

## INSIDE

Calendar of Events  
 Members in the News  
 MSU to Lead Study . . . . . 2  
  
 Army Corps . . . . . 3-4  
  
 National Institutes for Water  
 Resources  
 Port of Pascagoula. . . . . 4  
  
 Study on The Use  
 of Nautical Depth to  
 Manage Fluid Mud . . . . . 5

## President's Letter



Greetings to All,

Let me begin by thanking Barbara Travis and her superb staff at the Mississippi World Trade Center for the wonderful, cooperative effort putting together last year's 2011 Intermodal Conference in Natchez. While all of us worked hard to make it a success, it was MSWTC that carried the lion's share. Congratulations and thanks are also in order to William McAnally, Ph.D., at Mississippi State, for his efforts (along with his staff and the MS Department of Transportation) in putting together an exceptionally informative 2012

Intermodal Transportation Conference at MSU last month. I use these "thank you" to lead into our own MWRA Annual Meeting announcement – November 7-9 at IP Resort in Biloxi. We are reverting to a "just MWRA" Meeting, with balanced focus among all of Mississippi's water interests. Please mark your calendar now. More details will follow as plans develop.

This year, MWRRRI will host its own Water Resources Conference at the Hilton Jackson, April 3-4. You have missed a bet if you haven't signed up already! We have scheduled the MWRA Board of Directors meeting for the late afternoon beforehand to minimize mileage and driving time for our many board members who will be attending this event.

By the time you get this, our web site upgrade will have been completed and gone "live." This, too, has taken a lot of effort by a lot of people. It also took a lot of dollars! Be sure to click on [www.mswater.org](http://www.mswater.org) to see the upgraded site. The next effort is to get it translated. Speaking of MWRA Public Relations efforts, you should have also received the latest edition of the *MWRA Directory*, all cross-referenced and including all of the new committee members. Special thanks to Betty Ann White, MWRA Public Relations Chair!

Special thanks are also due to Alan Moore and Charles Carr for all of their hard work on the MS Intermodal Council. The MIC Board Dinner February 1 included 41 participants! The Breakfast with Legislators was a resounding success!

In short, a lot has been done – but there is still a lot to do to bring the message home that Mississippi's water resources are one of her strongest assets.

Anthony Hauer, MWRA President  
 Executive Director,  
 Port of Natchez-Adams County

### MWRA Mission Statement:

*MWRA promotes the advancement of Mississippi rivers, ports and harbors, coastal and inland waterways, flood control, recreation, water development and management, water supply and all other beneficial uses of water resources.*

# Calendar of Events 2012

- April 2-4      **MS Water Conference**, Jackson Hilton  
Information: [jschmidt@ext.msstate.edu](mailto:jschmidt@ext.msstate.edu)
- May 1-4        **IRPT Annual Conference**: Weston St. Louis.  
Information: [www.irpt.net](http://www.irpt.net)
- November 7-9    **MWRA Annual Meeting** – IP Resort, Biloxi.  
Information to follow at [www.mswater.org](http://www.mswater.org)

## MEMBERS IN THE NEWS

The **Tombigbee River Valley Water Management District** has announced new Board Members: These include James Threadgill, appointed by the Governor, who is an Executive Officer with BancorpSouth, Tupelo, replacing the unexpired term of Thomas A. Wicker; Ramie Ford, appointed by the MS Department of Wildlife, Fisheries and Parks and representing that Department, replacing Don Brazil; Paul Vickers, appointed by the Clay County Board of Supervisors, replacing his Dad who had a stroke while serving on the District's Board; he is in management with 4-County Electric.

**News from MDEQ:** Trudy D. Fisher was reappointed as Executive Director of the Mississippi Department of Environmental Quality by Governor Phil Bryant in January. Ms. Fisher was first appointed by former Governor Haley Barbour in January 2007 and is the first woman to serve as the agency's director. Prior to returning to MDEQ, she led a private practice in environmental law. She had previously served as MDEQ's General Counsel.

**MWRRI's New Advisory Board members** are Karrie Pennington, Ph.D., currently with USDA Natural Resources Conservation Service; Thomas Richardson, Deputy Director, Coastal Hazards Center of Excellence; Michael Hatcher of Michael Hatcher Landscape Contractors; and Kay Whittington, Chief of the Basin Management Branch, Surface Water Division, MDEQ.

## MSU TO LEAD NATIONAL TRANSPORTATION STUDY

Mississippi State University will lead a coalition of institutions in creating a center of excellence for transportation research.

The National Center for Intermodal Transportation for Economic Competitiveness, funded by a \$3.5 million federal grant, will promote development of a national intermodal transportation network by integrating passenger and freight transportation modes.

Burak Eksioglu, associate professor of industrial and systems engineering, is principal investigator for the project. He said that in addition to studying nationwide impact, the center will focus on transportation infrastructure in Mississippi.

-- The Associated Press, *The Clarion-Ledger*, March 5, 2012

### Obama's budget touts navigation, but waterway interests aren't happy

By Paul Quinlan, E&E reporter

The Obama administration is portraying its fiscal 2013 budget proposal for the Army Corps of Engineers as a boon for businesses that rely on navigable inland waterways. As Jo-Ellen Darcy, the Army's assistant secretary of civil works, put it, the spending plan reflects "the importance the administration places on navigation." Navigation interests have long grumbled about what they see as the Army Corps' emphasis on ecosystem restoration at the expense of dredging shipping channels, maintaining locks and other projects aimed at keeping waterways open.

President Obama's overall \$4.7 billion Army Corps budget proposal, Darcy said at a recent briefing, would send 37 percent of the agency's cash to navigation projects, compared with 33 percent for environmental restoration and 30 percent for flood control. And even though Obama's budget proposal is 5.4 percent smaller than what the agency is spending this year, Darcy said, there would be \$176 million more for navigation, an 11 percent increase over fiscal 2012 levels. And the Corps would spend \$848 million on harbor maintenance, up 12 percent from last year.

The industry's reaction? "Overall, disappointment," said Amy Larson, president of the National Waterways Conference, whose members include levee managers, shipping companies and engineering firms. Despite boosting waterways projects, industry officials say, the budget proposal fails to provide enough for navigation and levees to ensure U.S. water infrastructure can adequately provide flood protection and help meet Obama's goal of doubling the nation's exports by 2015. The Corps is under unprecedented pressure to do more with less. Spending caps imposed last year during the White House's debt-limit showdown with Congress have rendered the Army Corps' budget a zero-sum game for competing interests of navigation, flood control and ecosystem restoration.

Adding to the pressure were epic floods last year along the Mississippi and Missouri rivers, which forced the agency to raid other accounts for its response. Congress provided \$1.7 billion for the estimated \$2 billion disaster. With so many needs and so little cash, few groups are thrilled by their prospects in the Corps' budget sweepstakes. And waterways interests are pressing lawmakers to spend more on locks, levees and harbors and less on environmental restoration.

A big competitor for cash is the massive Everglades restoration. Last year, about 10 percent of the Army Corps' construction budget went to the Everglades effort. The 30-year, \$13.5 billion project was approved overwhelmingly by Congress and the Florida Legislature in 2000 as being essential to securing water supplies for 7 million people and protecting Everglades National Park and other federal parks and wildlife refuges. But Larson is telling lawmakers that some of that cash could pack more of an economic punch if spent on waterways. "It would seem to me," she said, "that the nation would be better served with a portion of that money focused on other projects which contribute more to the creation of jobs and our place in the global economy."

Inland waterways face an \$8 billion repair backlog, said Mike Toohey, president of the Waterways Council, a coalition of inland navigation interests. "The funding doesn't get anywhere near what the need is," Toohey said.

In a report last year, the National Research Council cited the Corps' shrinking budget and ever-increasing list of demands from Congress in characterizing its mission as unsustainable (Greenwire, March 25, 2011). The report called the dilemma a fundamental paradox of how the nation manages its water resources. "It's not just up to the Corps to change themselves," David Dzombak, an engineering professor at Carnegie Mellon University and the panel's chairman, said in an interview last year. "But the nation needs to rethink how we go about developing, prioritizing and implementing water resources projects."

Congress' self-imposed earmark ban failed to provide a cure. The agency last week released its civil works plan for 2012, essentially a list of projects to be funded in fiscal 2012. Congress, it turns out, had spread \$507 million across 26 Corps-controlled funds, which the agency redistributed to fund, among other things, \$212.7 million in new projects requested by individual lawmakers.

The Corps is in a poor financial position to prepare the nation's ports and harbors for the widening of the Panama Canal, which is expected to bring an influx of supersize freighters to the U.S. East Coast from Asia when it's completed in 2014. "We want to grow our export markets for grain and coal," Toohey said. "We have to rely on locks and dams that are 80 years old. That's a high-risk strategy."

## **FROM THE NATIONAL INSTITUTES FOR WATER RESOURCES**

Water makes headlines when there's too little or too much. The Texas drought and the Pennsylvania floods are dramatic examples of the power water has over our economy, safety and public health. Beyond the headlines, it's the long-term, ongoing management of this precious resource that's a critical issue facing our country and the world in the 21st century.

The National Institutes for Water Resources (NIWR) plays a major role in addressing water-related concerns by providing a national platform for research, training and collaboration.

Housed in the country's land-grant universities, the 54 NIWR member institutes leverage university expertise in the fields of engineering, chemistry, law, agriculture, social sciences and public health toward solutions to the challenges of our finite water supply.

The National Institutes for Water Resources promotes water-related research, education and technology transfer at the national, state and local levels. The network's 54 institutes are located at major universities in all 50 states, three U.S. territories and the District of Columbia. NIWR represents the Water Resources Research Institutes established under the Water Resource Research Act of 1964. The act authorized a state-based network of institutes dedicated to solving problems of water supply and water quality in partnership with universities, local governments and the general public. The Water Institutes network is the only federally mandated research program that focuses on applied water resource research, education, training and outreach.

Each Water Institute works in consultation with state and local agencies, leading experts in higher education and private industry, stakeholders, and the general public to determine its research agenda. The U.S. Geological Survey provides each institute with a grant to target local priorities, recruit researchers and leverage federal funds with state money and private funding.

## **PORT OF PASCAGOULA TO HOST USS MISSISSIPPI COMMISSIONING**

Terminal C in the Port of Pascagoula will be the site for commissioning of the U.S. Navy's newest attack submarine, the USS Mississippi. The Mississippi is the latest in the Virginia class of submarines, which are built at a cost of about \$2.6 billion each. The 7,800-ton vessel will carry a crew of approximately 132 officers and sailors led by Navy Captain John McGrath. The USS Mississippi is 377 feet long and has a 33-foot beam.

The commissioning ceremony is scheduled for June 2, 2012. For further information, please visit the official website [www.ussmississippi.org](http://www.ussmississippi.org).

# STUDY ON THE USE OF NAUTICAL DEPTH TO MANAGE FLUID MUD

We have received the following status report from William McAnally, Ph.D., at MSU. For questions regarding this project, please contact him at [mcanally@cee.msstate.edu](mailto:mcanally@cee.msstate.edu).

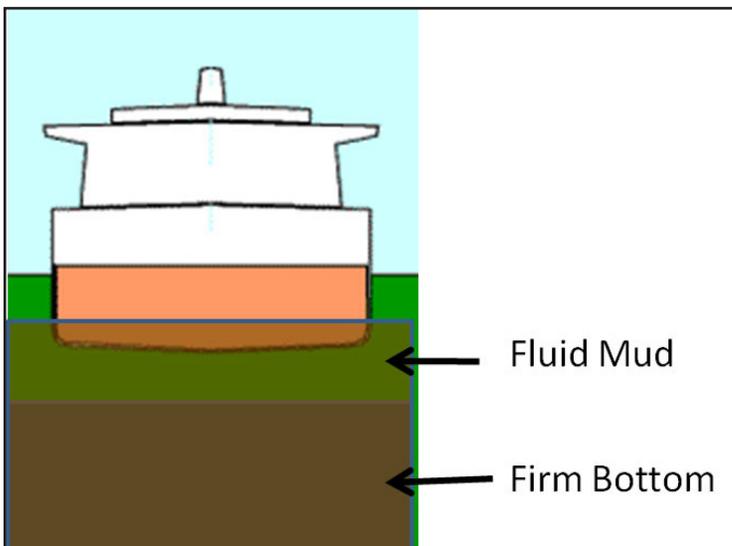
## Project on Nautical Depth: Navigation Engineering Sub-Committee, Waterways Committee, Coasts, Oceans, Ports and Rivers Institute (COPR)

**Purpose:** Evaluate the use of active and passive nautical depth in U.S. channels and harbors and inform the engineering community as to the merits of adopting nautical depth as a means to reduce maintenance dredging costs in coastal and estuarine ports and channels.

### Definitions:

- Fluid mud: “a high concentration aqueous suspension of fine-grained sediment in which settling is substantially hindered by the proximity of sediment grains and flocs, but which has not formed an interconnected matrix of bonds strong enough to eliminate the potential for mobility” (McAnally et al. 2007).
- Nautical depth is the distance from the water surface to a given suspension rheological parameter, typically suspension density in the range of 1100 to 1300 kg/m<sup>3</sup>, which allows vessels to safely navigate, but which may be deeper than the depth shown by acoustic fathometers in areas of fluid mud. (Kirby et al. 2008)
- Passive Nautical Depth: Use of the nautical depth definition, usually a specific gravity of about 1.2, to define available channel depth. (Kirby et al. 2008)
- Active Nautical Depth: Deliberately manipulating the fluid mud suspension both to create and to maintain its navigability by the nautical depth criterion. (Kirby et al. 2008)

**Background:** Fluid mud is ubiquitous in coastal ports and channels in the U.S., with well-documented cases in Savannah Harbor, Gulfport Harbor, and San Francisco Bay, just to name a few. Its pernicious effects include rapid infilling of newly dredged channels and imposition of anaerobic conditions over large areas of benthic habitat.



Nautical depth based on suspension density has been practiced in the Port of Rotterdam since the mid-1970's and is now employed world-wide, but not yet in the U.S. The PIANC Report 102-2008 (Kirby et al. 2008) evaluated nautical depth, both passive and active, and found it to be a viable approach to substantially reducing dredging requirements and costs. If it is applicable to U.S. waters, the navigation engineering community should be made fully aware of it.

Active nautical depth involves mechanical shredding of the suspension's floc structure and oxygenating to promote growth of naturally occurring aerobic bacteria which prevent rapid consolidation and may aid in breaking down of some potentially toxic contaminants. (Kirby et al. 2008)

A previous Task Committee produced two papers in the *Journal of Hydraulic Engineering* with the title of “Management of Fluid Mud in Estuaries, Bays, and Lakes” (McAnally et al. 2007a, 2007b). This project will examine one of those paper's conclusions – the use of nautical depth to manage fluid mud.

**Approach:** The Task Committee members will review the available literature on passive and active nautical depth, interview experts in related fields, and determine applicability of the concepts in U.S. waters. If found to be applicable, its contributions to reducing dredging costs and environmental sustainability will be identified. It will then promulgate the findings through contacts with persons responsible for managing and reviewing dredging, appropriate presentations, publications, and a webinar. A summary publication will be prepared providing basic information, criteria for successful implementation, and lessons learned. The target for this publication will be the *ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering*.