JACKSONVILLE HARBOR DEEPENING
MAYOR’S TASK FORCE

Presented by:
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Jacksonville District, U.S. Army Corps of Engineers

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**Jacksonville Harbor**

**An Investment in the National Interest**

- Nationally Significant Infrastructure Project as defined by President Obama’s “We Can’t Wait” Initiative
- #39 in U.S. for overall tonnage
- #12 in U.S. for container traffic
- Leading auto exporter in U.S.
- Department of Defense and MARAD* Designated Strategic Port

*MARAD: United States Maritime Administration

- 47-foot Deepening
- 2.7 BCR
- Total Federal Cost: $312.7 million
- Total Non-Federal Cost: $371.5

Images, left to right: President Obama visits JAXPORT; Post-Panamax Cranes at Dames Point TraPac Terminal
LOGISTICS
- Access to nationwide transportation:
  - Rail: CSX, Norfolk Southern, Florida East Coast
  - Interstates: I-10, I-75, I-95
- Port pro-active in infrastructure development
  (recent USDOT grant for intermodal transfer station)

DEMAND
- S.E. U.S. most rapidly growing region

MULTIPLE USES/VITAL PORT
- Leading automobile exporter nationwide
- #12 in container traffic nationwide
- Strategic Military Cargo Port
  (832nd Transportation Battalion)
JACKSONVILLE HARBOR

PROBLEMS

- Inadequate Depths and Widths
- Navigation Restrictions

OPPORTUNITIES

- Forecasted volume of goods on fewer, larger ships
- Reduce transportation costs

- Vessel light-loading
- More frequent trips
Authorization: Resolution from the Committee on Public Works and Transportation, United States House of Representatives, dated February 5, 1992:

“...to determine whether modifications of the recommendations contained therein are advisable at the present time, in the interest of navigation and other purposes.”

Non-federal Sponsor: Jacksonville Port Authority (JAXPORT)

DEEPENING HISTORY TIMELINE


12.5 ft 18 ft 30 ft 38 ft 40 ft 40 ft 47 ft


Miles 0 to 14.7 Miles 14.7 to 20 Miles 0 to 13

PANAMA CANAL EXPANSION
**ECONOMICS**
- Annual Tonnage: 15 million
- Annual Containers: 900,000 (12th in Continental U.S.)
- Trade Routes: Increase in cargo throughput on major East-West trades

**ENGINEERING**
- Dredged Material Management limited in upland capacity
- New ODMDS
- Annual O&M
  - 100% federally funded
- Advance Maintenance
- Shoreline Erosion

**ENVIRONMENTAL**
- St. Johns River/American Heritage River
- Lower river is an estuary (great variability in salinity)
- Threatened and Endangered species (e.g., manatees & sea turtles)
- Essential Fish Habitat
- Timucuan Ecological & Historic Preserve (TIMU) overlaps a portion of the study area

Not to Scale
DEEPENING STUDY

Federal Objective:

- Reduce navigation transportation costs and develop an alternative that is environmentally sustainable

Constraints:

- Avoid or minimize impacts on environmental resources (i.e., wetlands, submerged aquatic vegetation, and Threatened and Endangered species)
ALTERNATIVES CONSIDERED

Segment 1: Entrance Channel to River Mile 14 (Reduced to approximately River Mile 13)

Segment 2: River Mile 14 to 20 (eliminated)

Segment 3: West Blount Island Channel (eliminated)
DEEPENING:
Entrance Channel to ~ River Mile 13 from existing 40-foot depth to 47 feet

WIDENING:
Areas 1 and 2: ~ 100 to 300 feet

NEW TURNING BASINS:
Blount Island: ~ 2700' long by 1500' wide
Basin Brills Cut: ~ 2500' long by 1500' wide

LOCATION OF ODMDS
~8 nautical miles

Not to Scale
AUTHORIZED PROJECT 47 FEET

SUMMARY OF PROJECT COST

(FY14 Discount Rate 3.5% and October 2013 Price Level)

<table>
<thead>
<tr>
<th>Total Cost</th>
<th>$684,200,000</th>
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<tbody>
<tr>
<td>Federal Share</td>
<td>$312,700,000</td>
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<tr>
<td>Non-federal Share</td>
<td>$371,500,000</td>
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TRANSPORTATION SAVINGS PER TEU BY TRADE ROUTE

<table>
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<tr>
<th></th>
<th>40’</th>
<th>47’</th>
<th>SAVINGS</th>
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<tr>
<td>PANAMA / SUEZ</td>
<td>$1,104.75</td>
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Federal Benefit to Cost Ratio 2.7

CONCEPTUAL RENDERING: ADDITIONAL TEU CAPACITY AT 47-FOOT DEPTH
**Authorized Project**

**Engineering Summary**

**Dredging Quantities:** ~18 million cubic yards of material to new ODMDS

**Blasting:** Probable (depends on selected contractor’s dredging equipment)

**Advanced Maintenance:** Strategically located to maintain existing level of service (same annual dredging frequency as existing conditions)
SUMMARY OF SALINITY AND WATER LEVEL IMPACTS

**EELGRASS**
- 1%-3% increase in salinity stress frequency between Acosta and Buckman Bridges
- No beds would disappear because of the deepening

**WETLANDS**
- Due to minor changes in salinity, wetlands would not disappear or significantly change due to deepening
- Deepening may contribute in a small way to ongoing changes in plant composition and soil subsidence
- Proposed deepening would not cause changes in water level that would affect salt marsh or other wetlands

**FISH AND MACROINVERTEBRATES**
- 0-8% change in salinity-based habitat for some fish and shrimp
- **Used current guidance (EC 1165-2-212)**
- **Results of analysis for the 50-year period, 2018-2068:**
  - Low: 0.39 feet
  - Intermediate: 0.87 feet
  - High: 2.4 feet
- **Conclusion for navigation:**
  - Based on these sea-level rise projections and elevations of current and planned port facilities, no impacts on navigation and minor impacts on port facilities
- **Conclusion for salinity impacts:**
  - Majority of salinity changes will occur due to sea-level change; only minor impacts attributable to the project

![Diagram showing average salinity (PPT) at Buckman Bridge with and without the project.](image)
ENVIRONMENTAL MONITORING

- Address uncertainty of the models
- Inform agencies and public on monitoring data
- Monitoring would include water quality, wetlands, eelgrass, and fisheries

**Projected construction date**

- BASELINE COLLECTION PERIOD: 5 to 10 years
- CONSTRUCTION PERIOD: 4 to 6 years
- POST-CONSTRUCTION PERIOD: up to 5 to 10 years
CORRECTIVE ACTION PLAN

**THRESHOLDS DEFINED**

1. **COLLECT MONITORING DATA**
2. **ANNUALLY ASSESS SALINITY/ECOLOGY THRESHOLDS**
3. **DATA ANALYSIS AND SALINITY MODELING**

   - If effects are determined to be due to the project:
     - **ADDITIONAL MITIGATION ABOVE BASE**
     - Determine scale of impact
     - **EFFECTS ASSESSMENT: ECOLOGICAL MODELING AND MONITORING**

   - **If effects are determined NOT to be due to the project**

* Draft thresholds identified during feasibility phase; thresholds are updated and finalized during Preconstruction Engineering and Design (PED)
CULTURAL RESOURCES SUMMARY

- Conducted underwater cultural resources surveys from River Miles 0 to 13, and in the Mile Point project area
- Completed reconnaissance surveys of the islands at Mile Point
- Both the Deepening and the Mile Point Projects are compliant with Section 106 of the National Historic Preservation Act of 1966
- Coordination with the Florida State Historic Preservation Officer (SHPO) and appropriate federally recognized Tribes has been completed
- Based on these surveys, the proposed projects will not adversely affect cultural resources
PUBLIC / AGENCY INVOLVEMENT

Public Outreach
- Public Coordination initiated in 2007
- Public Meetings
  - 6 Public Meetings or Workshops
  - Bi-Monthly Teleconferences

Agency Coordination
- Cooperating Agency Letters: 2011
- Meetings on Ecological Modeling:
  - March and October 2012
- Monthly Teleconferences
- Endangered Species Act (ESA) coordination with U.S. Fish and Wildlife Service (November 2013) and National Marine Fisheries Service (February 2014)
- Magnuson-Stevens Fishery Conservation and Management Act (EFH) coordination with National Marine Fisheries Service (January 2014)
PROJECT IMPLEMENTATION (Key Dates)

Feasibility Phase:
- Chief of Engineers Report: April 16, 2014
- Authorized in Water Resources Reform and Development Act (WRRDA): June 2014

Preconstruction Engineering and Design (PED) Phase:
- June 2014 - September 2015

Construction Phase:
- Subject to Appropriations: 2016 - 2022
EXTENSIVE REVIEWS

☑ May 2013: Draft Legal Certification
☑ May 2013 – October 2013: Draft Agency and Public Review
☑ 2013 Cost Certification/Value Engineering Analysis:
☑ February 2014 Final Agency Technical Review and Legal Certification
☑ January 2014: Agency Approval for Use of Ecological Models
☑ February 2014: Final State and Agency Review and National Environmental Policy Act (NEPA) Review
SUMMARY OF INDEPENDENT EXTERNAL PEER REVIEW (IEPR) FINDINGS

- **Panel Members:** 5 Technical Experts
  - Hydraulic Engineering
  - Geotechnical Engineering
  - Economics
  - Environmental
  - Plan Formulation

- **Comments:** 13 Final Panel Comments

- The Panel concurred with all Project Team responses to the Final Panel Comments

- The Final IEPR report is available at [www.saj.usace.army.mil](http://www.saj.usace.army.mil)
CONCLUSIONS

- Final authorized report is legally and technically sound
- Extensive coordination will continue throughout the life of the project
- For more information visit www.saj.usace.army.mil