



# ASA(CW)-USACE CW Senior Leader Off-Site #11



## U.S. Port and Inland Waterway Modernization Strategy

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US Army Corps of Engineers  
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# U.S. Port and Inland Waterways Modernization Strategy



As directed by Congress:

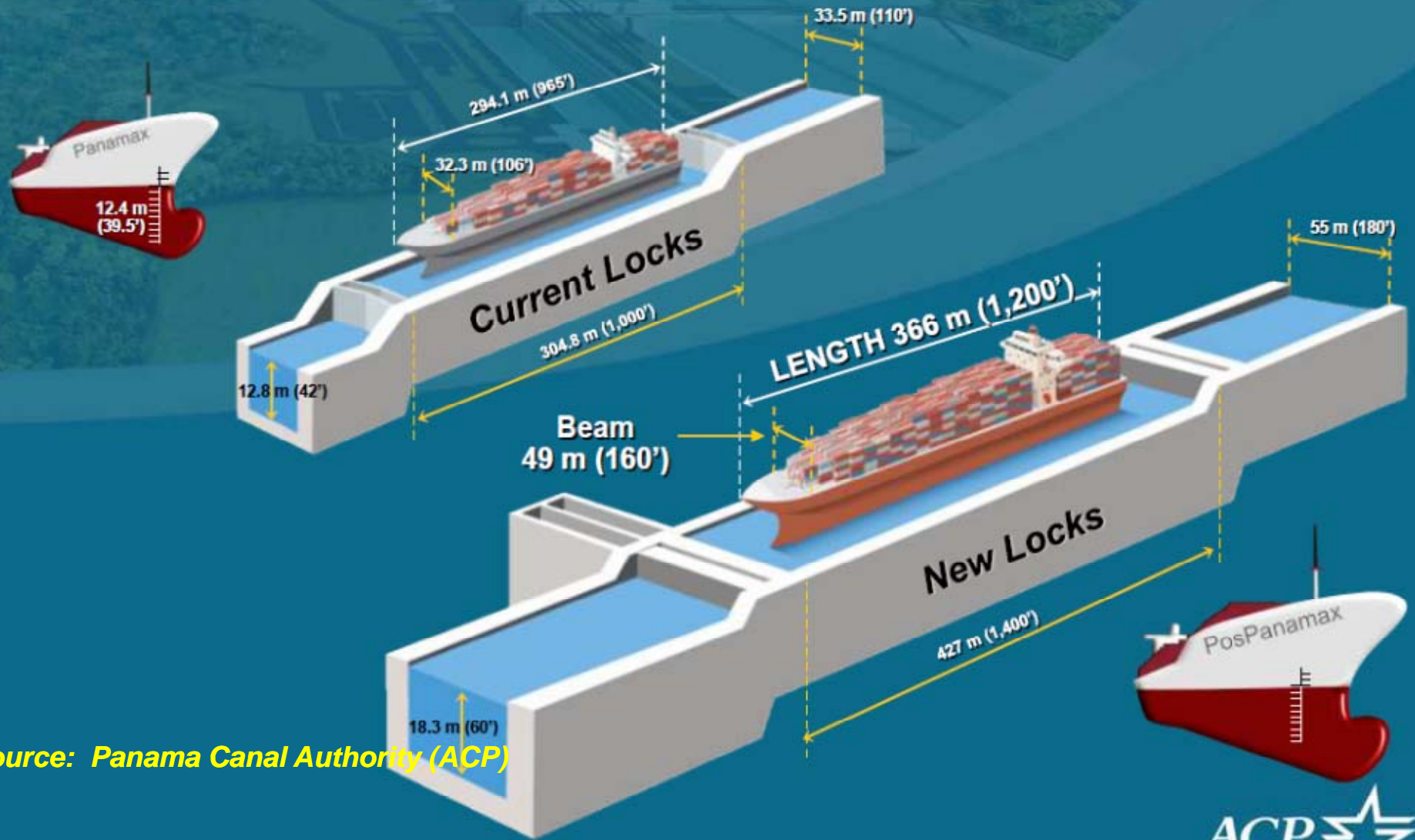
Within the funds provided, the Institute for Water Resources is directed to submit to the Senate and House Committees on Appropriations within 180 days of enactment of this Act, **a report on how the Congress should address the critical need for additional port and inland waterway modernization to accommodate post-Panamax vessels.** This study will not impede nor delay port or inland waterway projects already authorized by Congress. Factors for **consideration should include costs** associated with deepening and widening deep-draft harbors; the **ability of the waterways and ports to enhance the nation's export initiatives** benefitting the agricultural and manufacturing sectors; the current and projected population trends that **distinguish regional ports and ports that are immediately adjacent to population centers;** the availability of inland **intermodal access;** and the **environmental impacts** resulting from **the modernization of inland waterways and deep-draft ports.**

- Conference Report on the Consolidated Appropriations Act for Fiscal Year 2012



# Dimension of Locks and New-Panamax vessels

Existing Locks Max Vessel: **4,400 TEU's**



Source: Panama Canal Authority (ACP)

New Locks Max Vessel: **12,600 TEU's**





# U.S. Port and Inland Waterways Modernization Strategy



- Focus: How Congress should address critical need for additional port and inland waterway modernization to accommodate post-Panamax vessels.
- Factors to address:
  - Costs associated with deepening and widening deep-draft harbors;
  - Ability of waterways and ports to enhance export initiatives benefitting the agricultural and manufacturing sectors;
  - Current and projected population trends that distinguish regional ports and ports that are immediately adjacent to population centers;
  - Inland intermodal access;
  - Environmental impacts resulting from modernization of inland waterways and deep-draft ports.





# PDT



The Study team draws from both navigation PCXs, IWR, EDRC, multiple districts and the private sector, with intensive HQ oversight and public outreach:

- IWR
- DD NAV PCX
- Inland Nav PCX
- HQ Oversight via CECW
- CECTX
- ERDC
- Mobile District
- Jacksonville District
- CDM-Smith





# Schedule



## Major Milestones:

- PDT assembled, PMP, report outline – completed
- Website, fact sheet, talking points – completed
- Mock Draft Report – 7 March
- Stakeholder Engagement & Public Communications – ongoing
  - Listening Sessions
    - ✓ SWG Ports – 8 Mar
    - ✓ Environmental Interests – 13 Mar
    - ✓ ITTS - 14 Mar; Nav Industry Mtg - 15 Mar; AAPA - 16 Mar
    - ✓ Mtgs. with MARAD, Congressional staff, others being set
- 80% draft report – 1 April (**Stakeholder Engagement Continues?**)
- PDT, IWR, USACE & EPR Review, Report Revision – 1 May
- Formal Final Draft to HQ – 1 May
- Concurrent EPR, HQ, OASA (& OMB?) Review – 22 May
- Report Revision, Completion, OMB & Interagency Review – 1 June
- Transmit Final Report to Congress – June 20





# Stakeholder Engagement & Public Communications



- Goal – transparency, no surprises, elicit information to make sure we don't miss things
- Information Out – Study website, Press Release, Talking Points, HQ website & FB page
- Conference Outreach – Materials distributed at multiple conferences (e.g. Waterways Council Inc.'s Legislative Fly-in, National Waterways Legislative Summit, AAPA Spring Conference; Listening session planned for ITTS Freight in the Southeast (Norfolk) Mar 14
- Listening Sessions – Galveston 8 Mar; IWR Environmental 13 Mar; IWR Industry 15 Mar. Others upon request.
- Coordination w/MARAD Panama Canal Study & Short Shipping Listening Sessions
- Congress – Initial call w/staff; trying to set up briefing.
- **For Discussion – Posting of draft study products for comment**





## Progress to Date



- Initial briefings, IPR's set with HQ, and ASA,
- Contracts all in place
- Communication plan and website development
- Stakeholder and agency outreach begun
- Collection of data well underway
- Initial outline of report and mock write-ups of most sections
- DDNAVPCX provided preliminary fleet & commodity forecast
- Initial prototyping of cargo density analysis w/existing AIS data
- Updating of capacity information at most U.S. ports
- Evaluation of inland waterway's capacity to handle forecasted growth in agricultural exports
- Initial evaluation of impacts- Great Lakes, Ohio, Mississippi R's
- Data gathering & development of harbor maintenance costs
- Summary evaluation of environmental impacts
- Draft of alternative financing options
- Progress on literature review of Panama Canal expansion impacts







# Implications & Preliminary Findings Thus Far



- ✓ Growth in trade and the increasing size of vessels likely calling at U.S. ports presents challenges & opportunities for both inland waterways and coastal ports.
- ✓ Role of inland waterways should not be overlooked – particularly with regard to Canal expansion stimulating increased export traffic in Gulf.
  - ✓ Inland Waterways, New Orleans (Port of Southern Louisiana) and other Gulf ports have potential to be affected by expansion of the Panama Canal – not just container trade, but also bulk carriers.
- ✓ It's projected that larger bulk vessels through the Canal will reduce the delivery cost of U.S. grains to China by as much as \$0.35 per bushel.





# Implications & Preliminary Findings Thus Far



(Continued)

- ✓ With an expanded dimension Canal, Panamax vessels can be loaded to full capacity at New Orleans, and Smaller Capesize vessels that can fit through the expanded Canal can be accommodated by drafts of Mississippi River ports.
- ✓ Topping-off operations in the St. Lawrence River below Montreal or transloading into larger vessels are possible; however, current economics favor U.S. grain moving down the Mississippi River to New Orleans.
- ✓ In addition, U.S. ethanol subsidies are scheduled to expire next year.
- ✓ Most grain moving on the Great Lakes is Canadian origin wheat.
- ✓ World demand for grain may cause grain traffic to increase on all routes, including the Columbia-Snake system





# Implications & Preliminary Findings Thus Far



(Continued)

- ✓ Rail recognized the expansion as a threat and has aggressively invested in improving Class I Railroad track, equipment and capability to compete for cargo. It is highly uncertain, but there is likely to be little shift from existing west coast/land bridge trade to Gulf/South Atlantic ports via the canal.
- ✓ TEUs coming from Asia have relatively low cargo density. It is called a “cube trade” rather than a “weight trade” because the vessel reach volume capacity before they reach weight capacity.
- ✓ Therefore, near term forecast of maximum channel depth requirements may be driven more by trans Atlantic and “around-the world” trade routes.





# Implications & Preliminary Findings Thus Far



(Continued)

- ✓ However, larger post-Panamax vessels are significantly wider and longer – wider channels and more robust channel radii & larger turning basins may be among more critical needs at U.S. ports with expanded Canal.
- ✓ Maximum channel depth requirements may be driven more by trans Atlantic and “around-the world” trade routes.
- ✓ In addition, for U.S. Ports to accommodate larger container vessels they will need to expand capacity in berthing areas at the dock and to intermodal access.
- ✓ Underlines the need for synchronizing intermodal freight strategies on land and water sides.





# Uncertainties Impacting Harbor Investment Decisions



- Future vessel fleet – on what trade routes will future vessels be deployed? – and at what ports will they call?
- Implications for vessel re-routings stimulated by the Canal expansion?
- Rate of overall growth of global economy?
- Future trade growth rate – competition between the U.S. land bridge vs. the Panama Canal?
- Use of Tran-shipment Hubs – Bahamas?  
Other Caribbean locations?
- Future funding levels may be constrained by growing federal deficit
- These uncertainties imply that an adaptive approach to capacity expansion will be required





# Summary



- The report will highlight opportunities presented by increased use of post-Panamax vessels & the range of costs needed to take advantage of the opportunity.
- It will present a range of options for meeting critical needs – at two ends of the spectrum there is either an increased Federal role (increase in spending) or a change in the dynamics between the traditional USACE role & that of non-Federal sponsors.
- Between these extremes there is a range of options in form of alternative financing possibilities; PPP's, Infrastructure Banks, etc.
- The ports and industry will need a clear direction from the Congress on where the U.S. is headed along that spectrum
- Food-for thought - "what's next?" - How will USACE, Congress or industry use report upon completion?



# Backup Slides

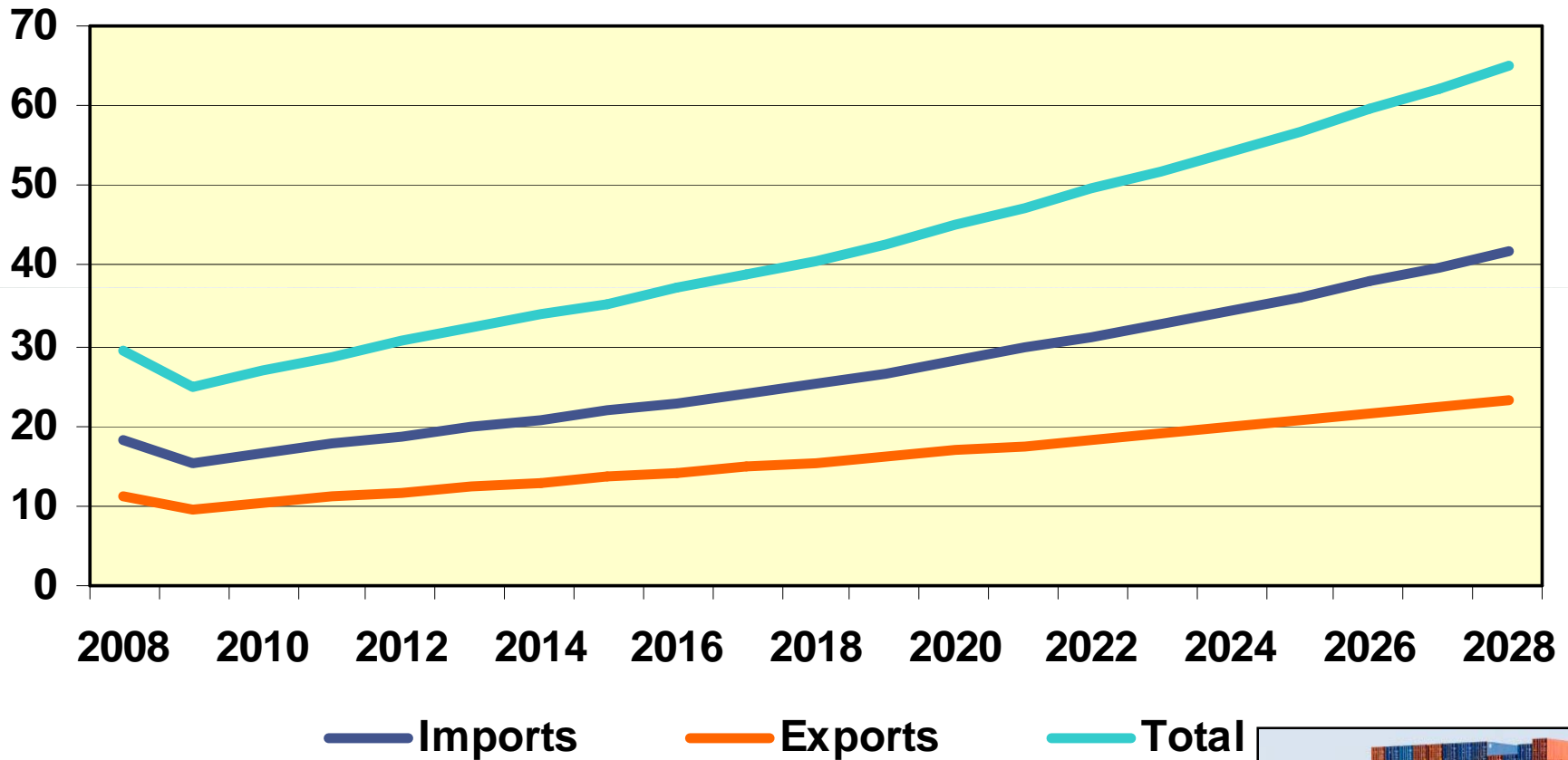


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# Forecast: U.S. Trade More Than Doubles

Millions of TEUs



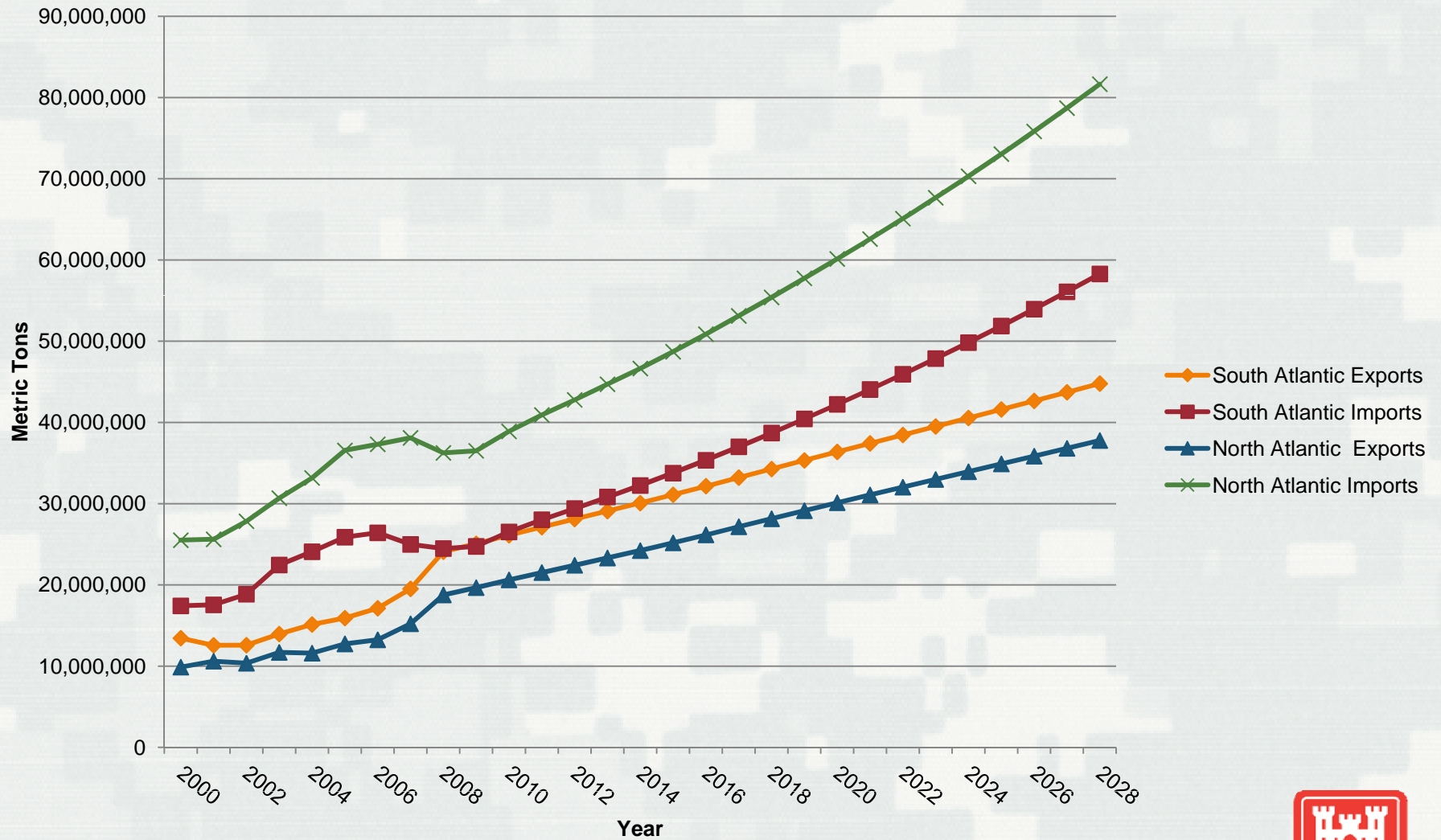
Source: I H S G I World Trade Service

February 2012





# North and South Atlantic: Historical and Forecasted Fully Cellular Container Vessel Commodities

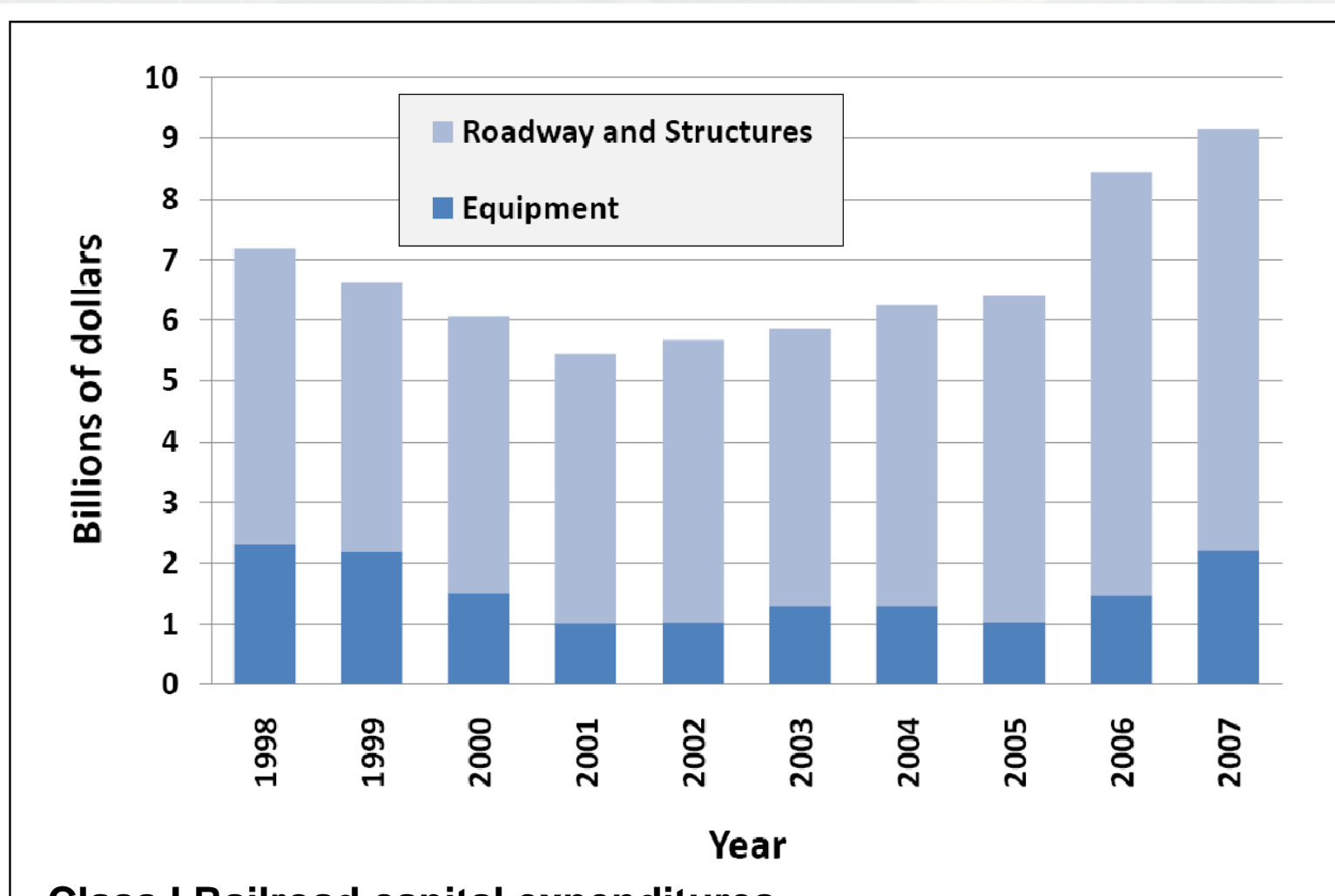


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# U.S. Port and Inland Waterways Modernization Strategy: Options for the Future



Class I Railroad capital expenditures

