of operations ranging from the extraction of raw materials, the assembly of intermediate goods, and the distribution of finished products to consumers. It involves all processes from production to final consumption, including the transportation of goods.

Source: *The Geography of Transport Systems* (2020)

Port competitiveness among deep-water ports is currently driven by the containerization of international trade, the diversification of cargo types and equipment, intermodal transport, and information technologies.

According to the survey results, the majority of cargo moved through Louisiana's deep-water ports is not containerized. In addition, shallow-draft coastal and inland ports are not capable of accommodating large container ships due to their channel depth requirements, though containerized cargo can also be moved via barge, rail, or truck in smaller quantities. For example, a typical Post-Panamax container ship carrying 8,000 TEUs requires a channel depth between 40-48 feet. Port of New Orleans accommodates a Post-Panamax container ship. Exhibit 16 contains examples of different container ship sizes and required channel depths as well as the maximum ship size each of the top container ports in southern coastal states can accommodate.






Exhibit 16 Container Ship Dimensions, Depth Requirements, and Port Capacity				
Container Ship	Dimensions (L x W, feet)	TEU Capacity	Channel Depth Requirements	Container Ports and 2022 Main Channel Depth (feet)
Early Container Ships (1956-1980) 	449 x 56 656 x 66 705 x 66	500 - 2,500	30-38 feet	Port of Gulfport, Mississippi
Panamax 	820 x 105 951 x 105	3,000 - 5,000	39-40 feet	The remaining top container ports in southern coastal states all have main channel depths over 40 feet
Post Panamax 	984 x 131 1,116 x 141	4,000 - 10,000	40-48 feet	Port of Mobile, Alabama Port of Jacksonville (JAXPORT), Florida Port of Savannah, Georgia Port of New Orleans, Louisiana Port of Wilmington, North Carolina Port Houston, Texas

Exhibit 16				
Container Ship Dimensions, Depth Requirements, and Port Capacity				
Container Ship	Dimensions (L x W, feet)	TEU Capacity	Channel Depth Requirements	Container Ports and 2022 Main Channel Depth (feet)
Very Large Container Ships (Neo-Panamax) 	1,201 x 161 1,303 x 184	11,000 - 15,000	48-51 feet	Port of New York-New Jersey, New York and New Jersey Norfolk International Terminal (Port of Virginia), Virginia
Ultra Large Container Ships (Mega-ships) 	1,312 x 194 1,312 x 200	18,000 - 25,000	51 feet and above	Port of Los Angeles, California Port of Charleston, South Carolina
<p>Note: Channel depths are the depths of the main ship channel of select U.S. container ports in 2022. These depths do not reflect any ongoing or planned deepening projects.</p> <p>Source: Prepared by legislative auditor's staff using information from the Bureau of Transportation Statistics and <i>The Geography of Transport Systems</i>, 5th ed.</p>				

The Port of New Orleans is currently Louisiana's only international container port, and according to the Port of New Orleans, the Ports of Mobile, Savannah, and Charleston are its greatest competitors for container volume. In terms of total tonnage, the Port of South Louisiana's greatest competition is Port Houston.

According to the Port of New Orleans, the Ports of Mobile, Savannah, and Charleston are its greatest competitors for container volume and are currently making large strategic investments for their future development. According to the Port of New Orleans, both Savannah and Charleston are also currently attracting Louisiana exports away from them. A seaport modernization program is currently underway to deepen Mobile Harbor's channels up to 56 feet, which will allow the Port of Mobile to receive Ultra-Large Container Ships (18,000+ TEUs) that the Port of New Orleans is not currently capable of accommodating. Additionally,

Current investments among major competitors:

- **\$1.4 billion** for the Port of Savannah
- **\$950 million** for the Port of Charleston
- **\$335.6 million** for the Port of Mobile and intermodal connections to the port
- **\$2.7 billion** bridge over the Mobile River with 215 feet of vertical clearance

See Appendix L for more information about investments in southern coastal states' ports.

Source: Port authority websites

in 2024, the Alabama DOT plans to begin construction on a \$2.7 billion bridge over the Mobile River with a 215-foot vertical clearance, 44 feet higher than the Crescent City Connection bridge in New Orleans and 72 feet higher than the I-210 bridge over the Calcasieu Ship Channel in Lake Charles. Appendix P provides air draft⁴⁴ restrictions for bridges over main channels for Louisiana active ports.

During fiscal year 2022, the Georgia Ports Authority issued just under \$1.4 billion in revenue bonds for improvements at the Port of Savannah, including expansion of container storage and modification of berths at its two container terminals, as well as the purchase of new ship-to-shore cranes that will allow the port to receive vessels up to 18,000 TEUs. South Carolina is also investing \$950 million in expansions and upgrades of intermodal facilities out of the Port of Charleston. According to the Port of New Orleans, one of Louisiana's top export commodities (plastic resin) is currently being railed to Savannah and Charleston for export to Asia instead of being shipped out of New Orleans. They said this is because Savannah and Charleston have more empty containers available and cheaper freight costs because they also have more ocean-going services to Asian markets. The Port of New Orleans also said that both Savannah and Charleston are connected by rail to key inland markets the Port of New Orleans also serves, such as Memphis, Dallas, and Chicago.

While Port Houston is the largest container port in the Gulf of Mexico,⁴⁵ the Port of New Orleans said it does not consider Port Houston a significant competitor because the majority of Port Houston's imports primarily remain within a 100-mile radius of Houston. In contrast, the Port of New Orleans stated that it competes with other ports for cargo destined for the Midwest. According to the Port of New Orleans, Houston will continue to dominate shipping in the Gulf of Mexico because it has both a larger port capacity and a larger consumer population than the state of Louisiana, plus access to other large population centers in Dallas, Austin, and San Antonio. Imports through Port Houston can be more easily consumed nearby. Additionally, Port Houston is investing a total of \$1.5 billion in capital enhancements over the next five years (i.e., 2024-2028), including upgrades to container wharves and yards and the purchasing of new ship-to-shore container cranes. Investments also include deepening and widening the Houston Ship Channel, which will allow Port Houston to accommodate larger ships in the future. According to the Port of New Orleans, Port Houston's capacity establishes the norm for the size of ships that make weekly container services in the Gulf of Mexico. As a result, the Port of New Orleans will also need to expand its capacity to accommodate these larger (i.e., 14,000 TEU) vessels.

In terms of total tonnage, the Port of South Louisiana's greatest competition is Port Houston. As demonstrated in Exhibits 4 and 5 of this report, the Port of South Louisiana lost its number one ranking by total tonnage to

⁴⁴ The distance between the mean low-level water line and the lowest point of a bridge over a shipping channel.

⁴⁵ According to the U.S. DOT, Bureau of Transportation Statistics: 2021 Port Data

Port Houston in 2019. According to the Port of South Louisiana, the port moved a total of 239.3 million tons of cargo in 2022, its first net increase in total tonnage since 2017. The port stated that it is actively trying to reclaim its previous top ranking from Port Houston.

Louisiana's coastal ports along the Gulf Intracoastal Waterway (GIWW) primarily compete against other GIWW ports in Texas, Mississippi, Alabama, and Florida, while for several of Louisiana's inland ports, competition depends primarily on location.

The following ports in southern coastal states are currently designated by the Department of Defense and the Maritime Administration as strategic seaports:

- Port of Corpus Christi (TX)
- Port of Port Arthur (TX)
- Port of Beaumont (TX)
- Port of Gulfport (MS)
- Port Savannah (GA)

No ports in Louisiana have been designated as strategic seaports.

Source: Gulf Coast Strategic Highway Coalition

Louisiana's coastal ports along the Gulf Intracoastal Waterway (GIWW) stated that proximity was a factor in competition against ports in neighboring states, as well as competition for similar businesses, such as liquefied natural gas (LNG) and renewable energy facilities. However, several ports stated that coastal ports in Texas were currently their greatest competition. According to the U.S. Energy Information Administration (EIA), the United States became the world's largest LNG exporter during the first half of 2022. Texas and Louisiana, two states on the U.S. Gulf Coast that produce and export LNG, accounted for nearly half the domestic demand growth for natural gas

from 2012 to 2022. According to the EIA, five LNG export projects are currently under construction with a combined 9.7 billion cubic feet per day of LNG export capacity – one in Louisiana (i.e., Plaquemines) and four in Texas (i.e., Golden Pass, Corpus Christi State III, Rio Grande, and Port Arthur).⁴⁶ In addition, according to *the Demand for a Domestic Offshore Wind Energy Supply Chain* study issued in June 2022,⁴⁷ the U.S. will need more than 2,100 wind turbines, at least 2,100 foundations, more than 6,835 miles of cables, and five wind turbine installation vessels to achieve its offshore wind energy target while cutting reliance on offshore wind components from Europe and Asia. This may be a big economic opportunity for Louisiana and its public ports.

In October 2023, the U.S. Department of the Interior, through the Bureau of Ocean Energy Management, finalized four Wind Energy Areas in the Gulf of Mexico off the coast of Texas and Louisiana with the potential to produce enough clean,

⁴⁶ LNG exports from Golden Pass LNG and Plaquemines LNG are expected to start in 2024.

⁴⁷ <https://www.nrel.gov/docs/fy22osti/81602.pdf>

renewable energy to power more than 3.0 million homes. Although there are currently no wind turbines in the Gulf's waters, both Louisiana and Texas have been critical to the early offshore wind projects along the East Coast. For example, a shipyard in Houma, Louisiana, built turbine foundations for the Block Island project off Rhode Island, which began commercial operation in 2016. A New Orleans company performed its blade testing and design, and another Gulf region company designed its four-pile jacket substructures. In Brownsville, Texas, a marine shipbuilding firm is helping to construct the first offshore wind turbine installation vessel that can comply with the Jones Act, a federal law requiring that goods transported between U.S. ports be carried on U.S.-flagged ships.

Some coastal ports, however, stated they had no direct competitors, primarily because they have niche specialties or serve local markets. For example, the Port of Mermentau said that it focuses on the needs of its local agricultural community, and West Calcasieu Port primarily offers barge fleeting services and safe harbor during storms that directly assist Louisiana's other ports. Several coastal ports in Texas and Mississippi, such as Beaumont, Port Arthur, Corpus Christi, and Gulfport, may also be eligible to receive federal funding as part of the Strategic Port Initiative, which will create a 1,300 mile I-14 corridor through central Texas, Louisiana, Mississippi, Alabama, and Georgia, including interstate spurs connecting the main corridor to select coastal ports. Currently, no Louisiana ports have been designated as strategic ports by this initiative.

For several of Louisiana's inland ports, competition depends primarily on location. Several inland ports identified nearby ports in other states as their greatest competitors. For example, the Port of Vidalia is directly across the Mississippi River from the Port of Natchez, Mississippi, while the Port of Lake Providence is slightly north of the Port of Vicksburg, Mississippi. According to the Port of Vidalia, Natchez (Mississippi) didn't want Vidalia to develop because it presents direct competition for Mississippi, but it is actually good for both ports because their competition helps generate business for the entire region. Central Louisiana Regional Port (CLRP) also said it competes with Natchez because of similar industries, such as liquid petroleum products. Some inland ports that we spoke with said they have no direct competition with other states because their markets or port services are so unique. For example, the Port of Avoyelles stated that its tenants bring in material, aggregates, and fertilizers that are primarily used in local agricultural and construction industries.

Some inland and coastal ports, however, mentioned that they sometimes compete with other ports in Louisiana that are close in proximity. Additionally, according to both the Port of Morgan City (coastal) and CLRP (inland), competition is not limited to southern coastal states. For example, CLRP stated that one of their tenants also has facilities in Helena, Arkansas, and Memphis, Tennessee, and that CLRP is always competing against those facilities for market share. The Port of Morgan City also said that it has some industrial competition over fabrication in North and South Dakota, Wyoming, Minnesota, Michigan, Colorado, Idaho, and Oklahoma.

Section 7: Suggested Improvements for Louisiana's Ports

According to the survey responses, improving the Louisiana public ports system requires collaboration among ports, governmental agencies, and relevant stakeholders. By acknowledging and addressing challenges, Louisiana ports can enhance their competitiveness, improve operational efficiency, and ensure sustainable growth in the face of evolving market conditions and environmental risks. Exhibit 17 below provides a summary of survey responses on how to improve ports in Louisiana.

Exhibit 17 Suggestions for Improvements to Louisiana's Public Ports System 2023 Survey Results	
Area for Improvement	Explanation
Funding	<ul style="list-style-type: none"> To seek external funding sources, pursue grant opportunities, and engage in public-private partnerships to support infrastructure development. To establish an <i>Infrastructure Loan Program</i> in collaboration with the Port Priority Program to alleviate funding needs. This program could offer lower interest rates to port specific projects or offer grants to disadvantaged communities, aiming to foster equitable access to funding and promote inclusive development.
Port Priority Program	<ul style="list-style-type: none"> To clear up the backlog of port projects. To allocate more resources with a funding preference given to the three types of ports: deep-water, coastal, and inland. This approach will recognize the unique needs and potential economic impact of each port type. To provide funding in a timely manner. The longer ports wait on funding, the more project costs increase due to inflation. To align the Port Priority Program's criteria with the federal Department of Transportation applications. This alignment will facilitate a streamlined and coordinated approach, ensuring consistency and compatibility between state and federal infrastructure funding guidelines.
Intermodal Connectivity	<ul style="list-style-type: none"> To identify initiatives aimed at improving intermodal connectivity and enhancing multimodal transportation options. To promote multimodal transportation solutions to optimize efficiency and reduce congestion. To develop a statewide master plan, which includes multimodal connectivity needs.
High Cost of Property Insurance	To invest in infrastructure resilience, incorporating risk management strategies, and promoting sustainable practices in order to mitigate insurance costs and enhance the long-term viability of ports.
Labor Shortages	<ul style="list-style-type: none"> To assess the current and future workforce needs of ports. To identify training programs and initiatives to develop a skilled labor force that can meet the evolving demands of the maritime industry. To collaborate with educational institutions and industry partners to provide relevant training and education opportunities.

Exhibit 17 Suggestions for Improvements to Louisiana's Public Ports System 2023 Survey Results	
Area for Improvement	Explanation
Statewide Master Plan	<ul style="list-style-type: none"> • To develop a comprehensive and coordinated plan to optimize the ports' collective potential and address common challenges. • To consider the unique characteristics and requirements of inland, coastal, and deep-water ports through individual ports' master plans.
Environmental Considerations	<ul style="list-style-type: none"> • To evaluate the environmental impact of port operations and develop strategies to mitigate potential negative effects. • To identify and incorporate sustainable practices, such as reducing emissions, improving waste management, and preserving the ecological health of coastal areas. • To encourage the adoption of green technologies and practices to minimize carbon footprint and enhance ecological resilience. • To consider potential climate change impacts and adaptability measures. • To seek input from environmental organizations and regulatory agencies to ensure sustainability.
Source: Prepared by legislative auditor's staff using unaudited survey responses.	

Matter for Legislative Consideration 10: The legislature may wish to work with the ports, DOTD, and the newly established Office of Port Development in LED to address improvements identified by the ports across Louisiana.

APPENDIX A: SUMMARY OF MATTERS FOR LEGISLATIVE CONSIDERATION

Matter for Legislative Consideration 1: The legislature may wish to consider fully funding the Office of Port Development to accomplish the goals set forth in legislation and also help align individual port needs with statewide development goals.

Matter for Legislative Consideration 2: The legislature may wish to consider setting a deadline for the Office of Port Development to create a state strategic plan for Louisiana ports.

Matter for Legislative Consideration 3: The legislature may wish to consider requiring the new Office of Port Development within LED to provide technical assistance to ports for applying for federal grants in order to help maximize the funding available to Louisiana ports.

Matter for Legislative Consideration 4: The legislature may wish to consider increasing its funding for ports in Louisiana to ensure Louisiana ports remain competitive.

Matter for Legislative Consideration 5: The legislature may wish to consider working with DOTD to investigate the possibility of adopting the equivalent of an Infrastructure Loan Program in collaboration with the Port Priority Program to help address the different infrastructure challenges facing Louisiana's ports.

Matter for Legislative Consideration 6: As recommended in our September 2022 report, *Sufficiency of the Transportation Trust Fund in Meeting the State's Transportation Needs*, the legislature may wish to consider diversifying state revenue sources for transportation needs beyond gas taxes and vehicle-related fees. This may help reduce the Port Priority Program's backlog and help Louisiana's multimodal transportation system.

Matter for Legislative Consideration 7: The Legislature may wish to task the newly established Office of Port Development in LED with collecting port-relevant data for all 32 active public ports for a state database.

Matter for Legislative Consideration 8: The legislature may wish to consider working with LED to commission a study evaluating the economic impact of Louisiana's 32 active public ports, which should not be based only on Port Priority Program data.

Matter for Legislative Consideration 9: The legislature may wish to consider requiring DOTD to track the actual economic benefits of the Port Priority Program instead of relying only on information self-reported by the ports.

Matter for Legislative Consideration 10: The legislature may wish to work with the ports, DOTD, and the newly established Office of Port Development in LED to address improvements identified by the ports across Louisiana.

APPENDIX B: SCOPE AND METHODOLOGY

This report provides the results of our informational report of Louisiana's Public Ports System. We performed this work under the provisions of Title 24 of the Louisiana Revised Statutes of 1950, as amended. This report covers calendar years 2018-2022, though some information includes periods prior to and after our scope. Our objective was:

To provide information about Louisiana's public ports and how they compare to other southern coastal states.

The scope of our review was less than that required by *Government Auditing Standards*; however, we used those standards as a guide and believe the evidence obtained provides a reasonable basis for our conclusions.

To answer our objective, we performed the following:

- Researched and reviewed applicable federal and state laws and regulations relevant to:
 - Louisiana's 42 public ports (32 active, 10 developing), such as creation, powers, jurisdiction, etc.
 - The Port Construction and Development Priority Program (Port Priority Program).
 - The Louisiana Capital Outlay process.
 - The Port Performance Freight Statistics Program in the Bureau of Transportation Statistics (BTS) within the U.S. Department of Transportation.
- Interviewed Louisiana Department of Transportation and Development (DOTD) and Louisiana Department of Economic Development (LED) staff, port directors, and other relevant stakeholders.
- Observed port-related legislative committee meetings and a meeting of the Ports Association of Louisiana.
- Visited and interviewed selected deep-water, coastal, and inland port directors and observed port operations.
- Obtained from DOTD:
 - A list of Louisiana's 42 public ports, including their status as active or developing, classification as deep or shallow draft,

- classification as coastal or inland, and port directors' contact information.
- Policies, procedures, and other documentation relevant to the Port Priority Program, such as technical feasibility scoring criteria and evaluation sheets, economist reports, application scoring and project rankings, completed projects ready for monitoring, completed monitoring reports, etc.
 - Fiscal year 2024 Port Priority Program - Recommended Program, including the current program backlog.
 - 2023 Port Priority Program Report.
 - Vertical clearance information for select bridges in Louisiana. DOTD's vertical clearances are measured at the mean high-water level.
- Researched port classifications and functions.
 - Surveyed all 32 of Louisiana's active public ports to obtain information about the ports' staffing, cargo, intermodal connections, tonnage, etc. In addition, we solicited the ports' opinions on port-related issues, such as state master and/or strategic plans, a state port authority, challenges, etc. We received responses from 30 ports, for a response rate of 93.8%. Survey results are used throughout the report, and are self-reported and unaudited.
 - The survey was conducted between May and July 2023.
 - The Louisiana Offshore Oil Port (LOOP) did not respond to the survey. According to LOOP, specific information about the port complex should not be made public due to the nature of the port's critical infrastructure. LOOP is a private entity, despite being overseen by a public port authority.
 - Tensas Parish Port did not respond to the survey. According to DOTD, although Tensas Parish Port is considered an active port, it is currently building its first facility and has been approved for Port Priority Program funding.
 - We also sent the survey to Louisiana's 10 developing ports, but did not report their results in the report because most of the information we requested was not applicable to them.
 - We provided copies of each port's individual responses to ports after the survey responses were analyzed.

- We provided DOTD with survey responses relevant to port facts and statistics, and an aggregate summary of ports' opinions.
- Developed a GIS map of Louisiana's 42 public ports.
- Summarized Port Priority Program and Capital Outlay Funding for Louisiana's public ports for fiscal years 2018-2023 using data from LaGov.
- **Research on other states.** We selected eight other southern coastal states for comparison to Louisiana: Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Texas, and Virginia.
 - We selected these states because DOTD, port directors, or other stakeholders recommended including ports in these states for comparison. Additionally, they are all southern states along the Gulf or Atlantic Coasts.
 - For selected other states, we researched:
 - The number of active public ports in each state.
 - Port governance, including whether each state has a state port authority, and if so, how many of the state's active public ports are in the state port authority's jurisdiction.
 - State master and/or strategic plans for ports.
 - Funding and investments, including dedicated state funding programs and major recent investments in ports.
 - Economic impact studies.
 - Ongoing waterway maintenance and deepening projects.
- **Researched federal port data.**
 - Obtained and analyzed tonnage and twenty-foot equivalent unit (TEU) data from the BTS.
 - Obtained and analyzed data from the U.S. Army Corps of Engineers (USACE) Waterborne Commerce Statistics Center:
 - 2017-2021 Five-Year Cargo Reports for all available Louisiana ports.
 - 2017-2021 Waterborne Tonnage by State.
 - 2017-2021 State-to-State Commodity Tonnages.

- Obtained and analyzed Freight Analysis Framework data produced through a partnership between BTS and the Federal Highway Administration (FHWA).
- Obtained and analyzed data on intermodal connectors to the Federal Highway System from the FHWA.
- Obtained a list of U.S. seaports designated as strategic ports by the U.S. Department of Defense and the U.S. Department of Transportation Maritime Administration.
- Obtained federally maintained channel depth data for waterways in Louisiana.
- Obtained vertical clearance data for bridges over the Mississippi River, the Atchafalaya River, and the Gulf Intracoastal Waterway from USACE and the National Oceanic and Atmospheric Administration.
- Researched and reviewed port, maritime, and transportation industry publications:
 - *EPA Ports Primer for Communities: An Overview of Ports Planning and Operations to Support Community Participation* (2020).
 - *The Geography of Transport Systems, 5th ed.* (2020).
 - *Building Capacity to Manage Risks and Enhance Resilience. A guidebook for Ports* (2022).
 - *Port Economics, Management, and Policy* (2022).
 - *Future of Louisiana Waterways Transportation System Study* (2023).
 - *Port Performance Freight Statistics Program: Annual Report to Congress* (2023).
- Researched federal grant opportunities available to ports.
- Researched Infrastructure Investment and Jobs Act (Bipartisan Infrastructure Law) funding for ports and waterways in Louisiana.
- Researched state and federal agencies with port-related interests and/or responsibilities.

- Obtained and analyzed 2020 Decennial Census data for U.S. states and metropolitan areas of the United States from the U.S. Census Bureau.
- Obtained and analyzed 2021 establishment data for wholesale trade, retail trade, and transportation and warehousing industry sectors in the U.S. by state from the U.S. Census Bureau Business Dynamics Statistics Center.
- **Estimated distance, travel times, and fuel costs between select U.S. and global container ports:**
 - Used BTS 2021 TEU data to identify the highest-ranked container ports in Louisiana and the eight other southern coastal states we selected for comparison.
 - Researched the 2021 top 100 global container ports and identified the highest-ranked container port on each continent.
 - Obtained average daily marine fuel prices from the U.S. Department of Agriculture from January 1, 2019 through October 10, 2023, and calculated the average price of marine gas oil over fiscal years 2021-2023.
 - Obtained port-to-port distance data from the U.S. National Geospatial Intelligence Agency.
 - For the purposes of calculating the distance and travel time scenarios between select U.S. and global container ports, we made the following assumptions:
 - A Post-Panamax container ship carries 8,000 TEUs on average.
 - The typical 8,000-TEU container ship travels at a normal speed of 24 knots (~27.6 miles per hour). However, we assumed this speed is constant in our scenarios with no stops or slowdowns from leaving the port of origin to arriving at the port of destination. The calculated travel times thus represent the shortest possible amount of time it would take to make each trip between ports.
 - The typical 8,000-TEU container ship consumes 225 tons of marine fuel per day.
- Obtained vertical clearance data for select bridges over Louisiana waterways from publicly available sources.

- Obtained and analyzed annual financial statements for all available active public ports in Louisiana.
- Sent copies of the report to DOTD and LED for review and feedback.
- Sent relevant report excerpts, copy of the survey response, and a copy of the Louisiana ports map to each port for verification and feedback.

APPENDIX C: PORT CLASSIFICATIONS AND FUNCTIONS

Port Classification

Active ports can be **classified by the type of waterborne cargo**⁴⁸ they can handle. Since each category of waterborne cargo requires a particular type of vessel and marine terminal, ports must have the necessary cargo handling equipment and supporting intermodal infrastructure. Although ports are mainly multifunctional entities, this characteristic is often the result of the combined activities of a number of specialized terminals, each dealing with specific goods and commodities such as containers, grain, oil, or iron ore. Exhibit C.1 below provides the main types of waterborne freight terminals.

Exhibit C.1 Main Types of Waterborne Freight Terminals	
Cargo Type	Definition
Breakbulk	This type of terminal handles cargo that is carried in drums, bags, pallets, or boxes. Breakbulk terminals are also referred to as general-purpose facilities that have a combination of open storage space and warehouses. Examples of cargo include iron, steel, machinery, linerboard, and wood pulp.
Dry Bulk	This type of terminal handles cargo that is not packaged, but is transported in large quantities that are limited by ship size or existing demand. The main commodities involve coal, iron ore, and grain, which require specialized equipment and storage facilities. This specialization level implies that the terminal cannot handle bulk products other than those it was designed and equipped to handle. Thus, a grain terminal cannot handle other commodities even if the pier can accommodate any ship class.
Liquid Bulk	This type of terminal handles commodities transported in liquid form requiring specialized transshipment equipment and storage facilities. The most common liquid bulk terminal facilities are designed to handle oil and petroleum products.
Containers	This type of terminal is designed only to handle a single breakbulk standard transport unit: the container. Container terminals have come to dominate the port terminal landscape because of the large variety of goods that can be carried in containers. They are capital intensive and require a large footprint due to container storage requirements. Most containers are "dry" units for general use, but containers may also be refrigerated. The specifications of containers used in international trade are governed by the International Standards Organization. Marine containers are typically 20 feet, 40 feet, or 45 feet long; 8 feet or 8'6" wide; and 8'6" or 9'6" high. Containers used in North American domestic service are usually 48 feet or 53 feet long.
Roll-on/Roll-off (Ro/Ro)	This type of terminal handles vehicles that are rolled on and off a vehicle carrier. They require ramps, but standard vehicle carriers commonly have their own ramps. The most important footprint of a Ro/Ro terminal is the parking space used to store vehicles. Ro/Ro facilities may also include ferries that carry a combination of vehicles and passengers and, as such, require rather extensive parking space while vehicles are waiting to roll onto the ferry.

⁴⁸ The goods carried aboard ship or barge, including any packaging, pallets, containers, or other items that move with the goods.

Exhibit C.1 Main Types of Waterborne Freight Terminals	
Cargo Type	Definition
Passengers	Historically, passengers were handled at multipurpose facilities as liner ships also carried freight. The emergence of the cruise industry has been associated with the setting up of cruise passenger terminals.
Source: Prepared by the legislative auditor's staff using information from the <i>Port Economics, Management and Policy</i> (https://porteconomicsmanagement.org/), the <i>Ports Primer for Communities</i> (https://www.epa.gov/community-port-collaboration/ports-primer-communities), and the <i>Port Performance Freight Statistics Program</i> (https://www.bts.dot.gov/ports).	

Active ports can also be **classified based on their activities**, which refer to freight activities (i.e., cargo movement and handling) and non-freight activities (e.g., tourism, commercial fishing, community development, etc.). These activities are subject to competitive pressures since the services offered by a port can be offered by other ports. According to the 2021 *Maritime Infrastructure* report,⁴⁹ non-freight activities can also be important to ports and local economies. The global shipping industry has evolved in recent decades, moving towards larger ships in an effort to reduce costs and increase efficiency. As a result, some port infrastructure can no longer adequately accommodate freight.

Due to these and other changes in the global economy and local conditions, some ports have undertaken or expanded non-freight activities. For example, the Port of Delcambre has transitioned from an industrial port to a community-focused port since Hurricane Katrina, focusing on community projects, tourism, and recreation. According to the survey, the most common port activity among Louisiana's active public ports from 2018-2022 was moving cargo, with 27 (90.0%) of 30 respondents reporting this activity. However, activities vary by port type. For example, more deep-water ports (five of eight, or 62.5%) stated that they offer tourist attractions (e.g., ocean or river cruises) as a port service than coastal or inland ports. At the same time, more coastal ports (ten of 11, or 90.9%) said that they perform waterway maintenance (such as dredging) than move cargo. Exhibit C.2 below summarizes port activities reported on the survey.

Exhibit C.2 Louisiana Active Public Ports' Activities Calendar Years 2018 through 2022				
Port Activity	Number of Responses by the Type of Active Port			
	Deep-Water (8)	Coastal (11)	Inland (11)	Total (30, 100.0%)
Moving Cargo, Commodities, and/or Freight	7	9	11	27 (90.0%)
Warehousing/Storage	6	6	9	21 (70.0%)
Waterway Maintenance, Including Dredging	6	10	2	18 (60.0%)
Fabrication/Manufacturing	4	8	5	17 (56.7%)

⁴⁹ United States Government Accountability Office (GAO) Report to Congressional Committees. *Maritime Infrastructure: Public Ports Engage in an Extensive Range of Activities beyond Freight Movement*. (December 2021). <https://www.gao.gov/assets/gao-22-104630.pdf>

Exhibit C.2 Louisiana Active Public Ports' Activities Calendar Years 2018 through 2022				
Port Activity	Number of Responses by the Type of Active Port			
	Deep-Water (8)	Coastal (11)	Inland (11)	Total (30, 100.0%)
Servicing (e.g., Offshore Infrastructure, Vessel Servicing, etc.)	4	8	1	13 (43.3%)
Processing (e.g., Chemical, Food, or Fuel Processing, etc.)	7	2	3	12 (40.0%)
Value-Added Services (e.g., Adding Coating to Metal Products, Transloading, etc.)	4	5	3	12 (40.0%)
Tourism, Including Ocean or River Cruises	5	2	0	7 (23.3 %)
Military Activities	1	3	2	6 (20.0%)
Other*	0	1	0	1 (3.3%)
Note: Numbers in parentheses under each port type indicate the total number of survey respondents for that port type. We received survey responses from 30 (93.8%) of the 32 active public ports. * Some activities included as "other" were reclassified based on the ports' descriptions of these activities. Source: Prepared by legislative auditor's staff using information from unaudited survey responses.				

Active ports can also be **characterized by their management model** as an operating port, a landlord port, or a hybrid of both models. Operational ports follow a management model in which a public port authority owns the port infrastructure and is in charge of all elements of the port, including full operation of the terminals and port-related services. While Louisiana does not have a true operational port, examples of this management model in other states include the Ports of Savannah, Mobile, and Charleston.

Landlord ports act as landlords, where infrastructure, particularly terminals, is leased to private companies with the port authority retaining control of the land. In contrast to operational ports, port operations (especially cargo handling) at landlord ports are carried out by private companies. Private companies provide and maintain their superstructure, including buildings (e.g., warehouses, container freight stations, workshops, etc.) and dock labor. The majority of Louisiana's public ports are landlord ports with tenants that operate their sections of the port. According to the survey results, the most common form of self-generated revenue was lease income for port-owned land and/or facilities, with 27 (90.0%) of 30 responding active public ports reporting this type of income. Examples of this management model in Louisiana include the Port

An **Operating Port** is a port where the owner of the facility is also responsible for the operations of some or all of the terminals in the jurisdiction rather than contracting the responsibility to a private sector port operator.

A **Landlord Port** is a type of port that builds and maintains terminal infrastructure and provides major capital equipment, but does not engage in operations.

A **Hybrid Port** is a port that is both an operating port and a landlord port.

Source: Prepared by legislative auditor's staff using information from the U.S. Department of Transportation, the Environmental Protection Agency, and stakeholder interviews.

of New Orleans, the Port of Greater Baton Rouge, the Central Louisiana Regional Port, and the Port of Iberia. Examples of this management model in other states include the Ports of Los Angeles, Long Beach, and Freeport. Ports sometimes can be both a landlord port and an operational port. Examples include the Port of Lake Charles in Louisiana and Port Houston in Texas.

Port Functions

Louisiana's ports are generally empowered to:

- Own, administer, construct, operate, and maintain both land- and water-related port facilities (e.g., docks, wharves, shipways, canals, storage buildings, etc.),
- Levy reasonable fees and charges for the use of any facilities owned or operated by the port authority, including charges for using waterways within the port's jurisdiction,
- Establish, operate, and maintain navigable waterways in cooperation with the state and federal governments,
- Enter contracts and lease agreements,
- Acquire property through purchase, lease, expropriation, and/or eminent domain, and
- Receive by gift, grant, donation, or otherwise any sum of money or property, aid, and assistance from the United States, the state of Louisiana or its political subdivisions, or any person, firm, or corporation.

State law⁵⁰ also permits port authorities to issue bonds, subject to the approval of the State Bond Commission, as well as to levy a special ad valorem tax within their jurisdictions for the maintenance, operation, and improvement of port facilities.⁵¹ Many ports also have additional taxation powers, but these powers may be subject to approval by other government entities (e.g., parish councils) or by the public residing in their jurisdiction (e.g., through special elections), and they typically have a maximum millage limit established in state law.⁵²

⁵⁰ R.S. 34: 340.2 and R.S. 34: 338.1; subject to conditions specified in each port's authorizing statute.

⁵¹ The Greater Baton Rouge Port Commission is the only port authority without the power to levy this special tax.

⁵² R.S. 34: 1, *et seq.* and R.S. 33: 130.401, *et seq.*

Most boards of commissioners (i.e., port authorities) serve on a part-time basis, and some board members may have little background in port operations. While these port authorities generally oversee port operations, port directors and other port staff manage and administer ports' day-to-day activities. Among the 11 coastal port respondents, three (27.3%) said that they have no full-time port staff,⁵³ and no coastal port reported having more than five. Comparably, three (27.3%) of the 11 inland port respondents said that they have no full-time port staff, and only one inland port said it has more than five. According to one coastal port we interviewed, smaller ports may rely exclusively on contract staff, including for the position of port director. Among ports with more than 10 full-time port staff, only one is not a deep-water port.

According to the survey results, deep-water ports have significantly more full-time port staff than either the coastal or inland ports. Eight deep-water ports reported a total of 603 full-time port staff, which accounts for 91.4% of the 660 full-time port staff reported by all 30 survey respondents.

Source: 2023 Louisiana Public Ports Survey

⁵³ "Full-time port staff" includes only personnel directly employed by the port on a full-time basis. It does not include part-time staff, full-or part-time contract employees, or tenants' employees.

APPENDIX D: 2021 CONTAINER PORT RANKINGS BY NUMBER OF TEUs MOVED (THOUSANDS OF TONS)

Rank	Port Name	2021 TEU Volume
1	Port of Los Angeles, CA	63,220
2	Port of Long Beach, CA	53,971
3	Port of New York, NY & NJ	50,887
4	Port of Savannah, GA	33,312
5	Port Houston, TX	22,123
6	Port of Virginia, VA	21,890
7	Port of Oakland, CA	18,912
8	Port of Charleston, SC	17,622
9	Port of Tacoma, WA	16,653
10	Port of Seattle, WA	13,371
11	Port of Honolulu, O'ahu, HI	10,853
12	Port of Jacksonville, FL	9,156
13	Port of San Juan, PR	8,768
14	Port Miami, FL	7,959
15	Port of Everglades, FL	7,271
16	Port of Baltimore, MD	7,159
17	Port of New Orleans, LA	4,068
18	Philadelphia Regional Port, PA	4,037
19	Port of Alaska, AK	3,738
20	Port of Mobile, AL	2,859
21	Port of Wilmington, NC	2,158
22	Port of Boston, MA	2,140
23	Port of Wilmington, DE	2,038
24	Port of Gulfport, MS	1,446
25	Port Freeport, TX	731
Source: Prepared by legislative auditor's staff using information from the U.S. DOT, Bureau of Transportation Statistics: Port Data.		

APPENDIX E: STATE PORT AUTHORITIES IN SOUTHERN COASTAL STATES

State	Number of Active Public Ports in the State Port Authority's Jurisdiction	State Port Authority Description and Information
Alabama	9	<p>The Alabama State Port Authority (ASPA) was established by the Alabama State Legislature in 2000. The board of directors for ASPA consists of eight members appointed by the Alabama governor, subject to confirmation by the Alabama State Senate. Two board members must be from each of three regions of the state, and two members serve at-large. Additionally, the mayor of the City of Mobile and the President of the Mobile County Commission rotate one-year terms as the ninth ex-officio member of the board. The board appoints the director of ASPA.</p> <p>ASPA owns and manages certain operations at the deep-water Port of Mobile, though some terminals at the port are privately owned and operated by lessees. ASPA also owns and operates eight inland ports, a liquid bulk terminal in an industrial complex south of Mobile, AL, and its own switching railroad.</p>
Florida ¹	0	<p>Florida does not have a state port authority; all 14 active public ports in the Florida Seaport System are governed by individual local port authorities.</p> <p>Florida does have other state-level organizations that assist with port system planning and coordination. The Seaport Office in the Florida Department of Transportation (FDOT) is responsible for statewide seaport system planning, coordinating with statewide freight planning, project management, and coordinating seaport infrastructure projects with Florida's seaports. The Florida Seaport Transportation and Economic Development (FSTED) Council within FDOT implements seaport capital improvement projects at the local level and administers the FSTED program, which finances seaport transportation projects. The Florida Ports Financing Commission implements a bond funding program for FSTED projects whereby the commission bonds intermodal transportation projects on a group basis, and then acts as a lender for individual ports.</p> <p>The Florida Ports Council (FPC), a non-profit corporation, serves as the professional association for Florida's seaports and their management and provides advocacy, leadership, and information on seaport-related issues to the legislative and executive branches of the federal and Florida state governments. The FPC also provides administrative support on matters related to the FSTED program and the financing commission.</p>

State	Number of Active Public Ports in the State Port Authority's Jurisdiction	State Port Authority Description and Information
Georgia ²	4	<p>The Georgia Ports Authority (GPA) was established by the Georgia General Assembly in 1945. The board of directors for GPA consists of 13 members appointed by the Georgia governor to serve four-year, staggered terms.</p> <p>GPA owns, either solely or jointly, the deep-water Ports of Savannah and Brunswick, and two active inland ports. GPA also operates all terminals at the Port of Savannah, two of three terminals at the Port of Brunswick, and one inland port. The second inland port is a joint venture between GPA; the State of Georgia; Murray County, Georgia; and CSX Transportation, a Class I railroad.</p>
Mississippi	2	<p>Mississippi has two state port authorities: the Mississippi State Port Authority (MSPA) owns the deep-water Port of Gulfport, while the Yellow Creek State Inland Port Authority (YCP) owns and operates the Yellow Creek State Inland Port.</p> <p>The Port of Gulfport was conveyed to the State of Mississippi in 1961 and renamed the MSPA. It is governed by a board of five commissioners that serve staggered five-year terms. The Mississippi governor appoints three commissioners, the Harrison County Board of Supervisors appoints one commissioner, and the City of Gulfport City Council appoints one commissioner. Mississippi state law³ authorizes the Mississippi Development Authority to oversee the port's operations.</p> <p>The YCP was established by the Mississippi State Legislature in 1970. It is governed by an eight-member board of commissioners. The Boards of Supervisors for the counties of Alcorn, Itawamba, Prentiss, and Tishomingo each appoint one director to the YCP board, and the Mississippi governor appoints four.</p>
North Carolina	3	<p>The North Carolina Ports Authority (NCPA) was established by the North Carolina General Assembly in 1945. The board of directors for NCPA consists of 11 members: six are appointed by the North Carolina governor, four are appointed by the North Carolina General Assembly, and the North Carolina Secretary of Transportation fills the final seat.</p> <p>NCPA owns and/or operates all of the active public ports in the state of North Carolina, which include the deep-water Ports of Wilmington and Morehead City and one inland port.</p>
South Carolina	3	<p>The South Carolina Ports Authority (SCPA) was established by the South Carolina General Assembly in 1942. The board of directors of SCPA consists of nine voting members appointed by the South Carolina governor to serve five-year terms. The South Carolina Secretary of Transportation and Secretary of Commerce also serve on the board as non-voting members.</p> <p>SCPA owns and operates all of the active public ports in the state of South Carolina, which include the deep-water Port of Charleston as well as two inland ports.</p>

State	Number of Active Public Ports in the State Port Authority's Jurisdiction	State Port Authority Description and Information
Texas	0	<p>Texas does not have a state port authority; all 19 active public ports in the Texas Maritime Port System are governed by individual local port authorities.</p> <p>Texas does have other state-level organizations that assist with port system planning and coordination. The Texas Port Authority Advisory Committee advises the Texas Transportation Commission on port and maritime issues and makes recommendations to the Texas Department of Transportation (TxDOT) to consider formulating policies concerning the Texas port system. The Texas Port Authority Advisory Committee also develops the Texas Maritime Port Mission Plan, subject to approval by the Texas State Legislature; promotes Texas ports for economic development opportunities; and identifies federal, state, and other funding opportunities for maritime investment.</p> <p>The Texas Ports Association serves as a professional organization for Texas public port authorities, and advocates for continued funding for land- and waterside infrastructure, ensuring that ports retain the authority to respond to market demands, and coordinates with the federal government for building and maintaining navigable waterway channels and material placement areas for dredged sediment, among other major issues.</p>
Virginia ⁴	1	<p>The Virginia Port Authority (VPA) was established in 1952 as a political subdivision of the Commonwealth of Virginia. The board of commissioners of VPA consists of the Virginia State Treasurer, the Chief Executive Officer of the Virginia Economic Development Partnership, and 11 members appointed by the Virginia governor to serve staggered five-year terms. These 11 members may serve a maximum of two consecutive terms.</p> <p>VPA owns and operates the Port of Virginia, which consists of three deep-water marine terminals in Norfolk, Portsmouth, and Newport News, and an inland port facility. VPA also leases two additional marine terminals in Portsmouth and Richmond.</p>
<p>¹ The number of active public ports in Florida only includes active seaports in the Florida Seaport System. It does not include the four existing inland intermodal logistics centers in Florida.</p> <p>² A fifth public port is currently under construction and expected to open in 2026. This developing inland port will also be owned by the Georgia Ports Authority.</p> <p>³Mississippi Code Ann. 1972 Section 59-5-21.</p> <p>⁴ The Virginia Port Authority owns and/or operates six port terminals located across the state of Virginia. However, the Virginia Port Authority refers to all six terminals collectively as the single Port of Virginia.</p> <p>Source: Prepared by legislative auditor's staff using information from state port authority, state department of transportation, state port association, and individual port websites.</p>		

APPENDIX F: SUMMARY OF MASTER AND/OR STRATEGIC PLANS IN SOUTHERN COASTAL STATES

State	Master or Strategic Plan	Key Contents
Alabama	2019 Alabama State Port Authority Master Plan	<ul style="list-style-type: none"> • Asset inventory • Market assessment and cargo forecasts to 2037 • Asset condition and capacity assessments • Functional requirements to meet projected cargo demands • Constraints/ enhancement needs • Upgrade and development recommendations • Capital program schedule and budget • Implementation program
Florida	2022 Florida Seaport and Waterways System Plan, Florida Department of Transportation	<ul style="list-style-type: none"> • Overview of the seaport system including governance and operational structure • Current and projected cargo and passenger volumes • Five-, 10-, and 20-year assessments of seaport and freight needs, priorities, advantages, and constraints • Florida Department of Transportation focus areas, strategies, and initiatives that guide the state’s seaport program
Georgia	Unknown ¹	<ul style="list-style-type: none"> • The Georgia Ports Authority (GPA) website states that GPA has developed a \$1.9 billion master plan, which includes planned infrastructure updates and investments. GPA has also forecasted cargo growth to 2031.
Mississippi	2024-2028 Mississippi State Port Authority at Gulfport Five-Year Strategic Plan	<ul style="list-style-type: none"> • Alignment of port functions with relevant statewide goals and benchmarks, including economic development and infrastructure. • Assessment of external factors (e.g., global economic changes, natural disasters, etc.) that may impact port performance. • Goals, objectives, and development strategies for 2024-2028.
Mississippi	2021-2025 Yellow Creek State Inland Port Authority Five-Year Strategic Plan ²	<ul style="list-style-type: none"> • Alignment of port functions with statewide goals and benchmarks, including economic development and infrastructure. • Assessment of external factors (e.g., economic slowdowns, taxes, etc.) that may impact port performance. • Goals, objectives, and development strategies for 2021-2025.
North Carolina	2021 North Carolina Ports Strategic Plan	<ul style="list-style-type: none"> • Summary of economic impacts of ports on the state • Summary of current operations and recent developments • Projected growth of cargo volumes through 2026 • Investment requirements to meet cargo forecasts • Summary of current global vessel coverage with plans to expand • Goals and objectives to support statewide economic development projects and develop the workforce
South Carolina	2011 South Carolina Ports Authority Strategic Plan Update ³	<ul style="list-style-type: none"> • Summary of port authority assets • Statement of ports’ economic impact • Identification of key strategic issues (e.g., cargo growth, infrastructure development, etc.) and strategic initiatives to address those issues
Texas	2024-2025 Texas Port Mission Plan, Texas Port Authority Advisory Committee	<ul style="list-style-type: none"> • A port investment strategy, including port system overview, planned port system investments, and funding requests. • The 2024-2025 Texas Port Capital Investment Report, including port capital projects and their profiles. • Texas Ship Channel Improvement Report, including needs, challenges to implementation, benefits, and summaries of individual waterway improvement projects.

State	Master or Strategic Plan	Key Contents
		<ul style="list-style-type: none"> • Port connectivity report, including challenges for port connectivity, connectivity funding needs, connectivity needs and solutions, as well as a list of connectivity projects.
Virginia	2022-2065 Port of Virginia Master Plan	<ul style="list-style-type: none"> • Summary of economic benefits. • Summary of current cargo volume and existing conditions, including description of each terminal.⁴ • Projected growth to 2065. • Short- and long-term development strategies to achieve 2065 goals. • Capital investment plan (CIP). • Identified sources of funding for the CIP.
<p>Note: These are the most recently published publicly available master and/or strategic plans for these states.</p> <p>¹ The Georgia Ports Authority (GPA) master plan was not publicly available. The audit team contacted the Georgia Ports Authority to obtain a copy of the plan, but we did not receive a response.</p> <p>² Mississippi has two state port authorities, each with its own strategic plan.</p> <p>³ The most recent publicly available master or strategic plan for South Carolina is from 2011.</p> <p>⁴ The Virginia Port Authority owns and/or operates six terminals located across the state. However, the Virginia Port Authority refers to all six terminals collectively as the single Port of Virginia.</p> <p>Source: Prepared by legislative auditor's staff using information from port master and/or strategic plans.</p>		

APPENDIX G: PORT PRIORITY PROGRAM ALLOCATIONS TO PORTS, FISCAL YEARS 2018- 2023

#	Port	TTF-Regular	State General Funds	Total
Deep-water Ports				
1	Port Fourchon	\$10,189,008	\$-	\$10,189,008
2	Port of Greater Baton Rouge	8,652,013		8,652,013
3	Port of Lake Charles	22,502,035		22,502,035
4	Port of New Orleans	40,000,000	5,000,000	45,000,000
5	Port of South Louisiana	25,513,227		25,513,227
6	Port of St. Bernard	25,860,656		25,860,656
	<i>Subtotal Deep-Water Ports</i>	<i>\$132,716,939</i>	<i>\$5,000,000</i>	<i>\$137,716,939</i>
Coastal Ports				
1	Port Manchac	\$840,000	\$-	\$840,000
2	Port of Delcambre	4,214,500		4,214,500
3	Port of Iberia	15,153,195		15,153,195
4	Port of Morgan City	10,314,712		10,314,712
5	Port of Vermilion	339,000		339,000
6	Port of West St. Mary	1,009,433		1,009,433
7	Port Terrebonne	1,769,976		1,769,976
8	West Calcasieu Port	5,079,000		5,079,000
	<i>Subtotal Coastal Ports</i>	<i>\$38,719,816</i>	<i>\$-</i>	<i>\$38,719,816</i>
Inland Ports				
1	Central Louisiana Regional Port	\$4,606,388	\$-	\$4,606,388
2	Madison Parish Port	2,047,267		2,047,267
3	Port of Caddo-Bossier	10,423,321		10,423,321
4	Port of Columbia	5,000,000		5,000,000
5	Port of Krotz Springs	5,130,000		5,130,000
6	Port of Lake Providence	11,484,000		11,484,000
7	Port of Vidalia	12,520,035		12,520,035
8	Red River Parish Port	2,204,083		2,204,083
	<i>Subtotal Inland Ports</i>	<i>\$53,415,094</i>	<i>\$-</i>	<i>\$53,415,094</i>
	Total	\$224,851,849	\$5,000,000	\$229,851,849
<p>Note: These are actual allocations made to ports and not the total funding awarded to ports through the Port Priority Program.</p> <p>Source: Prepared by legislative auditor's staff using information from the State's LaGov Enterprise Resource Planning System (LaGov).</p>				

APPENDIX H: CAPITAL OUTLAY ALLOCATIONS TO PORTS, FISCAL YEARS 2018-2023

#	Port	State General Obligation Bonds	State General Funds	Total
Deep-water Ports				
1	Port Fourchon	\$1,700,000	\$1,000,000	\$2,700,000
2	Port of Greater Baton Rouge	22,220,400		22,220,400
3	Port of Lake Charles	272,661	760,000	1,032,661
4	Port of New Orleans	39,100,000		39,100,000
5	Port of South Louisiana	6,431,439	2,269,313	8,700,752
	<i>Sub-total Deep-water Ports</i>	<i>\$69,724,500</i>	<i>\$4,029,313</i>	<i>\$73,753,813</i>
Coastal Ports				
1	Port of Grand Isle	\$-	\$527,800	\$527,800
2	Port of Mermentau		142,000	142,000
3	Port of Morgan City	20,700	513,200	533,900
4	Port of Terrebonne	2,629,947	2,069,130	4,699,077
5	Port of Vermilion		640,000	640,000
6	Port of West St. Mary		3,000,000	3,000,000
7	West Calcasieu Port	37,200	486,700	523,900
	<i>Sub-total Coastal Ports</i>	<i>\$2,687,847</i>	<i>\$7,378,830</i>	<i>\$10,066,677</i>
Inland Ports				
1	Madison Parish Port	38,200	356,800	395,000
2	Port of Columbia	37,154		37,154
3	Port of Lake Providence	102,200	10,000	112,200
4	Port of Pointe Coupee*		11,800	11,800
	<i>Sub-total Inland Ports</i>	<i>\$177,554</i>	<i>\$378,600</i>	<i>\$556,154</i>
Developing Ports				
1	Jefferson Parish Economic Development and Port District (JEDCO)	\$9,321,200	\$-	\$9,321,200
	<i>Sub-total Developing Ports</i>	<i>\$9,321,200</i>	<i>\$-</i>	<i>\$9,321,200</i>
Total		\$81,911,101	\$11,786,743	\$93,697,844
<p>*Act 180 of the 2019 Regular Legislative Session added Pointe Coupee Parish to the territorial limits and jurisdiction of the Greater Baton Rouge Port Commission and abolished the Pointe Coupee Port Commission effective January 1, 2020.</p> <p>Source: Prepared by legislative auditor's staff using information from the State's LaGov Enterprise Resource Planning System (LaGov).</p>				

APPENDIX I: EXAMPLES OF DEDICATED FUNDING PROGRAMS FOR PORTS IN LOUISIANA AND OTHER SOUTHERN COASTAL STATES, FISCAL YEARS 2022-2024

State	Program Name	Program Description	Fiscal Year 2022 (\$, Millions)	Fiscal Year 2023 Budget (\$, Millions)	Fiscal Year 2024 Budget (\$, Millions)
Alabama	Alabama Inland Port Infrastructure Program*	The Alabama Department of Economic and Community Affairs (ADECA) administers the Alabama Inland Port Infrastructure Program, which is a \$5 million competitive grant for inland port capital improvement initiatives.	\$-	\$-	\$-
	General Fund Conditional Appropriations to Port Authority**	Conditional appropriations from the state's General Fund to the Alabama State Port Authority.	3.5	3.5	3.5
Florida	Seaport Transportation and Economic Development Program	Annual appropriations from the State Transportation Trust Fund to fund the Florida Seaport Transportation and Economic Development Program.	25.0	25.0	25.0
	Seaport Grants	Annual appropriations from the State Transportation Trust Fund to provide Seaport Grants.	75.6	100.9	114.3
	Strategic Port Investment Program	Annual appropriations from the State Transportation Trust Fund to fund the Strategic Port Investment Program.	10.0	10.0	10.0
Georgia	Ports and Waterways	Annual appropriations from the State General Funds to the Ports and Waterways Services within the Department of Transportation. The purpose of these appropriations is to support the planning, development, and maintenance of Georgia's Ports and Waterways.	-	1.4	1.4
Louisiana	Port Construction and Development Priority Program	The Port Construction and Development Priority Program is administered by the Louisiana Department of Transportation and Development (DOTD). This program provides \$39.4 million annually in competitive grants for funding port construction and development projects. DOTD applies objective standards, such	39.4	39.4	64.4***

State	Program Name	Program Description	Fiscal Year 2022 (\$, Millions)	Fiscal Year 2023 Budget (\$, Millions)	Fiscal Year 2024 Budget (\$, Millions)
		as technical and financial feasibility, as well as expected economic impacts, to select projects that have the highest probability of success.			
Mississippi	Mississippi State Port Authority	Annual appropriations to defray the expense of the port authority.	55.7	45.8	76.4
	Yellow Creek State Inland Port Authority	Annual appropriations to defray the expense of the port authority.	13.2	13.3	13.9
North Carolina	Quarterly Allocations to Ports Authority	Funds appropriated to the North Carolina State Ports Authority from the Highway Trust Fund may only be used (i) to pay debt service or related financing costs and expenses on revenue bonds or notes issued by the State Ports Authority and (ii) for capital projects.	45.0	45.0	45.0
South Carolina	South Carolina State Ports Authority	The South Carolina State Ports Authority does not receive an annual appropriation from the state, although it can petition the General Assembly for state support through general obligation bonds for major capital projects.	-	-	-
Texas	Seaport Connectivity Program (SCP)	The SCP is administered by the Texas Department of Transportation (TxDOT). This program provides grants to ports and other entities for projects that will improve connectivity, enhance safety, and relieve congestion in communities around the state's maritime ports.	20.0	20.0	20.0
	Ship Channel Improvement Revolving Fund (SCIRF)	The SCIRF program is administered by TxDOT. This program was created to enhance the funding capabilities of entities responsible for the local share of qualified project costs by providing revenue or security for low-interest loans, longer repayment terms for loans, and/or flexible loan repayment terms.	-	-	400.0
	Maritime Infrastructure Program (MIP)	The MIP is administered by TxDOT. This program established the Port Access Account Fund for maritime port security, transportation, or facility projects.	-	-	200.0

State	Program Name	Program Description	Fiscal Year 2022 (\$, Millions)	Fiscal Year 2023 Budget (\$, Millions)	Fiscal Year 2024 Budget (\$, Millions)
Virginia	State Budget to the Virginia Port Authority	Appropriations to the Virginia Port Authority for economic development services; port facilities planning, maintenance, acquisitions, and construction; financial assistance to port activities; and administrative and support services.	255.3	280.4	290.8
	Capital Budget to the Virginia Port Authority	Capital appropriations to the Virginia Port Authority for improvements to cargo-handling facilities, expanding empty yards, stand-alone equipment acquisitions, dredging projects, etc.	70.8	889.0	150.0
<p>*It is not clear whether any funds were appropriated in fiscal years 2022-2024. We reached out to ADECA, but did not receive a response.</p> <p>**The appropriation request of \$3.5 million for the 2021-2022 year is contingent upon the availability of funds and upon the financial needs of the port authority.</p> <p>***Includes \$25.0 million in funding payable from the State General Fund.</p> <p>Source: Prepared by legislative auditor's staff using other states' program descriptions and appropriations.</p>					

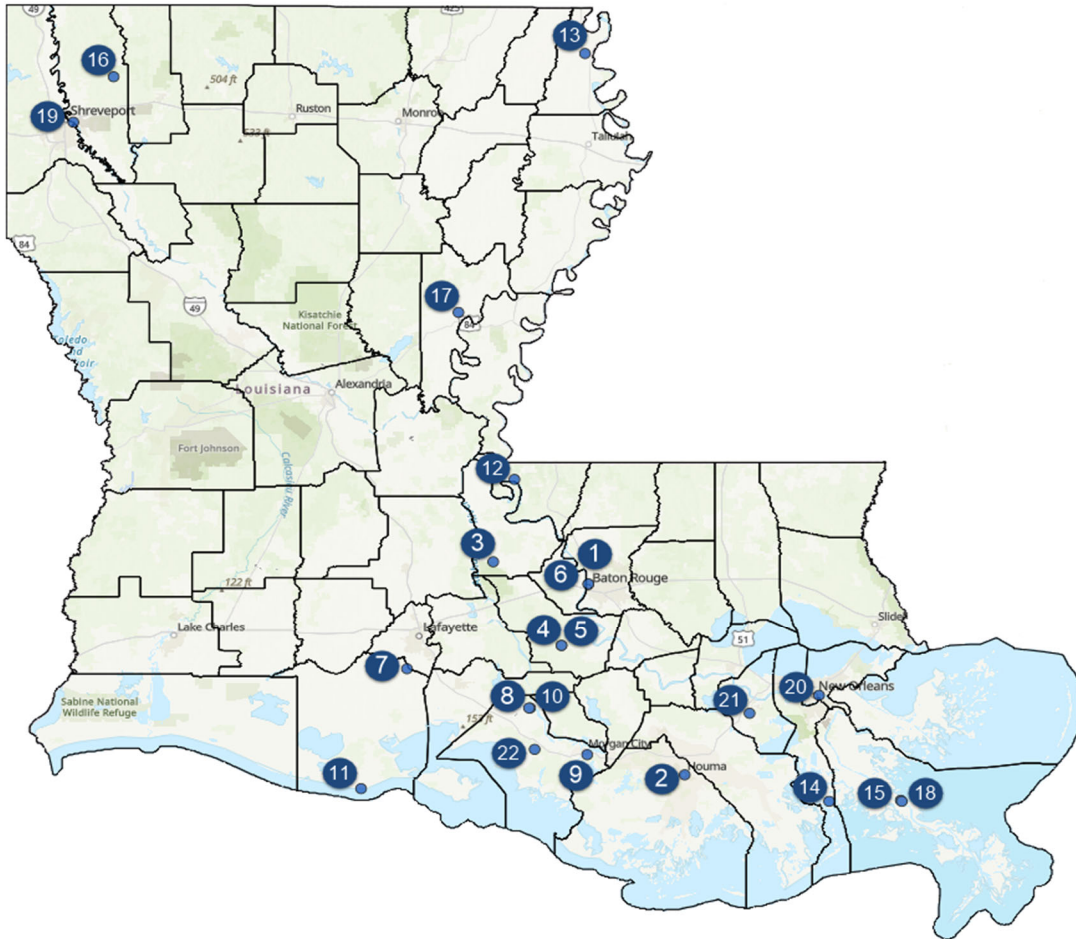
APPENDIX J: EXAMPLES OF FEDERAL GRANT OPPORTUNITIES AVAILABLE TO PORTS

Funding Source	Program Name	Program Purpose	Website
U.S. Department of Transportation, Maritime Administration	Port Infrastructure Development Program (PIDP)	PIDP grants support efforts by ports and industry stakeholders to improve port and related freight infrastructure to meet the nation’s freight transportation needs and ensure our port infrastructure can meet anticipated growth in freight volumes.	https://www.maritime.dot.gov/PIDPgrants
U.S. Department of Homeland Security/ Federal Emergency Management Agency (FEMA)	Port Security Grant Program (PSGP)	PSGP grants provide funding to state, local, and private-sector partners to help protect critical port infrastructure from terrorism, enhance maritime domain awareness, improve port-wide maritime security risk management, and maintain or reestablish maritime security mitigation protocols that support port recovery and resiliency capabilities.	https://www.fema.gov/grants/preparedness/port-security
U.S. Environmental Protection Agency	National Clean Diesel Funding Assistance Program under the Diesel Emissions Reduction Act (DERA)	DERA grants offer funding assistance to accelerate the upgrade, retrofit, and turnover of the legacy diesel fleet. The DERA program promotes an array of diesel emissions strategies by working with manufacturers, fleet operators, air quality professionals, environmental and community organizations, and state and local officials to address the varying priorities of different regions and sectors.	https://www.epa.gov/dera
FEMA – Administered by the Louisiana Governor’s Office of Homeland Security and Emergency Preparedness	Public Assistance (PA) Grant Program	The PA Grant Program provides supplemental federal assistance to states and local communities to return an area impacted by disaster to its pre-disaster conditions and function.	https://www.fema.gov/fact-sheet/fema-public-assistance

Funding Source	Program Name	Program Purpose	Website
U.S. Department of Treasury – Administered by the Louisiana Division of Administration	State and Local Fiscal Recovery Funds (SLRF) program – Louisiana Port Relief Fund	The program provided funding to Louisiana port authorities for revenue loss and reimbursement of expenses related to COVID-19 and port security measures. In order to qualify for an award, ports must have had a physical and active operation in Louisiana as of March 1, 2020 and must have experienced a loss of gross revenue for the period of March 1, 2020, through June 30, 2021. In addition, ports were required to submit applications within the Port Relief Portal and were required to upload their 2020 and 2019 audited financial statements.	https://www.cfprd.doa.louisiana.gov/PortReliefProgram/index.cfm
U.S. Department of Transportation/ Federal Aviation Administration	Airport Improvement Program (AIP)	AIP provides grants to public agencies – and, in some cases, to private owners and entities – for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems.	https://www.faa.gov/airports/aip
U.S. Department of Commerce	U.S. Economic Development Administration (EDA)	EDA provides economic development funding opportunities to communities to spur growth, job creation, innovation, and regional competitiveness in a way that works best for them.	https://www.eda.gov/funding/funding-opportunities
U.S. Department of Defense/ the U.S. Army Corps of Engineers (USACE)	Maintenance of commercial deep-draft and inland channels.	USACE operates and maintains navigable waterways and navigation infrastructure that serve ports and the navigation interests of 45 states.	https://www.usace.army.mil/Missions/Civil-Works/Project-Partnership-Agreements/
U.S. Department of Transportation (U.S. DOT)	Infrastructure For Rebuilding America (INFRA) Grant Program	U.S. DOT awards competitive INFRA grants for multimodal freight and highway projects of national or regional significance to improve the safety, efficiency, and reliability of the movement of freight and people in and across rural and urban areas.	https://www.transportation.gov/rural/grant-toolkit/infrast-structure-rebuilding-america-infra-grant-program

Source: Prepared by legislative auditor's staff using information from federal agency websites.

APPENDIX K: ANNOUNCED BIPARTISAN INFRASTRUCTURE LAW INVESTMENTS IN LOUISIANA FOR PORTS AND WATERWAYS AS OF AUGUST 2023



#	Project Name	Location	Funding (\$)
1	Baton Rouge-New Orleans Shuttle Service Barge Expansion Project	East Baton Rouge Parish	TBD
2	Morganza to the Gulf of Mexico, LA	Houma	\$378,516,450
3	Atchafalaya River and Bayous Chene, Boeuf and Black, LA	Vermilion	33,100,000
4	Gulf Intracoastal Waterway, LA	Port Allen	23,248,000
5	Gulf Intracoastal Waterway, LA	Multiple	16,500,000
6	Mississippi River, Baton Rouge to the Gulf of Mexico, LA	Multiple	15,000,000
7	Mermentau River, LA	Vermilion	12,674,000
8	Atchafalaya Basin, LA	St. Mary	10,000,000

#	Project Name	Location	Funding (\$)
9	Western Dock Expansion - Phase 3B	Morgan City Harbor and Terminal District	10,000,000
10	Atchafalaya Basin, LA	St. Mary	9,889,000
11	Freshwater Bayou, LA	Vermilion	8,075,000
12	Old River, LA	West Feliciana Parish	7,000,000
13	Tensas Basin, Red River Backwater, LA	Multiple	5,500,000
14	Barataria Bay Waterway, LA	Jefferson Parish	5,160,000
15	Louisiana Department of Transportation - Ferry Boat Program	Louisiana Department of Transportation	2,873,578
16	Bayou Bodcau Reservoir, LA	Bossier	2,750,000
17	Wallace Lake, LA	Catahoula Parish	2,300,000
18	Plaquemines Parish Ferry Department - Ferry Boat Program	Plaquemines Parish	1,421,839
19	J. Bennett Johnston Waterway (Red River), LA	Shreveport	803,000
20	New Orleans Regional Transit Authority - Ferry Boat Program	New Orleans	777,944
21	Mississippi Delta Region, LA	St. Charles	95,000
22	St. Mary Parish Council - Ferry Boat Program	St. Mary Parish	29,992
Total			\$545,713,803
<p>Note: The Western Dock Expansion at the Morgan City Harbor and Terminal District (highlighted) is currently the only port project that received funding from the Bipartisan Infrastructure Law/Infrastructure Investment and Jobs Act (BIL/IIJA).</p> <p>Source: Prepared by legislative auditor's staff using information from the Louisiana BIL/IIJA Dashboard (https://experience.arcgis.com/experience/1e05919a65744cd7af115f46b0072880/).</p>			

APPENDIX L: EXAMPLES OF ONGOING INVESTMENTS IN LOUISIANA AND OTHER SOUTHERN COASTAL STATES' PORTS

State	Port	Investment	Amount (\$, Millions)	Expected Completion Year
Alabama	Alabama State Port Authority	Alabama's seaport modernization program remains on track to meet shipper demands and accommodate new vessel services. The Alabama State Port Authority has expanded the container terminal at the Port of Mobile since its opening in October 2008. The new \$104.0 million Phase IV expansion program adds a new sheet pile wall on the north side of the terminal to facilitate the filling of approximately 13 acres of man-made water-bottoms, generating new land. The project will also develop another 19 acres adjacent to the water-bottoms, generating a combined yard of 32 acres. The Alabama State Port Authority and its operator, APM Terminals, will partner in the delivery of the project, with APM Terminals committed to installing two new ship-to-shore super Post-Panamax cranes totaling \$30.0 million. Currently, the container terminal is equipped to simultaneously dock two 14,000-TEU vessels and four gantry cranes (two Super Post-Panamax and two Post-Panamax). The Alabama State Port Authority will undertake \$74.0 million in land improvements.	\$104.0	2025
		Alabama-USA Corridor is a \$231.6 million program of rail projects to upgrade economic development infrastructure in central and southern Alabama. The first phase of the A-USA Corridor initiative involves linking the Port of Mobile with the McCalla Intermodal Facility near Birmingham. This 280-mile rail corridor will also link mega-economic development sites in Etowah (Little Canoe Creek), Shelby (Calera), and Washington/Mobile (Calvert) counties, each totaling more than 1,000 acres. A fourth site in Jefferson County (McCalla) will see the development of a 104-acre site with up to a million square feet of warehousing under roof.	231.6	2025
Florida	Jacksonville Port Authority (JAXPORT)	During the 2023 legislative session, Florida legislators appropriated funds to purchase two new cranes for JAXPORT's Blount Island Marine Terminal. The new cranes will increase JAXPORT's cargo-handling efficiencies, allowing more cargo to move through the port.	30.0	N/A

State	Port	Investment	Amount (\$, Millions)	Expected Completion Year
	Port Miami	Port Miami has about \$1.2 billion in construction projects and expansions coming within five years. Current ongoing projects include the building of a three-berth mega-cruise terminal, a separate new cruise terminal with parking facilities, replacement of cruise berths, cargo terminal and berth improvement projects, shore power, 40-year recertification efforts, ancillary improvements for new cargo gantry cranes, expansion of cargo facilities handling Florida East Coast Railway trains where use is predicted to rise 3.0% in 2023, roadway improvements, and more.	1,200.0	2028
Georgia	Georgia Ports Authority	The Georgia Ports Authority issued \$1,350.0 million in revenue bonds to help finance the following seven projects: <ol style="list-style-type: none"> 1. Realignment of Berth 1 at Garden City Terminal 2. Purchase of eight new ship-to-shore cranes 3. Expansion of Garden City Terminal container storage 4. Modification of Garden City Terminal container storage at Berths 7, 8, and 9 5. Reconfiguration of Berths 12 and 13 6. Purchase and delivery of seven new ship-to-shore cranes 7. Redevelopment of a portion of the Ocean Terminal container yard. 	1,350.0	2026
Louisiana	Port of Caddo-Bossier	The Port of Caddo-Bossier moves forward with the new \$35.0 million Bossier City Waterline. The waterline will connect to the port's newly acquired acreage on the west side of LA-1. The waterline is one of the first improvements needed so the port will be more appealing to larger manufacturing facilities that could create hundreds of jobs. The port is working on a rail spur for those sites and planning on adding electric substations, natural gas lines, and transload facilities, so these sites are ready for construction. The port is financing the \$35.0 million project with a low-interest loan.	35.0	N/A

State	Port	Investment	Amount (\$, Millions)	Expected Completion Year
	Port Fourchon	At Port Fourchon, the development generating the most excitement is the much-awaited start of Phase II of elevating the LA-1 roadway, which will complete a multi-mile protected route from inside the South Lafourche flood protection system in Golden Meadow south to Port Fourchon. The \$463.0 million LA-1 project demonstrates a commitment by federal and state partners, and others in both the public and private sectors, to ensuring ongoing access for trucks and other vehicles to Port Fourchon, which serves as a primary hub for offshore energy operations in the Gulf of Mexico.	463.0	2026
Mississippi	Mississippi State Port Authority	The Mississippi State Port Authority continues to maintain and expand its capital asset portfolio. Over \$75.0 million has been budgeted for capital outlay during the next two fiscal years (2023-2024). The major capital projects include: renovations; repairs and improvements to the East Pier, which includes Shed 53 Ocean Aero Improvements; and completion of the Roger F. Wicker Ocean Enterprise Facility, to include piers and waterfront amenities.	75.0	2024
		The Mississippi State Port Authority is working on a Port Road Access Project which is funded in part by a \$15.7 million federal grant through the U.S. Department of Transportation (USDOT) Maritime Administration (MARAD). This project will improve roadway infrastructure that feeds into the Port of Gulfport and help develop intermodal connectivity; it will connect directly to the port's western entrance which facilitates all freight and military movement in and out of the port. The project elements include: pavement strengthening along 30th Avenue, replacing existing span wire signals with mast arms, access management improvements, and implementing Intelligent Transportation Systems (ITS).	15.7*	N/A
North Carolina	Port of Wilmington	A rail enhancement project will allow the Port of Wilmington to increase the volume of containers moved by rail from 14,000 containers a year to up to 50,000. Shifting the mode of transportation to rail will reduce congestion and bottlenecks on the National Highway Freight Network, providing significant public benefits. The project entails a new loading and discharge area for rail-bound containers at the port with four dedicated rail sidings. About 9.7 acres will be paved around the rail siding and the project will use three	22.5	2025

State	Port	Investment	Amount (\$, Millions)	Expected Completion Year
		specialized and dedicated reach stackers to unload/load rail cars.		
	Port of Morehead City	Planning and development are underway to upgrade US-70 to interstate standards from the Havelock Bypass to east of Thurman Road in Craven County. One of the intents for this project is to provide closer interstate connection to the Port of Morehead City. US-70 provides an important connection between the Port of Morehead City, military bases in Havelock and Goldsboro, and the Global Trans Park in Kinston.	275.1	2028
South Carolina	South Carolina Ports Authority (SCPA)	SCPA is developing a rail-served intermodal yard that provides near-dock rail to the Port of Charleston. Class I railroads CSX and Norfolk Southern will both serve the Navy Base Intermodal Facility, helping to speed goods to market for port-dependent businesses.	400.0	2025
		SCPA is developing an inner-harbor barge operation that will support the Navy Base Intermodal Facility by moving containers via waterways between Wando Welch Terminal and Leatherman Terminal. The South Carolina General Assembly appropriated \$550.0 million for SCPA's Navy Base Intermodal Facility and inner-harbor barge project.	550.0*	N/A
Texas	Port Houston	Port Houston is investing a total of \$1.5 billion in capital enhancements over the next five years (2024-2028). For example, at Barbours Cut Container Terminal, Port Houston is investing more than \$650.0 million over the next five years (2024-2028) to help redevelop and rehabilitate existing areas around the terminal. Port Houston has also purchased three additional ship-to-shore cranes and 26 rubber-tired gantry cranes to strengthen its vessel and yard operations. Additionally, at Bayport, the port invested more than \$425.0 million in infrastructure improvements to help with traffic flow on Freight Station Road and both empty- and loaded-container storage capacity.	1,500.0	2028
	Port of Beaumont	The Port of Beaumont has started construction on Phase II of its Main Street Terminal 1 project. Phase II of the project includes demolition of a failed dock structure and construction of a new state-of-the-art general cargo deck. Two of the goals for the terminal redesign were to make it more sustainable and resilient. These goals are being accomplished by the use of concrete piles that provide a corrosion resistant foundation for extended design life and resiliency.	57.0	2024

State	Port	Investment	Amount (\$, Millions)	Expected Completion Year
Virginia	Port of Virginia	The Port of Virginia is investing in the Virginia Inland Port (VIP) to expand capacity by 40.0%; to add four rubber-tire gantry cranes to increase the efficiency of rail loading/unloading; and to reconfigure and expand the terminal's container yard capacity.	15.0	2025
		The Port of Virginia is investing \$733.0 million in Norfolk International Terminals (NIT) optimization and Central Rail Yard (CRY) expansion. Renovations include expanding and modernizing the North Terminal at NIT to create capacity for 1.4 million annual TEUs, and the installation of new ship-to-shore cranes and a reconfigured container stack yard supported by semi-automated stacking cranes. Expanding CRY to accommodate 455,000 additional rail TEUs annually will increase the terminal’s total rail capacity to 1.1 million TEUs and the port’s total to more than 1.8 million TEUs.	733.0	2027
<p>Note: This exhibit does not contain all ongoing investments in these states. *Not the full cost of the project since the project is in the design/development phase. Source: Prepared by legislative auditor's staff using information from other states’ port websites, news media articles, and other states’ agencies.</p>				

APPENDIX M: CHALLENGES FACING LOUISIANA'S PORTS

Infrastructure Funding. As of fiscal year 2024, DOTD's Port Priority Program has a \$144.6 million backlog in port infrastructure needs. In addition, according to the survey, the greatest challenge confronting both individual ports and Louisiana's port system as a whole is a lack of funding for infrastructure and development, including deferred maintenance needs. In our survey, 13 (46.4%) of 28⁵⁴ ports listed funding as their greatest individual challenge, and 15 (55.6%) of 27 ports included funding as the greatest challenge confronting the port system as a whole. Funding for port infrastructure includes docks,⁵⁵ terminals,⁵⁶ channel harbors, cargo handling equipment, and more. Several ports explained that funding for capital projects is not sufficient, reliable, or timely. Delays in securing funding can hinder infrastructure projects, limit capacity improvements, and hamper the ports' ability to adapt to changing market demands and compete for future shipping opportunities. According to our survey results, timely access to funding is crucial for the modernization, expansion, and maintenance of port infrastructure and operations.

The legislature currently funds the Port Priority Program at \$39.4 million⁵⁷ and DOTD caps its funding at a rate of \$5.0 million per year to a single port and limits funding to any one project to \$15.0 million. In comparison, Virginia appropriated \$103,938,924 for port facilities planning, maintenance, acquisition, and construction in fiscal year 2022 alone. Louisiana's annual funding of \$39.4 million through the Port Priority Program is only 37.9% of the amount funded by Virginia.

⁵⁴ While 30 active public ports completed the survey, certain questions were not required. Thus, it is possible for fewer than 30 ports to have provided a response.

⁵⁵ A **dock** is the area of water where a vessel ties up at the terminal.

⁵⁶ A **terminal** is a bounded physical space within a port as defined by the port operating body.

Terminals can be defined by their facilities, equipment, the type of cargo handled, physical barriers or boundaries, ownership or operating structures, and other characteristics. Small ports may have only one terminal, while larger ports may include more than 50.

⁵⁷ For fiscal year 2021, the legislature appropriated \$35.5 million to the Port Priority Program.

Channel Depth: Channel depth and waterside access problems are recurring issues for Louisiana ports. Some ports – especially those serving the fabrication industry – are losing business to competing states such as Texas because deeper waterways can accommodate drill ships, ship repair, or project cargo that Louisiana's channels cannot. Channel depth is important because it impacts the size of vessels that may safely enter a port. The federally designated channels in inland and coastal waterways are dredged to their congressionally authorized depth and width by the U.S. Army Corps of Engineers, but funding is not always available when it is needed due to a persistent federal channel maintenance backlog. Even if a port's minimum channel depth allows for megaships (i.e., 18,000+ TEUs), the individual marine terminals within a port may not have the minimum depth to handle them. The potential for more goods to be transported by larger vessels has led many ports and communities, including on the Gulf of Mexico, to pursue U.S. Army Corps of Engineers harbor-deepening projects. Exhibit M.1 provides examples of ongoing deepening projects in Louisiana, Texas, and Alabama.

A **channel** is the navigable portion of a waterway, usually marked and designated on the appropriate navigation charts with known widths and depths.

Channel Depth is the vertical distance from the water surface to the bottom of a channel.

Source: U.S. Department of Transportation

Exhibit M.1 Examples of Ongoing Deepening Projects in Louisiana, Texas, and Alabama	
Port	Change in Depth (feet)
Louisiana	
Port of Greater Baton Rouge	45 to 50
Port of New Orleans*	45 to 50
Port of Plaquemines*	45 to 50
Port of South Louisiana*	45 to 50
Port of St. Bernard*	45 to 50
Port of Terrebonne	15 to 20
Port of Iberia	12 to 16
Texas	
Port of Corpus Christi**	47 to 54
Port of Brownsville	42 to 52
Port Arthur	40 to 48
Port of Beaumont	40 to 48
Port of Orange	40 to 48
Calhoun Port Authority	38 to 47
Port Houston	40 to 46.5
Port of Galveston	40 to 46
Cedar Port	8 to 11
Alabama	
Port of Mobile	45 to 52
<p>*According to the Louisiana Maritime Association, the Mississippi River Ship Channel was deepened to 50 feet up to Smoke Bend (11 miles north of the Sunshine Bridge) as of March 2023.</p> <p>**According to the Texas Department of Transportation (TxDOT), the port is also undertaking a non-federal feasibility study to deepen its channel to 75 feet.</p> <p>Source: Prepared by legislative auditor's staff using information from the U.S. Army Corps of Engineers and TxDOT.</p>	

Exhibit M.2 provides main channel depths for Louisiana's 32 active public ports.

Exhibit M.2 Main Channel Depths at Louisiana's Active Public Ports		
Deep-water Ports		
Cameron Parish Port	Calcasieu Ship Channel	40'
LOOP	Gulf of Mexico	115'
Port Fourchon	Bayou Lafourche	27' to 30'
	Pass Fourchon	20'
Port of Greater Baton Rouge	Mississippi River*	45' (deepening to 50' expected by 2027)
	Gulf Intracoastal Waterway (GIWW)**	12'
Port of Lake Charles	Calcasieu Ship Channel	40'
Port of New Orleans	Mississippi River	50'
	Inner Harbor Navigational Canal	30'
Port of Plaquemines	Mississippi River	50'
Port of South Louisiana	Mississippi River	50'
Port of St. Bernard	Mississippi River	50'
Coastal ports		
Port Manchac	North Pass	9'
Port of Delcambre	Delcambre Canal	9'
Port of Grand Isle	Bayou Rigaud	16'
	Barataria Bay Bar Channel	16'
Port of Iberia	Acadiana Gulf of Mexico Access Channel (AGMAC)	10-18' (project underway to deepen to minimum 16')
Port of Mermentau	Mermentau River	9'
Port of Morgan City	GIWW	12-20'
	Atchafalaya Northbound	12'
	Atchafalaya River to Gulf of Mexico	20'
Port of Terrebonne	Houma Navigation Canal	15'
	GIWW	12'
	Bayou LaCarpe	10'
	Bayou Grand Caillou	14'
Port of Vermilion	Vermilion River	9-12'
	GIWW	12'
	Freshwater Bayou Canal	12'
Port of Vinton	Vinton Navigation Channel to GIWW	12'

Exhibit M.2 Main Channel Depths at Louisiana's Active Public Ports		
Port of West St. Mary	GIWW	16'
	Charenton Navigational Canal	20'
	Ivanhoe Canal	8'
West Calcasieu Port	GIWW	12-16'
Inland Ports		
Central Louisiana Regional Port	Red River	9'
Greater Ouachita Port	Ouachita River	9'
Madison Parish Port	Mississippi River***	9-12'
Natchitoches Parish Port	Red River	9'
Port of Avoyelles	Atchafalaya River	12-18'
Port of Caddo-Bossier	Red River	9'
Port of Columbia	Ouachita River	9'
Port of Krotz Springs	Atchafalaya River	12'
Port of Lake Providence	Mississippi River	9-12'
Port of Vidalia	Mississippi River	9-12'
Red River Parish Port	Red River	9'
Tensas Parish Port	Mississippi River	9-12'
<p>Note: Depths for major navigable waterways (e.g., Mississippi River, Atchafalaya River, GIWW, etc.) are reported as the U.S. Army Corps of Engineers (USACE) federally-maintained depths. Depths for other access channels (e.g., minor waterways, canals, bayous, etc.) were provided by the ports. Where ports reported channel depths that differed from USACE federally-maintained depths, we included the depth as a range.</p> <p>* As of March 2023, USACE has deepened the Mississippi River to 50 feet from the Southwest Pass Sea Buoy to Mile 175 Above the Head of Passes (AHP), located 11 miles north of the Sunshine Bridge (164 AHP). The project will deepen the Mississippi River to 50' up to the Port of Greater Baton Rouge, and it is expected to be completed by 2027.</p> <p>** The Louisiana portion of the GIWW is federally maintained at a minimum depth of 12 feet from Lake Borgne to its intersection with the Atchafalaya River in Morgan City, Louisiana. From Morgan City to the Sabine River, the GIWW is federally maintained at a depth of 16 feet. However, some portions of the GIWW may be deeper than 16 feet, while others may be shallower than 12 feet if dredging is not maintained.</p> <p>*** USACE maintains the Mississippi River at a minimum depth of nine feet above the U.S.-190 Bridge in Baton Rouge. The average depth is 12' between the U.S.-190 Bridge and Cairo, Illinois, though the river may be deeper than 12 feet in some locations. For example, according to Madison Parish Port, the Mississippi River averages 20 feet of depth at its facilities.</p> <p>Source: Prepared by legislative auditor's staff using information from the U.S. Army Corps of Engineers and the 2023 Louisiana Public Ports Survey, unaudited responses.</p>		

Routine Waterway Maintenance:

Routine channel maintenance and disposal of dredge spoils is one of the biggest issues for many Louisiana ports. Sedimentation requires regular dredging of channels to maintain authorized depths and widths. Most of the waterways in the state need funds for maintenance dredging, which has to be done constantly, regardless of water depth, because rivers are always moving and carrying sediment. In addition, many ports have difficulty keeping their access channels clear to the federally-maintained channels, and many ports in Louisiana, especially coastal ports, have to continually find both sufficient space to dispose of dredged material and funding to meet their non-federal share of project costs. For example, both the Port of Lake Charles and West Calcasieu Port cited high costs associated with spoil disposal of dredged materials in their jurisdictions. Since the U.S. Army Corps of Engineers typically requires individual ports to conduct dredging operations beyond the immediate authorized channel area, getting the required depth all the way to the dock can be a challenge.

According to stakeholders, some ports in Louisiana have lost business opportunities due to inadequate waterway capacity. For example:

- Louisiana ports have lost potential business opportunities because of air draft restrictions (e.g., bridge heights) that are too low over some Louisiana waterways.
- Louisiana lost out entirely on deep-water hull construction in the shipbuilding industry because Louisiana's channels aren't deep enough.
- One port lost a major tenant because part of the Atchafalaya River was closed for a period of time, and the channel depth decreased from 20 feet to eight feet.
- Other ports worry about attracting and/or retaining business if waterways are not maintained adequately.

Source: Stakeholder interviews and the 2023 Louisiana Public Ports Survey

Intermodal Congestion: Congestion, bottlenecks, or disruptions anywhere along transportation modes can result in backups at the ports or serious interruptions at inland destinations or points of origin. According to the survey results, congestion in public port systems arises from factors such as inefficient infrastructure, inadequate planning and management, increasing trade volume, and limited connectivity, resulting in delays and reduced efficiency. For example, DOTD is building a bridge over Contraband Bayou that will create a new access point to the Port of Lake Charles, and the port is relocating its short line railroad due to this construction. According to the Port of Lake Charles, the new bridge will reduce truck traffic on the current access road, which is only one lane in each direction, while relocating the railroad will reduce the number of rail crossings for trucks from 14 to three. While most ports are adding capacity to address growing freight volumes, their success is contingent on the capacity of, and ease of access to, other modes of transportation such as roads and rail. However, as mentioned previously, Louisiana has almost a \$20 billion backlog in transportation needs.

Natural Disasters: Louisiana is vulnerable to hurricanes, floods, and wildfires. In addition to the risks they present to human life, wind damage, wildfires, and flooding can disrupt or shut down port operations, causing the port to lose revenue and preventing supplies from reaching populations in times of critical need. In extreme situations, natural disasters can result in damage to, or even

destruction of, port infrastructure and equipment, which can impair regular operations resulting in financial losses to the ports. For example, because of the loss of two ship loaders caused by Hurricanes Laura and Delta in 2020, the Port of Lake Charles' revenues, which are based on tonnage, were negatively impacted because it required more workers and more days to load and unload the ships; the longer it takes to load/unload ships, the less tonnage the port moves and the lower its revenues. In addition, according to the port, it sustained significant damage to its infrastructure. For example, the port said it lost 40.0% of all warehousing and storage at City Docks, which is the main terminal owned and operated by the port. Exhibit M.3 shows some of the damage sustained by the Port of Lake Charles from Hurricane Laura in 2020.



Similarly, West Calcasieu Port is still recovering from the 2020 hurricane season. According to the port, it incurred about \$5.0 million in damages, resulting in a major drop in operational income. According to an inland port we interviewed, while hurricanes do not typically directly affect north Louisiana, if the Mississippi River is shut down or shipping backs up in south Louisiana, it also affects business for smaller ports upriver because the ports are interconnected.

Disruptions from Extreme High- and Low-Water Levels: Inland ports are vulnerable to damage or disruptions from extreme high- and low-water levels. The U.S. inland waterway system is used to transport petroleum, crude materials, and agricultural products, among other goods. Localized disruptions to the waterways can result in difficulties moving freight through ports, lost wages and economic activity in the community, and social uncertainty. Because much of the cargo shipped by barge is used as raw materials for other industries, disruptions in barge transportation at a local scale may also result in production disruptions and economic losses throughout the country.

Extreme high-water levels can also lead to flooding at ports, which can in turn disrupt port operations and damage cargo, electronic equipment, and port facilities. High water can also reduce access to the port or associated industrial parks. In contrast, low-water events can require the reduction of barge drafts in

navigation channels or close rivers altogether. Access to ports along the upper Mississippi River (Baton Rouge to Lake Providence) is not possible when droughts create low-water conditions. For example, according to the *2023 Port Performance Freight Statistics Program: Annual Report to Congress*, low-water levels in the lower Mississippi River due to scant rainfall severely hampered fall 2022 barge shipments, resulting in a backup of more than 2,000 barges on the lower Mississippi River in early October 2022. In addition, the U.S. Army Corps of Engineers does not provide dredging above Baton Rouge, instead leaving it up to non-federal sponsors (i.e., states, municipal governments, ports, etc.), which impacts several inland river ports including Lake Providence, Avoyelles, Vidalia, and Madison Parish.

High Cost of Property Insurance: According to the survey responses, the increased risks associated with climate change, including coastal erosion, sea-level rise, and more frequent natural disasters, can lead to higher property insurance costs for port infrastructure and operations. Insurance companies may consider these risks when determining premiums, potentially placing a financial burden on ports. According to the Port of New Orleans, having port infrastructure inside a flood protection zone is critical to the port's operations and reducing its insurance costs. During Hurricane Ida in 2021, the port was shut down for about one week, but that was only because of issues with power and not flooding. Some Louisiana ports have experienced increases in their property insurance costs. For example, the Port of Lake Charles' operating expenses increased \$2.9 million (7.0%) from 2020 to 2021 primarily due to higher insurance premiums following the damaging effects of the 2020 hurricane season.

Cyberattack Risks: Cyberattacks are an emerging risk for ports that are increasingly dependent on information technologies for management, operations, communication, and marketing. A compromise of these systems could lead to disruptions of port operations and related supply chains, resulting in financial losses. For example, during 2022, the Port of South Louisiana was the victim of a cyberattack, which resulted in \$420,319 being misappropriated from the port. The port was able to recover \$250,000 through insurance providers and is still in the process of filing proof of loss for additional insurance reimbursement. According to the Port of South Louisiana, the port was awarded nearly \$3.0 million in Port Security Grants for cybersecurity upgrades to its computer system from the Department of Homeland Security's Federal Emergency Management Agency. In addition, in 2023, Louisiana State University and five⁵⁸ deep-water ports announced a partnership to develop cybersecurity talent and technology for critical infrastructure, supporting the ports' pivotal role in the global supply chain and in securing food, energy, goods, and materials for the nation and world.

Other challenges: According to the survey results, other challenges Louisiana ports face include delays in obtaining coastal permits and labor shortages. Some ports stated that state and federal permitting requirements, such

⁵⁸ Port of New Orleans, Port Fourchon, Port of South Louisiana, St. Bernard Port, and Port of Greater Baton Rouge

as coastal use permits and environmental regulations, impact their port operations and delay infrastructure projects. Working conditions and wages at ports and in port-related industries can impact the economic stability of workers and their families. In addition, ports operate in a complex regulatory environment at both the state and federal levels. Multiple state agencies have responsibilities related to certain aspects of port construction, development, and/or operations. According to the U.S. Committee on the Marine Transportation System, 37 federal departments and agencies have marine transportation responsibilities, covering 80 prescribed functions and program areas. Exhibit M.4 summarizes state agencies with port-related responsibilities.

Exhibit M.4	
Examples of State Agencies with Port Oversight or Port-Related Functions	
State Agency	Responsibilities
Department of Transportation and Development (DOTD)	<ul style="list-style-type: none"> • <i>DOTD</i> does not directly oversee or regulate ports or port operations, but it constructs, operates, and maintains parts of the multimodal transportation system (e.g., highways, bridges, etc.) that connects to ports and facilitates the movement of cargo throughout the state and beyond. DOTD develops statewide transportation plans that incorporate both port and waterway development and improvement projects. The 2015 Statewide Transportation Plan list three projects Category A Megaprojects* with a total unfunded cost of \$1.15 billion. The plan includes additional port projects as Category C and D Megaprojects. • The <i>Office of Multimodal Commerce (OMC)</i> administers the planning and programming functions of DOTD related to commercial trucking, ports and waterways, aviation, and freight and passenger rail development; advises the Office of Planning on intermodal issues; and implements the master plan as it relates to intermodal transportation. • The <i>Ports and Waterways Division</i> within OMC administers the Port Construction and Development Priority Program. DOTD staff in the Ports and Waterways Division evaluate applications for Port Priority Program funding based on technical and financial feasibility, and prioritize projects that create the highest expected return on the state's investment. They also monitor construction of Port Priority Program projects. • The <i>Aviation Division</i> and the <i>Freight and Passenger Rail Division</i> of OMC also administer priority programs for airport and railway improvements. Ports that own airports can apply for state funding through the Airport Construction and Development Priority Program, and ports that own rail infrastructure can apply for grant funding under the Class II and Class III Rail Infrastructure Improvement Program.

Exhibit M.4 Examples of State Agencies with Port Oversight or Port-Related Functions	
State Agency	Responsibilities
Department of Economic Development (LED)	<ul style="list-style-type: none"> • <i>LED</i> offers a variety of tax credits and incentive programs (e.g., the Import-Export Cargo Credit, the Louisiana Import Tax Credit, the Industrial Tax Exemption Program, the Quality Jobs Rebate Program, etc.) to attract private investment to the state's port facilities, grow international trade, and encourage the use of public port facilities for importing and exporting containerized or break-bulk cargo. • The <i>Office of International Commerce (OIC)</i> focuses on initiatives that attract foreign direct investment, increase trade volumes, and expand manufacturing activity within the state. • The <i>Louisiana Board of International Commerce (LABIC)</i> provides strategic advice to the OIC and develops a Master Plan of International Commerce. LABIC serves as the state's authority to advance international commerce initiatives and implements the state's strategy to enhance Louisiana's competitive position in the global marketplace by attracting foreign and domestic investment and by enhancing the state's trade-based economy. • The <i>Office of Port Development**</i> will collect information about the facilities, capacities, and capabilities of ports and intermodal infrastructure in the state; develop and implement a statewide port strategic plan; provide for the attraction, retention, and expansion of industrial and business investments at or near Louisiana ports; identify obstacles to the growth of Louisiana ports and develop remedies for such obstacles; identify sources of non-state funds for economic development and implement a plan to increase access to these funds; cooperate and coordinate with regional and local economic development entities throughout the state with regard to port development; and perform any other functions as directed by the LED secretary or governor or suggested by the Port Development Advisory Commission.
Division of Administration (DOA)	<ul style="list-style-type: none"> • <i>DOA</i> develops an initial capital outlay budget which becomes the Capital Outlay Bill (i.e., House Bill 2), which includes state and non-state (e.g. ports) projects that have been proposed, reviewed, and evaluated by the <i>Office of Facility Planning and Control (OFPC)</i>. House Bill 2 is subject to amendment by the legislature and signature by the governor, who has a line veto power.

Exhibit M.4 Examples of State Agencies with Port Oversight or Port-Related Functions	
State Agency	Responsibilities
	<ul style="list-style-type: none"> • <i>OFPC</i> administers port projects funded by House Bill 2 through the design, bid and construction process, and acts as a clearinghouse for all projects for requests for action when appropriate. <i>OFPC</i> administers cooperative endeavor agreements for all non-state (e.g., ports) projects.
Department of Treasury	<ul style="list-style-type: none"> • The <i>State Bond Commission (SBC)</i> approves or disapproves lines of credit and bond sales for port projects funded in House Bill 2. It also can approve certificates of impossibility and impracticability.
Department of Natural Resources (DNR)	<ul style="list-style-type: none"> • <i>DNR</i> works to ensure sustainable and responsible use of the state's natural resources, including mineral resources throughout the state and protection of wetlands in the Coastal Zone. • The <i>Office of Coastal Management</i> issues Coastal Use Permits (CUPs) for various regulated activities in the state's Coastal Zone. Some port activities that require CUPs include dredging or filling and discharges of dredged material; siting, construction, or operation of industrial and governmental structures; energy development activities; shoreline modification projects and harbor structures; and any other project that would require a permit or other form of authorization from the US Army Corps of Engineers, the Environmental Protection Agency, or another division of DNR.
Department of Environmental Quality (DEQ)	<ul style="list-style-type: none"> • <i>DEQ</i> is the primary state agency concerned with environmental protection and regulation. <i>DEQ</i> issues permits for the discharge of pollutants into the air and any waters of the state of Louisiana from identifiable point sources, including waterborne vessels. Examples of port-related activities requiring a Louisiana Pollutant Discharge Elimination System permit include oil and gas exploration, development, and production in either the coastal waters or territorial seas of the state; vessel cleaning and/or repair, fleeting, or operation of shipyards; and release of industrial wastewater. • <i>DEQ</i> also administers grants, such as the Louisiana Clean Diesel Grant Program, which can be awarded to ports to reduce diesel emissions from medium- and heavy-duty engine trucks, marine diesel engines, locomotives, and cargo-handling equipment.

Exhibit M.4 Examples of State Agencies with Port Oversight or Port-Related Functions	
State Agency	Responsibilities
Coastal Protection and Restoration Authority (CPRA)	<ul style="list-style-type: none"> • <i>CPRA</i> is the single state entity with authority to develop, implement, and enforce a comprehensive coastal protection and restoration master plan. CPRA works with federal, state, and local political subdivisions, including ports, to establish a sustainable coast that will protect Louisiana’s communities, the nation’s critical infrastructure, and the state’s natural resources. Port-related CPRA projects include storm-surge flood risk reduction, sediment diversion in multiple coastal waterways, and supporting waterway navigation.
Governor’s Office of Homeland Security and Emergency Preparedness (GOHSEP)	<ul style="list-style-type: none"> • <i>GOHSEP</i> leads the state’s efforts to protect communities, citizens, property, and assets in the event of a natural or man-made emergency or disaster. GOHSEP maintains a Critical Infrastructure Protection Plan, including a list of the state’s critical infrastructure (e.g., ports, railroads, energy production facilities, etc.), to assist facilities deemed critical to the nation and state in reducing their vulnerabilities. • <i>GOHSEP</i> coordinates with state agencies, and local authorities, and eligible nonprofits (i.e., those providing critical governmental type services) to identify, apply for, and keep federal assistance for both emergency preparedness and hazard mitigation. GOHSEP also coordinates with the Federal Emergency Management Agency (FEMA) immediately following an emergency or disaster and administers funding to eligible recipients, including ports.
<p>Note: Additional state agencies may have port-related functions or oversight based on specific port activities or industries and accompanying state and federal regulations. The agencies included in this exhibit may also have additional responsibilities related to ports that are not listed.</p> <p>* A megaproject is a very expensive or large-scale transportation improvement that would have a regional or statewide impact and requires funding outside of normal DOTD funding mechanisms. Priority A Megaprojects are of highest priority to the state.</p> <p>** The Office of Port Development was created by Act 459 of the 2023 Regular Legislative Session. The Port Development Advisory Commission, also established by Act 459, is required to develop and submit an operational plan for the Office of Port Development to the Senate Committee on Commerce, Consumer Protection, and International Affairs and the House Committee on Commerce by February 1, 2024. The office is expected to become effective on July 1, 2024.</p> <p>Source: Prepared by legislative auditor’s staff using information from DOTD, LED, and state agency websites.</p>	

Exhibit M.5 contains examples of port-related federal interests and corresponding federal agencies.

Exhibit M.5	
Examples of Federal Agencies with Port Oversight or Port-Related Functions	
Federal Interest	Select Federal Agencies
Enhance Safety	<ul style="list-style-type: none"> • The <i>National Oceanic and Atmospheric Administration (NOAA)</i> facilitates commerce after severe weather or major disasters by conducting seafloor sonar surveys used by authorities to reopen ports and harbors to commerce and allow vessels to return safely to port. • The <i>Maritime Administration (MARAD)</i> promotes and contributes to safety in the maritime industry through participation in national and international safety standards organizations. • The <i>U.S. Coast Guard (USCG)</i> inspects commercial vessels, mobile offshore drilling units, and marine facilities; maintains aids to navigation; establishes and promulgates navigation Rules of the Road; licenses commercial vessel crews; serves as National Recreational Boating Safety Coordinator; and is the lead agency for maritime search and rescue in U.S. waters.
Protect the Environment	<ul style="list-style-type: none"> • The <i>Environmental Protection Agency (EPA)</i> has authorities and responsibilities to address issues and develop regulations to protect air, water quality, land, marine conservation areas, and address stormwater, noise, air emissions, including through environmental reviews, permitting, oil spill response, developing and implementing best practices and encouraging sustainability, and participation in international conventions. • The <i>Natural Resources Conservation Service (NRCS)</i> works with other federal and state agencies involved in stormwater, dredge material disposal, and environmental reviews. • <i>USCG</i> plays a vital role in enforcing laws intended to protect the environment by safeguarding sensitive marine habitats, mammals, and endangered species. USCG also enforces laws protecting our waters from the discharge of oil, hazardous substances, and non-indigenous invasive species. Under the National Contingency Plan, Coast Guard Captains of the Port are the pre-designated Federal On-Scene Coordinators (FOSC) for oil and hazardous substance incidents in all coastal and some inland areas.

Exhibit M.5 Examples of Federal Agencies with Port Oversight or Port-Related Functions	
Federal Interest	Select Federal Agencies
Facilitate Commerce*	<ul style="list-style-type: none"> • The <i>International Trade Administration (ITA)</i> strengthens the competitiveness of U.S. industry, promotes trade and investment, and ensures fair trade through enforcement of US trade laws and agreements. • The <i>Foreign Agricultural Service (FAS)</i> helps U.S. exporters develop and maintain markets for agricultural products. • <i>USCG's</i> primary role in trade facilitation is the provision of essential navigation services, including placement of Marine Aids to Navigation and Vessel Traffic Services. Additionally, Coast Guard Captains of the Port have authority over maritime commerce. Furthermore, USCG is responsible for providing a safe, efficient, and navigable waterway system to support domestic commerce, international trade, and military sealift requirements for national defense. • The <i>U.S. Army Corps of Engineers (USACE)</i> is responsible for constructing, operating, and maintaining over 25,000 miles of navigation channels and 238 navigation lock chambers at 192 sites, as well as maintaining 926 coastal, Great Lakes, and inland harbors. They also regulate water levels on inland waterways. • The <i>Economic Development Administration (EDA)</i> makes grant-based investments that promote job creation and economic prosperity in communities and regions suffering from economic distress. These grants include support for infrastructure projects for ports, harbors, and waterway development.
Ensure National Security	<ul style="list-style-type: none"> • The <i>U.S. Transportation Command (TRANSCOM)</i> is the Department of Defense Single Manager for Transportation responsible for providing common-user air, land, and sea transportation, terminal management, and aerial refueling to support global deployment, employment, sustainment, and redeployment of US forces. • The <i>Department of Energy (DOE)</i> is charged with enhancing the protection of infrastructure (e.g., production, refining, storage, and distribution of oil, gas, and electricity). Energy is linked and often dependent upon maritime transportation and the security (i.e., reliability, survivability, and resiliency) of infrastructure.

Exhibit M.5 Examples of Federal Agencies with Port Oversight or Port-Related Functions	
Federal Interest	Select Federal Agencies
	<ul style="list-style-type: none"> • <i>USCG</i> as the Nation’s primary maritime law enforcement service, enforces, or assists in enforcing, federal laws and treaties on waters under U.S. jurisdiction, and other international agreements on the high seas. The Coast Guard’s primary maritime security missions include Illegal Drug Interdiction, Undocumented Migrant Interdiction, Defense Readiness, and Ports, Waterways, and Coastal Security, including the inspection of marine terminal facilities and containers.
Cross-Cutting Interests (e.g., Research and Development)	<ul style="list-style-type: none"> • The <i>Research and Innovative Technology Administration (RITA)</i> and the <i>Bureau of Transportation Statistics</i> collect, analyze, and disseminate maritime data and statistics related to coastal, inland, and ocean water transportation. • <i>NOAA</i> tests and evaluates new cartographic, hydrographic, and oceanographic systems in order to advance the science and processes used by NOAA for safe, efficient navigation and the utilization and protection of the coast.
<p>Note: This exhibit contains examples and does not represent an exhaustive list of federal agencies with port oversight or that serve port-related functions. A list of federal agencies coordinating under the US Committee on the Marine Transportation System, as well as their responsibilities, may be found at https://www.cmts.gov/compendium/.</p> <p>* Facilitating commerce includes the facilitation and promotion of trade; vessel construction and operations; federal channels, waterways, and sea lanes; and port/ modal transfer infrastructure.</p> <p>Source: Prepared by legislative auditor’s staff using information from the United States Committee on the Marine Transportation System.</p>	

APPENDIX N: EXAMPLES OF ECONOMIC IMPACT STUDIES FOR FOUR SOUTHERN COASTAL STATES IN 2022 and 2023

State	Name of the Study	Prepared By	Date	Major contents
Alabama	Alabama State Port Authority 2021 Economic Impact	Martin Associates for the Alabama State Port Authority	October 2022	<ul style="list-style-type: none"> • Introduction and Summary: Impact Definition, Methodology, Economic Impact Model, Summary of Results • Economic Impact of Marine Cargo Activity: Impact Structure; Commodities Included in the Analysis; Marine Cargo Employment Impacts, Total Economic Output, Business Revenue, Income and Tax Impacts; Personal Earnings Impact; Tax Impacts • Comparison of Impacts 2021-2019: Change in Tonnage by Commodity, Harborwide; Change in Economic Impacts Harborwide; Change in Direct Jobs by Commodity; Change in Direct Jobs by Category
Georgia	The Economic Impact of Georgia's Deepwater Ports on Georgia's Economy in FY2021	Selig Center for Economic Growth, Terry College of Business, the University of Georgia for the Georgia Ports Authority	June 2022	<ul style="list-style-type: none"> • The Concept of Ports Economic Impact • Methodology: Estimating the Ports Industry's Economic Impact, Estimating the Ports Users' Economic Impact • The Results: Output Impacts, State GDP (Value Added) Impacts, Income Impacts, Employment Impacts, State Tax Impact, Local Tax Impact, Federal Tax Impact • Comparison to Previous Estimates
South Carolina	2023 Economic Impact of the South Carolina Ports Authority	Joseph C. Von Nessen, Ph.D.	October 2023	<ul style="list-style-type: none"> • Increasing Long-Run Economic Growth Rates in South Carolina: Export-Oriented Manufacturing in South Carolina; the COVID-19 Pandemic and the Acceleration of Population Migration to the Southeast • Economic Impact Methodology: the Economic Multiplier Effect; Data Inputs: Port Operations and Port Users • Statewide Results: Port Operations; Port Users; Supporting High Wage Employment; Supporting Diversity of Employment; Supporting Local Businesses; Economic Impact in the Southeastern U.S. • South Carolina Regional Results

State	Name of the Study	Prepared By	Date	Major contents
				<ul style="list-style-type: none"> Contributions to State Tax Revenue
Virginia	The Fiscal Year 2022 Virginia Economic Impacts of the Port of Virginia	The Raymond A. Mason School of Business, College of William & Mary, for the Virginia Port Authority	April 2023	<ul style="list-style-type: none"> Port Operations: Tons and TEUs Moved Exports Made in Virginia Imports Used as Inputs in Virginia Exports/Imports Deep Dive and Trends Port of Virginia Impact Recap State and Local Government Revenue Impact Looking Forward
Source: Prepared by legislative auditor's staff using information from other states' ports' websites.				

APPENDIX O: FACTORS IMPACTING LOUISIANA PUBLIC PORTS' COMPETITIVENESS

Costs to Shippers

Transport and operating costs are major factors impacting a port's competitiveness because shippers have a responsibility to establish and maintain profitable routes. All else equal, shippers opt for routes that minimize their costs. These costs are affected by multiple factors, including distance; time; cargo requirements; vessel size and capacity; trade imbalances between exports and imports; infrastructure and intermodal connectivity; the regulatory environment; taxes, fees, and other surcharges; and the costs of auxiliary and value-added port services.

Distance and Time

Distance is one of the most basic conditions affecting shippers' transport and operational costs, as shorter distances between ports of origin and destination reduce travel time and operating costs (e.g., fuel costs, crew costs, maintenance and repair, etc.) for shippers. Particularly for international trade, shorter routes allow for more frequent trips at lower costs. For example, a Post-Panamax container vessel carrying 8,000 TEUs travels at a typical speed of 24 knots (~27.6 miles per hour), and covers 1,000 nautical miles in approximately one day and 18 hours. If this ship were to leave the Port of Rotterdam, Netherlands,⁵⁹ it would take just under six days to reach the Port of New York-New Jersey, but almost 8.5 days to reach the Port of New Orleans. For every one round trip from Rotterdam to New Orleans, this ship could make 1.4 round trips to New York-New Jersey. A ship of this size traveling at 24 knots also consumes approximately 225 tons of marine fuel per day. According to the U.S. Department of Agriculture, the average price per ton for marine gas oil over fiscal years 2021-2023 was \$880.19, which equates to \$198,042.23 in fuel costs per day for a typical 8,000-TEU Post Panamax container ship. Exhibit O.1 contains examples of distances, travel times, and fuel costs between select global and U.S. container ports for a typical 8,000 TEU Post-Panamax container ship traveling at a speed of 24 knots:

⁵⁹ The Port of Rotterdam, Netherlands, is the highest-ranked container port in Europe by 2021 TEU volume.

Exhibit O.1				
Example Distances, Travel Times, and Fuel Costs Between Select Global and United States Container Ports				
Destination¹	Distance (Nautical Miles)²	Distance (Statute Miles)²	Travel Time³	Fuel Cost (\$, millions)⁴
From the Port of Rotterdam, Netherlands⁵				
Port of New York-New Jersey (New York)	3,391	3,900	5 Days + 22 Hours	\$1.18
Port of Virginia (Virginia)	3,555	4,088	6 Days + 5 Hours	\$1.23
Port of Wilmington (North Carolina)	3,758	4,322	6 Days + 14 Hours	\$1.30
Port of Charleston (South Carolina)	3,822	4,395	6 Days + 17 Hours	\$1.32
Port of Jacksonville (Florida)	4,023	4,626	7 Days + 1 Hour	\$1.39
Port of Savannah (Georgia)	4,089	4,702	7 Days + 4 Hours	\$1.42
Port of Mobile (Alabama)	4,784	5,502	8 Days + 9 Hours	\$1.66
Port of Gulfport (Mississippi)	4,807	5,528	8 Days + 10 Hours	\$1.67
Port of New Orleans (Louisiana)	4,837	5,563	8 Days + 11 Hours	\$1.68
Port Houston (Texas)	5,058	5,817	8 Days + 20 Hours	\$1.75
Port of Los Angeles (California)	7,755	8,918	13 Days + 14 Hours	\$2.69
From the Port of Shanghai, China⁵				
Port of Los Angeles (California)	5,699	6,554	9 Days + 23 Hours	\$1.98
Port of Mobile (Alabama)	9,979	11,476	17 Days + 11 Hours	\$3.46
Port of Gulfport (Mississippi)	9,997	11,497	17 Days + 12 Hours	\$3.46
Port of New Orleans (Louisiana)	10,010	11,512	17 Days + 12 Hours	\$3.47
Port of Jacksonville (Florida)	10,136	11,656	17 Days + 19 Hours	\$3.51
Port Houston (Texas)	10,149	11,671	17 Days + 18 Hours	\$3.52
Port of Savannah (Georgia)	10,172	11,698	17 Days + 19 Hours	\$3.53
Port of Charleston (South Carolina)	10,173	11,699	17 Days + 19 Hours	\$3.53
Port of Wilmington (North Carolina)	10,222	11,755	17 Days + 21 Hours	\$3.54
Port of Virginia (Virginia)	10,388	11,946	18 Days + 4 Hours	\$3.60
Port of New York-New Jersey (New York)	10,584	12,172	18 Days + 13 Hours	\$3.67

Exhibit O.1 Example Distances, Travel Times, and Fuel Costs Between Select Global and United States Container Ports				
Destination ¹	Distance (Nautical Miles) ²	Distance (Statute Miles) ²	Travel Time ³	Fuel Cost (\$, millions) ⁴
<p>¹ Each destination port is the top container port by 2021 TEU volume for the state listed in parentheses. The Ports of New York-New-Jersey (New York) and Los Angeles (California) are the top US container ports by 2021 TEU volume on the East and West US Coasts, respectively.</p> <p>² Distance in nautical miles is the number of nautical miles from a central position at the port of origin (i.e., the Ports of Rotterdam, Netherlands, and Shanghai, China) to a central position at the destination port, as calculated by the U.S. National Geospatial-Intelligence Agency. A nautical mile is approximately 6,076 feet. Distances were converted to statute miles (i.e., standard miles measuring 5,280 feet) by multiplying nautical miles by 1.15. Statute miles are rounded to the nearest whole mile.</p> <p>³ Travel times are estimates based on a typical Post-Panamax container ship carrying 8,000 TEUs traveling at a speed of 24 knots (~27.6 miles per hour), which can cover 1,000 nautical miles in approximately one day and 18 hours (1.75 days). Travel times shown here assume a constant speed of 24 knots with no slowdowns or stops between the port of origin and the port of destination. They thus represent the hypothetically shortest amount of time it would take to make each trip. Travel times are rounded to the nearest whole hour.</p> <p>⁴ A typical Post-Panamax container ship carrying 8,000 TEUs traveling at 24 knots will consume approximately 225 tons of fuel per day. Fuel costs shown in the "Fuel Costs (\$, millions)" column are estimates based on travel times and the US Department of Agriculture Fiscal Year 2021-2023 average price per ton of marine gas oil (\$880.19). A fuel consumption of 225 tons per day would cost approximately \$198,042.23 per day.</p> <p>⁵ The Ports of Rotterdam, Netherlands, and Shanghai, China, are the top container ports by 2021 TEU volume in Europe and Asia, respectively. The Port of Shanghai is also the number one container port in the world by 2021 TEU volume.</p> <p>Source: Prepared by legislative auditor's staff using information from the Bureau of Transportation Statistics, the U.S. National Geospatial-Intelligence Agency, the U.S. Department of Agriculture, and the American Journal of Transportation.</p>				

Other Transport and Operations Costs

Other transport and operations cost considerations include the following:

- **Cargo requirements** – some products require special packaging, special handling, or are bulky or perishable. For example, coal is easier to transport than fruit or fresh flowers. Insurance requirements for different types of cargo must also be considered, as some cargoes are riskier to move than others.
- **Vessel size and capacity** – larger vessels carry more commodities per trip, which reduces unit transport costs. This is especially true for container ships. Greater vessel capacities have also greatly extended the space demands for port activities. Further, growing ship sizes have implied several new constraints for port sites, such as deeper waterways, larger terminal space (both for ship handling and warehousing), and more efficient inland road and rail access.

- **Trade imbalances between exports and imports** – the ideal ratio between exports and imports is 50/50, as it is more cost-effective for a ship to offload imports and reload with exports at the same port; however, a balanced ratio is uncommon. In container shipping, having more exports than imports means that a port may have to acquire empty containers from elsewhere to fill for export, while having more imports than exports means that a port has extra empty containers that may have to be returned to their destination without cargo. In the latter scenario, a ship may need to transport empty containers. Both cases can increase transportation costs.
- **Infrastructure and intermodal connectivity** – poor and/or inefficient infrastructure creates greater transport costs and delays. Additionally, different modes of transport are characterized by different costs, since each has its own capacity limitations and operational conditions. Good intermodal connectivity is also one of the main criteria used by shippers and logistics companies in port selection. Distribution often requires inland transport services from seaports, including transportation by barge, rail, truck, air, or pipelines.
- **Regulatory environment** – transportation takes place in a complex regulatory environment. Regulations impacting transport and operational costs include customs, labor, environmental, and safety regulations.
- **Taxes, fees, and other surcharges**
– The price of port services (e.g., land lease, cargo handling fees, dockage fees, etc.) directly impacts transportation costs. Tenant companies must pay the agreed-upon price in their lease agreements for the use of port-owned land or facilities, and ports often charge certain cargo-related fees to ships. Shippers also consider taxes levied by governments, such as fuel taxes or tolls for the use of certain transportation facilities.
- **Auxiliary and value-added services** – shippers consider the cost and quality of auxiliary and value-added services offered by ports, such as pilotage, towage, customs, warehousing, and port security.

Not all ports charge the same fees or the same types of fees. For example, 14 (46.7%) of the 30 active ports that responded to our survey said they charge a dockage fee, while 11 (36.7%) said they charge wharfage fees.

Source: 2023 Louisiana Public Ports Survey

Waterway and Port Capacity

It is critical for competitiveness that waterway capacity and both water- and landside port infrastructure be adequate and appropriate for port and port customer needs. Routine channel maintenance and disposal of

dredge spoils is one of the biggest issues for many Louisiana ports, particularly those in the coastal region. Most of the waterways in the state need funds for maintenance dredging, which must be done constantly regardless of water depth, because rivers are always moving and carrying sediment. Without the capability to meet customers' needs, businesses may relocate and/or ship elsewhere.

Ports accommodating waterborne vessels must also have the necessary water- and landside infrastructure for these vessels to dock and load/unload. This infrastructure includes permanent facilities and capital equipment, such as port terminals, docks, wharves, on- or near-dock rail, navigation aids, cranes, etc. Without the necessary infrastructure to support customer needs, businesses may seek opportunities at other ports. According to DOTD, much of the dockside infrastructure at Louisiana's ports needs to be updated, upgraded, or replaced because it is either incapable of handling cargoes or too old. According to our survey results, funding for infrastructure development and/or maintenance is the most pressing concern for Louisiana's port system as a whole. DOTD currently has a \$144.6 million backlog in port infrastructure needs approved for funding through the Port Priority Program.

According to several stakeholders, infrastructure alone is not sufficient to be competitive because market forces are what dictate the flow of cargo. Companies choose where to establish their businesses, what infrastructure they need, and where to ship their products. In the words of one port we interviewed, it is not as simple as "if you build it, they will come."

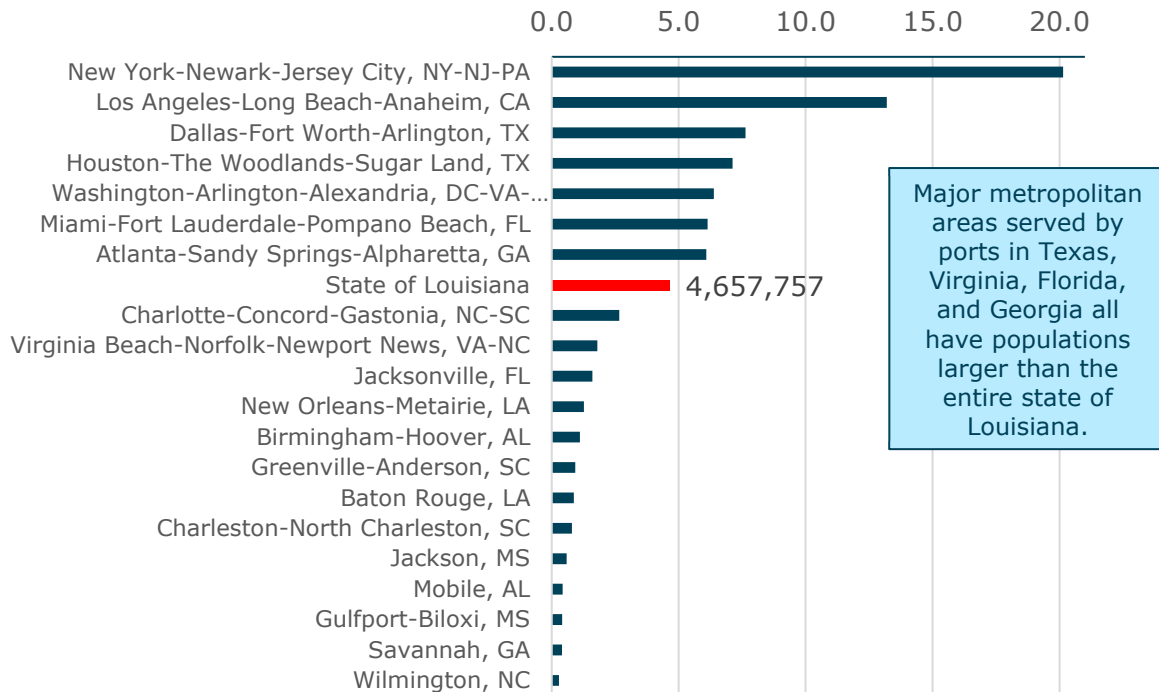
Source: Stakeholder interviews

Population, Distribution, and Intermodal Connectivity

Ports in proximity to large population centers are generally more competitive than those without access to large consumer bases. Some major metropolitan areas served by ports in Texas, Virginia, Florida, and Georgia have larger populations than the entire state of Louisiana. Because consumption is the last link in the supply chain, it is more cost-effective for businesses to ship their goods close to where they will be consumed. Areas with larger populations constitute a larger consumer market for finished goods via retail distribution, and ships are driven to areas that generate and consume cargo. Exhibit O.2 shows the 2020 population of the state of Louisiana compared to the 2020 populations of the largest metropolitan area in selected states (including Louisiana), as well as the metropolitan areas directly served by these states' top container ports.⁶⁰

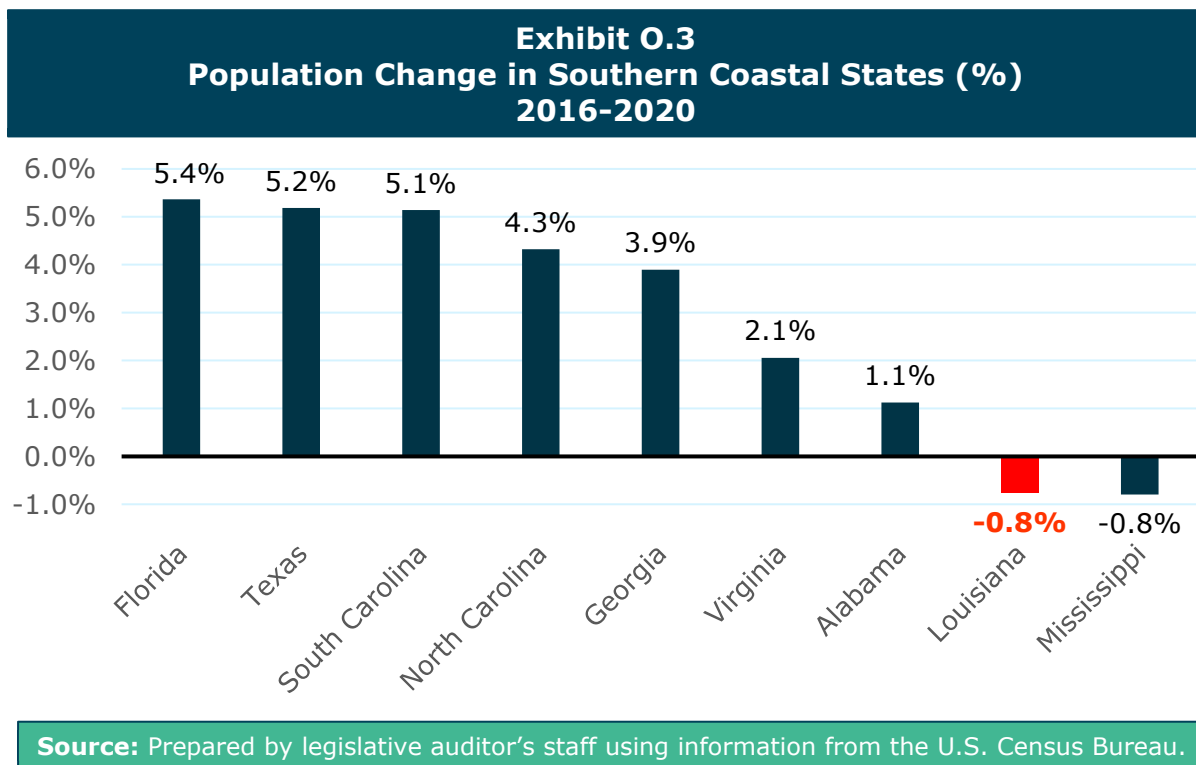
⁶⁰ The metro areas of New York-Newark-Jersey City and Los Angeles-Long Beach-Anaheim are included for comparison because (a) they are the two largest metropolitan areas in the United States, and (b) they are served by the highest-ranked container ports by 2021 TEU volume on the east and west coasts, respectively.

Exhibit O.2 Select Major and Port Metropolitan Area Populations 2020 (millions)



Source: Prepared by legislative auditor's staff using information from the 2020 U.S. Census.

Not only is Louisiana's total population smaller than some metropolitan areas in competitor states, but Louisiana is losing population while competitor states are growing. According to the Port of New Orleans, it is essential for Louisiana's ports to attract industry and grow imports to remain competitive, but with declining population, this will become increasingly difficult to do. Between 2016-2020, Louisiana experienced a -0.8% decline in population, meaning that more people died or left the state than were born in or moved to Louisiana. Nominally, a -0.8% growth rate between 2016-2020 equates to just over 36,000 people. If population loss at this rate were to continue, however, Louisiana will have lost 4.6% of its 2020 U.S. Census population in 2040. Of the eight other southern coastal states we evaluated, only Mississippi has experienced similar population decline since 2016; all other states are growing, with Florida, Texas, and South Carolina growing at the fastest rates. Exhibit O.3 shows the percentage change in the populations of southern coastal states from 2016-2020.



Even if ports lack direct access to nearby population centers, robust distribution networks and access to high-capacity, high quality, and reliable intermodal transportation systems can increase port competitiveness. While Louisiana has a smaller number of distribution and logistics establishments than some competitor states like Texas, Florida, and Georgia, if the totals are adjusted for population, Louisiana fares similarly or better than many southern coastal states. Ports are only one node in the entire supply chain, but they serve as important gateways within complex transportation networks that link producers to consumers. Physical distribution is the range of activities involved in the movement of goods from points of production to final points of sale and consumption. This includes all of the functions of movement and handling of goods, particularly transportation services, transshipment and warehousing services, trade, wholesale and, in principle, retail.

Because it is often impractical to ship goods directly from producers to retailers or consumers, distribution centers act as a buffer where products are assembled, packaged, stored, etc. Distribution centers tend to focus on the demands of customers, so they are inextricably linked to consumer markets and tend to locate where there is access to sufficient transportation networks and labor. Exhibit O.4 shows the total number of wholesale, retail, and transportation and warehousing establishments in select states, as well as the number of these establishments per 100,000 population in each state.

Exhibit O.4 Number of Establishments by Key Distribution and Logistics Industry Sectors* in Select States, Total and Population Adjusted** 2021						
State	Wholesale Trade (Total)	Wholesale Trade (per 100k)	Retail Trade (Total)	Retail Trade (per 100k)	Transportation and Warehousing (Total)	Transportation and Warehousing (per 100k)
Alabama	4,751	95	16,539	329	3,014	60
California	50,372	127	95,718	242	27,471	69
Florida	27,303	127	68,189	317	15,876	74
Georgia	11,552	108	32,230	301	7,487	70
Louisiana	4,871	105	14,786	317	3,435	74
Mississippi	2,431	82	10,384	351	2,080	70
New Jersey	12,055	130	26,993	291	7,203	78
New York	24,479	121	65,633	325	11,541	57
North Carolina	10,402	100	32,327	310	6,240	60
South Carolina	4,458	87	16,679	326	2,773	54
Texas	30,462	105	75,801	260	20,429	70
Virginia	6,174	72	23,932	277	4,949	57

* The **wholesale trade sector** comprises establishments engaged in wholesaling merchandise and rendering services incidental to the sale of merchandise, including for the outputs of agriculture, mining, manufacturing, and certain information industries. The wholesaling process is an intermediate step in the distribution of merchandise. The **retail trade sector** comprises establishments primarily engaged in retailing merchandise and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise. The **transportation and warehousing sector** includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation (i.e., air, rail, water, road, and pipeline).

** Population-adjusted establishments are displayed as the number of each type of establishment per 100,000 population in each state according to 2020 U.S. Census populations, and rounded to the nearest whole number. This allows for a direct comparison between states with large population differences (e.g., Louisiana and Texas).

Source: Prepared by legislative auditor's staff using information from the U.S. Census Bureau's Business Dynamics Statistics.

Intermodal connections are necessary to distribute raw materials and goods from seaports to inland ports or other hinterland (i.e., inland areas) destinations, and vice versa. Shippers and port customers consider the reliability, capacity, frequency, and costs of inland transport services by truck, rail, inland barge, and pipelines. Port competitiveness is increasingly

derived from access to inland areas/hinterlands, and a poor transportation system can negatively affect the competitiveness of regions and their economic activities and thus have a negative impact on economic opportunities and employment. While most ports are adding capacity to address growing freight volumes, their success is contingent on the capacity of, and ease of access to, other modes of transportation such as roads and rail. As of 2017,⁶¹ Louisiana has fewer intermodal facilities connected to the National Highway System than several other southern coastal states, as shown in Exhibit O.5.

While some ports in Louisiana have greater access to rail, highways with at least four lanes, and air transportation options than others, Louisiana is currently facing a \$19.6 billion backlog in overall transportation needs. Additionally, inland waterway transportation is an essential component of Louisiana's transportation system, but according to the 2023 *Future of Louisiana Waterways* study, Louisiana's waterways are currently underutilized in terms of their potential and capacity. Other states, such as Alabama, North Carolina, and Texas, are making large strategic investments in both their ports and their intermodal transportation networks, and these investments are likely to increase their transportation efficiencies and attract greater business to their ports and states.

Exhibit O.5				
Intermodal Connections to the National Highway System in Southern Coastal States				
2017*				
State	Airport	Port	Truck/Rail	Total
Texas	19	43	19	81
Florida	25	14	12	51
Mississippi	3	22	2	27
Georgia	4	5	13	22
Louisiana	8	8	5	21
Virginia	7	6	3	16
North Carolina	9	2	4	15
Alabama	4	5	4	13
South Carolina	4	4	2	10

Note: According to the Federal Highway Administration's (FHWA), a facility qualifies as a National Highway System Intermodal Connector if it moves the equivalent of at least 100 trucks of freight per day in each direction on the principal connecting route.
* The FHWA updated intermodal connector data for Florida and Texas in 2022. Data for all other states are from 2017.
Source: Prepared by legislative auditor's staff using information from the Federal Highway Administration.

⁶¹ These are the most recently published Federal Highway Administration data on intermodal connectivity.

Port Specialties

Ports that operate within a similar environment (e.g., geographic area, regulatory conditions, etc.) can increase their competitiveness by developing or offering specialized services. Port specialties include activities, services, industries, or commodities that are unique. Port specialties may be based on geographic location (e.g., project cargo), port technological or process developments (e.g., fully automated container terminals), or industry needs (e.g., barge fleet, value-added services, etc.). Port specialties can be particularly important since contemporary supply chains are a series of interlinking functions that can, in many cases, be better offered by a network of entities. Ports retain their competitiveness by understanding user expectations and adjusting their actions accordingly.

Other

Other factors, such as access to labor, the regulatory environment, or intangible features like a port's reputation, can also impact a port's competitiveness. Ports are important job creators. Shipping, cargo, and industrial activities and services in port areas generate direct employment benefits, but labor must be available to fill these positions. Access to a skilled labor force contributes to the competitiveness of ports. Government authorities can impose a variety of regulations that impact the transportation industry, including labor, safety, and environmental regulations. Particularly, modern efforts to promote environmental sustainability represent a growing area of responsibility for ports and transport operators. International regulations restricting fueling options have triggered interest in alternative sources of power for vessels, and ports' ability to provide on-shore power supplies or liquefied natural gas (LNG) bunkering is emerging as a key performance indicator. However, the regulatory framework that ports operate under may increase the cost of doing business. Other factors, such as intangible traits like reliability along with reputation, and historical, psychological, political, and personal factors can impact shippers' decisions when choosing a port.

APPENDIX P: AIR DRAFT RESTRICTIONS FOR BRIDGES OVER MAIN CHANNELS AT LOUISIANA'S ACTIVE PUBLIC PORTS

Port	Bridges over Main Channels	Air Draft
Deep-water Ports		
Port of Greater Baton Rouge	Sunshine Bridge	171.0'
	I-10 Horace Wilkinson Bridge	174.0'
	US-190 Huey P. Long-O.K. Allen Bridge	111.0'
	John James Audubon Bridge	135.0'
	Mo Pac Railroad Bridge – lift	73.0' when open
	LA-1 Port Allen Canal Bridge	65.0'
Port of Lake Charles	I-210 Israel LaFleur/Calcasieu High Bridge	143.0'
Port of New Orleans	Crescent City Connection	171.0'
	Huey P. Long Bridge	153.0'
	St. Claude Avenue Bridge – bascule	no limit when open
	Judge William Seeber Bridge – lift	156.0' when open
	Florida Avenue Bridge – lift	156.0' when open
	Almonaster Avenue Bridge – bascule	no limit when open
	I-10 Highrise Bridge	115.0'
	Danziger Bridge – lift	125.0' when open
	Seabrook Railroad Bridge – bascule	no limit when open
	Senator Ted Hickey Bridge – bascule	no limit when open
Port of South Louisiana	Crescent City Connection	171.0'
	Huey P. Long	153.0'
	Hale Boggs–Luling Bridge	158.0'
	Gramercy Bridge	164.0'
	Sunshine Bridge	171.0'
Coastal ports		
Port Manchac	I-55 Manchac Swamp Bridge	56.0'
	Lake Pontchartrain Causeway	varies 10.0-50.0'; partial bascule has no limit when open
	Norfolk Southern Lake Pontchartrain Bridge - bascule	no limit when open
	Maestri Bridge – bascule	no limit when open
	I-10 Twin Span Bridge	73.0'
	Rigolets Bridge	72.0'
	CSX Rigolets Pass Bridge - swing	no limit when open
Port of Delcambre	LA-14 Delcambre Bridge – lift	150.0' when open
Port of Grand Isle	Andy Valence Memorial Bridge	47.0'
Port of Mermentau	Grand Chenier Bridge – swing	no limit when open

Port	Bridges over Main Channels	Air Draft
	LA-14 Mermentau River Bridge	50.0'
	US-90 Mermentau River Bridge	44.0'
Port of Morgan City	Berwick Bay Railroad Bridge - lift	73.0 when open
	E.J. "Lionel" Grizzaffi Bridge	85.0'
	Long-Allen Bridge	57.3'
Port of Terrebonne	Dularge Bridge - bascule	no limit when open
	Houma Navigation Bridge - swing	no limit when open
	Houma Twin Span	73.0'
	Prospect Bridge	73.0'
	Dulac Bridge - pontoon	no limit when open
Port of Vermilion	Perry Bridge - lift	55.0' when open
	Vermilion River Bridge - lift	57.0' when open
	Abbeville Veterans Memorial Bridge - lift	56.1' when open
Port of Vinton	Sabine Lake Causeway Bridge	40.0'
	LA-27 Ellender Bridge - lift	135.0' when open
Port of West St. Mary	LA-319 Louisa Bridge - bascule	no limit when open
	LA-317 Intracoastal Waterway Bridge	73.0'
West Calcasieu Port	LA-27 Ellender Bridge - lift	135.0' when open
Inland Ports		
Central Louisiana Regional Port	Union Pacific Railroad Bridge - lift	65.5' when open
	Curtis Coleman Memorial Bridge	73.70'
	Gillis William Long Bridge - lift	64.5' when open
	Alexandria-Pineville Expressway	64.5'
Greater Ouachita Port	I-20 Highway Bridge	72.6'
	Desiard Street Endom Bridge - swing	no limit when open
	Kansas City Southern Railroad Bridge - swing	no limit when open
	LA-80 Lea Joyner Bridge - bascule	no limit when open
Madison Parish Port	I-20 Vicksburg Bridge	116.2'
	US-80 Vicksburg Bridge	116.3'
Natchitoches Parish Port	Grand Ecore Highway Bridge	71.3'
Port of Avoyelles	LA-1 Simmesport Bridge	114.4'
	Kansas City Southern Railroad Bridge - swing	no limit when open
Port of Caddo-Bossier	Jimmie Davis Bridge	66.0'
	Shreveport-Barksdale Bridge	67.0'
	Union Pacific Railroad Bridge - swing	no limit when open
	I-20 Red River Bridge	76.6'
	Illinois Central Railroad Bridge - swing	no limit when open
	US-79 and 80 Bridge	76.0'
	I-220 Bridge	68.9'

Port	Bridges over Main Channels	Air Draft
Port of Columbia	Governor John J. McKeithen Bridge	86.4'
	Mo Pac Railroad Drawbridge - lift	94.0' when open
Port of Krotz Springs	US-190 Frank and Sal Diesi Bridge	90.7'
	Krotz Springs Union Pacific Railroad Bridge - swing	no limit when open
Port of Lake Providence	I-20 Vicksburg Bridge	116.2'
	US-80 Vicksburg Bridge	116.3'
Port of Vidalia	Natchez-Vidalia Bridge	126.0'
Red River Parish Port	US-84 Coushatta Bridge	60.2'
Tensas Parish Port	Natchez-Vidalia Bridge	126.0'
	I-20 Vicksburg Bridge	116.2'
	US-80 Vicksburg Bridge	116.3'

Note: Unless otherwise specified, air draft restrictions are presented in feet between the water level and the bottom of the structure's highest span at the appropriate reference gage zero reading or at mean high water. Bridges are ordered from south to north and/or west to east.

Source: Prepared by legislative auditor's staff using information from DOTD, the U.S. Army Corps of Engineers, the National Oceanic and Atmospheric Administration, unaudited responses from the 2023 Louisiana Public Ports Survey, and additional publicly available information for specific bridges.