



Port Infrastructure Development Grants and Port Planning
and Investment Toolkit
Norfolk, VA
AAPA

Oct 14, 2019

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MARAD
U.S. MARITIME ADMINISTRATION



Overview

- The transportation system moved 17.7 billion tons of goods valued at over \$18.1 trillion in 2016.⁽¹⁾
- Trucks carried 62.7 percent of the tonnage, 11.1 billion tons, and 61.9 percent of the value.
- Rail moved 1.6 billion tons, 8.9 percent of goods, and water moved 0.8 billion tons, or 4.5 percent, in 2016. Remainder was carried by air, pipeline, or a combination of modes.
- Goods valued at \$527 billion moved on all waterways of the United States.
- Transportation's contribution to the U.S. GDP was \$1,066.9 billion in 2016 according to the U.S. Department of Transportation's Bureau of Transportation Statistics (BTS).⁽²⁾
- For-hire transportation contributed \$562.4 billion or 2.97 percent to the U.S. GDP.
- In-house transportation contributed another \$504.5 billion or 2.66 percent.
- Inland water transportation contributed \$19.2 billion to U.S. GDP.
- For-hire water transportation contributed \$16.5 billion and in-house contributed \$2.8 billion.⁽³⁾

(1)Transportation Statistics Annual Report, 2018. U.S. Department of Transportation Bureau of Transportation Statistics.

(2)In-house transportation is business-related transportation. Business-related transportation includes privately owned and operated vehicles of all body types, used primarily on public rights of way, and the supportive services to store, maintain, and operate those vehicles. For-hire transportation consists of the services provided by transportation firms to industries and the public on a fee-basis. For more information, see: https://www.bts.gov/transportation_satellite_accounts.

(3)This GDP contribution is for all water transportation in the United States and includes only the direct contribution from transportation. The inland waterways are not differentiated. Indirect and induced impacts are not included.

Continental Interstate Highway System

There are approximately **4,071,000 miles** of roads in the United States, 2,678,000 miles paved and 1,394,000 miles unpaved.

The Interstate System is 46,876 miles long. The *Federal-Aid Highway Act of 1956* imposed a statutory limitation on the Interstate mileage that would be built with Interstate Construction funds under the new program (41,000 miles at the time).



Rail System

- The U. S. had about 138,500 railroad route-miles in 2017, including approximately 93,000 miles owned and operated by the seven Class I railroads.⁽¹⁾
- About 570 local and regional railroads operated the remaining 45,500 miles.
- Over the past 50 years, Class I railroads and connecting facilities have developed increasingly efficient ways to carry and transfer cargo, allowing more cargo to be carried with fewer railcars. Average freight car capacity was about 93 tons in 2000 and reached 105 tons in 2016 due to construction of larger cars, particularly new hopper and tank cars.
- Freight rail ton-miles tripled to 1.8 trillion between 1960 and 2016 despite mileage declining by half.
- Class I railroads had approximately 184,000 network route miles before the Railroad Revitalization and Regulatory Reform Act of 1976, which led to the sale of rail lines to short-line railroads or the complete abandonment of rail-lines permanently reducing route-miles.
- The Staggers Rail Act of 1980 is federal law that deregulated the railroad industry, ending restrictions on rate setting and allowing rail carriers to set market rates and abandon unprofitable lines.
- Since passage of the Staggers Act, the modal share of grains, oilseeds, and grain products hauled by rail has declined from 50 percent in 1980 to about 25 percent in 2016.⁽²⁾

(1) Association of American Railroads, Railroad Facts, Statistical Highlights (Washington, DC: Annual Issues), available at <https://www.aar.org/> as of August 2018.

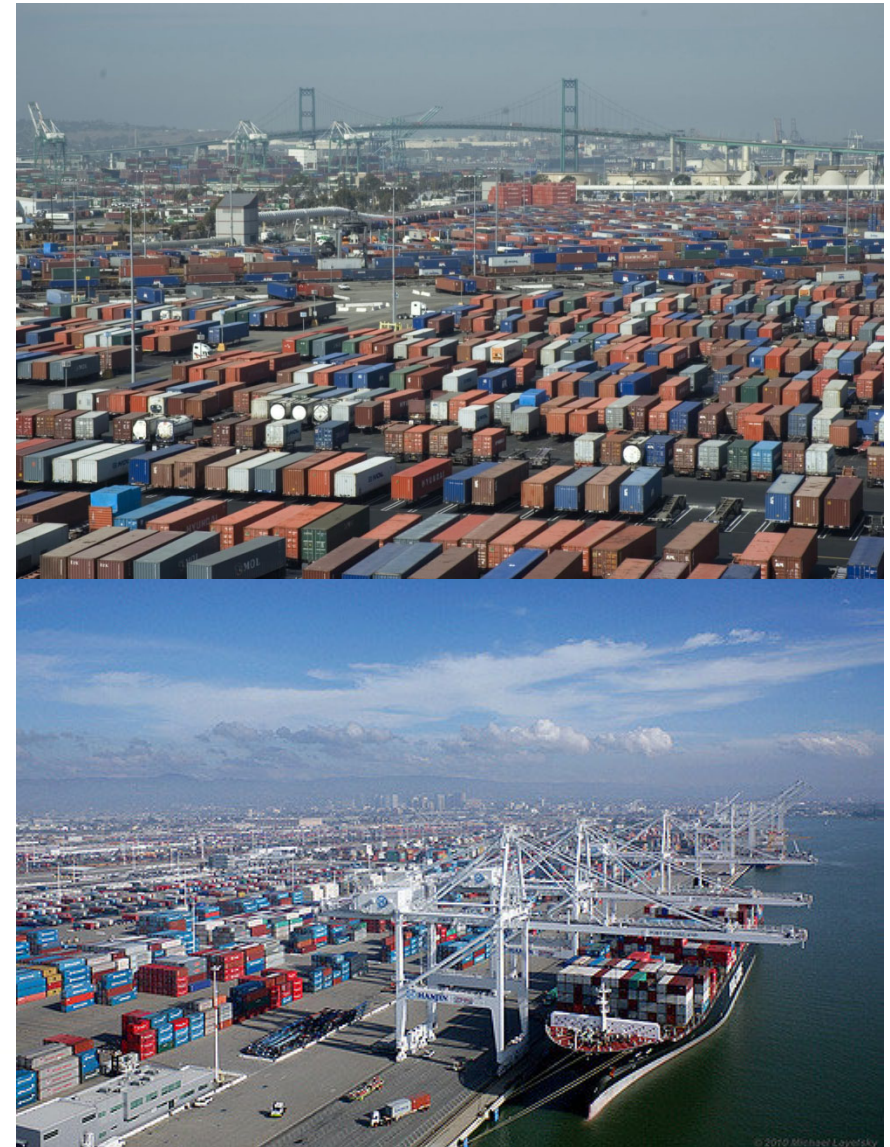
(2) Chang, Kuo-Liang “Matt”, Peter Caffarelli, Jesse Gastelle, and Adam Sparger. Transportation of U.S. Grains: A Modal Share Analysis, April 2019. U.S. Dept. of

Inland Waterways System

- The upper and lower Mississippi River,
 - Illinois River,
 - Missouri River,
 - McClellan-Kerr Arkansas River,
 - Ohio River System,
 - Tennessee River, and
 - Gulf Intracoastal Waterway.
-
- The inland waterways system consists of nearly 12,000 miles of navigation channels with 193 lock sites and 239 locks.
 - More than half of all barge trips traverse at least one lock.
 - Locks and dams make it possible for safe and efficient transit of commodities and products.
 - The 2018 fleet of barges totaled 22,801 of which 19,141 were dry cargo barges.
 - This total includes 12,893 covered barges, which are used to move agricultural commodities, such as soybeans and corn.⁽¹⁾

(1) Agribusiness

- More than 300 U.S. ports serve as Gateways to world markets for U.S. products and as intermodal hubs for exports and domestic distribution.
- Waterborne commerce contributes more than \$649 billion annually to the U.S. GDP, and sustains more than 13 million jobs.
- 42% of the value of exports and imports (71% by volume) leaves or enters the U.S. by water.
- Contributes over \$212 billion in annual port sector Federal/state/local taxes.
- It has been identified that over \$29B in necessary port infrastructure investments need to be funded.



- **SAFETY:** Reduce Transportation-Related Fatalities and Serious Injuries Across the Transportation System. Work with State, local, Tribal, and private partners; address human behaviors to reduce safety risks; improve safety data analysis to guide decisions; continue to employ safety countermeasures; ensure that automation brings significant safety benefits; and pursue performance-based rather than prescriptive regulations. **(Safety & Security)**
- **INFRASTRUCTURE:** Invest to Ensure Safety, Mobility and Accessibility and to Stimulate Economic Growth, Productivity and Competitiveness for American Workers and Businesses. Work with State, local, Tribal, and private partners to guide investments that stimulate economic growth, improve the condition of transportation infrastructure, and enable the efficient and safe movement of people and goods. Provide guidance, technical assistance, and research that leverages Federal funding, accelerates project delivery, reduces project lifecycle costs, and optimizes the operation and performance of existing facilities. Use innovative forms of financing and project delivery, encourage partnerships between the public and private sectors, and strategically balance investments across various modes of transportation to promote greater efficiencies for the Nation's economy and people. **(Sustainable Growth; Mobility; Safety & Security)**
- **INNOVATION:** Lead in the Development and Deployment of Innovative Practices and Technologies that Improve the Safety and Performance of the Nation's Transportation System. Emerging technologies are transforming our transportation system. Lead in guiding research investments and facilitating the deployment of beneficial transportation technologies. Engage with the private and public sectors, to leverage Federal resources to support technology transfer and ensure the safety and security of new technologies. **(Transition; Operational Excellence; Safety & Security)**
- **ACCOUNTABILITY:** Serve the Nation with Reduced Regulatory Burden and Greater Efficiency, Effectiveness and Accountability. Streamline regulations and improve organizational effectiveness of the Department. DOT will raise accountability standards that improve the efficient use of taxpayer funds. By streamlining business processes and investing in workforce development, DOT will enhance its responsiveness and adaptability to the demands of a rapidly evolving industry. **(Operational Excellence; Transition)**

Office of Ports & Waterways:

- 10 Gateway Offices in U.S. port cities
 - Provide outreach to stakeholders re: Federal programs related to ports and waterways.
 - Build relationships within the region and provide technical assistance.
- Administers Federal Assistance for port and intermodal infrastructure development
 - \$292.5M or Port Infrastructure Development Grants.
 - \$1.03B grants for \$2.53B in projects awarded to ports across the USA in BUILD/INFRA Grants.
 - Marine Highway Grants.
 - Port Conveyance Property Sale of surplus Federal land for maritime use.
 - Creating 'coaching compliance' outreach to help stakeholders with Federal Assistance requirements.
- Deepwater ports
 - Licensing of offshore Deepwater Energy Ports for the import and export of oil and natural gas products.



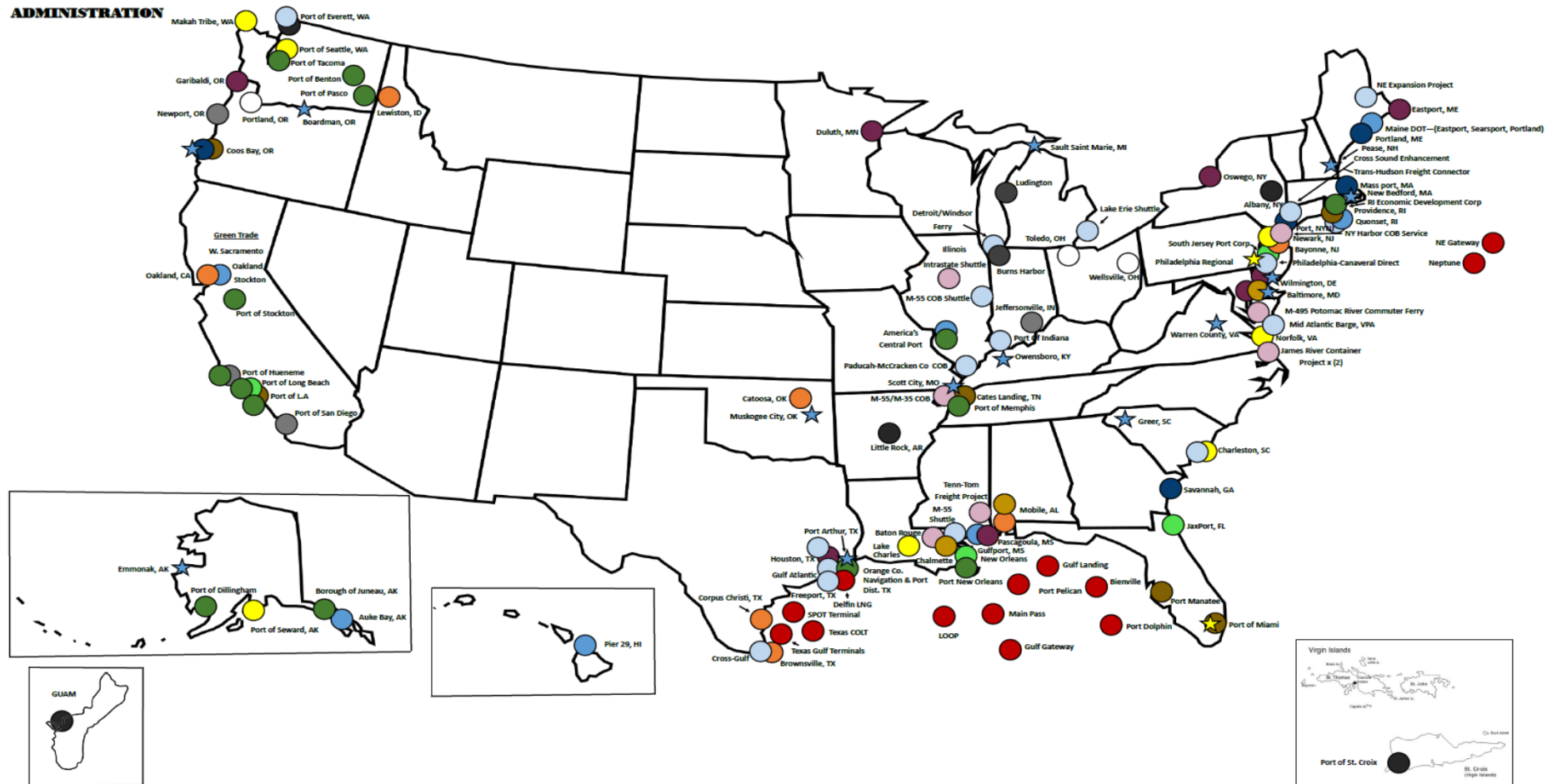


U.S. Department of Transportation

MARITIME ADMINISTRATION

PORTS & WATERWAYS

INFRASTRUCTURE PROJECTS & SERVICES



○ ARRA Grants 2009 (3)	● TIGER IV FY 2012 (7)	● TIGER VIII FY 2016 (5)	● DEEP WATER PORTS (13)	★ INFRA FY 17/18 (2)
● TIGER I FY 2009 (7)	● TIGER V FY 2013 (8)	● TIGER VIII FY 2017 (3)	● PORT CONVEYANCE (14)	★ BUILD 2018 (14)
● TIGER II FY 2010 (6)	● TIGER VI FY 2014 (7)	● FASTLANE 2016 (5)	● MH PROJECTS (23)	
● TIGER III FY 2011 (4)	● TIGER VII FY 2015 (4)	● FASTLANE II 2017 (2)	● MH GRANTS (12)	

- Provide Port and Intermodal Planning Assistance.
- Access Funding and Financing Options for Port Modernization and Expansion.
- Educate re: P3 Opportunities.
- Expand domestic movement of freight by waterborne transportation.
- Educate and Administer Grants and Loans for Projects:
 - These services are offered to Port Authorities, State Departments of Transportation, Metropolitan Planning Organizations, and Regional and Local communities.
 - Also offered to privately owned port terminal operators, vessel operators, export industry groups, manufacturers, and other stakeholders.
- Port innovation is trending towards an increased use of technology to improve efficiency and safety.
- MARAD is engaged in a multi-year research program that seeks to achieve two primary goals:
 - To identify opportunities to conduct research that addresses critical freight movement and intelligent transportation system (ITS) infrastructure gaps, and
 - To identify opportunities for pilot projects and programs to be deployed including technology transfer.

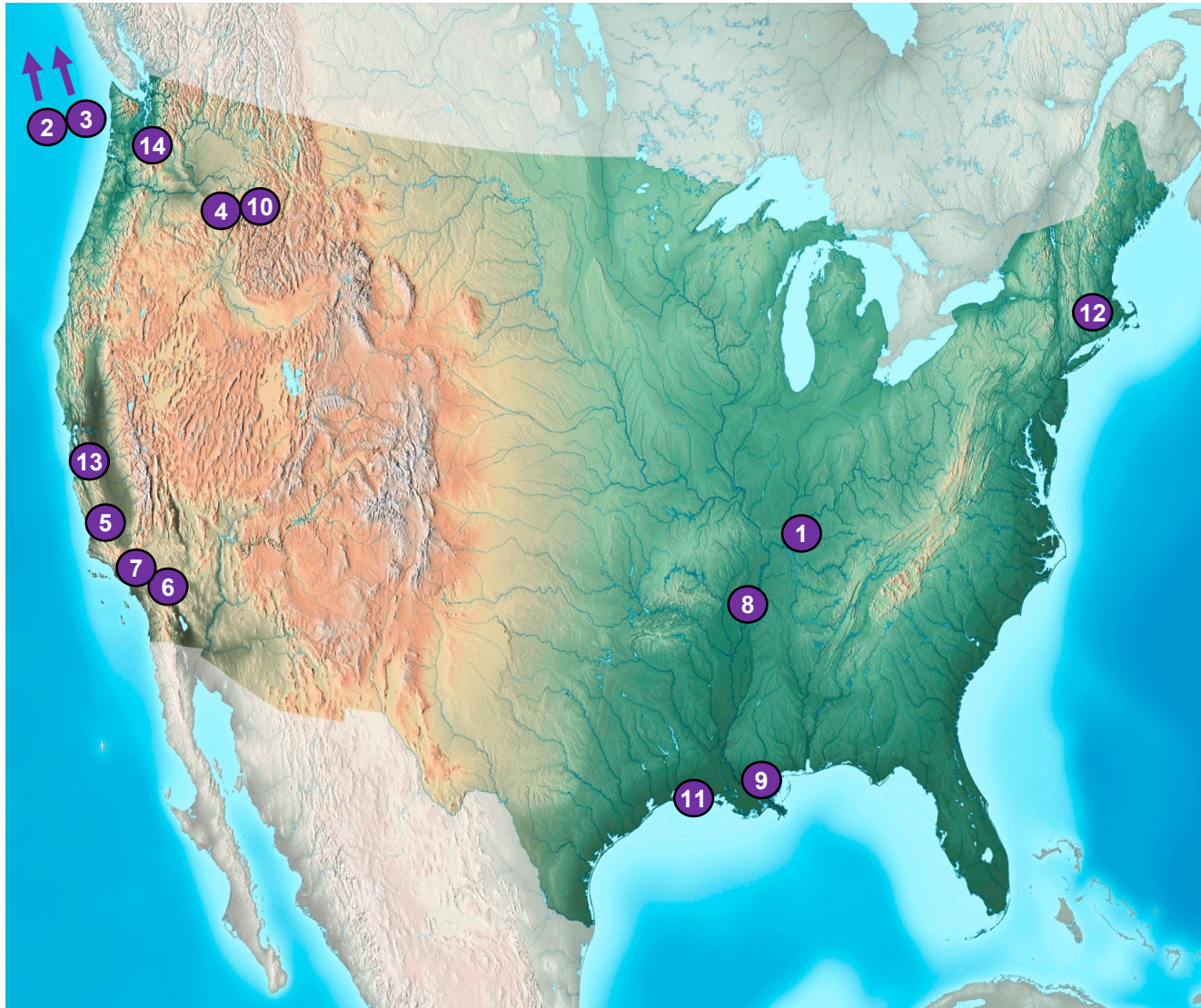
- Works with manufacturers, beneficial cargo owners, vessel operators, ports, and other public and private stakeholders to build economically competitive alternative supply chains that utilize our waterways.
- Incorporates routes into the National Freight Strategic Plan and National Multimodal Freight Network for an integrated transportation system.
- Administers grants to address capital risks and other obstacles to service development:
 - FY 2010 - \$7M 3 grants awarded
 - FY 2016 - \$5M 6 grants awarded
 - FY 2017 - \$5M 6 grants awarded
 - FY 2018 - \$7M 3 grants awarded
 - FY 2019 - \$7M Grants under review.
 - FY 2020 - TBD



The America's Marine Highway System includes the vast majority of the navigable waterways of the United States, including rivers, coastlines and the Great Lakes. The System also includes the waters in and around the territories of Puerto Rico and American Samoa.

- Transfers surplus Federal real property to states and local governments at no cost for the development and enhancement of port facilities and intermodal terminals.
- The program is designed to create jobs and revitalize communities impacted by military base closures or other Federal actions, support the provision of port capacity and U.S. port infrastructure, improve goods movement, and meet future national defense needs.
- Since its inception in 1994, MARAD's Port Conveyance Program has transferred over 2,830 acres of former Federal property to facilitate the expansion of the nation's Marine Transportation System.
- Uses of transferred properties include development of intermodal transfer and warehousing stations to expedite intermodal cargo transfers at U.S. ports, enhancement of commercial boating and recreational facilities, and expansion of administrative office space.
- In early 2019, the Port of Benton offered the Federal government \$3M to purchase 71.15 acres of surplus land, which it managed for over 20 years through the Port Conveyance Program. The sale was completed on August 7, 2019.

Port Conveyance Program: Location of Current Conveyances



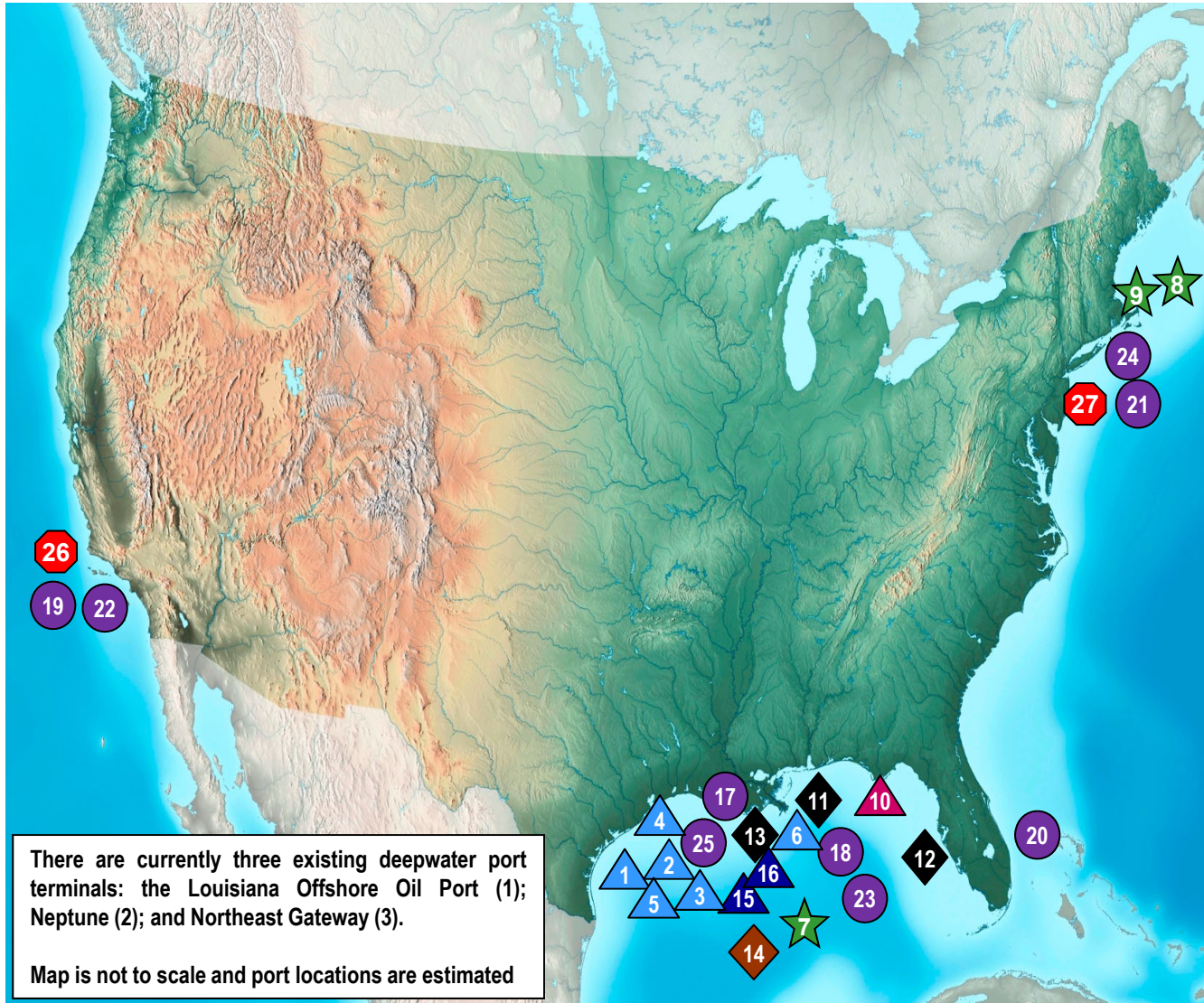
- 1: America's Central Port**
752 Acres: Granite City, IL
- 2: City of Dillingham**
2.38 Acres: Dillingham, AK
- 3: City and Borough of Juneau**
1.91 Acres: Juneau, AK
- 4: Port of Benton**
71.15 Acres: Richland, WA
- 5: Port of Hueneme**
33 Acres: Hueneme, CA
- 6: Port of Long Beach**
407.35 Acres: Long Beach, CA
- 7: Port of Los Angeles**
48.32 Acres: Los Angeles, CA
- 8: Port of Memphis**
42.64 Acres: Memphis, TN
- 9: Port of New Orleans**
12.87 Acres: Jefferson Parish, LA
- 10: Port of Pasco**
2.16 Acres: Pasco, WA
- 11: Orange County Navigation & Port District**
13.73 Acres: Orange, TX
- 12: Rhode Island Commerce Corporation**
96 Acres: Davisville, RI
- 13: Port of Stockton**
1,433 Acres: Stockton, CA
- 14: Port of Tacoma**
9.03 Acres: Tacoma, WA

Last updated: September 18, 2019

- Designed to streamline review and construction of liquid natural gas (LNG) and oil deep-water ports.
- Promotes maritime commercial mobility needs, national security and environmental protection.
- In 2018, the Louisiana Offshore Oil Port (LOOP), a licensed deepwater port, transitioned to add bi-directional import and export capability:
 - Since 2018, LOOP has executed at least seven major export crude deliveries to energy markets abroad, primarily in Asia.
- In the past year, MARAD has received one LNG and five oil deepwater port export license applications with the expectation of receiving several more by the end of 2020.



Deepwater Port Location and Status Map



There are currently three existing deepwater port terminals: the Louisiana Offshore Oil Port (1); Neptune (2); and Northeast Gateway (3).

Map is not to scale and port locations are estimated

Applications Currently Under Review

1. Bluewater SPM (Oil [Export])
2. COLT (Oil [Export])
3. GulfLink (Oil [Export])
4. SPOT Terminal Services (Oil [Export])
5. Texas Gulf Terminals (Oil [Export])
6. West Delta LNG (LNG [Export])

Approved: Operational Facilities

7. Louisiana Offshore Oil Port (Oil [Bidirectional])
8. Neptune (LNG [Import])
9. Northeast Gateway (LNG [Import])

Approved: License Issuance Pending

10. Delfin (LNG [Export])

Approved: Surrendered Licenses

11. Gulf Landing (LNG [Import])
12. Port Dolphin (LNG [Import])
13. Port Pelican (LNG [Import])

Approved: Decommissioned

14. Gulf Gateway (LNG [Import])

Approved: Withdrawn After Record of Decision and Prior to License Issuance

15. Bienville (LNG [Import])
16. Main Pass Energy Hub (LNG [Import])

Withdrawn Prior to Record of Decision

17. Beacon Port (LNG [Import])
18. Calypso (LNG [Import])
19. Clearwater Port (LNG [Import])
20. Compass Port (LNG [Import])
21. Liberty Natural Gas (LNG [Import])
22. Oceanway Secure Energy (LNG [Import])
23. Pearl Crossing (LNG [Import])
24. Safe Harbor Energy (LNG [Import])
25. Texas Offshore Port System (Oil [Import])

Disapproved Prior to Record of Decision

26. Cabrillo Port (LNG [Import])
27. Port Ambrose (LNG [Import])

Ongoing ITS JPO Initiatives

- **Intelligent Transportation Systems Joint Program Office (ITS JPO) Mission Statement:**

“Conduct research, development, and education activities to facilitate the adoption of information and communication technology to enable society to move more safely and efficiently.”

- **ITS Strategic Plan (2015-2019) ... One of two key strategic priorities:**

“Advancing Automation: Shapes the ITS Program around the research, development, and adoption of automation-related technologies as they emerge.”

Previous Work

- **State of the Practice and Business Case Assessment (November 2017)**

Ongoing

- **Port Planning & Investment Toolkit ITS Module (May 2019)**
- **Truck Staging Study – Autonomous Truck Queuing Feasibility Study (May 2019)**

Future

- **Port Autonomous/Connected Drayage Truck Development and Testing (FY 2019-2021)**

State of the Practice/Business Case Analysis

- Study completed in 2017.
- 20 ITS technologies used at U.S. ports identified; four analyzed in detail:
 - Port Community System (PCS)
 - Queue Detection (QD)
 - Truck Appointment System (TAS)
 - Advanced Transportation/Freight Information and Security Systems (ATMIS/FRATIS)



Photo credits:
www.pxhere.com

ITS MARAD Truck Staging

- Study completed in May 2019
- Collaborative study with Federal Motor Carrier Safety Administration
- Batelle (with assistance from Thomas Phelan, Keith Chase, Gannett Fleming)
- A fifth technology beyond the four from the Phase 1 study was analyzed in detail:

Project Objective: “To determine the state of the practice regarding truck staging, including access, queuing, and parking, at maritime ports and to identify port operators’ and trucking industry needs; and to perform an economic feasibility study of automated truck queuing as a technology solution.”

Next Steps

- **Continue industry and public agency stakeholder collaboration in automated vehicle technology development.**
- **Raise awareness among port owners and operators, State DOTs, and MPOs, as technologies continue to emerge.**
- **Enable prospective applicants to more effectively compete for USDOT grant opportunities (e.g., INFRA, BUILD, and ATCMTD).**
- **Continue to survey the global landscape of technology implementation.**

■ Port Infrastructure Development Program Grants

- Grants provide Federal assistance to improve port facilities at coastal seaports.
- \$292.73 million authorized for FY19.
 - \$200 million for coastal seaports
 - \$92.73 million for 15 coastal seaports with most loaded TEUs (2016 U.S. Army Corps of Engineers data)
- \$10,000,000 minimum award. No maximum.
- Federal share may not exceed 80% of project costs.
- Application submittal deadline is 8 p.m. EDT, September 16, 2019.
- Applications submitted through www.grants.gov.

■ Eligible Applicants

- A port authority, a commission or its subdivision or agent under existing authority;
- State or political subdivision of a State or local government;
- A Tribal government
- A public agency or publicly chartered authority established by one or more States;
- A special purpose district with a transportation function;
- A multistate or multijurisdictional group of entities, or
- A lead entity described above jointly with a private entity or group of private entities.

Port Infrastructure Development Grant Details



States with eligible coastal seaports

Alabama
Alaska
California
Connecticut
Delaware
Florida
Georgia
Hawaii
Illinois
Indiana
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
New Hampshire
New Jersey
New York
North Carolina
Ohio
Oregon
Pennsylvania
Rhode Island
South Carolina
Texas
Virginia
Washington
Wisconsin

\$200M available for eligible coastal seaports in these states.

Eligible U.S. Territories

American Samoa
Guam
N. Mariana Islands
Puerto Rico
US Virgin Islands

Top 15 ports by loaded TEU in 2016 per USACE

1. Los Angeles
2. Long Beach
3. NY/NJ
4. Savannah
5. Port of Virginia
6. Houston
7. Oakland
8. Tacoma
9. Charleston
10. Seattle
11. Jacksonville
12. Miami
13. Port Everglades
14. San Juan
15. Honolulu

Additional \$92.73M available for only these 15 coastal seaports.

■ Eligible Projects

- Improve safety, efficiency, or reliability of the movement of goods within the boundary of a seaport, or outside the boundary of a seaport
 - Includes port infrastructure, infrastructure for intermodal connectors, and digital infrastructure
- Equipment used for the loading and unloading of cargo at a seaport
- For the 15 coastal seaports with most loaded TEUs per 2016 USACE data, **priority consideration shall be given** for the construction of phytosanitary treatment facilities as defined in Section 305.1 of Title 7, Code of Federal Regulations.
- *Note: This program will not fund vessel construction.*

Coastal Seaport:

- A “coastal seaport” is any seaport capable of receiving deep-draft vessels (drafting greater or equal to 20 feet) from a foreign or domestic port.

Project locations:

- Port Infrastructure Development Program grants shall be located either within the boundary of a coastal seaport, or outside the boundary of a coastal seaport and directly related to port operations or to an intermodal connection to a port.

Evaluation Criteria

Leveraging of Federal funding;

Project costs and benefits based on applicant supplied Benefit/Cost Analysis (BCA);

Project outcomes;

Demonstrated project readiness;

Domestic preference; and

Additional considerations.

■ Project Outcomes.

- Advance technology-supported safety, and design efficiency improvements by incorporating technology or innovative approaches to port safety, design, or efficiency.
- Bring facilities to a state of good repair and improve resiliency by addressing current or projected vulnerabilities in the condition of port transportation facilities.
- Promote efficient energy trade by supporting the efficient movement of energy products and/or increasing national energy production capacity.
- Promote manufacturing, agriculture, or other forms of exports by increasing the efficient movement of goods for exports and/or increasing national export capacity.
- For only the top 15 coastal seaports by loaded TEU in 2016, support the safe flow of agricultural and food products, free of pests and disease, domestically and internationally.

Examples of port related eligible projects include, but are not limited to the following, *provided* they improve the safety, efficiency or reliability of the movement of goods

- Port gate improvements, including digital innovations to improve flow
- Road improvements both within and connecting to the port
- Rail improvements both within and connecting to the port
- Berth improvements including docks, wharves, piers and dredging incidental to the improvement project (note: maintenance dredging may not be considered competitive; navigation channel improvements are not eligible for this grant program)

- Cargo moving equipment used shore side (note: must be Buy American Act compliant)
- Facilities necessary to improve cargo transport including silos, elevators, conveyors, container terminals, ro/ro facilities including parking garages necessary for intermodal freight transfer, warehouses including refrigerated facilities, bunkering facilities for oil or gas products, lay-down areas, transit sheds and other such facilities.
- Utilities necessary for safe operations including lighting, storm water and other such improvements that are incidental to a larger infrastructure project
- Port related intelligent transportation system hardware and software – all technologies used to promote efficient port movements including routing and communications for vessels, trucks, and rail, cargo movements, flow through processing for import/export requirements, storage and tracking, and asset/equipment management.
- *Vessel projects are not eligible for this program.*

■ **Submission date**

- Due by 8:00 pm EDT on Monday, September 16, 2019
- Thru Grants.gov

■ **Content and form of submission**

- Standard Form 424 (Application for Federal Assistance)
- Cover page
 - Consider: succinct description of :the project, why it is needed and its benefits
- Project narrative

■ **Project narrative should follow this basic outline**

- Project description
- Project location
- Grant funds, sources and uses of all project funding
- Leveraging of Federal funds
- Project costs and benefits
- Project outcomes
- Demonstrate project readiness
- Domestic preference

Port Infrastructure Development Program Grants Overview:
<https://www.maritime.dot.gov/PIDPgrants>

Notice of Funding Opportunity (NOFO) for 2019 Port Development Grants:
<https://www.maritime.dot.gov/office-port-infrastructure-development/port-and-terminal-infrastructure-development/2019-port-2>

Frequently Asked Questions (FAQs):
<https://www.maritime.dot.gov/PIDP%20Grants/FAQs>

For more information contact the program at:
ports@dot.gov
(202) 366-PORT (202-366-7678)

Port Planning & Investment Toolkit *A Maritime Industry Joint Venture*

A **joint venture** between AAPA and MARAD

The toolkit modules can be used to help ports:

- Evaluate port conditions
- Define problems
- Plan thoroughly
- Navigate the preplanning process
- Engage private partners
- Present actionable needs to administrators
- Access available funding
- Complete project

Toolkit helps ports obtain funding

ITS Module release in July 2019

Port Planning & Investment Toolkit

A Maritime Industry Joint Venture

Introduction and User's Guide

<http://aapa.files.cms-plus.com/PDFs/Toolkit/Introduction%20and%20Users%20Guide%202019.pdf>

General Projects Module

<http://aapa.files.cms-plus.com/PDFs/Toolkit/General%20Projects%20Module.pdf>

Intelligent Transportation Systems Module

<http://aapa.files.cms-plus.com/PDFs/Toolkit/ITS%20Module.pdf>

Port Concession Evaluation Model

<http://aapa.files.cms-plus.com/PDFs/Toolkit/Port%20Concession%20Evaluation%20Model.xlsx>

Resource Catalog

<http://aapa.files.cms-plus.com/PDFs/Toolkit/Resource%20Catalogue.xlsx>

Marine Highway Module

Under Development - Available in 2020

Port Planning & Investment Toolkit
A Maritime Industry Joint Venture

What other Modules would the industry like to see?

**For more information please
contact:**

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U.S. Department of Transportation

