WEDA
Western Dredging Association

Mexico Chapter Annual Meeting

Securing Waterways Infrastructure for a Competitive U.S.

Russ Tolle

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Inland Navigation
Headquarters, U.S. Army Corps of Engineers

September 1, 2015

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US Army Corps of Engineers
BUILDING STRONG®

USACE Mission and Vision

Mission:

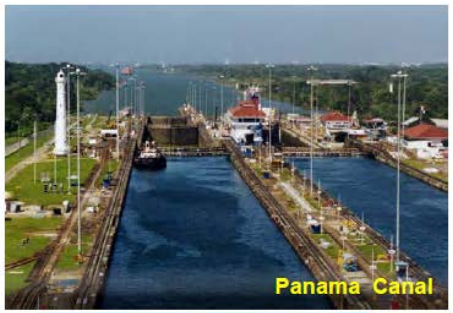
Deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation's security, energize the economy and reduce risks from disasters.

Vision:

Engineering solutions for our Nation's toughest challenges.

U.S. Army Corps Of Engineers

239 Years of Service to the Nation



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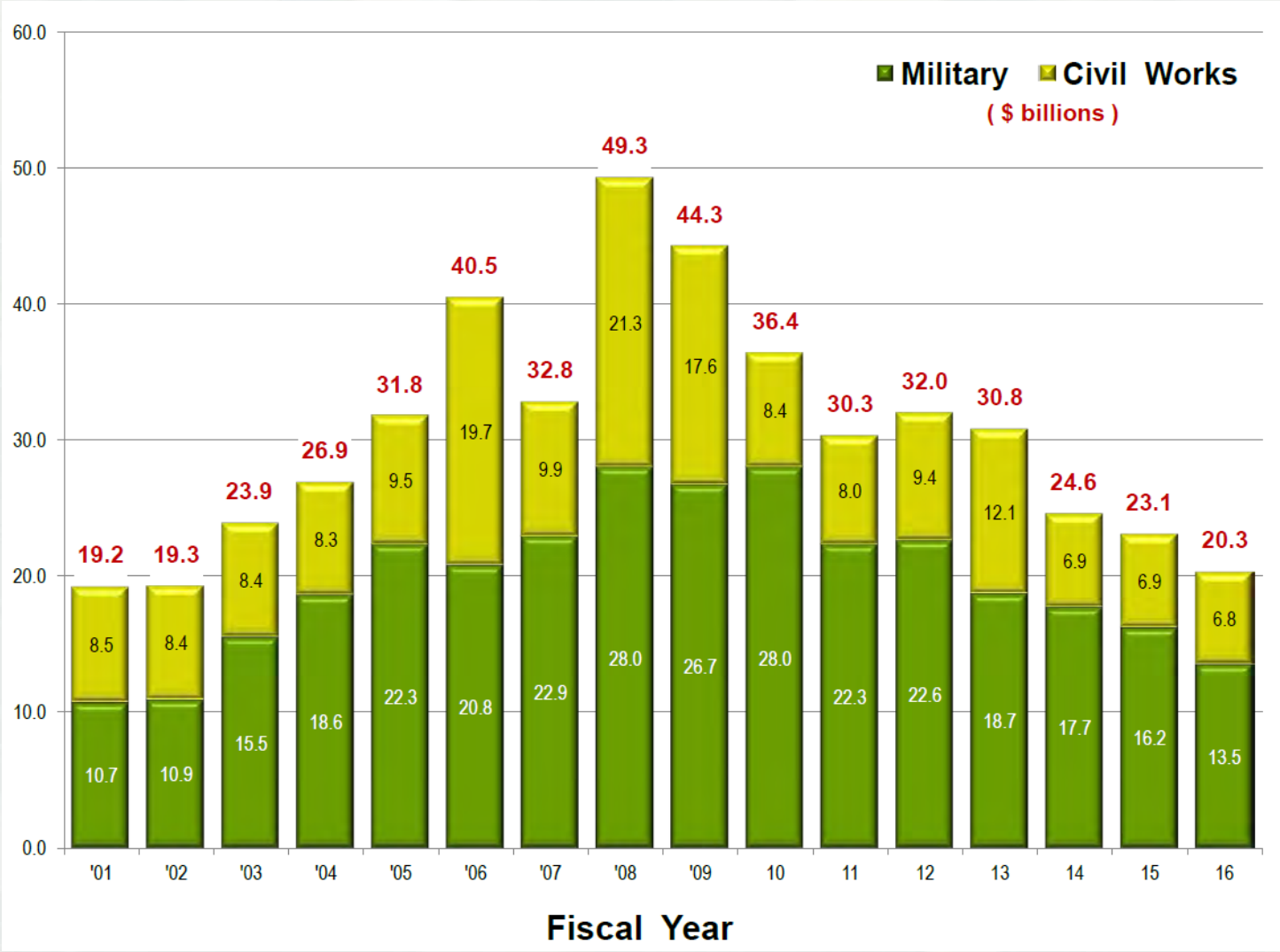
The USACE Program



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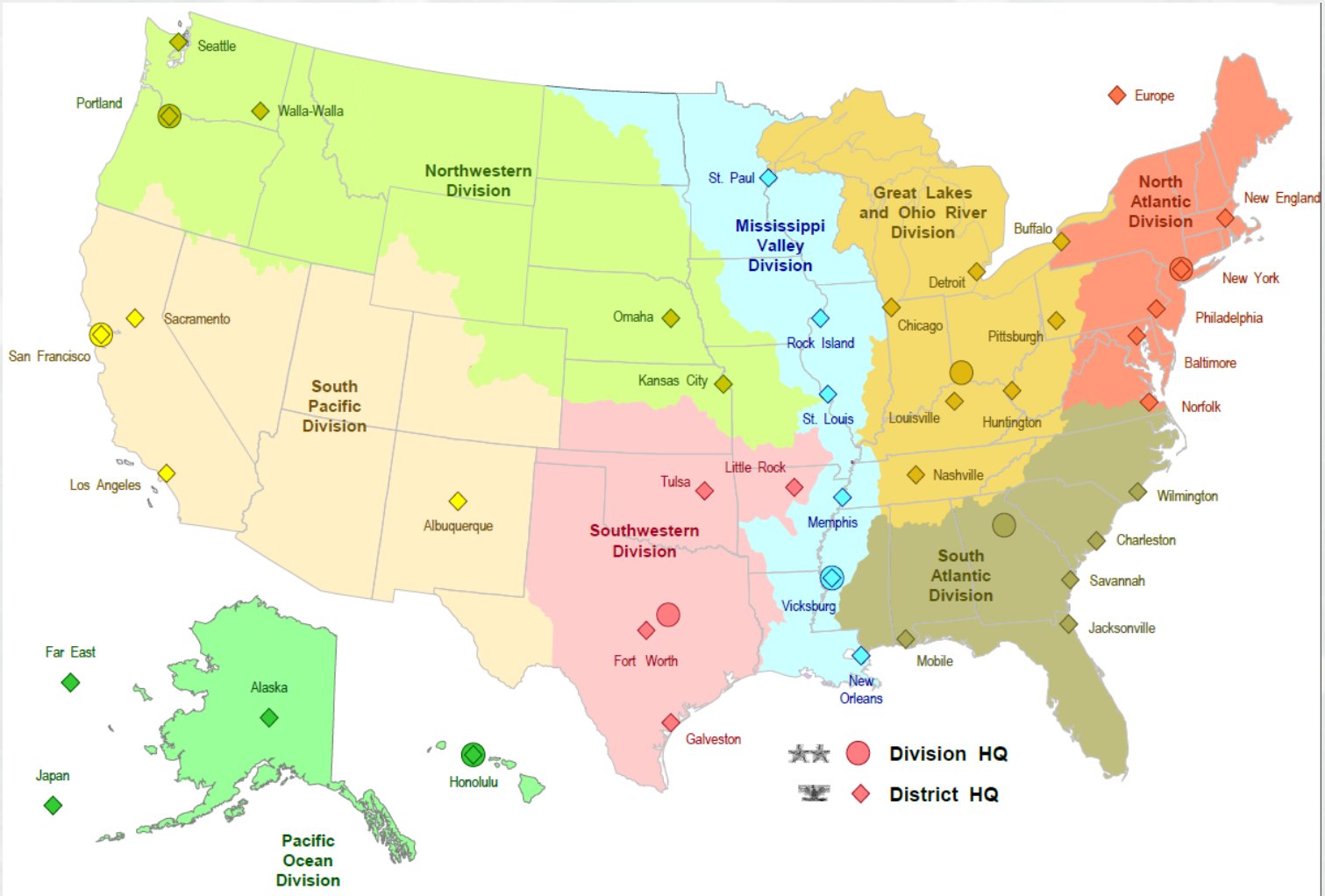
Civil Works Divisions and Districts



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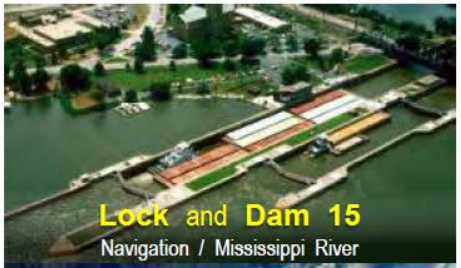
USACE Civil Works Mission



Deliver enduring and essential water resource solutions using effective transformation strategies.

Navigation

Flood Risk Management

Ecosystem Restoration and **Infrastructure**

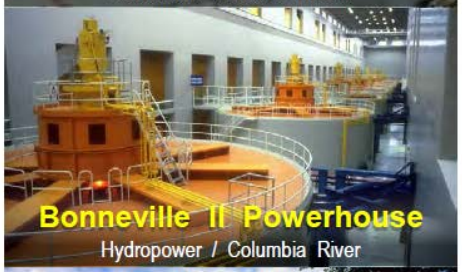
Recreation and **Natural Resource Management**

Hydropower

Regulatory
Wetlands and Waterways

Water Supply

Expenses
Includes ASA(CW)



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USACE Navigation Mission

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

Navigation Facts

- 99.6% of U.S. overseas trade volume moves through coastal channels maintained by USACE
- The U.S. marine transportation industry supports ~ $2 trillion in commerce.
- More than 60% of farm exports move on inland waterways to downstream ports. Nearly 80 million tons of grain move by barge annually.
- One barge can carry as much freight as 15 rail cars or 60 trucks, and reduce traffic congestion and air pollution.
- Average age of our navigation locks is over 60 years.
- Federal funding has remained flat in nominal terms and declined in real terms.

The U.S. Navigation System

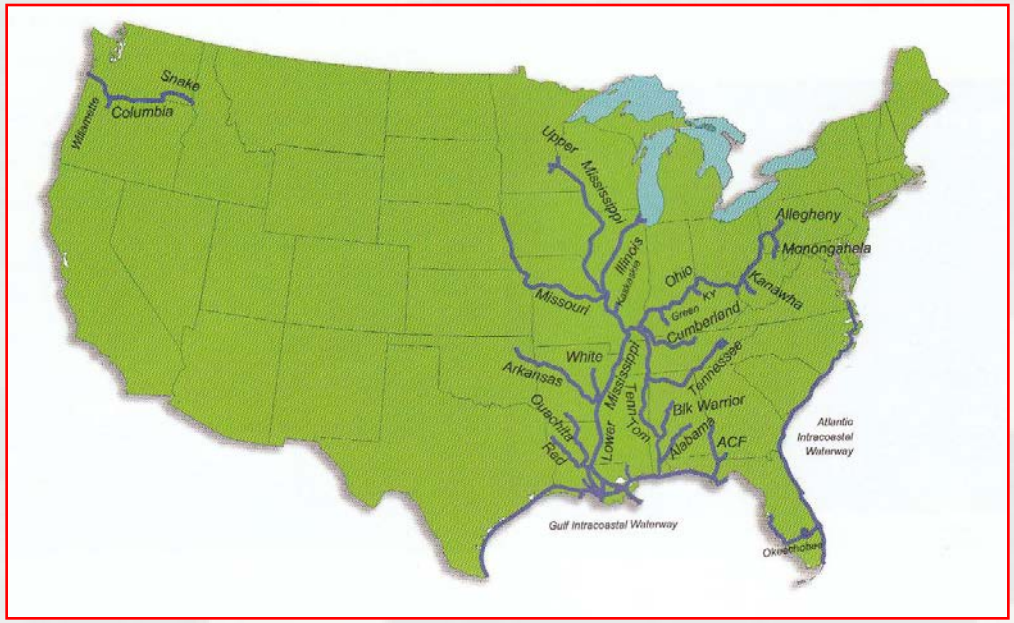
USACE Navigation Assets

INLAND NAVIGATION

27 Inland River Systems

228 lock chambers @ 186 lock sites

12,000 miles of inland river channels



COASTAL NAVIGATION

1,067 Navigation Projects

13 lock chambers

929 navigation structures

844 bridges

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U.S. Ports: Vital to Trade… and to Our National Economy

Navigation Authority

- Authority and funding for studying, constructing, and operating & maintaining navigation comes from U.S. Congress.
- Studies generally conducted and funded 50% by the Corps and funded 50% by non-Federal sponsor.
- Goal to complete studies within 3 years and $3 million
- Must have a benefit to cost ratio of at least 1.0 to be authorized.

Support for Navigation Mission: Who Does What?

- The Corps' Role in Navigation:
  - Plan, design, construct, operate, maintain and secure infrastructure to support coastal and inland navigation
  - Locks & dams, channel dredging, river training works, bank protection, wreck and debris removal, electronic charting (inland), cargo data collection and analysis, etc.
- Coastal Ports and Non-Federal sponsors: Ports, states, municipalities pay a share of the study and construction costs and are responsible for land-side infrastructure, berthing areas, and non-Federal channels.
- Inland Navigation: No single project sponsor per se, but local, regional, & national stakeholder groups are critical to all stages of project implementation, especially political support and securing funding.

National Priorities for Budgeting

1. Provide for National Defense
2. Reduce the Deficit
3. Create Jobs and Restore the Economy
4. Improve Resiliency and Safety of Communities and Infrastructure
5. Restore and Protect the Environment
6. Maintain Global Competitiveness
7. Increase Energy Independence and Renewable Energy
8. Improve Quality of Life
9. Support Research and Innovation that leads to American Jobs and Industries

FY 16 Budget

- Budget is performance based.
- Focuses on highest performing projects and programs with high economic, environmental, and public safety returns to the nation.
- Emphasizes operation and maintenance of infrastructure to address critical infrastructure needs and provide a reliable and resilient system.
- Provides a fiscally prudent investment in Nation's water resources infrastructure making tough decisions to put the nation on a fiscally prudent path.
- The Navigation portion focuses on high commercial use coastal harbors and channels with > 10 million tons of commerce; and inland and intracoastal waterways with > 3 billion ton-miles of commerce.

Navigation Trust Funds

- There are 2 Navigation-related Trust Funds
- Inland Waterways Trust Fund
  - Purpose: Fund 50% of Construction and Major Rehabilitation of Inland & Intracoastal Waterways
  - $0.29/gallon fuel tax
- Harbor Maintenance Trust Fund
  - Purpose: Fund Operation & Maintenance of Coastal Navigation Harbors and Channels
  - Issue: Ad valorem tax receipts and balance in the HMTF continue to grow (over $8 Billion), but insufficient O&M funds are available to maintain projects

Navigation Trust Funds

- Inland Waterways (Fuel Taxed)
  - O&M: Federal Government 100%
  - Construction: Federal Government 50%
    Inland Waterways TF 50%
- Coastal/Harbors
  - O&M: Federal Government 0%
    Harbor Maintenance TF 100%
  - Construction: Federal Government 40-80%
    Project Sponsors 20-60%

President's Budgets

($millions)

Pres Bud	Coastal	Inland	Nav	CW total	Nav %
FY 16	$973	$974	$1,947	$4,732	41
FY 15	$991	$834	$1,825	$4,561	40
FY 14	$980	$904	$1,884	$4,826	39
FY 13	$967	$780	$1,747	$4,731	37
FY 12	$832	$744	$1,575	$4,631	34
FY 11	$873	$779	$1,652	$4,939	33
FY 10	$971	$796	$1,767	$5,125	35
FY 09	$969	$931	$1,900	$4741	40
FY 08	$957	$1052	$2,009	$4,900	41

Navigation Budget by Appropriation

($millions)

Pres Bud	Investigations	Construction	O&M *	MR&T	Total Nav
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
FY 09	$20	$495	$1,346	$39	$1,900
FY 08	$19	$572	$1,383	$35	$2,009

* $850 - $900M is for Maintenance Dredging

Inland Navigation Budget

($million)

Pres Bud	Investigations	Construction	O&M	MR&T	Total Nav
FY 16	$25	$321	$1,563	$38	$1,947
FY 15	$22	$277	$1,487	$39	$1,825
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Coastal Navigation Budget

($million)

Pres Bud	Investigations	Construction	O&M	MR&T	Total
FY 16	$18	$81	$872	$2	$973
FY 15	$17	$97	$875	$2	$991
FY 14	$16	$108	$853	$2	$980
FY13	$17	$151	$797	$2	$967
FY12	$7	$117	$706	$2	$832
FY11	$9	$115	$747	$2	$873
FY10	$16	$119	$834	$2	$971
FY09	$17	$188	$760	$4	$969

How Does USACE Accomplish the Dredging Mission?

Dredging is accomplished by:

- Corps (Government Owned) Dredges
- Contracting (Private Industry) Dredges

Public Law 95-269 (1978)

The Secretary of the Army, acting through the Chief of Engineers, in carrying out projects for improvement of rivers and harbors shall, by contract or otherwise carry out such work in the manner most economical and advantageous to the United States. 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 a reasonable price and in a timely manner.

To carry out emergency and national defense work the Secretary shall retain only the minimum federally owned fleet capable of performing 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.

Government Owned Hopper Dredges*

Vessel Name	Region	Class	Size (YD^3)	Year
Wheeler	Gulf Coast	Large	8,400	1982
Essayons	West Coast	Medium	6,000	1982
McFarland	East Coast	Medium	3,140	1967
Yaquina	West Coast	Small	1,042	1980

*USACE also owns a number of small sidecast, dustpan, and cutterhead dredges.

Contracted Dredging

- Unit Price contracts are the preferred method
- Bid Item for Mobilization/Demobilization usually included (Lump Sum)
- Payment based on material removed:
  - Pre and Post Hydrographic Surveys performed by Government to determine actual quantities removed
- Payment based on hours dredged (Plant Rental):
  - Government directs areas and depths to be dredged and maintains records of operational / partial operational / non-operational / standby hours

Procurement Types

- Invitation for Bids (IFBs):
  - Award based on Responsiveness, Responsibility, and Cost
- Request for Proposals (RFPs):
  - Award based on evaluation factors (technical, past performance, small business participation, cost, etc.)
- Multiple Award Task Order Contracts (MATOCs):
  - RFPs and Task Orders issued to only Pool Members
- Single Award Task Order Contracts (SATOCs):
  - Single contractor awarded and issued task orders

Environmental Concerns

- During Planning phase, coordination with multiple agencies (national, state, and local) is required.
- Applicable Permits must be obtained and included in the contract documents.

Sample Environmental Matrix

Spec/Permit Reference	Specification	Deadline	Responsible Entity	Date Provided
Pre-Construction				
403.813 (1)(f), FS	Notify DEP of dredging project and provide documentation of original design specifications	At least 30 days prior to commencement	CESAJ-PD-E	
Spec 01 35 26; 1.5.3.1 and Section 403.813 (1)(f), F.S. BMP	Preconstruction Conference to be conducted w/ Contractor, COR, FWC, & DEP	At least 7 days Prior to commencement	CESAJ-CD-N	
Section 403.813(f), F.S.	Send Notice of Commencement to DEP BBCS	At least 48 hours prior to commencement	CESAJ-CD-N	
Spec 01 35 26; 3.1.2.2 and Section 403.813 (1)(f), F.S. BMP	Send written statement from project engineer or designee regarding DMMA structural integrity, functionality, and pre-dredge site visit summary.	Immediately prior to commencement	CESAJ-CD-N/ CESAJ-EN-DW	
During Construction				
Spec 01 35 20; 3.1.3.3	Report finds of archeological artifacts to CESAJ-RD, DEP NED, and DHR. Stop soil disturbance work until authorized by DHR.	Immediately	Contractor/ CESAJ-CD-N	
	Manatees			
Env. Spec. 01 57 20; 1.5	Any collision with and/or injury to a manatee shall be reported to CESAJ-PD-E, CESAJ-CD-N, the FWC "Wildlife Alert" at 1-888-404-FWCC (3922) and USFWS Jacksonville Office at 1-904-731-3336	Immediately	Contractor/ CESAJ-CD-N/ CESAJ-PD-E	

Sample Environmental Matrix

	Turbidity and Disposal Monitoring Specifications			
Section 403.813(3)(a) and (b), F.S.	Notify DEP BBCS, CESAJ of any exceedence of 29 ntu over background levels within a 100-meter radius from the point of dredging (150 m when disposing at ODMDS) and 150-meter radius from the point of discharge (upland placement only)	Immediately	Contractor/ CESAJ-CD-N	
Env. Spec. 01 57 25 and Section 403.813(1)(f), F.S. BMP	Provide to CESAJ/DEP BBCS/DEP NED turbidity test reports (electronically)	On a weekly basis	Contractor	
	Turtles			
Env. Spec. 01 57 20; 3.1.5.1(b)4 SARBO	1 Take: Notify CESAJ PD-E (Paul Stodola and Branch Chief) and CO and NMFS via email if taken; 2 Takes within 24 hr.: Notify CESAJ PD-E and CO; 3 takes: cease operations until cleared by CESAD; 5 takes: terminate operations unless superseded by prior agreement; 2 takes of endangered species: suspend operations until cleared by CESAD	Immediately	Contractor	
JCP 0129277-013-BE SC 6	Notify Sea Turtle Stranding Network Coordinator, Dr. Allen Foley at (904)573-3930 or allen.foley@myfwc.com of start up and completion of hopper dredging	Prior to starting work with the hopper	CESAJ-CD-N/ CESAJ-PD-E	
JCP 0129277-013-BE SC 7	If a turtle is captured during dredging or non-capture trawling, submit incident report to Marineturtle@myfwc.com		Contractor/ CESAJ-CD-N/ CESAJ-PD-E	
	Sturgeon			
Env. Spec. 01 57 20; 3.1.5.1 SARBO	1 Take: Notify CESAJ Branch Chief and CO; 3 takes: cease operations until cleared by CESAD	Immediately	Contractor	
	Right Whales			
Env. Spec. 01 57 20; 3.1.5.1(3) SARBO	Notify FWC at 1-888-404-FWCC of any Right Whale and NMFS Whale Stranding Network at 305-862-2850 if the whale is stranded/injured.	Immediately	Contractor	
	Shore Birds			
Env. Spec. 01 57 20; 3.1.5.9	If nesting occurs, notify the contracting officer. The Corps will coordinate with the USFWS and the FFWCC.	Immediately	Contractor/ CESAJ-CD-N	
Post-Construction				
Env. Spec. 01 57 20; 3.1.5	Submit report detailing manatee sightings, work stoppages, and other protectged species related incidents to FWC, USFWS, NMFS, COE	Within 30 days of project completion	Contractor/ CESAJ-CD-N/ CESAJ-PD-E	
403.813 (1)(f), FS	Submit Notice of Completion to DEP	Within 30 days of completion of disposal operations	CESAJ-CD-N	

Beneficial Use of Dredged Material

Beneficial Uses
- Introduction
- Decision Process
- Sediment Types
- Glossary
- Links
- References
- K-12 Lessons
- Lead Organizations
- Authorities
- Calendars

Agricultural/Product Uses
- Aquaculture
- Construction Materials
- Decorative Landscaping Products
- Topsoil

Engineered Uses
- Beach Nourishment
- Berm Creation
- Capping
- Land Creation
- Land Improvement
- Replacement Fill
- Shore Protection

Environmental Enhancement
- Fish & Wildlife Habitats
- Fisheries Improvement
- Wetland Restoration

View by State
Select a State

Beneficial Uses of Dredged Material

Beneficial Uses

Engineered Uses

Environmental Enhancement

Agricultural/ Product Uses

http://el.erdc.usace.army.mil/dots/budm/budm.cfm

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Beneficial Use of Dredged Material

Upland Disposal Area Created Using dredged Material

Beneficial Use of Dredged Material

Material being placed on the beach

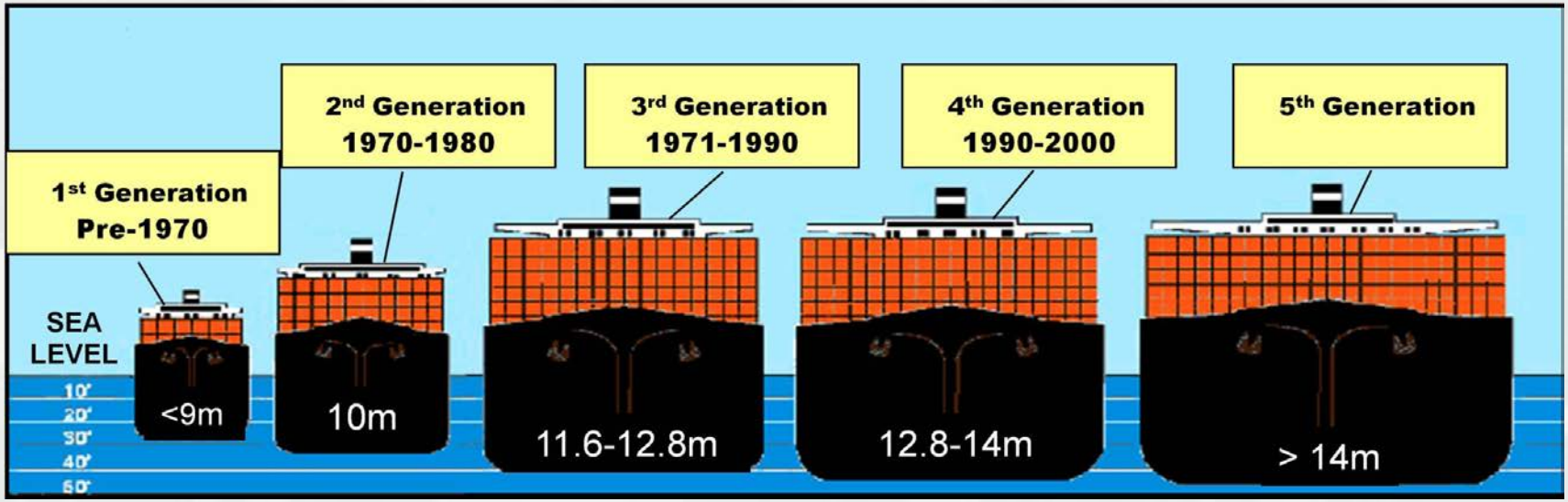
Ready for the Panama Canal?
U.S. Harbors 45’ or Greater

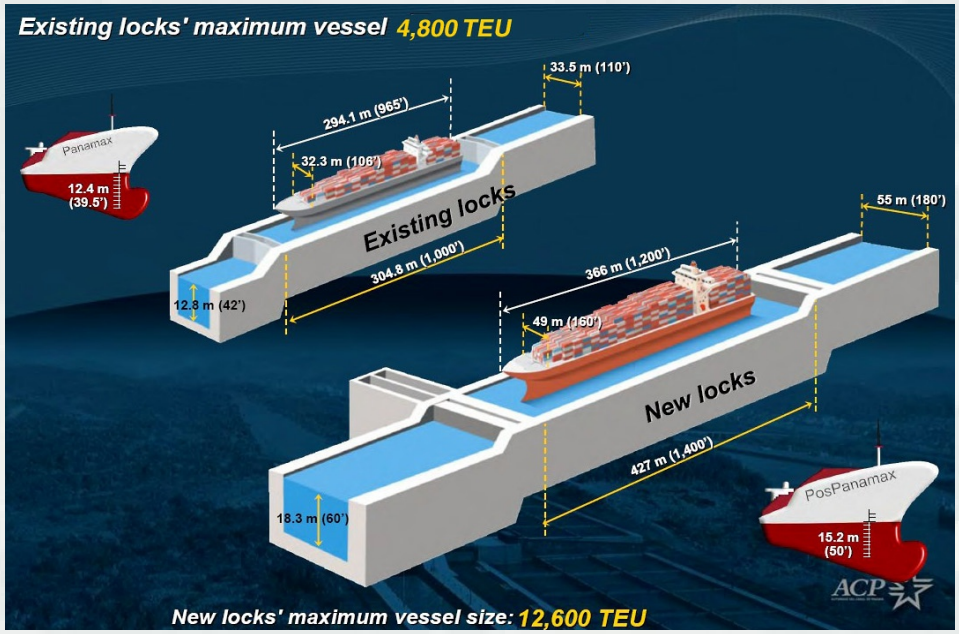
WEST COAST
Seattle/Tacoma (>50’)
Oakland (50’)
LA/LB (>50’)
San Diego (47’)

EAST COAST
NY/NJ (50’ underway)
Baltimore (50’)
Hampton Roads (50’)
Charleston
Morehead City

GULF COAST
Mobile
New Orleans
Houston/Galveston/Texas City
Corpus Christi
Freeport

President's "We Can't Wait" Press Release





Advancing key infrastructure projects at 5 East Coast ports:

- NY/NJ
- Charleston
- Savannah
- Jacksonville
- Miami

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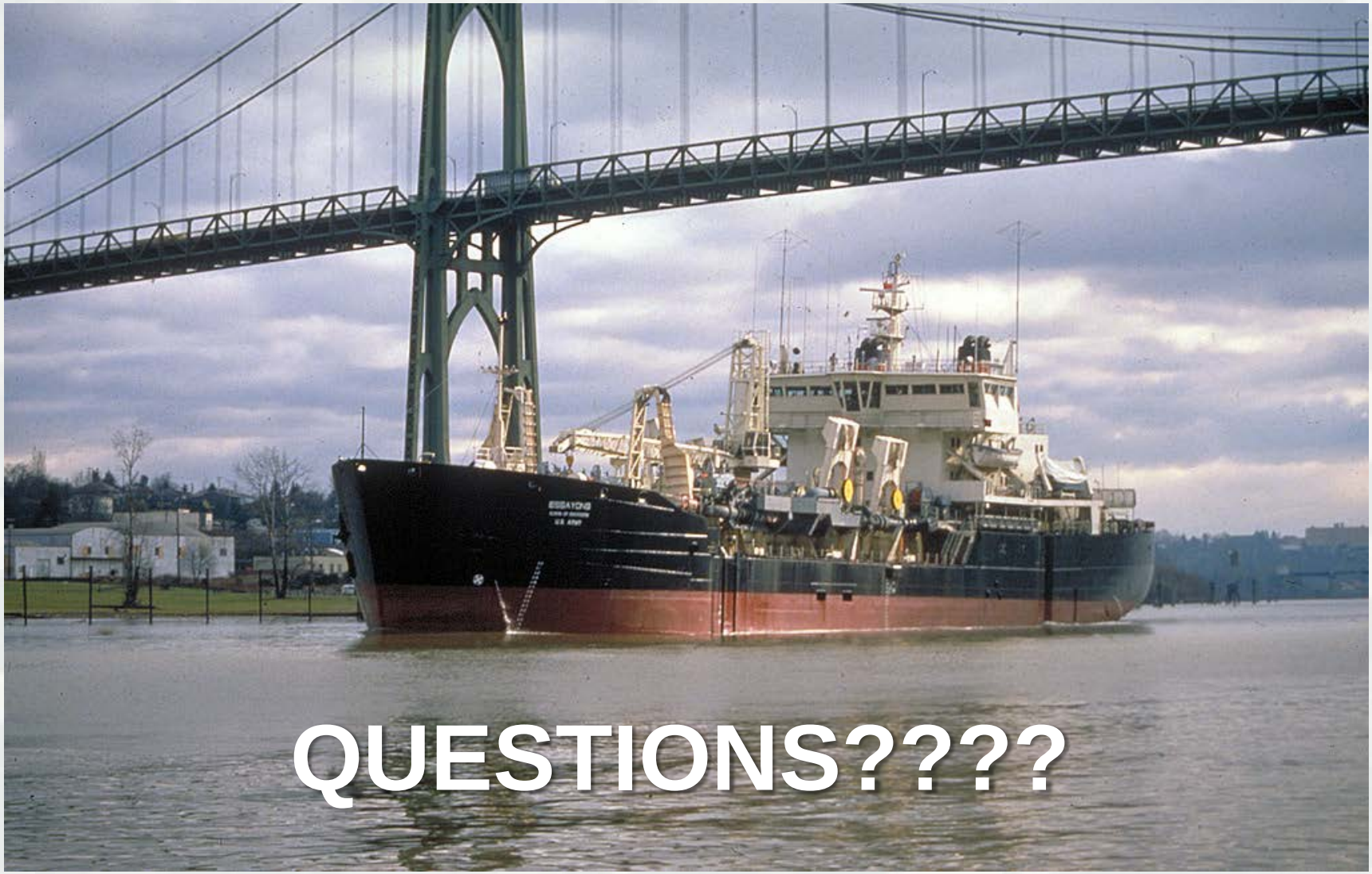
Challenges

- U.S. population growth increasing to 110 million in 30 years
- U.S. imports and exports projected to increase significantly
- Worldwide numbers of post-Panamax vessels increasing
- Opportunities for economically justified port expansion are expected to be greatest along the Southeast and Gulf coasts
  - Corps is conducting 17 port specific studies to identify expansion needs

Challenges

- Increased grain exports can be expected as a result of transportation cost savings associated with the use of larger vessels
  - The capacities of the Inland Waterways serving the export market need to be maintained to take advantage of this opportunity
- Environmental mitigation costs will be significant
- Funding will be the primary challenge



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