

NATIONAL WATERWAYS CONFERENCE, WASHINGTON, D.C. MARCH 5-7, 2018

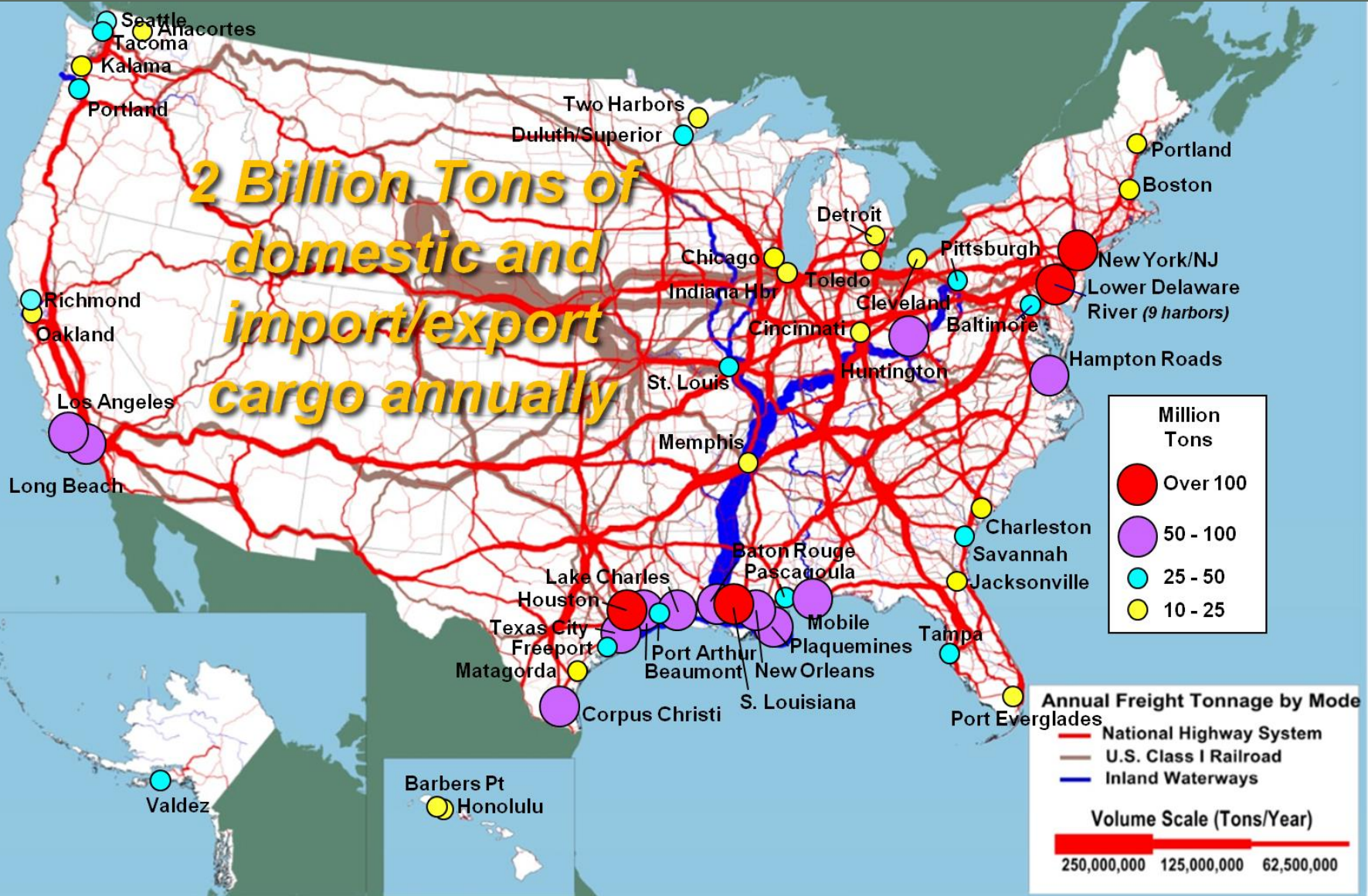
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Washington, D.C.
6 March 2018



US Army Corps
of Engineers®



U.S. PORTS AND INLAND WATERWAYS: VITAL TO OUR NATIONAL ECONOMY

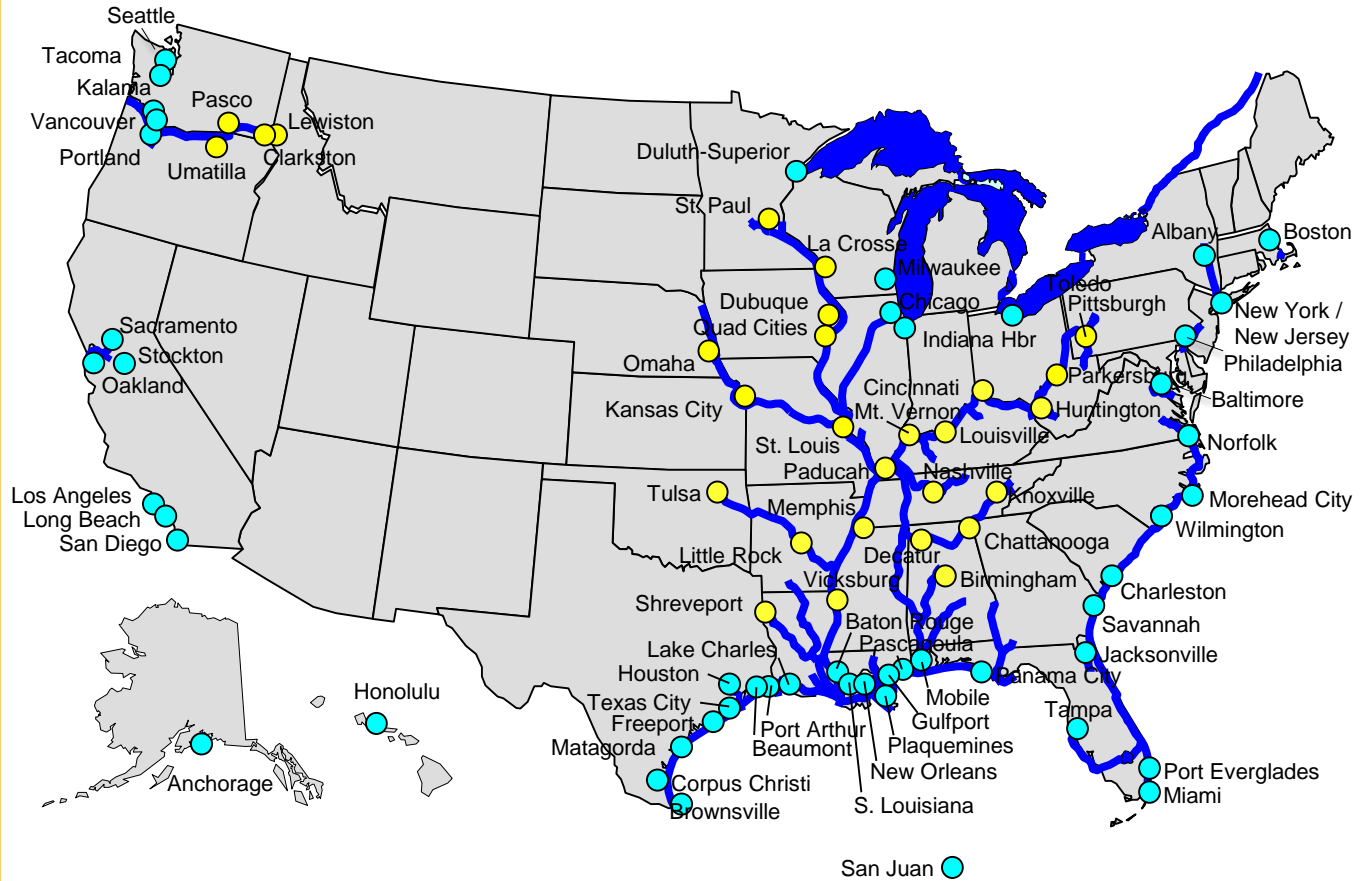




USACE Navigation System



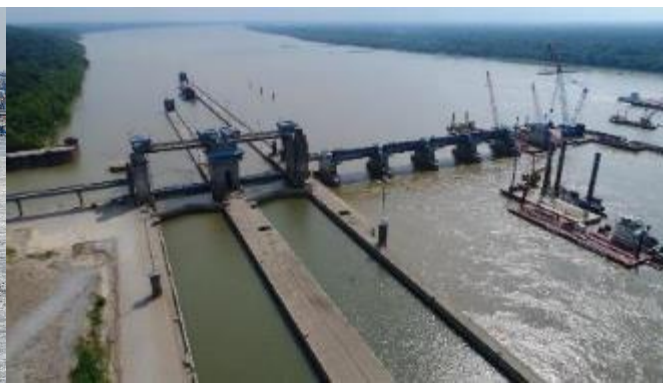
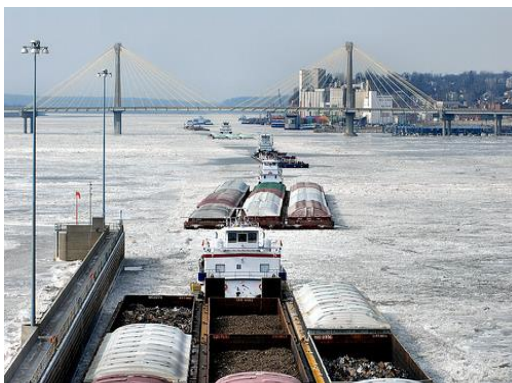
- U.S. Marine Transportation Industry Supports
~ **\$2 Trillion** in Commerce Annually
- **More than 48%** of Consumer Goods Bought by Americans Pass Through Harbors Maintained by Corps.
- Over **1.3 Billion Short Tons** of Foreign Goods Moved Through U.S. Ports/Waterways in 2015
- Over **900 Million Short Tons** of Domestic Goods Moved Thru U.S. Ports/Waterways in 2015
- **15%** of U.S. Domestic Freight Carried by Water
- **239** Lock Chambers at **193** sites
- **13,000** Miles of Coastal and Deep Draft Channels
- **12,000** Miles of Commercial Inland and Intracoastal Waterways
- **1,067** Coastal, Great Lakes and Inland Harbors
- **40** States are directly served by USACE Channels & Waterways





USACE Navigation Mission

Provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems for movement of national security needs, commerce, and recreation.





OLMSTED LOCKS & DAM





OLMSTED LOCK AND DAM BOTTOM LINE



- **Ahead of Schedule**
 - 2018 (Project Operational) vs. 2022 (80% certainty)
 - 2022 (Project Complete) vs. 2026 (80% certainty)
- **Under Budget**
 - TEP (Total Estimated Price) = \$2.771B vs. \$3.1B (80% certainty)
 - Savings = \$329M (FY19 Request = \$35M “Funds to Completion”)
- **Keys**
 - Efficient funding (annual capability)
 - Advantageous river conditions (expanded work beyond the contractual low water season (15 Jun – 30 Nov)).



NAVIGATION CHALLENGES



- Decaying (aging) infrastructure
- Constrained Funding
 - Performance Risk
 - Challenges maintaining authorized/constructed channel dimensions and critical infrastructure
- Funding for low commercial use projects
- Increased cost of doing business
- Environmental Issues
 - Air and water quality requirements
 - Threatened, endangered, and invasive species
 - Dredging windows



Navigation Budget by Account

(\$Millions)

Pres Bud Fiscal Yr	Investigations	Construction	O&M	MR&T	Total Nav
FY 19	\$14	\$176	\$1,706	\$33	\$1,930
FY 18	\$19	\$310	\$1,717	\$52	\$2,098
FY 17	\$22	\$348	\$1,527	\$37	\$1,934
FY 16	\$25	\$321	\$1,563	\$38	\$1,947
FY 15	\$22	\$277	\$1,487	\$39	\$1,825
FY 14	\$23	\$345	\$1,461	\$55	\$1,884
FY 13	\$25	\$352	\$1,326	\$44	\$1,747
FY 12	\$18	\$283	\$1,237	\$37	\$1,575
FY 11	\$19	\$291	\$1,297	\$45	\$1,653
FY 10	\$19	\$288	\$1,411	\$48	\$1,767

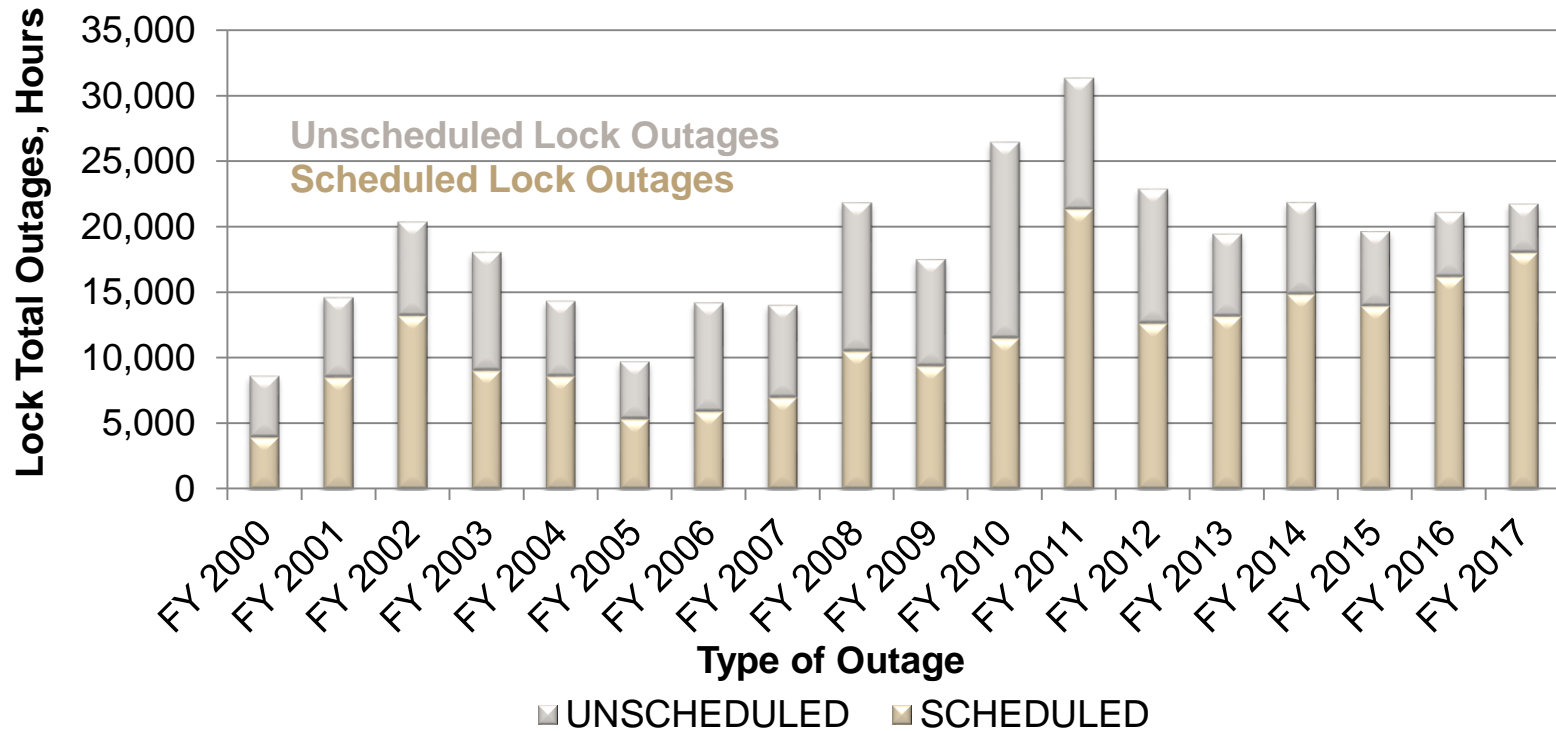


National Lock Portfolio Service Trends



Capital Investment Strategy (CIS)

Lock Mechanical Outage Trends (High Use Fuel Taxed Waterways)



“Assuring Performance and Reliability of Aging Water Infrastructure....”

24 x 365 x ~200 Sites = ~1,752,000 Operational Hours/Year

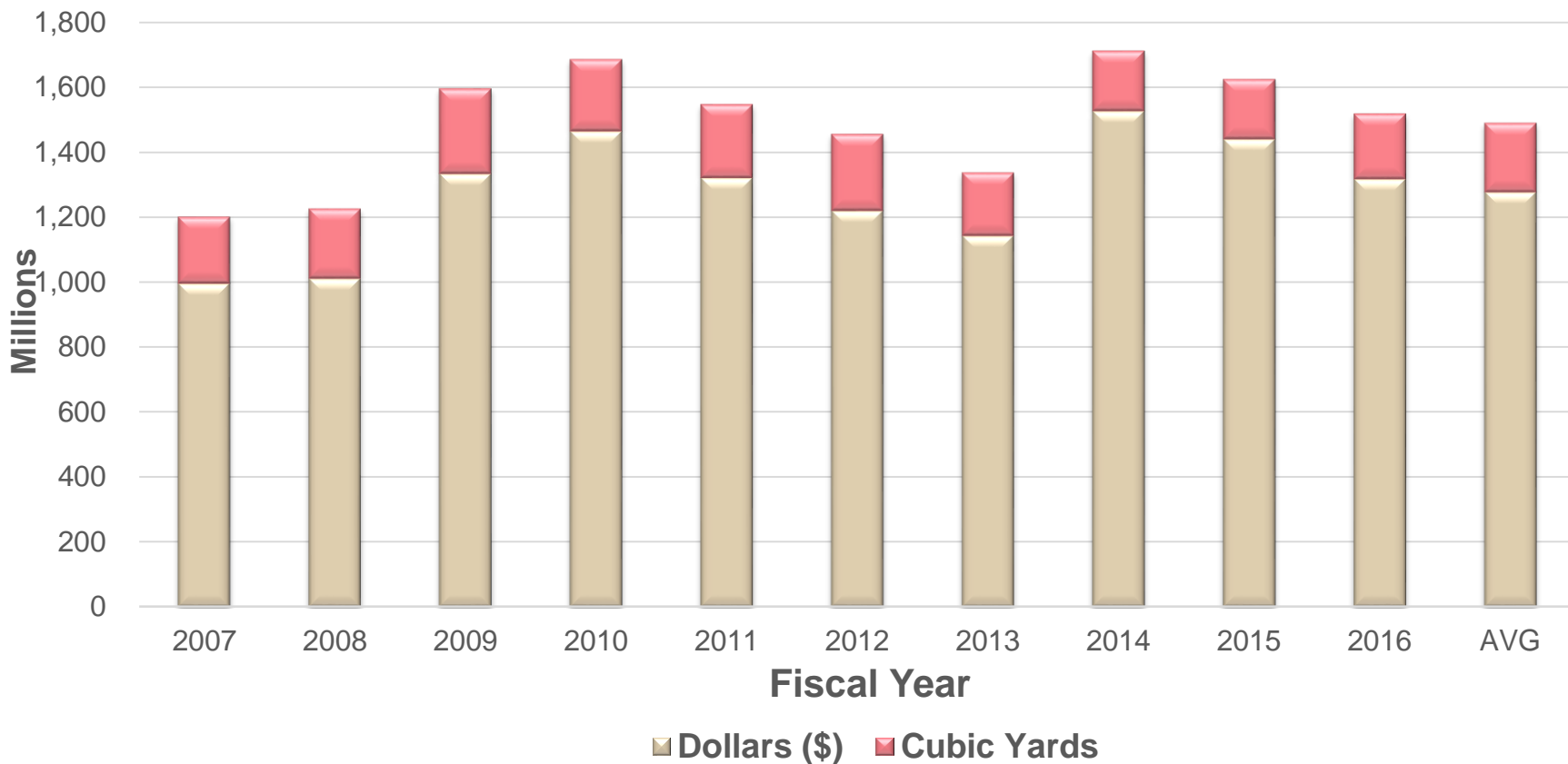
At 21,000 Hour Level, Locks are Unavailable Around ~ 1.2% of Time due to Mechanical Issues; So, Locks are **AVAILABLE** to Pass Commercial Traffic **Almost 99%** of the Time



National Dredging Program Trends



Total Dredging FY 2007-2016



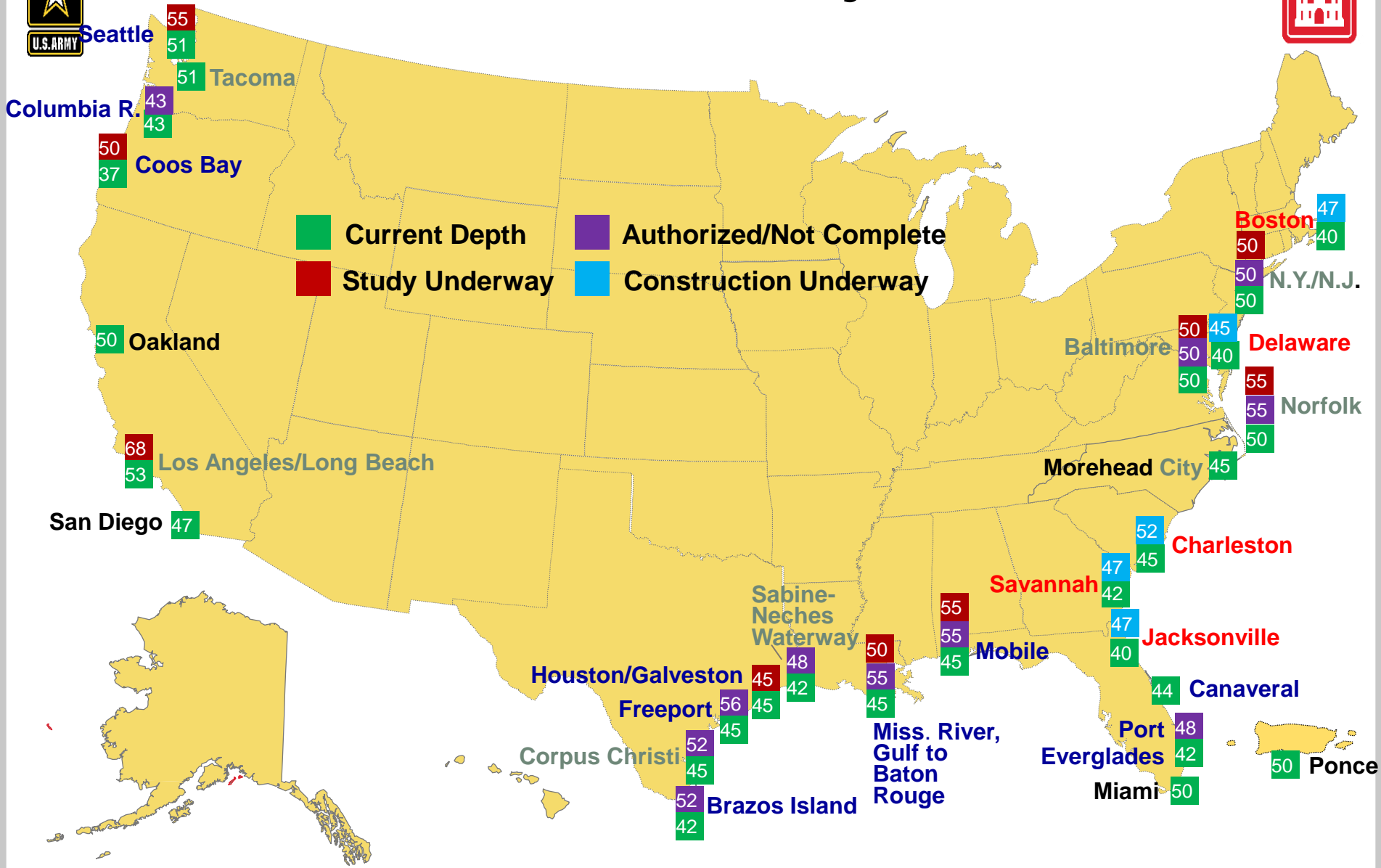
Fiscal Year 2016 Total Dredging: 202 MCY @ \$1,318 Million (~\$6.51/CY)

Maintenance Work: 186 MCY (92%) @ \$1,036 Million (79%)
Hurricane Sandy & Emergency: 11 MCY (5%) @ \$ 191 Million (14%)
New Work: 6 MCY (3%) @ \$ 91 Million (7%)

Post-Panamax Port Projects/Studies

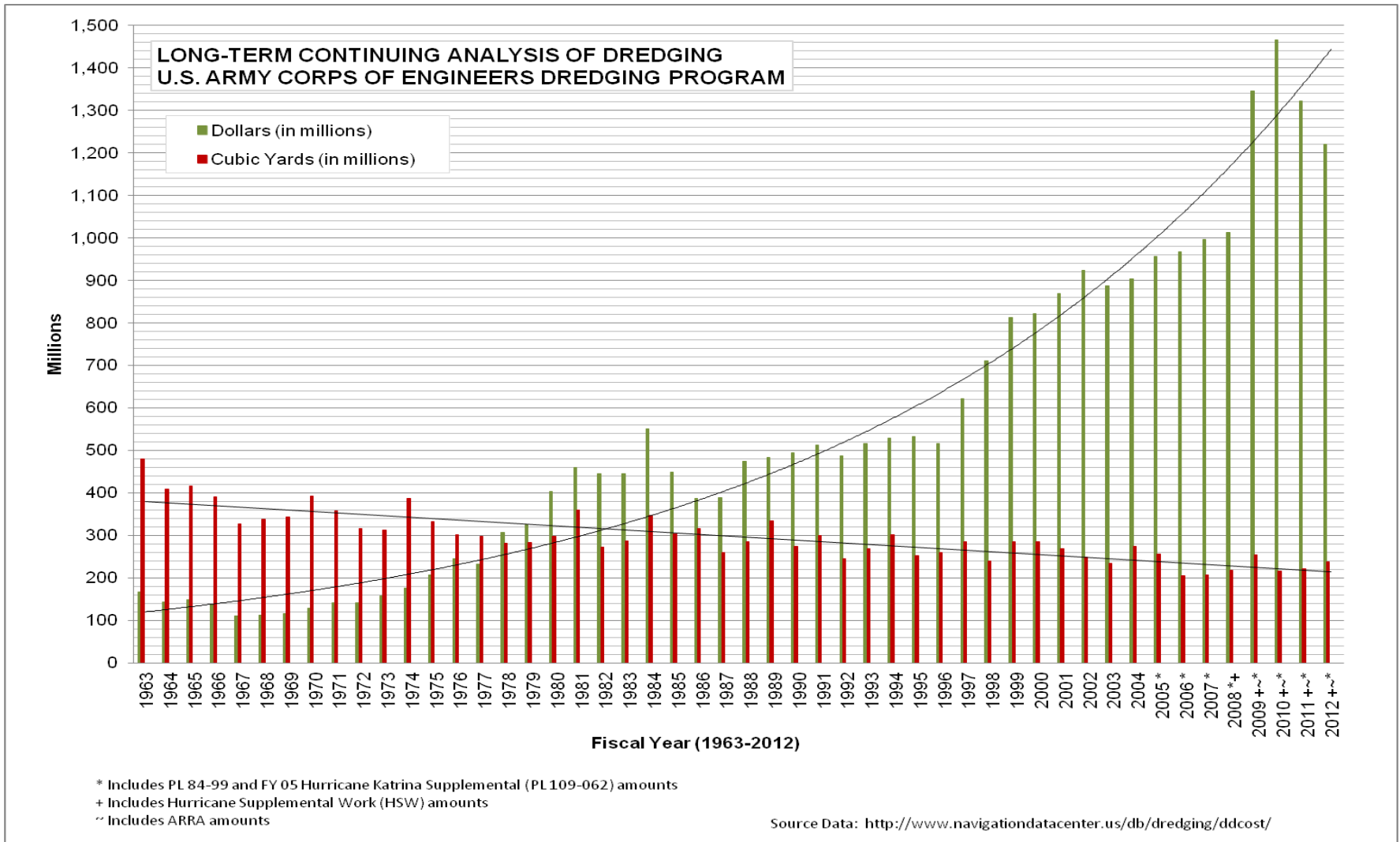


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CHALLENGES TO NAVIGATION DREDGING



Growing dredging requirements and increasing cost present strategic risk



SECTION 1122 OF WRDA 2016 BENEFICIAL USE OF DREDGED MATERIAL PILOT PROGRAM



- Section 1122 of WRDA 2016 directs the Corps of Engineers to establish a pilot program consisting of 10 projects for the beneficial use of dredged material.

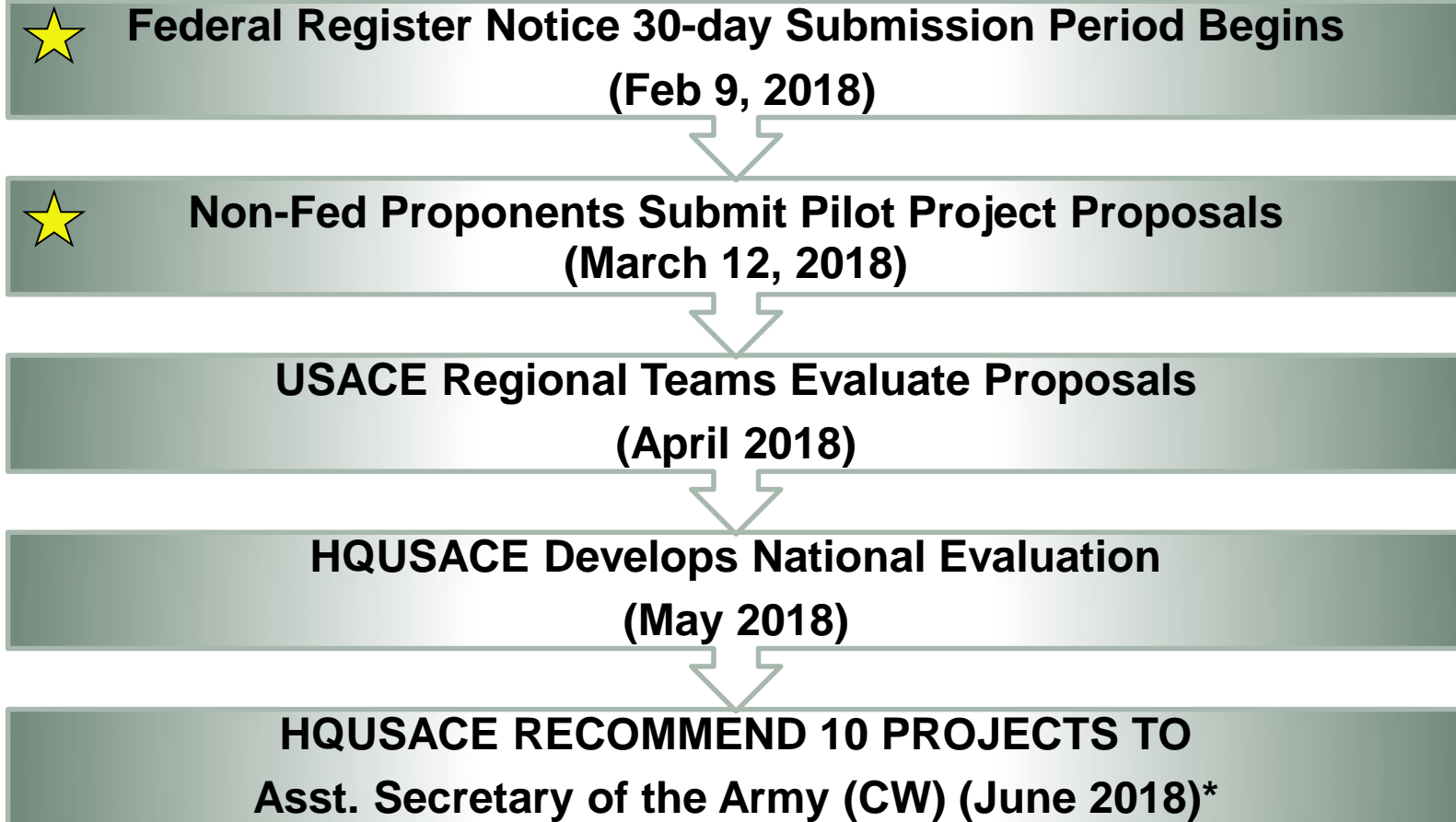
“...the Secretary shall carry out the pilot program in a manner that...”

- **Maximizes the beneficial placement** of dredged material from Federal and non-Federal navigation channels;
- **Incorporates**, to the maximum extent practicable, **2 or more** Federal navigation, flood control, storm damage reduction, or environmental restoration projects;
- Coordinates the mobilization of dredges and related equipment, including **through the use of such efficiencies in contracting and environmental permitting as can be implemented under existing laws and regulations**; **Fosters** Federal, State, and local **collaboration**;
- **Implements best practices** to maximize the beneficial use of dredged sand and other sediments;
- Ensures that the use of dredged material is **consistent with all applicable environmental laws**.





SECTION 1122 OF WRDA 2016 PILOT SELECTION PROCESS TIMELINE



*Note WRDA 2016 is an authorizing document and does not provide appropriations for the execution of the 10 selected projects. Implementing those projects will require separate appropriations by Congress and is not guaranteed.



HURRICANE HARVEY RELATED DAMAGES

- 9 Million Cubic Yards of shoaling in Coastal Texas
- At onset, no vessel movement in 1,000 Miles of Federal Channels (All of Coastal Texas) at onset
- Gulf Intracoastal Waterway closed for 30 days
- \$15.2B impact on Texas Economy due to closures
- Ten Contract Dredges mobilized to perform urgent Dredging Operations
- Some restrictions remain in place

FY18 SUPPLEMENTAL

- Investigations: \$135 million total (FRM) focused
- Construction: \$15 B (FRM)
- O&M: \$608 M repairs
- MR&T: \$770 M (\$370 M for Repairs)
- FCCE: \$810 million



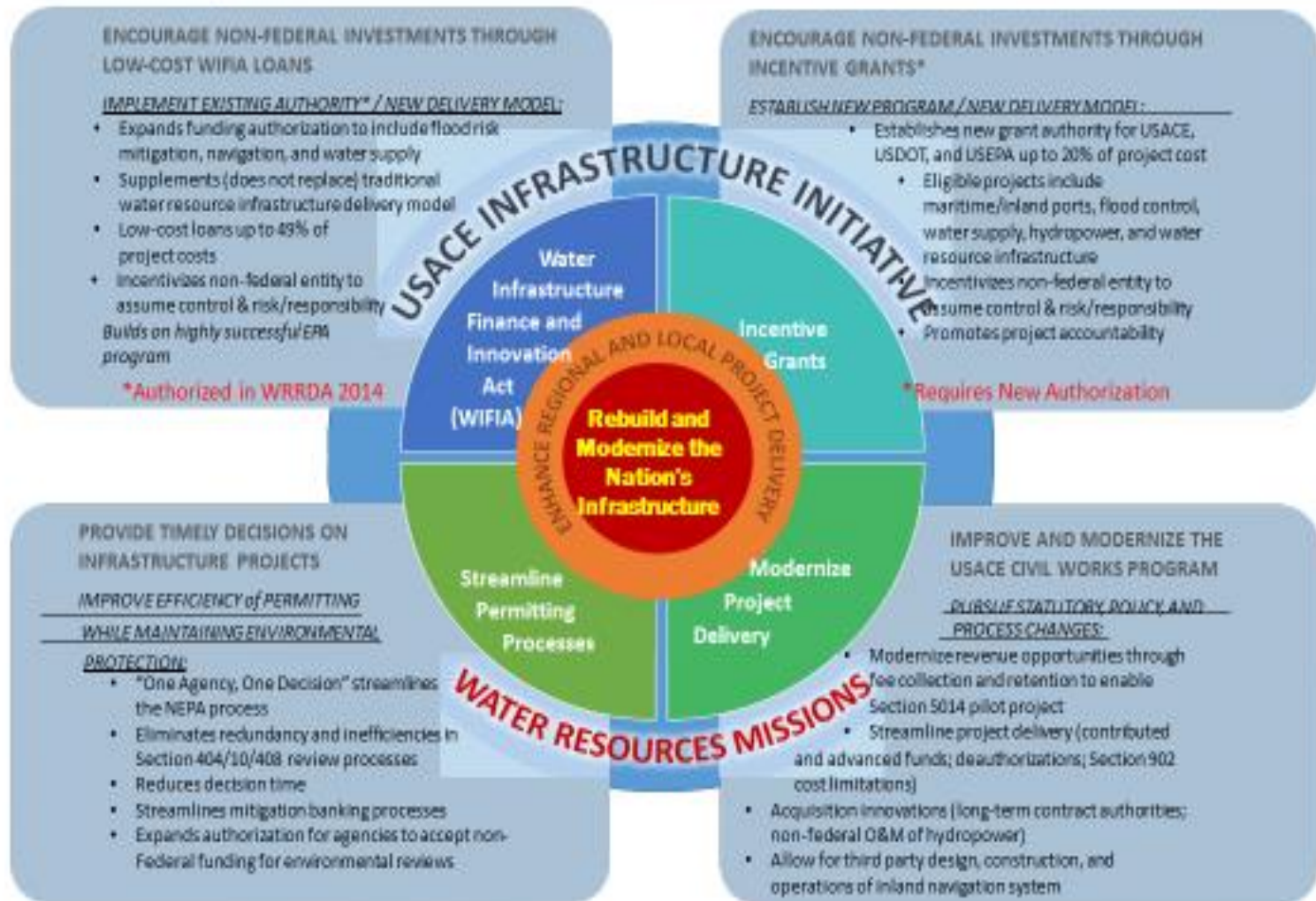
INFRASTRUCTURE INFORMATION



DELIVER INTEGRATED WATER RESOURCES SOLUTIONS
PREPARE FOR TOMORROW

RENEW OUR INFRASTRUCTURE TO BUILD A MORE PROSPEROUS FUTURE

WATER RESOURCES INFRASTRUCTURE – LEGISLATIVE PRINCIPLES





Civil Works: Focus on Delivery



- **Embrace and Operationalize Risk-Informed Decision Making**
- **Make, Justify and Document Decisions at the Most Appropriate Level**
- **Synchronize Headquarters Functions to Support MSC and District Project Delivery**
- **Integrate and Synchronize Agency Policy and Guidance**
- **Incorporate Social and Environmental Benefits into Project Formulation, Design and Implementation**



CLOSING THOUGHTS



- USACE Funding Continues to be Constrained and Addressing the Nation's Infrastructure Investment Gap must be a Shared Federal, State and Local Responsibility.
- The Corps Doesn't Deliver Anything by Itself... Critical that We Not Lose Focus on Our Partners, Stakeholders, and Our Commitments
- Navigation Investment is Essential for the Nation's Global Trade and International Competiveness
- America's Marine Transportation System infrastructure Must be a National Priority in Order to Secure Adequate Levels of Investment
- Navigation Investment is Key to National Economy, Jobs, and Exports!



THANK YOU





Inland Waterways

2013 GRADE **D+**

Our nation's inland waterways and rivers are the hidden backbone of our freight network - they carry the equivalent of about 51 million truck trips each year. In many cases, the inland waterways system has not been updated since the 1950s, and more than half of the locks are over 50 years old. Barges are stopped for hours each day with unscheduled delays, preventing goods from getting to market and driving up costs. There is an average of 62 service interruptions a day throughout the system. Projects to repair and replace aging locks and dredge channels take decades to approve and complete, exacerbating the problem further.

AMERICA'S GPA:
D+
A = Exceptional
 B = Good
 C = Marginal
 D = Poor
 F = Failing
GRADE RETROCALCULATED



	Add'l Total Investment by 2020	Protects \$B in Exports	Protects \$B in GDP	Protects Jobs	Protects Personal Income
Waterways	\$16B	\$270B	\$697B	738,000	\$872B
Airports	\$39B	\$54B	\$313B	350,000	\$361B
Electricity	\$107B	\$51B	\$496B	529,000	\$656B
Water/Wastewater	\$84B	\$20B	\$416B	669,000	\$541B
Roads	\$846B	\$114B	\$897B	877,000	\$930B



Stakeholders and Partnering

- Leverage Efforts
- Understand and communicate Civil Works and Marine Transportation System Value to Nation
- Find consensus on Major Initiatives
 - Identify Funding to Reach Outcomes
 - Engage in Dialogue
- Be mutually supportive
- Shared Messages
- Involve & Engage End-Users
- Seek to Influence Decision-Makers



Infrastructure Information

U.S. ARMY CORPS OF ENGINEERS in NUMBERS

- Replacement value of Civil Works infrastructure: **\$267 billion** dollars
- **715** dams; **14,700** miles of levees; **400** miles of shoreline protection;
- U.S. marine transportation industry supports **\$2 trillion** dollars in commerce and creates employment for over **13 million** people
- **\$197 million** dollars in damages prevented in 2017
- Commercial deep draft channels operated and/or maintained: **13,000** miles
- **250 million** outdoor recreation visits a year
- **75** hydropower plants produce **3%** of US electric energy
- Navigation lock chambers: **239**, at **193** sites



WATER RESOURCES INFRASTRUCTURE

ASCE 2018 INFRASTRUCTURE REPORT CARD

KEY CHALLENGES

- LEVEES**: \$80 billion needed in the next 50 years to maintain the levee system. **D**
- PORTS**: Need for modernization and equipment adjustment due to larger vessels. **C-**
- INLAND WATERWAYS**: Continuous dredging and larger navigation channels needed. **D**
- DAMS**: Average age of over 90,000 dams in the country; 50 years. **D**

Additional note: 40% of vessels moving goods on the inland waterways experience delays.

THE NATION'S WATER RESOURCES NEEDS ARE NOT BEING MET



Traditional Infrastructure Project Delivery Methods Alone Will NOT Get the Job DONE

