U.S. Army Corps of Engineers releases the U.S. Port and Inland Waterways Modernization: Preparing for Post-Panamax Vessels report

WASHINGTON (June 21, 2012) – The U.S. Army Corps of Engineers (USACE) submitted to Congress Wednesday the “U.S. Port and Inland Waterways Modernization: Preparing for Post-Panamax Vessels” report, an examination of options for future modernization of U.S. ports and inland waterways. The report has been released to the public today at http://www.iwr.usace.army.mil/portandwaterways/.

The USACE Institute for Water Resources (IWR) in Alexandria, Va., was responsible for the development of the report as directed by Congress in Public Law 112-74, the Consolidated Appropriations Act of 2012 (H.R. 2055), in December 2011. The act required USACE within 180 days to submit to the Senate and House committees on appropriations a “report on how the Congress should address the critical need for additional port and inland waterways modernization to accommodate post-Panamax vessels.” The submission to Congress Wednesday met the 180-day requirement.

“Post-Panamax vessels today make up 16 percent of the world’s container fleet, but account for 45 percent of the fleet’s capacity,” said Maj. Gen. Michael J. Walsh, USACE deputy commanding general for Civil Works and Emergency Operations. “Those numbers are projected to grow significantly over the next 20 years.”

“The United States is a maritime nation,” continued Walsh. “This report provides to Congress and the public an analysis of the challenges and opportunities presented by the post-Panamax vessels, and outlines options on how the nation might address the port and inland waterway infrastructure needs required to accommodate these new vessels.”

“U.S. Port and Inland Waterways Modernization: Preparing for Post-Panamax Vessels” identifies capacity maintenance and expansion issues associated with the deployment of post-Panamax vessels to trade routes serving U.S. ports. This identification was accomplished through an evaluation of the future demand for capacity in terms of freight forecasts and vessel size expectations, and an evaluation of the current capacity of the nation’s inland waterways and coastal ports.

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U.S. Army Corps of Engineers releases the U.S. Port and Inland Waterways Modernization: Preparing for Post-Panamax Vessels report/2-2-2

The report, along with a summary, reflects the information available at the time of its writing. It addresses the factors Congress identified with chapters on: Discussion of Demand for Future Capacity, Current Capacity, Evaluating Capacity Maintenance and Expansion, Environmental Impacts of Capacity Expansion, Financing Options for Funding U.S. Port and Inland Waterway Infrastructure Needs, and Additional Considerations. This is a technical report and does not necessarily reflect program and budgeting priorities inherent in the formulation of a national Civil Works construction program or the policy perspective of higher review levels within the executive branch.

The report makes the following observations and findings:

- World trade and U.S. trade are expected to continue to grow, with imports growing more than fourfold, and exports expected to grow more than sevenfold over the next 30 years.
- The U.S. population is expected to grow by almost 100 million over the next 30 years, with most of the growth in the southern and western regions of the nation.
- Post-Panamax size vessels currently call at U.S. ports and will dominate the world fleet in the future. By 2030, post-Panamax vessels will account for 62% of the capacity of the world's container fleet.
- These vessels will call in increasing numbers at U.S. ports that can accommodate them.
- Along the Southeast and Gulf coasts there may be opportunities for economically justified port expansion projects to accommodate post-Panamax vessels.
  
  - This is indicated by an evaluation of population growth trends, trade forecasts and an examination of the current port capacities.
  
  - Investment opportunities at specific ports will need to be individually studied.
- The potential transportation cost saving of using post-Panamax size vessels to ship agricultural products to Asia, through the Panama Canal may lead to an increase in grain traffic on the Mississippi River for export at Gulf ports.
  
  - An analysis indicated the current Mississippi River capacity is adequate to meet potential demand if the waterways serving the agricultural export market are maintained.
  
  - A need for lock capacity expansion is not indicated.

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Despite the uncertainty in market responses to the deployment of post-Panamax vessels and the expansion of the Panama Canal, individual investment opportunities for port expansion can be identified using established decision making under uncertainty techniques. Adaptive management techniques can also be used to address uncertainty issues. Preliminary estimates indicate the total investment opportunities may be in the $3-$5 billion range.

- Environmental mitigation costs associated with port expansion can be significant and will play an important role in investment decisions.
- The primary challenge with the current process to deliver navigation improvements is to ensure adequate and timely funding to take advantage of potential opportunities.
  - A notional list of financing options is presented to initiate discussion of possible paths to meet this challenge.
  - It is anticipated that a variety of options may be desirable, and in all cases individual project characteristics, including its economic merits, would need to be considered in selecting the optimal financing mechanisms.

Maintaining the capacity of the nation’s major ports and waterways and expanding port capacity when, where, and in a way that best serves the nation will require leadership at all levels of government, and partnership with ports and the private sector. The main challenges are to continue to maintain the key features of our current infrastructure, to identify when and where to expand coastal port capacity, and to determine how to finance its development.