



THE CRANEY ISLAND CONNECTION

CRANEY ISLAND EASTWARD EXPANSION NEWS AND INFORMATION

VOLUME 3 ISSUE 5

NOVEMBER 2009

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Federal Investment In Craney Island Leverages State Funds for Significant Regional & National Benefits

THE CRANEY ISLAND CONNECTION IS PUBLISHED MONTHLY UNDER THE AUSPICES OF THE VIRGINIA PORT AUTHORITY AND THE U.S. ARMY CORPS OF ENGINEERS, TO PROVIDE READERS WITH REPORTS RELATED TO THE DEVELOPMENT OF THE EASTWARD EXPANSION OF CRANEY ISLAND. ARTICLES PRINTED HEREIN ARE FOR INFORMATIONAL PURPOSES ONLY. WE INVITE READERS TO COMMENT ON ARTICLES AND SUGGEST FUTURE TOPICS FOR CONSIDERATION.

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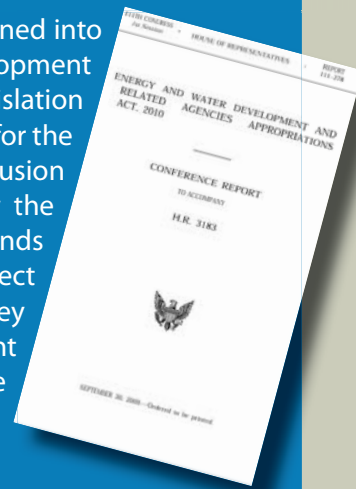
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On October 28, 2009, President Barack Obama signed into law the fiscal year 2010 Energy and Water Development and Related Agencies Appropriations Act. The legislation includes an initial Federal investment of \$100,000 for the Craney Island Eastward Expansion project. Inclusion of the project in the federal budget will allow the Virginia Port Authority (VPA) to leverage state funds for project construction as well as qualify the project for federal stimulus dollars. This issue of The Craney Island Connection examines how this important funding milestone will generate a wide magnitude of regional and national benefits.



OVERVIEW

In October of 2006, the U.S. Army Corps of Engineers recommended implementation of the Craney Island Eastward Expansion, for the purpose of constructing a container terminal and extending dredged material capacity at Craney Island Dredged Material Management Area (CIDMMA). This recommendation was based, in part, on projected average annual National Economic Development (NED) benefits.

NED benefits refer to a project's ability to make the nation as a whole more efficient and more productive. They are typically widely dispersed over a variety of market sectors, including manufacturing, transportation, and retail.

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The federal government's objective in water and related land resources project planning like the Craney Island Eastward Expansion is to maximize such benefits.

On November 15, 2007, Congress recognized the project's significant national benefits by authorizing it under the 2007 Water Resources Development Act, also referred to as WRDA, a law that governs U.S. Army Corps of Engineers (USACE) projects. Under WRDA, the project's dike construction was authorized at a 50/50 state and federal cost-share. Less than two years later, the project has secured a portion of these critical federal matching funds that will allow the project team to leverage state funding and proceed with construction in summer 2010.

Virginia's Congressional delegation was instrumental in acquiring funds for the Craney Island Eastward Expansion. Senators Webb and Warner and Representatives Scott and Nye worked diligently to illustrate the regional and national significance of this project to their Congressional colleagues.

TRANSPORTATION COST SAVINGS

The Port of Virginia is a major international gateway to the Midwest. In fact, more than 55% of the cargo handled by The Port originates in or is destined for locations outside the Commonwealth. More than 14,000 companies outside Virginia—such as Weyerhaeuser, Caterpillar, and Ford Motor Company—use The Port because of its cost-effective and reliable service.



Despite recent challenges to national economic growth and a decline in port volume, demand for cargo capacity at The Port of Virginia is expected to see a steady average growth rate of at least 5% percent annually over the long-term. Accordingly, port cargo demand still exceeded forecast in 2005. Moreover, at this rate, regional cargo growth will outpace capacity at the existing Port facilities by 2020. As a result, the Craney Island Marine Terminal (CIMT) will significantly increase The Port's current capacity, allowing it to capture future growth.

Without the additional capacity created by CIMT, cargo that would otherwise use The Port of Virginia would be rerouted to other ports, resulting in freight moving over longer distances at a higher cost. For example, it would cost an average of \$373 more per TEU to move this cargo. As a result, this increase would generate a total of \$22 billion in additional transportation costs when applied to the amount of cargo that would be rerouted to other ports over a 50 year period. However, with CIMT, The Port's container handling capacity is increased. Accordingly, transportation cost savings consist of reduced landside transportation costs based on efficient cargo movement through The Port of Virginia.

With CIMT, this additional \$22 billion cost is avoided and becomes an origin to destination cost savings to the nation in terms of maintaining the efficient, low-cost transportation afforded through The Port of Virginia. This cost savings qualifies as NED benefits because while companies such as Weyerhaeuser, Caterpillar and Ford would all benefit

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BENEFICIAL REUSE OF DREDGED MATERIAL, A NATIONAL ASSET

Dredging is a critical activity that affects the lives of nearly every Hampton Roads citizen. Significant components of the Hampton Roads economy — including maritime commerce, ship building, and the military — depend upon deep, clear navigation channels, which in turn depend upon dredging material from our harbor's waterways. The relatively low cost of dredging in Norfolk Harbor is due to the location and availability of dredged material placement at Craney Island.

The Eastward Expansion will allow Craney Island to accept dredged material well beyond 2025, extending its useful life by almost ten years. Expanding dredged material placement capacity at Craney Island will ensure that the channels in Hampton Roads remain clear, offering an economically efficient, reliable, and safe navigation system.

Construction of the Craney Island Eastward Expansion cell will beneficially reuse material from within the existing Craney Island Dredged Material Management Area (CIDMMA). Reusing this material creates critical disposal capacity within CIDMMA, supporting efficient navigation in Norfolk Harbor channel. Furthermore, beneficial reuse ensures that the material is managed in an environmentally-friendly manner and not wasted.

from a new marine terminal at The Port of Virginia, none of these single entities can exclusively capture the associated transportation cost savings.

PANAMA CANAL EXPANSION

Craney Island Marine Terminal (CIMT) will also create much-needed deep draft port capacity on the East Coast to accommodate increased vessel traffic resulting from the Panama Canal Expansion. The Panama Canal Expansion will attract an even bigger share of international container freight to the eastern United States. Much of this cargo will travel aboard increasingly larger container ships.



Currently, Panamax vessels are the largest vessels that can transit the Panama Canal; they have a draft of almost 40 feet. The Panama Canal Expansion is scheduled to be complete in 2015, and will accommodate larger Post-Panamax vessels—like the Emma Maersk. Such ships have drafts as deep as 50 feet, and many East Coast ports, including those in Savannah, Charleston, and Miami, are too shallow to accept them; or have bridge obstructions. In contrast, The Port of Virginia is the only port on the U.S. East Coast that can handle the largest ships that will use the Panama Canal after 2015. By capturing this growth, the facility will enhance national economic growth, through international trade.

AIR EMISSIONS SAVINGS

The Craney Island Road and Rail Connector is a multimodal link designed to supply road and rail access from and to CIMT. It will effectively move up to 50% of CIMT cargo by rail. The reduction of truck miles and this shift to more efficient transport afforded by the Craney Island Road and Rail Connector will reduce CO₂ air emissions at The Port of Virginia by 31.7 million tons. Carbon dioxide is considered the most important global warming gas emitted by human activity. Accordingly, the total project carbon emissions savings are equivalent to the annual carbon storage of nearly 32 million acres of Southeastern Pine Forest. By moving more cargo by rail, CIMT will also save over 94 million gallons of fuel annually.



STATE INVESTMENT GENERATES REGIONAL GROWTH

With Federal funds now appropriated, the VPA can leverage state funding for project construction, which will in turn leverage tremendous regional benefits. The VPA receives funds from two primary sources: terminal revenues and Commonwealth Port Funds. Terminal revenues are

generated from the fees that ship lines and customers pay to use the existing VPA facilities and will cover the majority of the project costs. The funds represent a significant reinvestment to stimulate and grow Hampton Road's already vibrant maritime economy.

The project will increase the cargo capacity of The Port of Virginia by more than 80%, enabling it to sustain projected cargo growth for twenty years. More container traffic results in additional manpower required to handle those containers, which results in more jobs.

Project construction alone will generate over 2,000 regional jobs. Over time, the project will create at least 63,000 additional trade, labor, and professional jobs, across a variety of sectors, including: construction, transportation, distribution, and port operations. These jobs will boost the regional economy as a whole through increased secondary spending. The project will generate \$70 billion in new regional income, \$222 billion in new economic activity, and \$7 billion in tax revenue in the Commonwealth of Virginia.

CONCLUSION

Initial federal investment in the Craney Island Eastward Expansion of \$100,000 will allow project construction to begin in summer 2010. The federal interest in the project emerges from its tremendous benefits, emerging from transportation cost savings, air emission savings, and regional economic impact that would be generated by CIMT. The nation will achieve \$22B in transportation cost savings. Moreover, CIMT saves 32 million tons of CO₂ emissions, demonstrating the project's continued dedication to environmental stewardship.

Federal investment will also leverage money from the state to generate the tremendous economic activity associated with project construction, including significant regional job creation. The project will create at least 63,000 jobs that will create a stronger and more vibrant maritime economy in the Commonwealth of Virginia.

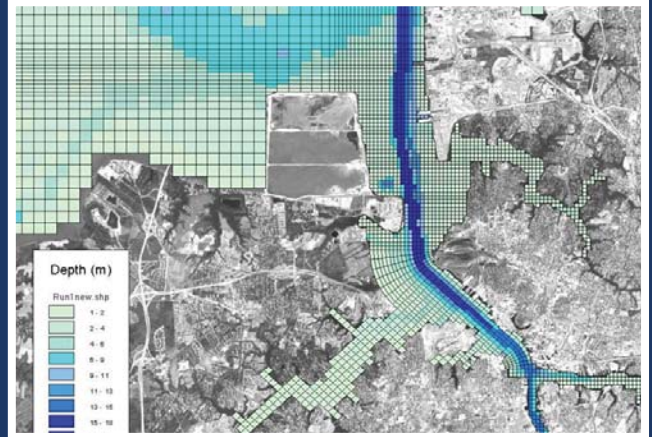
Project Update

A summary of a water quality modeling study completed for the Craney Island Eastward Expansion project was featured at the ASCE-sponsored Eleventh International Conference on Estuarine and Coastal Modeling. Mac Sisson, with the Virginia Institute of Marine Science and Principal Investigator for the CIEE study conducted in 2007-2008, presented a paper entitled "Assessment of Long-term Water Quality Impact of Craney Island Eastward Expansion, Elizabeth River, Virginia". One focus of this year's conference was utilizing numerical modeling to solve engineering and environmental assessment problems. Held this year in Seattle, WA, the conference attracts engineers and scientists from all over the world.

In September 2008, the Virginia Institute of Marine Science (VIMS) completed an analysis of the eastward expansion's impacts to the hydrodynamics (water flow) and water quality of the Elizabeth and Lower James Rivers. It was used to evaluate potential water quality impacts from construction and long-term changes to the river system. Modeling showed that the eastward expansion construction should create no adverse impacts on the Elizabeth River hydrodynamics and long-term water quality.



Mac Sisson
Virginia Institute of Marine Science



A Portion of the VIMS HEM-3D Model
Grid Near Craney Island

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