

USACE NAVIGATION OVERVIEW AAPA

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US Army Corps
of Engineers®



ASSISTANT SECRETARY OF ARMY FOR CIVIL WORKS (ASA(CW)) LINES OF EFFORT



- Upgrade Waterways and Ports to Strengthen Supply Chains and Economic Growth
- Build innovative, climate Resilient infrastructure to protect Communities and Ecosystems
- Modernize Civil Works Programs to better serve the needs of disadvantaged communities
- Invest in Science, Research and Development to deliver enduring water-resource solutions
- Strengthen communications and relationships to solve water resource challenges





USACE NAVIGATION MISSION



Navigation is the US Army Corps of Engineers' earliest Civil Works mission, dating to Federal laws in 1824 authorizing and funding the USACE to improve safety on the Ohio and Mississippi Rivers and several ports.

USACE provides safe, reliable, efficient, and environmentally sustainable waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, and recreation.

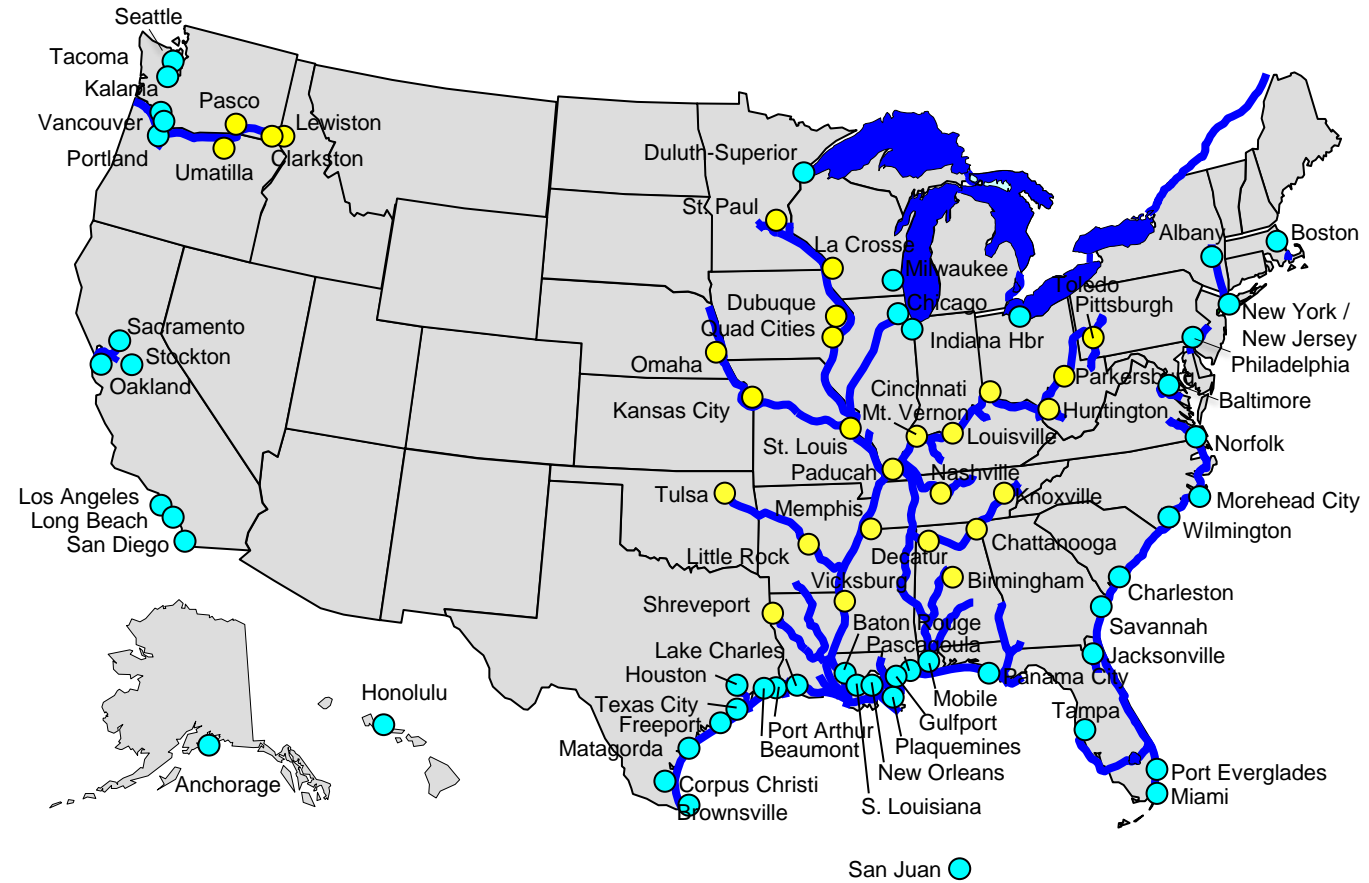




USACE Navigation System



- U.S. Marine Transportation Industry Supports ~ **\$2 Trillion** in Commerce Annually
- **More than 48%** of Consumer Goods Bought by Americans Pass Through Harbors Maintained by Corps.
- Over **1.5 Billion Short Tons** of Foreign Goods Moved Through U.S. Ports/Waterways in 2020
- Over **743 Million Short Tons** of Domestic Goods Moved Thru U.S. Ports/Waterways in 2020
- **15%** of U.S. Domestic Freight Carried by Water
- **237** Lock Chambers at **192** sites
- **13,000** Miles of Coastal and Deep Draft Channels
- **12,000** Miles of Commercial Inland and Intracoastal Waterways
- **1,072** Coastal, Great Lakes and Inland Harbors
- **45** States are directly served by USACE Channels & Waterways





DREDGING BY THE NUMBERS



The US Army Corps of Engineers (USACE) is responsible for maintaining and improving nearly 12,000 miles of inland and intracoastal waterways, 13,000 miles of coastal channels, and 400 ports, harbors, and turning basins throughout the United States. Maintaining our Federal channels and waterways is essential for strengthening the economy, creating jobs, reducing risks, and bolstering our long-term global competitiveness and national security.

HISTORIC MISSION FACTS

AVERAGE ANNUAL BUDGET (2010-PRESENT) **\$1.5** BILLION

AVERAGE ANNUAL MILLIONS OF CUBIC YARDS (MCY) DREDGED (2010-PRESENT) **220** MCY

MATERIAL REMOVED FROM USACE CONSTRUCTED & MAINTAINED CHANNELS IN FY 2020 **264.5** MCY

COST TO REMOVE DREDGED MATERIAL FY2020 **\$2.5** BILLION

FUNDING

TOTAL DREDGING ALLOCATION FY2022 **\$1.6** BILLION

TOTAL ALLOCATION FY2022 PRESIDENTS BUDGET **\$1.2** BILLION

SUPPLEMENTAL ALLOCATION FY2022 INFRASTRUCTURE INVESTMENT & JOBS ACT **\$0.4** BILLION

USACE DREDGING

12,000 MILES OF INLAND AND INTRACOASTAL WATERWAYS

13,000 MILES OF COASTAL WATERWAYS

PORTS 400

% COMPLETED BY TYPE FY2020

MAINTENANCE DREDGING 77.5%

NEW CONSTRUCTION (CHANNEL DEEPENING/ BEACH RENOURISHMENT) 13.2%

EMERGENCY DREDGING 9.3%

FY2020 AVG COST PER CUBIC YARD MAINTENANCE / NEW CONSTRUCTION \$6.77 / \$21.14

TYPES OF DREDGE VESSELS

Pipeline dredge involves a dredge that floats on the water and pumps the material through a temporary pipeline to an off-site location, often several thousand feet away.

Mechanical dredge involves the use of an excavator or another type of heavy equipment — usually situated on a barge or on the water's edge — to dig out the bed of the body of water and remove the sediment.

Hopper dredge is a self-propelled seagoing ship equipped with a suction pipe, which trails over the side of the vessel or through a well in the hull. The suction pipe hydraulically discharges the material into a hopper or, in the case of a side casting dredge, over the side of the vessel. The hopper dredge transports material to a placement site for open water disposal or pump out to the upland, beach, or other beneficial use.

DREDGING CONTRACTS STATS FY2020

Total Contracts- **110** Bids Received- **237**

Companies Submitting- **77** Number of Companies Awarded- **45**

- Large Companies 14

- Small/Hubzone/Emerging 31

% REMOVED BY PRIVATE CONTRACTORS FY2020 83.3% (220.4MCY)

COST \$2.3 BILLION

DREDGE USE BY TYPE FY2020

Pipeline Dredge

% of Contracts- 44.5%

% of Contract Dollars- 52%

% of Material Removed- 51.3%

*Most Common Dredge Type

Mechanical Dredge

% of Contract Dollars- 7.6%

% of Material Removed- 3.5%

Hopper Dredge

% of Contract Dollars- 29.9%

% of Material Removed- 37.7%



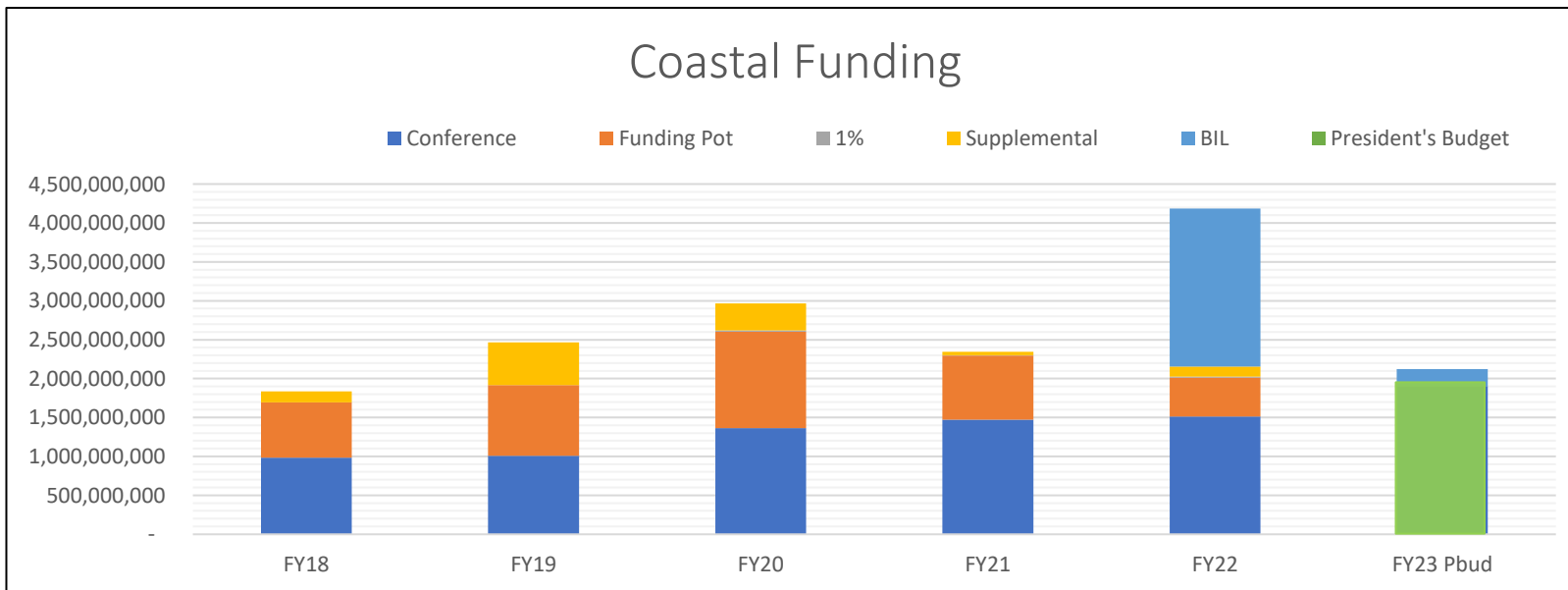
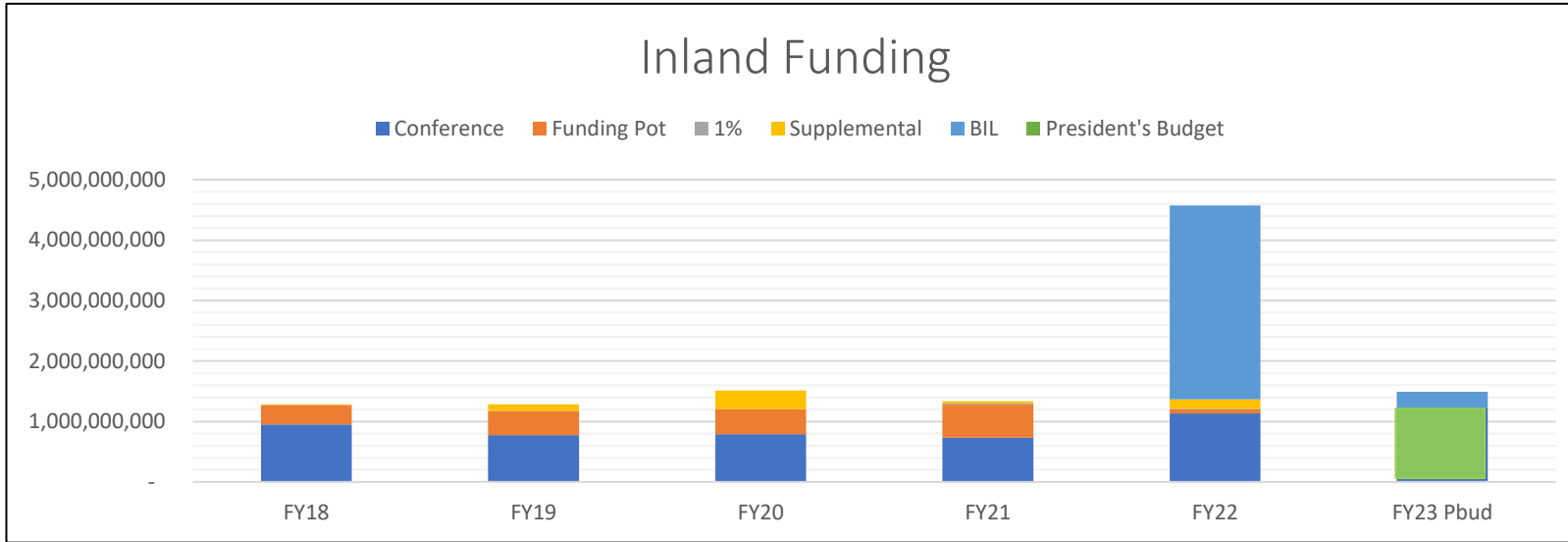
BUILDING STRONG®

Visit our Navigation Mission Explorer at: <https://navigation.usace.army.mil/DIF/Explore>



INLAND & COASTAL FUNDING TRENDS

INCLUDES INVESTIGATIONS, CONSTRUCTION, O&M, AND MR&T. DOES NOT INCLUDE REMAINING ITEMS OR JOINT COSTS

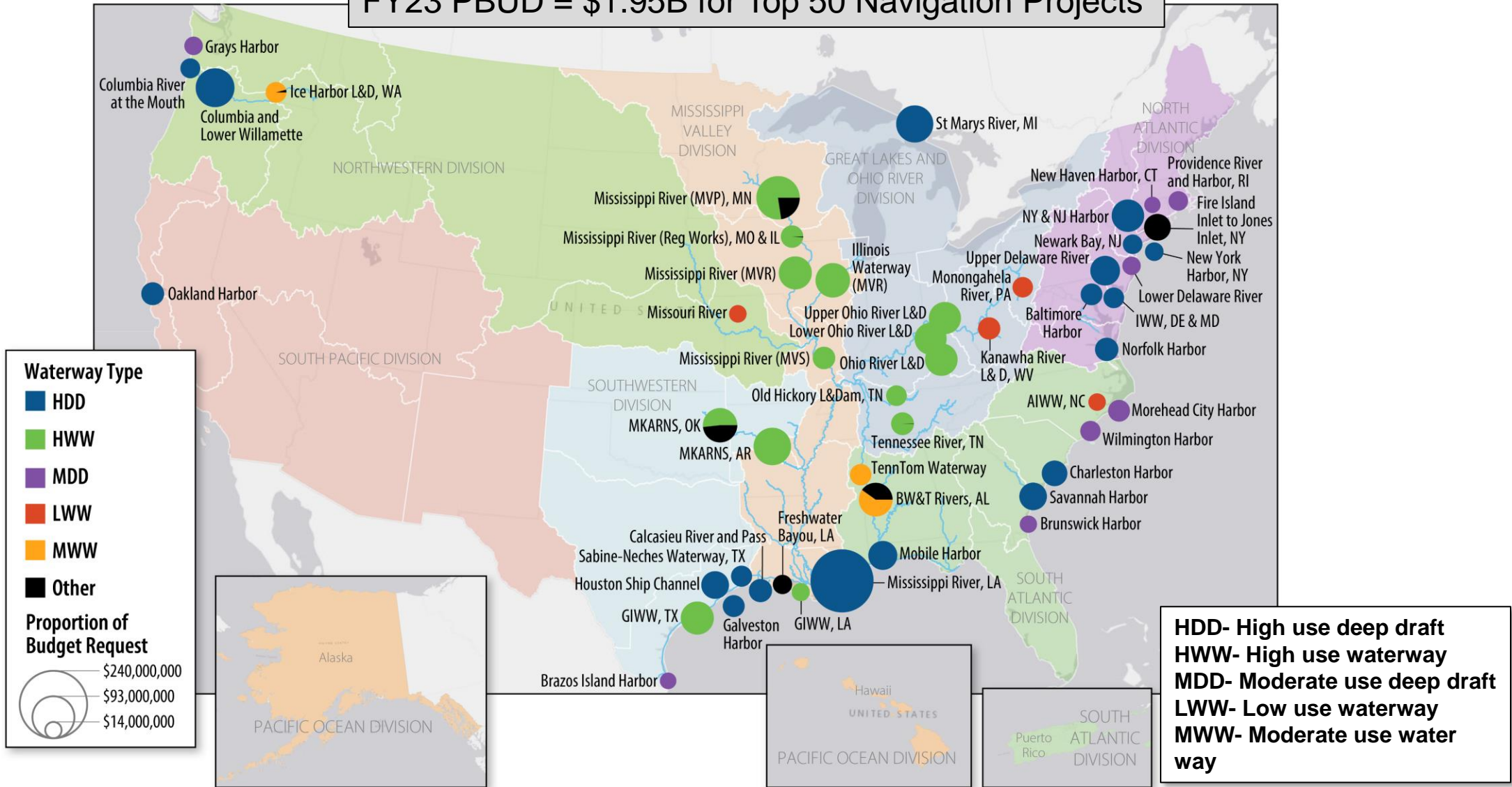




TOP 50 O&M NAVIGATION PROJECTS BY FY23 PRESIDENT'S BUDGET

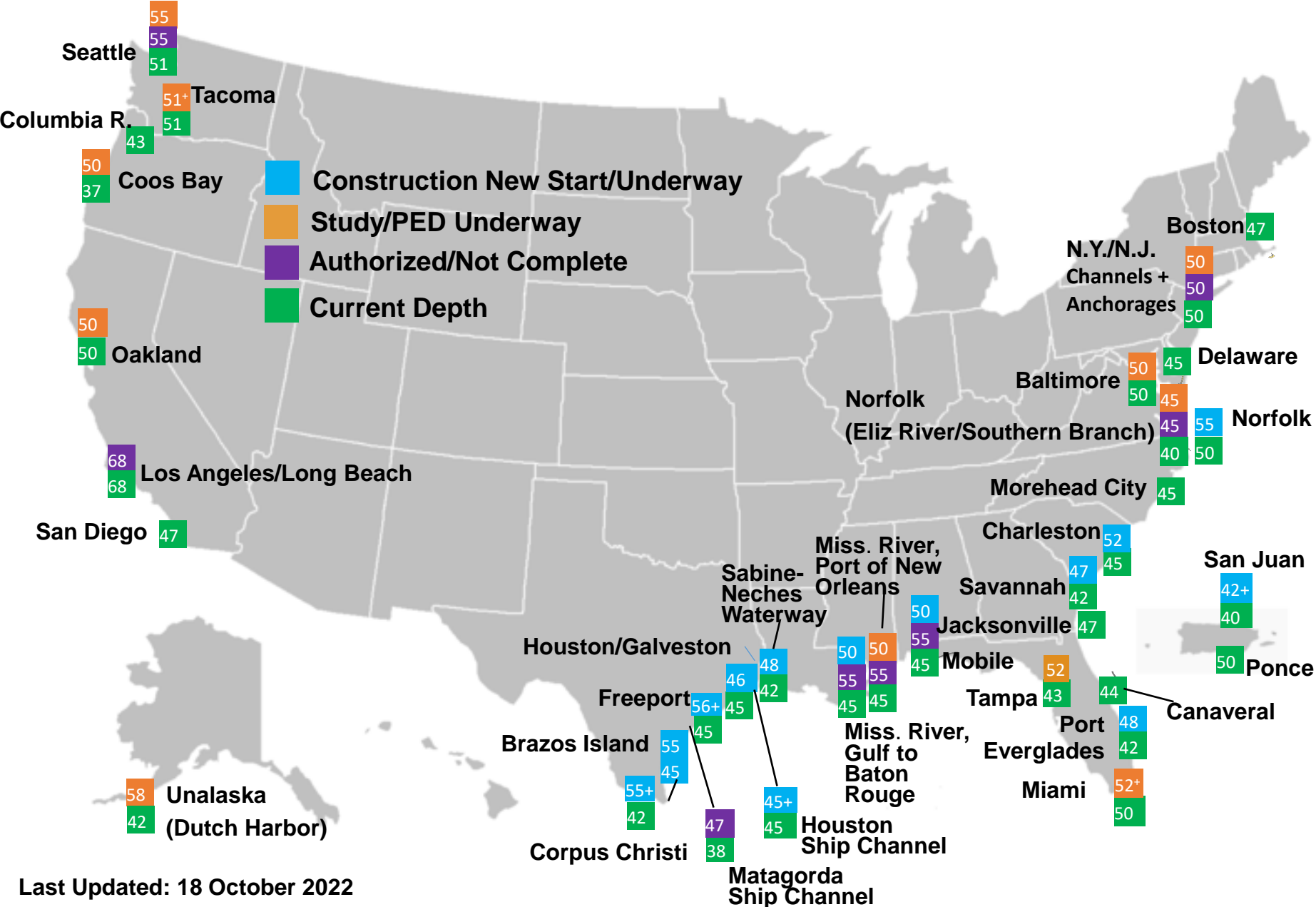


FY23 PBUD = \$1.95B for Top 50 Navigation Projects



Source: CWIFD FY23 President's Budget, USACE and Woolpert analysis

Post-Panamax Port Projects/Studies



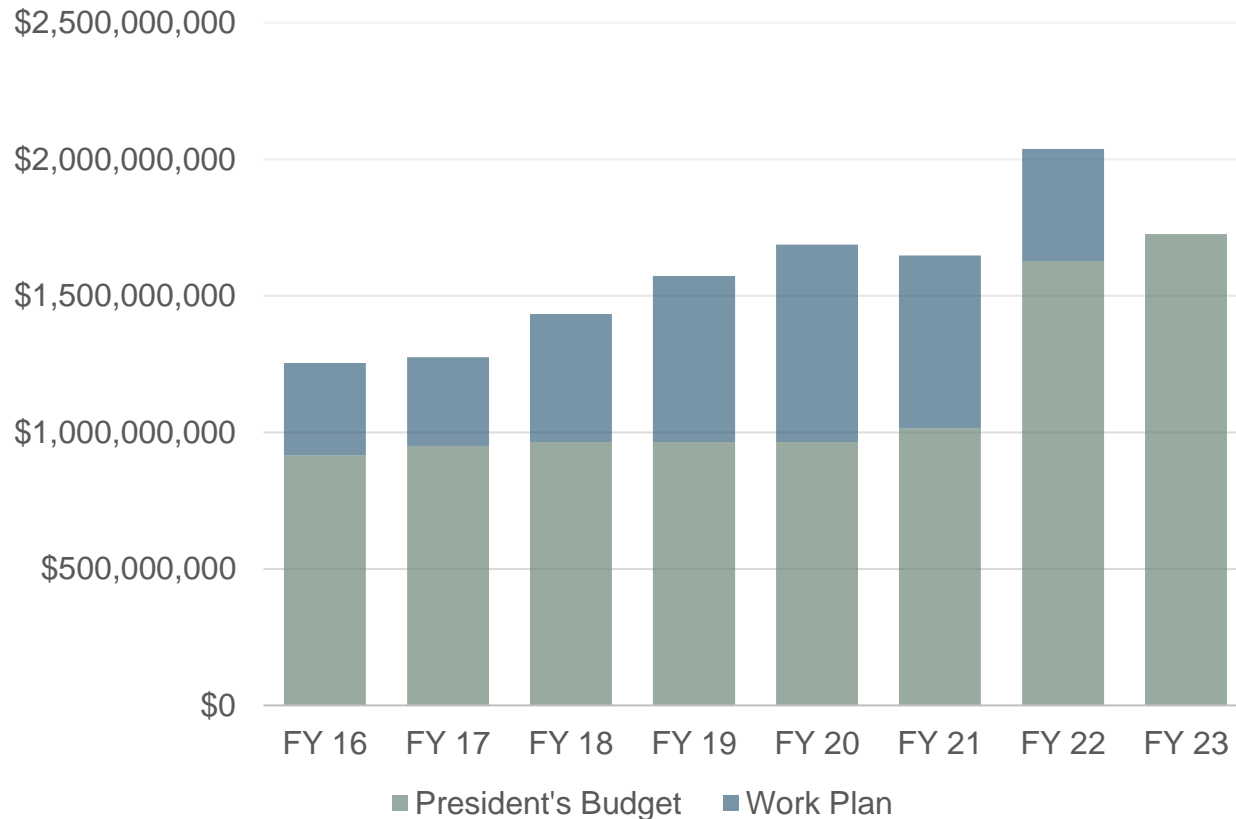
Last Updated: 18 October 2022



HARBOR MAINTENANCE TRUST FUND



HMTF Allocation Trends



-FY 22 EOY Balance- \$9.5B

-With the exception of a minor dip in FY 20 collections have remained at about \$1.5B/year

-The additional HMTF investments have allowed us to:

- maintain further into the portfolio those low use projects
- address breakwater and jetty maintenance
- consider advanced maintenance activities at critical harbors



REGIONAL DREDGING PROGRAM



Potential Benefits per Senate Report 116-102

- ✓ Improved project schedules/faster construction execution at the demonstration projects;
- ✓ Fewer disruptions to other projects across the enterprise due to emergencies at the Southwest Pass (pulling dredges off projects);
- ✓ Fewer or no bid busts (bid higher than the Independent Government Estimate by 25%) for the demonstration projects;
- Reduced cost per cubic yard at the demonstration projects and/or across the enterprise for hopper dredge contracts;
- Efficiency of contract award process at the demonstration projects; and
- ✓ Fewer “no bid” responses at Mississippi River Baton Rouge to Gulf hopper dredge contracts.

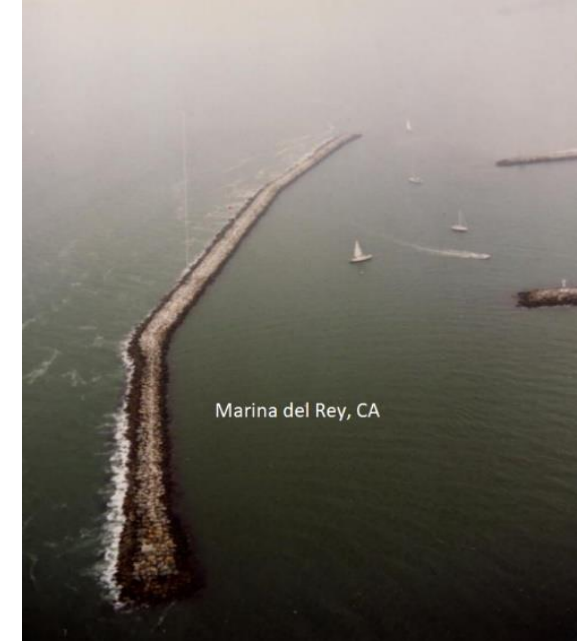
Use of regional dredging contracts have positively impacted dredging execution across the enterprise. We consider the regional dredge program to be a success and have leveraged the approach on the West, Gulf, and East Coasts. 280M CY dredged in FY21, highest in over a decade without any disruptions.



NAVIGATION KEY INITIATIVES



- **Modernizing and rehabilitating key infrastructure.**
 - Using the Capital Investment Strategy to identify opportunities for investment in the inland system
 - Improving major maintenance and rehab policies and processes to efficiently manage critical assets - locks, breakwaters, and jetties
 - Leveraging consolidated/coordinated closures to complete necessary major lock maintenance and rehab
- **Executing historical investment using key principles of delivery**
 - Strategic stakeholder & industry engagements
 - Enterprise and Regional coordination and scheduling
 - Use best management practices for contracting process
 - Find environmentally friendly technology and innovation solutions to meet our increased maintenance, resiliency and beneficial use of dredged material goals
- **Efficiently manage dredged material placement capacity**
 - Improve dredge material management policies and practices
 - Increase beneficial reuse of dredged material to effectively manage sediment within the ecosystem
 - Leverage 5-year dredged material management plans



Marina del Rey, CA



Mississippi Baton Rouge to Gulf, LA



PLACEMENT OF DREDGED MATERIAL



Beneficial uses are defined as “productive and positive uses of dredged material, which cover broad use categories ranging from fish and wildlife habitat development, to human recreation, to industrial/commercial uses” (Engineer Manual 1110-2-5025, 2015).

Dredge Disposal

The Corps dredges ~ 270 million cubic yards regulated under the Clean Water Act annually

Revolutionize USACE BU

- Currently place ~40% beneficially
- Goal of 70% material placed beneficially by 2030



Major Initiatives to Advance Beneficial Use

- Regional Sediment Management
- Engineering with Nature
- WRDA 2020 Section 125 Implementation Guidance
- WRDA 16 Section 1122 Projects



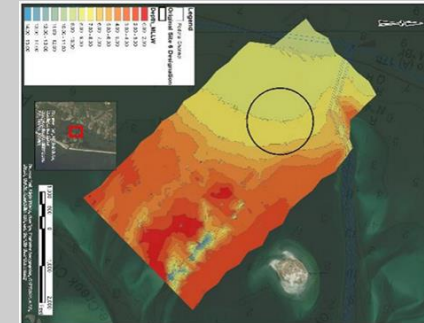


HOW ARE WE INCREASING BENEFICIAL USE?

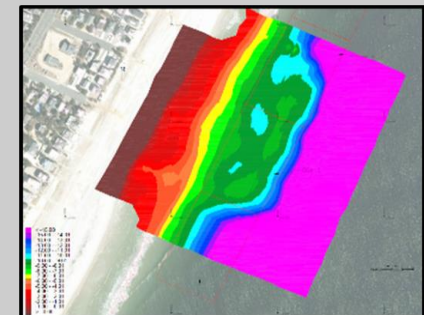


- **Enterprise-wide goal to more than double environmentally acceptable beneficial use that delivers safe, reliable, cost efficient, sustainable, and resilient projects**
- **Quantify and document current practices in Navigation projects to showcase success and highlight potential opportunities to increase beneficial use**
- **Develop innovative solutions and partnerships**
- **Examine and update our existing policies**
- **Identify and address challenges – beneficial use obstacles root cause analysis**

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1122 Barnegat Inlet Island Creation Location (NAP)



1122 Barnegat Inlet Island Nearshore Nourishment (NAP)



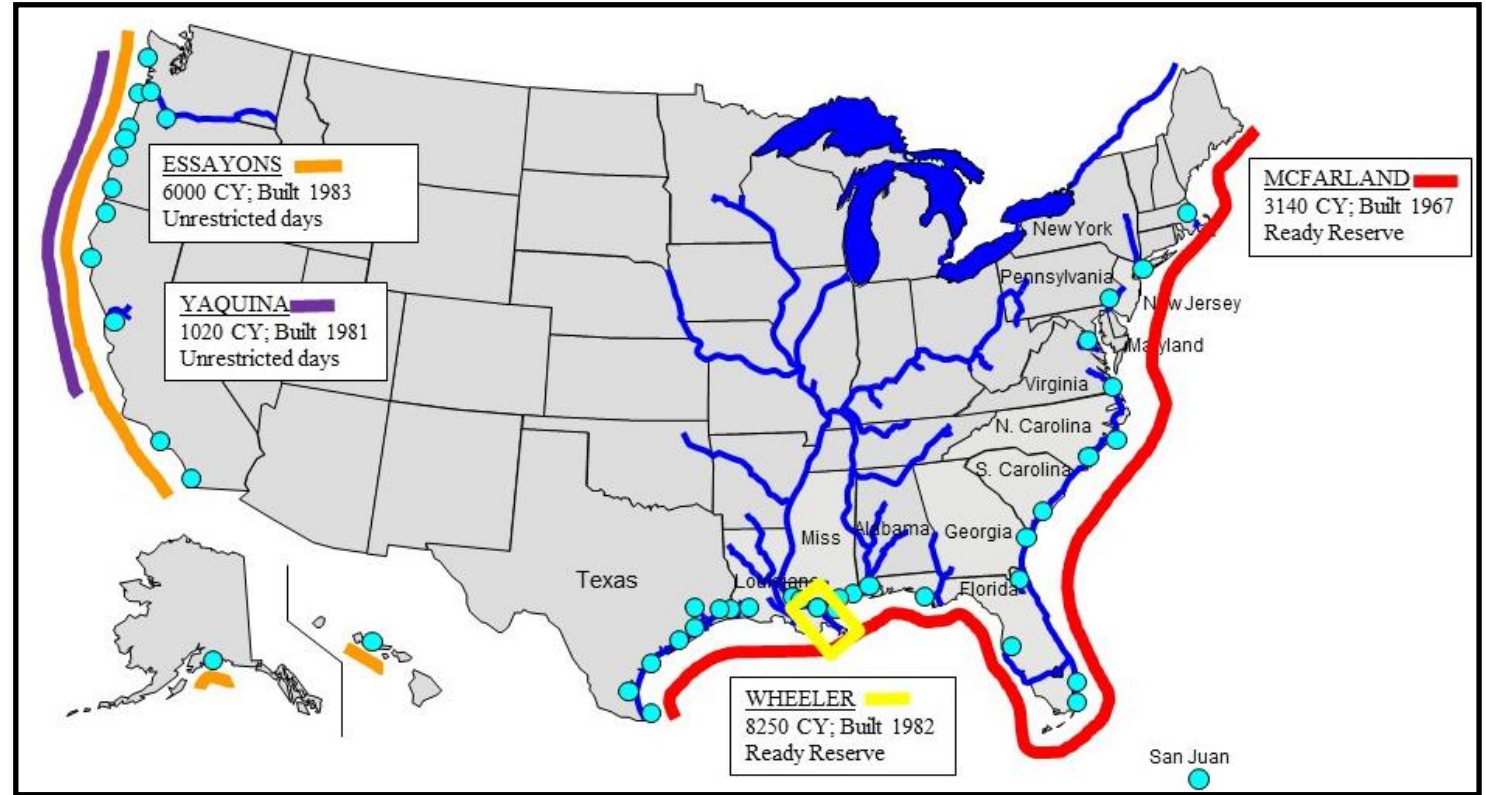
USACE FLEET RECAPITALIZATION



Public Law 95-269 “Industry Capability Program” was passed to encourage the growth of private dredging industry. (April 1978)

- The Secretary shall have dredging and related work done by contract if he determines private industry has the capability to do such work and it can be done at reasonable prices and in a timely manner
- To carry out emergency and national defense work the Secretary shall retain only the minimum federally owned fleet capable to perform such work and he may exempt from the provisions of this section such amount of work as he determines to be reasonably necessary to keep such fleet fully operational.
- The minimum federally owned fleet shall be maintained to technologically modern and efficient standards, including replacement, as necessary.

USACE HOPPER DREDGE FLEET—Operational Framework





QUESTIONS?

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