



September/October 2011

The Dredging *Link*

Dedication of MERC Barge

The September 27th dedication of a new barge in Baltimore Harbor marked more than another vessel in the water. It celebrated the region's growing capacity to combat invasive native species in Chesapeake Bay—and a joint achievement by the Maryland Port Administration and the University of Maryland Center for Environmental Science.



The barge is a long-awaited addition to the Maritime Environmental Research Center (MERC), a consortium of groups led by the University of Maryland Center for Environmental Science. The Maryland Port Administration is the lead funder for the Baltimore-based center, which opened in 2008.

MERC tests the effectiveness of systems for removing invasive species from ballast water and unwanted organisms attached to the sides of ships. MERC brings good science to bear in addressing ballast water issues as shippers try to comply with environmental regulations in all the ports of the world.

The new barge provides a mobile platform for testing systems designed to remove invasive species from ballast water. Mobility is vital to testing such systems under the range of salinities and biological communities that can be found in the Bay from Baltimore to Norfolk.

Invasive species are a big potential problem in coastal waters like the Chesapeake Bay, as well as in lakes and freshwater systems. In the Chesapeake, for example, over 150 species not native to the Bay have been identified. These species introduce problems because they have no natural predators in these waters. A recent example of invasive species wreaking damage in the Bay occurred when zebra mussels found their way down the Susquehanna from the Great Lakes and began to foul water intake lines, boat hulls, piers, and so forth.

MERC and its mobile test platform are truly unique. Only two other such facilities exist in the United States – one on the Great Lakes focused on fresh water, and one in Key West focused on ocean water. Both are stationary.

Approximately 50,000 ships worldwide need to install ballast water treatment systems in order to comply with new Coast Guard regulations. Treatment systems can cost as much as \$1 million each. Currently, MERC plans to offer free assistance to technology developers who want to use the mobile station to test their systems. It is hoped that this tool will accelerate the adoption of new and innovative technologies for ballast water treatment.

MERC and the treatment platform have been strongly supported by Congressman Elijah Cummings of MD. Other

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Wetland Planting at Masonville Site

Community volunteers recently converged along the Maryland Port Administration's dredged material placement site at Masonville for a massive three-day planting that will bring new life to a neglected city shoreline.

The Maryland Port Administration opened the Masonville dredged material placement site in 2010 and has partnered with a number of organizations to restore the shoreline ecosystem.

This recent planting—the first of several—took place from September 29 through October 1, supported by a grant from the Port Administration. The National Aquarium at Baltimore coordinated the planting, which drew 135 youth and adult volunteers. Some volunteers came as groups from Curtis Bay Elementary/Middle School, Maree G. Farring Elementary/Middle School, W.R. Grace, and Benjamin Franklin High School and the Canton Kayak Club paddled their way to the site.

Armed with hand trowels and shovels, the volunteers planted 2,100 shrubs to help create a two-acre wetland along the outside slope of the dike. Grasses will be added to the inter-tidal zone in the spring.



The wetland will not only add to the natural beauty of the Masonville shoreline, but provide much needed wildlife habitat for species living in and around the Baltimore Harbor.

"The creation of this wetland is greatly beneficial to the harbor area because it increases the wildlife habitat within the city," said the Aquarium's conservation director Laura Bankey. "The nearby Fort McHenry wetland has had over 200 bird species documented there over the years, which demonstrates that wildlife can and does exist within highly urbanized areas."

funding partners include the US Maritime Administration and the National Oceanic and Atmospheric Administration.

MERC is managed by Dr. Mario Tamburri of the University of Maryland Center for Environmental Science, who works in collaboration with the Smithsonian Environmental Research Center, University of Maryland at College Park, University of Maryland Wye Research and Education Center, and Old Dominion University. MERC's new mobile test barge is berthed at Pier 6 on the Middle Branch of the Patapsco in Baltimore. More information, visit info@maritime.enviro.org.

Tropical Storm Impacts on Dredging

Tropical Storms Irene and Lee delivered record amounts of rainfall to the Baltimore area and washed an enormous amount of sediment into Chesapeake waterways. That sediment is now settling onto the floor of the bay and its rivers—as well as the shipping channels vital to regional commerce.

Increased sediment in the shipping channels may create a greater need for dredging, but the extent of the impact is not yet known.

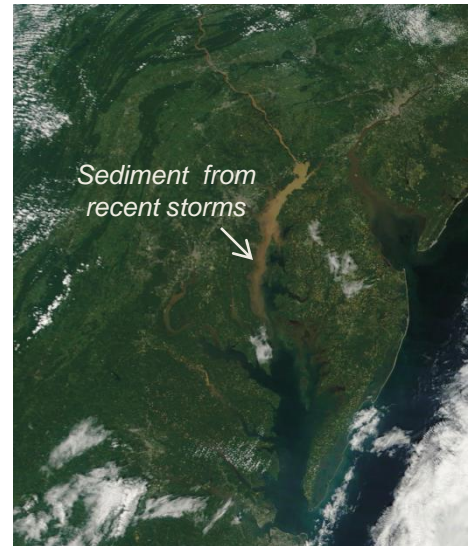
Monte Franklin, chief of navigation section for the Army Corps of Engineers (USACE), Baltimore District, said that the impact of the September storms will become clearer over the coming year. USACE is responsible for surveying the depth of approximately ninety percent of the shipping channels that serve the Port of Baltimore. Most channels are surveyed at least once a year.

"We do expect to see more shoaling than normal," Franklin said.

According to the Maryland Department of Natural Resources, Tropical Storm Lee increased Susquehanna River flows at Conowingo Dam to 778,000 cubic feet per second. Real-time monitoring showed peak turbidity levels exceeding fifty times the normal conditions.

Channels in the northern parts of the bay may see greater problems than their counterparts to the south. Franklin said that depth surveys in the Susquehanna River found about two to five feet of additional shoaling.

"Those channels near the Susquehanna and the C&D Canal will probably see a major impact and the impact will probably lessen as you go down the bay," Franklin said. "But we do expect to see some sort of impact to federal channels serving the Baltimore Harbor."



Clean Up Farring Baybrook Park!

Join Us!

When: Saturday, October 22, 2011, 10am to 1pm
Where: Farring Baybrook Park
Why: To give back to the community and to clean the stream leading into Masonville Cove and the Chesapeake Bay.

RSVP by October 20, 2011 @ 410-246-0669 ext.106 or email at: chull@masonvillecove.org

Lunch will be provided to all volunteers!

