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Product Focus:
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Theme: Beach Renourishment/
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More: MS Valley AGC
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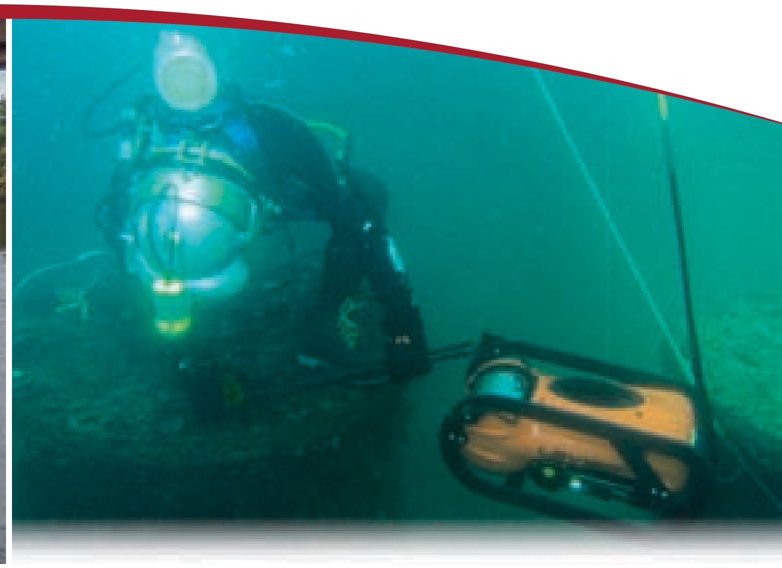
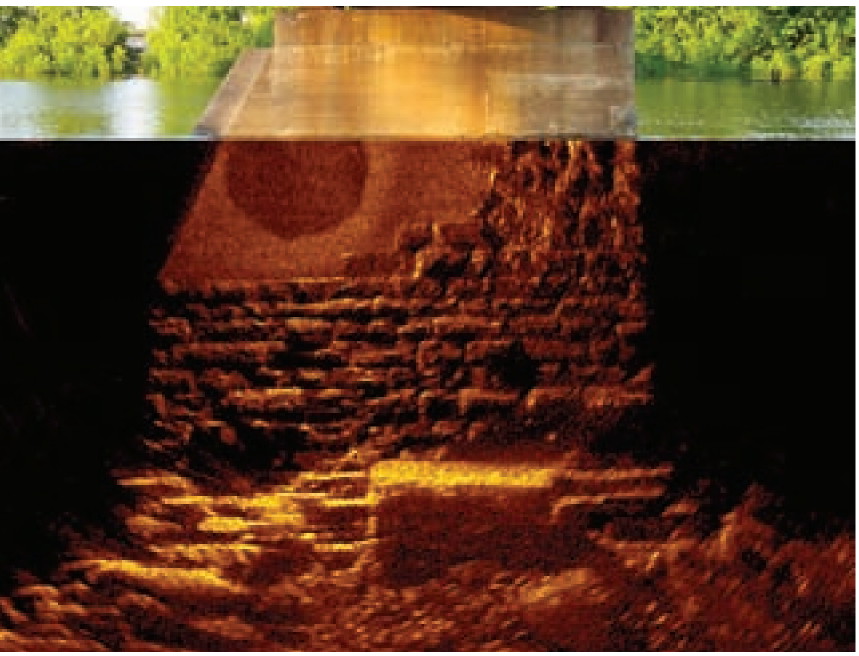
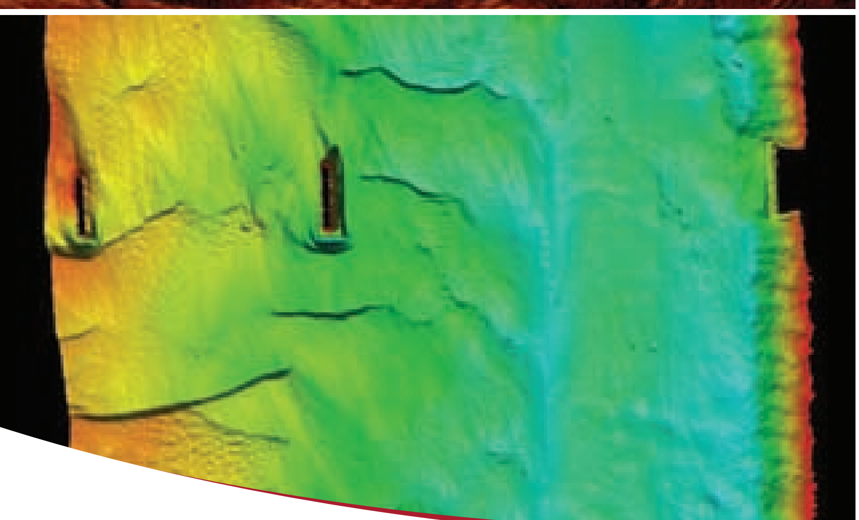


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International Dredging Review

March/April 2018 Volume 37, Number 2

On The Cover

The Dutra Group began work on the Jacksonville Harbor deepening project in early February. The mechanical dredge The Paula Lee is working at the entrance channel. The $22 million contract was awarded in September 2017 for the first phase of work through July 2019.

Departments

Editorial / ANNA TOWNSHEND

Changes Needed to Implement P3s on Wide Scale for Infrastructure Projects

In January, the Ash Center for Democratic Governance and Innovation at the Harvard Kennedy School released a report that examined the challenges facing funding and financing for federally-sponsored water resource infrastructure ("Tapping Private Financing and Delivery to Modernize America's Federal Water Resources").

For some years, a focus on public-private partnerships (P3s) has been held up as a new tool to solve our infrastructure woes. It has been used successfully for recent large-scale port projects, but only with non-federal sponsors who had the means to front project costs up front, and often with the help of new permitting initiatives such as President Obama's "We Can't Wait" initiative and the U.S. Army Corps of Engineers initiatives to cut project timelines, costs and federal oversight. The new wave of P3 infrastructure projects is still in the making.

Fixing the country's crumbling infrastructure became a campaign promise for President Trump, and now, it may take the spotlight for policy and legislation. In early February, Trump released his infrastructure plan. For more details on the plan, read the editorial in the recently published 2018 IDR directory, owners and operators edition.

Some in Congress are poised to act on infrastructure. None more than the House Transportation & Infrastructure (T&I) subcommittee on Water Resources and Environment, which held a hearing in January on water resources infrastructure and enhanced project delivery. For more on the hearing, see the story on page 44.

One of the witnesses, Jill Jamison of Jones Lang LaSalle, who advises public authorizes on project implementation, also co-authored the Ash Center report with Stephen Goldsmith.

THE SHRINKING CIVIL WORKS BUDGET

The report starts with a focus on our infrastructure crisis, failing and inadequate structures and not enough funding, as the Corps struggles to meet its growing obligations. Since 1962, the report said, the Corps' Civil Works spending has shrunk from 0.16 percent of national Gross Domestic Product (GDP) to as low as 0.04 percent today.

"To put this decline in perspective, between 1962 and 2014, GDP grew from $3.3 trillion to $15.9 trillion. Over the same period, foreign trade volume grew from $207 billion to $3.7 trillion, while the Corps' annual spending remained flat in real terms, at approximately $5.9 billion," the report said.

Because of funding shortages and the process for budgeting federal projects, we often wait to fix critical infrastructure, until it begins to fail. No surprise, the "fix-as-fails" approach is vastly more expensive, the report said.

Projects are rarely considered on a life-cycle basis, so instead of low-cost, high-quality infrastructure, we get limited funding for projects year to year. Protracted appropriations yield the costliest infrastructure delivery system, the report said.

Appropriations in the 1950s and 1960s primarily supported new construction. Over time, the need for new construction was replaced with the need for maintenance, rehabilitation and modernization of aging infrastructure. Funding for operation and maintenance (O&M) has increased over the years some, the report said, but it has not kept pace with the rising cost of maintaining the infrastructure.

Many are quick to highlight the flaws with

Editorial, continued on page 27

AIWA Advocates for Increasing Funds to Dredge the M-95 Intracoastal Waterway

BY MARSHA COHEN

Department of Transportation-designated marine highway M-95 needs to be improved to provide for an integrated marine transportation system on the U.S. Atlantic Coast. That is clear to Brad Pickel and a broad group of his maritime partners including the dredging industry. "A viable Marine Highway 95, the Intracoastal Waterway, is an integral part of the overall United States transportation infrastructure," said Pickel, executive director of the Atlantic Intracoastal Waterway Association (AIWA), a non-profit, membership organization dedicated to the health and maintenance of the Atlantic Intracoastal Waterway (AIWW). For those not living on the U.S. East Coast, the Interstate-95 roadway goes from Maine to Florida and is a crucial corridor for freight transport. Marine Highway 95 should be doing the same on the water. "The Atlantic Intracoastal Waterway is under used and underfunded. Our goal is to change that," Pickel said. "Our mission is to raise awareness and secure adequate funding for the further development of waterborne commerce and recreation on the Intracoastal Waterways of Virginia, North Carolina, South Carolina, Georgia and Florida. This means promoting regular dredging and adequate maintenance to ensure safe, cost-effective navigation."

Historically, since the early 1800s, the Intracoastal Waterway has been mandated to be kept at depth. Today, Congress has authorized the U.S. Army Corps of Engineers to maintain the waterway at a 12-foot depth at low tide.

"Easier said than done. Funding is an issue, and it is our job to ensure that Congress understands the importance of the Intracoastal Waterway to U.S. industry and the total transportation picture," Pickel said. His own background is in water resources management and advocacy from previous employment with a Washington, D.C.-based lobbying firm, and overseeing coastal management issues for a Florida community for more than 15 years. He is also a board member and executive committee member for the National Waterways Conference Inc.

The part of the Atlantic Intracoastal Waterway/Intracoastal Waterway that Pickel is focused on is the 1,100 miles going from Norfolk, Virginia, to Key West, Florida. One of the nation's longest water infrastructure areas, it directly connects three of the top ten U.S. ports. In the Fiscal Year 2017 Corps work plan, AIWW received more than $15.6 million for operations and maintenance of everything, but in fact, "based on annual assessment per district, it's not enough," Pickel said. "There are competing interests for money allocated to the Corps for waterway improvements, coastal and inland, and they are all worthy. The pie is simply not big enough."

Brad Pickel, executive director of the Atlantic Intracoastal Waterway Association (AIWA).

INLAND WATERWAY TRUST FUND

A few top issues for the AIWW are the shoaling in parts of the waterway, which cause unsafe navigation situations. According to Pickel, the maintenance budget for this is inadequate and more federal funds should be made available. For instance, commercial operators pay fuel taxes to the Inland Waterway Trust Fund (IWTF), but none of this comes back to the AIWW. Instead, the trust fund is used to supplement federal funding for major lock rehabilitation and construction projects on other inland waterways. Current legislation does not allow any of these funds to be used for maintenance projects, and since Corps projects on the AIWW require maintenance funds, they are not eligible to receive funds from the IWTF.

AIWA is working to get Congress to address the inequity in this legislation. One positive result of AIWA's actions has been that the federal government has started to recognize the billions of dollars that all users generate and not to consider commercial traffic as the only justification for dredging. Additional benefits of the waterway include but are not limited to serving as critical harbors of refuge, transportation routes for jet fuel to support national defense, homeland security training areas, and providing safe waterways for Coast Guard station rescues. Incorporating these additional metrics and more into the decision-making process has resulted in important increases in funding.

REVERSING THE BACKLOG

All this means that the backlog in dredging to maintain depth and width continues to accumulate, limiting access to the waterways. "We're playing catch up when it comes to dredging for deep draft vessels and this will only worsen as the major ports like Charleston [South Carolina] and Savannah [Georgia] see increasing traffic as a result of international expansion in the Panama and Suez canals," Pickel said.

Pickel is not alone in these thoughts. On January 11, the American Association of Port Authorities (AAPA), representing public seaports throughout the nation, testified before the U.S. Senate Committee on Environment and Public Works (EPW) at a hearing entitled "America's Water Infrastructure Needs and Challenges." The message was that the United States will need $66 billion to fund the country's public ports for navigation infrastructure maintenance, rehabilitation and replacement. This funding issue needs to be, and presumably will be, addressed in the next Water Resources Development Act (WRDA) legislation.

This need for improved marine infrastructure is also confirmed by a recent report from the National Retail Federation, which indicates that 2017 was a record year for containerized imports at America's biggest retail ports, showing an increase of some 7 percent over 2016.

TRUCKING SECTOR LACKS CAPACITY

Pickel points out another aspect of this increase in trade: trucking capacity. Getting goods to and from ports requires intermodal transportation, which at this time means primarily land transport by truck. "Unfortunately, the trucking industry reports in its American Trucking Association Driver Shortage Analysis in the State of Trucking 2017 that we are facing an increasing shortage in drivers. Truckers are aging, younger drivers are not forthcoming, and the demand for cargo transport is increasing. As our roads clog up and become overfull, industry is recognizing more and more the advantages of waterborne commercial transportation. We've always known that maritime transport of goods is more economical and environmentally-sound than road transport. Now it has also become a capacity and workforce issue. Will land-based truck transporters be able to keep pace with the growth in commerce at our ports? We clearly have to find the money to fund the improvements of the AIWW," Pickel said.

Although the AIWA advocates for funds from Congress, to make up this deficit, Pickel can imagine a future where funding streams increasingly come from not only federal but also non-federal sources, where "states and local governments have a role to play."

A STATE FUNDING MODEL

The Fiscal Year 2017 budget was a total of $47,879,000, including $32,275,000 in hurricane-recovery supplemental funding and the annual maintenance need, as estimated by the Corps was approximately $50.5 million. Contrast that with information from the Corps, which offered a district-by-district analysis of the anticipated costs to return the waterways to the congressionally authorized dimensions and thus eliminate, or start to eliminate, the backlog in maintenance. Delineated by "responsible district," the amounts were: Norfolk District, $18,000,000; Wilmington $11,000,000; Charleston $54,000,000; Savannah $22,591,000; and

Mark Crosley, of Florida Inland Navigation District (FIND) and the 2017 AIWA Chair, offers opening remarks at the 2017 Annual Meeting, November 16 and 17 in Wrightsville Beach, North Carolina.

Jacksonville $0. A total of some $106 million.

To Pickel, this presents a clear picture that the Atlantic Intracoastal Waterway is seriously underfunded. But also an indication that Florida is doing something right and different than other states. And that difference? Florida funds its own maritime projects. The Florida Inland Navigation District (FIND) is a special state taxing district for the continued management and maintenance of the Atlantic Intracoastal Waterway (AICW) (http://www.aicw.org/). FIND was created by the Florida Legislature in 1927 to be the state and local sponsor for the Atlantic Intracoastal Waterway.

"Long ago, Florida established its own budget through property tax assessments to maintain its waterways and the result is that Florida has no backlog and provides about $10 million per annum in state cost-sharing funding to maintain its inland and coastal waterways. For the Intracoastal to function well, we need a long-term plan that offers predictability and reliability toward our industries that want – and in some cases need – to use marine transportation.

"In North Carolina, the state legislature developed a non-federal funding source utilizing boater registration fees and gas tax. This fund is used to cost-share with local and federal governments for maintenance dredging. The benefit to this approach is that it utilizes funds that come from waterway users as its source and thus serves as a user fee," Pickel said. He believes this approach may be a new way forward for other states. "When we are able to tie the non-federal funding source to waterway users, we can make a better argument on why these funds are necessary for AIWW maintenance," Pickel said.

As for how things can go wrong, Pickel cites the case of Nucor Steel of Hertford, North Carolina, which for several years received raw iron and transported its domestic steel by barge via the Intracoastal. Suddenly, shoaling in the southern part of the Intracoastal made the waterway too shallow and the company could not take a chance. It had to switch to other modes of transportation to move its products. Once this section of the waterway was dredged, Nucor began utilizing the waterway once again showing a clear return on investment.

Pickel said other national defense issues are concerns as well, including the jet fuel for F-35B planes that is delivered by water on barges from Jacksonville, "a hazardous material that we do not want on our roads." From an economic perspective, the enormous precast concrete bridge components necessary for the reconstruction of America's antiquated infrastructure are simply too large for transport by road or rail. Take for instance, the "I Lift NY" super crane that has a lifting arm that is taller than a 30-story building and was transported from the U.S. West Coast through the Panama Canal to New York for the construction of the New Tappan Zee Bridge.

MEMBERSHIP IN AIWA

Pickel said, "Our advocacy toward Congress is consistent and persistent, but also limited by resources. AIWA is supported by members' dues drawn from a broad base of maritime related areas, and we welcome all interested parties." Supporting organizations include state and local agencies, dredging and construction companies, marinas, yacht clubs and resorts, educational, tourist and waterway publications, tug and barge, shippers and shipyards, engineering, legal services, and consulting groups, real estate, property management and developers, and real estate, property management and developers.

"Dredging is of course key to maintaining and improving the waterways, which is why we are happy that Dredging Contractors of America actively support us and that Devin Carlock of Cottrell Dredging recently joined our board," Pickel said. At least a dozen dredging companies as well as more than a half-dozen engineering and surveying companies are members.

The Atlantic Intracoastal Waterway Association is headquartered in Beaufort, South Carolina, and more information can be found at www.atlanticintracoastal.org.

Administration Releases Civil Works FY19 Budget

BY ANNA TOWNSHEND

On February 12, the Trump administration released details for the fiscal year 2019 U.S. Army Corps of Engineers Civil Works program. The budget provides $4.785 billion in discretionary funding for the Civil Works program, including $1.930 billion for commercial navigation, $1.491 billion for flood and storm damage reduction, and $224.464 million for aquatic ecosystem restoration.

The budget proposes revisions to the appropriations language for the Construction, Operations and Maintenance, and Mississippi River and Tributaries accounts and the Harbor Maintenance and Inland Waterways Trust Funds to enable greater transparency in how these funds are spent, the administration said in its budget overview.

The budget provides a total of $1.019 billion for the Construction program ($871.733 million from the Construction account, $32.6 million from the Harbor Maintenance Trust Fund, $108.932 million from the Mississippi River and Tributaries account, and $5.25 million from the Inland Waterways Trust Fund).

Projects are chosen based on Construction Performance Guidelines. To qualify for consideration, projects must be authorized for construction; have an approved Chief's report; and a completed review under Executive Order 12322, which requires that agencies seeking Congressional approval, appropriations or legislative actions for reports, studies or plans, submit the plan to the Office of management and Budget (OMB) first for review. The construction performance guidelines by which a project would be judged include project purpose as related to the Corps three main mission areas (flood and storm damage reduction, commercial navigation and aquatic ecosystem restoration); safety issues; economic return; environmental/mitigation requirements.

The budget provides a total of $3.144 billion for the Operation and Maintenance program, consisting of $2.077 billion from the Operation and Maintenance account, $932.532 million from the Harbor Maintenance Trust Fund, and $135.113 million from the Mississippi River and

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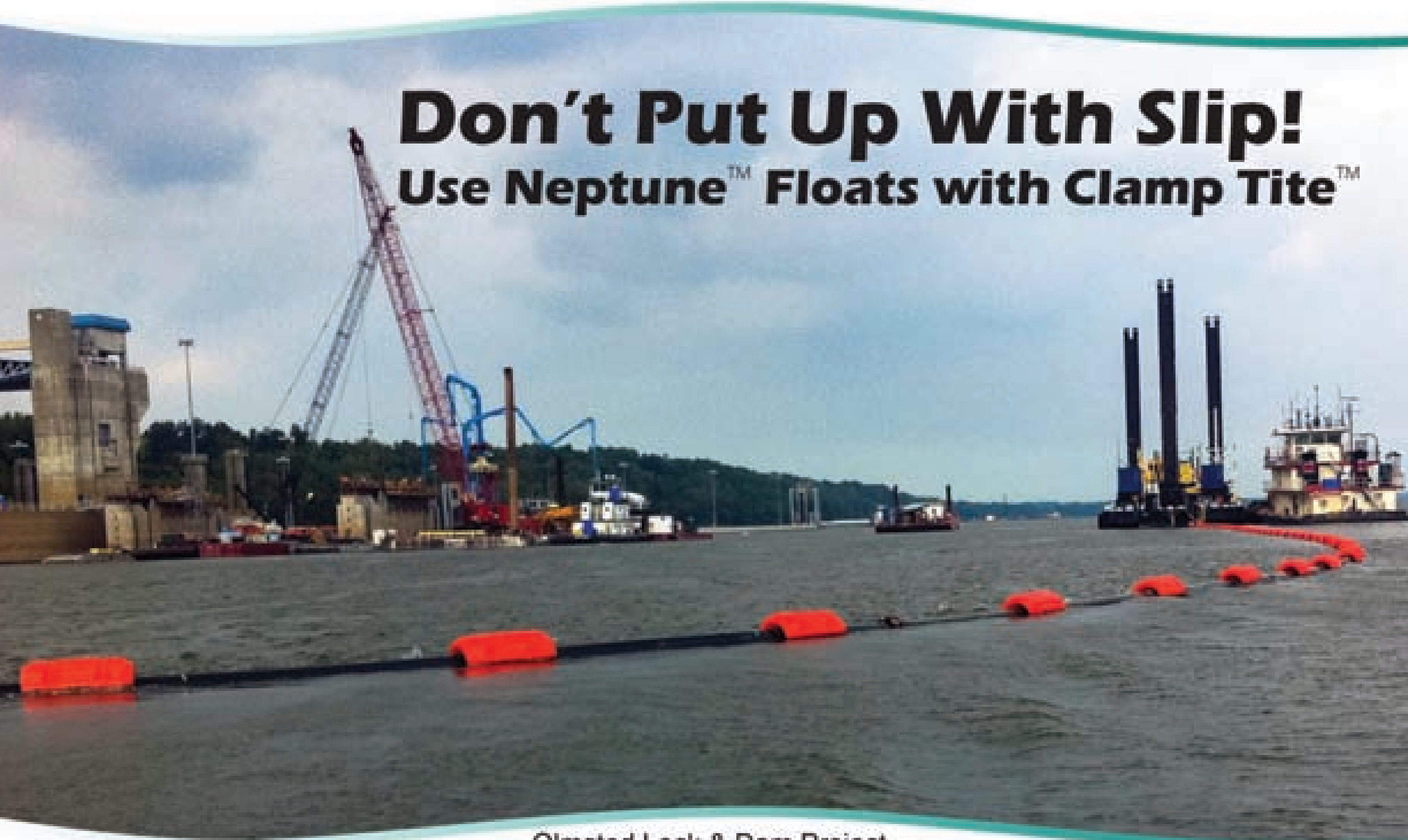

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Tributaries account.

The budget provides a total of $82.6 million for the Investigations program, consisting of $82 million from the Investigations account and $0.6 million from the Mississippi River and Tributaries account.

The budget includes $965.132 million for work financed from the Harbor Maintenance Trust Fund to support cargo transport at current levels at the 50 largest U.S. coastal ports, which handle around 90 percent of the waterborne cargo that is shipped to or from the United States.

The honorable R.D. James, assistant secretary of Army for Civil Works was in attendance at the press conference for the budget proposal, on his first day on the job. He was confirmed a week prior.

Ryan Fisher, principal deputy assistant secretary of the Army for Civil Works, stood in to speak for the Corps on the details of the budget.

"Tough choices have to be made," Fisher said. For the $4.8 billion in investments, the administration's priorities focus on projects that will yield high economic and environmental returns, or address significant risks to public safety.

Fisher said the budget focuses on the "highest performing work" within those three main Corps missions: navigation, flood and coastal storm damage reduction, and aquatic ecosystem restoration.

The budget and its projects, Fisher said, also rely on strong relationships between the Corps and local communities. "And that foundation will help us move forward in several key areas that I would like to emphasize now," Fisher said. Those key areas being working with local communities; being part of the national and international conversation on addressing water resource challenges; improving efforts on resilience and sustainability; and maintaining the vast water resources infrastructure that the Corps owns and manages. This means both finding innovative rehabilitation practices or finding ways to hand off projects to others.

The budget also proposes changes to the Harbor Maintenance Trust Fund (HMTF).

"The budget proposes revisions to the appropriations language for the construction, operations and maintenance, and Mississippi River and tributaries accounts, and the Harbor Maintenance and Inland Waterways trust funds, to enable greater transparency on how these funds are budgeted and spent," Fisher said.

The budget proposes slightly more than $965 million from HMTF – the highest amount ever budgeted – but proposes to reduce the Harbor Maintenance tax rate "to better align estimated annual receipts with recent appropriations levels," Fisher said.

FUNDING FOR PROJECTS AND STUDIES

"We will continue to be a key partner in the national dialog concerning many current and future water resource challenges facing this nation," Lt. General Todd Semonite, Corps commanding general, said.

The budget funds 26 construction projects, including 12 flood risk management projects, seven aquatic ecosystem restoration projects, and seven commercial navigation projects. The seven navigation projects are Boston Harbor, Savannah Harbor Expansion, Corpus Christi Ship Channel, Poplar Island, Savannah Harbor disposal areas, Olmsted Locks and Dam and Columbia River.

The budget funds 24 investigations for 10 commercial navigation projects, nine flood risk management and five aquatic restoration studies. Of these, six investigations are funded to completion, including three commercial navigation studies.

When asked about the Savannah Harbor deepening project, which is reaching its halfway point and needed $100 million this year, and received $49 million, Fisher said the Corps had no concerns about the project's viability. "I think it comes down to tough choices, right? You look across the spectrum of the budget, doing performance-based criteria and what is affordable and appropriate amount of investment at this time, which is what I believe this reflects for Savannah Harbor," Fisher said.

Major General Donald Jackson, Corps deputy commanding general for civil and emergency operations, also answered a question regarding funding for a newly implemented beneficial use pilot program. Proposals for the new program were due March 12.

"We do not have any funds in this budget to implement that. What we're doing, looking to do, is get those proposals back and let that feedback inform future budgeting efforts," Jackson said.

FY18 BUDGET AND INFRASTRUCTURE PLAN

Some in attendance at the press conference took the opportunity to ask the Corps about the work that was rolled out in the Congressional budget that just passed on February 8.

"There was a substantial amount of work rolled out on Friday," Gen. Semonite said. "We have an organization that is not necessarily constrained by how many people we're allowed to have, unlike some other Army organizations. So districts will continue to be able to augment. We'll hire up where we need to, to be able to handle that capacity."

Gen. Jackson couldn't comment on plan specifics from the most recent legislation yet, but he said, "It's premature to talk project specifics because we'll go through a process to do that, where we will align the guidance that we've been given through the Congressional language with the resources that have been provided by Congress to make investment recommendations through the administration," Jackson said. He said work will in part address damage from recent hurricanes and new construction. Congress authorized $17.4 billion in that bill for Civil Works, all associated with flood risk management.

In response to questions about Trump's infrastructure plan, which was released earlier that morning, Fisher said the Corps looks forward to working with Congress and the administration to "modernize the way the Corps does business as far as the infrastructure initiative is concerned, looking at other ways to fund projects."

"I think everybody in this room is aware of the backlog of authorized projects that exists, and I think we've got a unique opportunity with this administration to address this at that time and look for innovative ways to finance these projects in addition to our traditional Civil Works funding approach," Fisher said.

FOCUSING ON THE PROCESS

"You know, budgets are going to come and go, projects are going to come and go. But I want to make sure I take this opportunity to let all you know that we are continuing to focus on the process as well. Our absolute focus is to deliver the program," Gen. Semonite said.

He added, "We want to continue to work with OMB because this is not just about concrete and steel and dredging rivers, this is about how do we make our very, very scarce federal dollars go as far as they can, and to be able to make sure we really are taking care of both the environment and to be able to take care of the economy."

R.D. James to Head Corps of Engineers

On January 25, the U.S. Senate confirmed the nomination of Rickey Dale "R.D." James to lead the U.S. Army Corps of Engineers in the position of Assistant Secretary of the Army for Civil Works. James was a self-employed farmer and manager of cotton gins and grain elevators for the A.C. Riley Company in New Madrid, Missouri, and was on the Mississippi River Commission from 1981 to 2012, after being reappointed three times for nine-year terms. James worked at the Kentucky Department of Water Resources engineering office while working on his degree in civil engineering from the University of Kentucky. He serves on the board of directors and executive committee of the Southern Cotton Ginners Association and is a board member of the Cotton Producers of Missouri.

Rickey Dale "R.D." James was confirmed on January 25 as the Assistant Secretary of the Army for Civil Works.

The Dutra Group began work at Jacksonville Harbor on the deepening project. Contract A will run through July 2019 removing around 3 million cubic yards from the entrance channel.

The Dutra Group Begins Contract A at Jacksonville Harbor

In early February, The Dutra Group began work on the Jacksonville Harbor deepening project, which will deepen the navigation channel from 40 to 47 feet. The U.S. Corps of Engineers Jacksonville District awarded the first phase of the project – Contract A – for $22,826,400 in September 2017.

Jacksonville Harbor is a part of the St. Johns River, and deep draft navigation vessels transit the harbor from the Atlantic Ocean to the Main Street Bridge in downtown Jacksonville. The harbor has an authorized project depth of 40 feet from mile 0 to mile 20 and an authorized project depth of 34 feet to mile 22.

The Chief's Report for the Jacksonville Harbor Channel Deepening Study was signed in April 2014.

St. Johns River at Mile Point project was completed in 2016 in anticipation of the harbor deepening project. Mile Point, along the north shore of the St. Johns River and east of the Intracoastal Waterway, was known to experience difficult crosscurrents on the ebb tide. Manson Construction Company removed an existing 3,100-foot training wall and built a new 4,250-foot training wall, dredging 43,000 cubic yards for a new channel.

On April 7, 2017, the St. Johns Riverkeeper filed a lawsuit against the Corps seeking to review the Record of Decision, under the National Environmental Policy Act. The complain was seeking injunctive relief to stop the project from beginning, before further environmental studies were completed. In late January, U.S. District Judge Marcia Morales Howard denied the motion for a preliminary injunction and work on the project has continued.

The Jacksonville Harbor Deepening Project Final Feasibility Report and Environmental Impact Statement was originally authorized through the Water Resources Development Act (WRDA) in 1999 and included deepening the main channel from a project depth of 38-feet to 40-feet from the entrance channel to about river mile 14.7. The original General Reevaluation Report (GRR-II) which looked at project depths beyond 40 feet did not have sufficient benefits at the time. In 2013, the GRR-II got a second look at deepening the existing federal channel from a project depth of 40 feet to up to 50 feet.

The Dutra Group is using mechanical dredge The Paula Lee. The 250-foot by 68-foot by 15-foot dredge has an American-Amclyde Model crane.

The final project would deepen the channel depth of the St. John's River to 47 feet from the entrance chancel to approximately river mile 13. Widening of the channel and turning basin will also be required. The overall plan will dredge approximately 18 million cubic yards of material. Some confined rock blasting will also be needed prior to dredging. The project also anticipates that maintenance dredging for the area will increase by 137,000 cubic yards each year.

The initial work, Contract A, includes dredging around 3 million cubic yards from the entrance channel (Bar Cut-3) to slightly west of the Mayport Ferry (Cut 7). The Dutra Group will transport dredged sediment to the Jacksonville Ocean Dredged Material Disposal Site, located at six miles southeast of the entrance channel jetties.

Work will take place 24 hours a day, seven days a week until completion, which is expected in July 2019.

Autonomous Survey Vessel Increases Efficiency on MDVP's Portable Dredging Projects

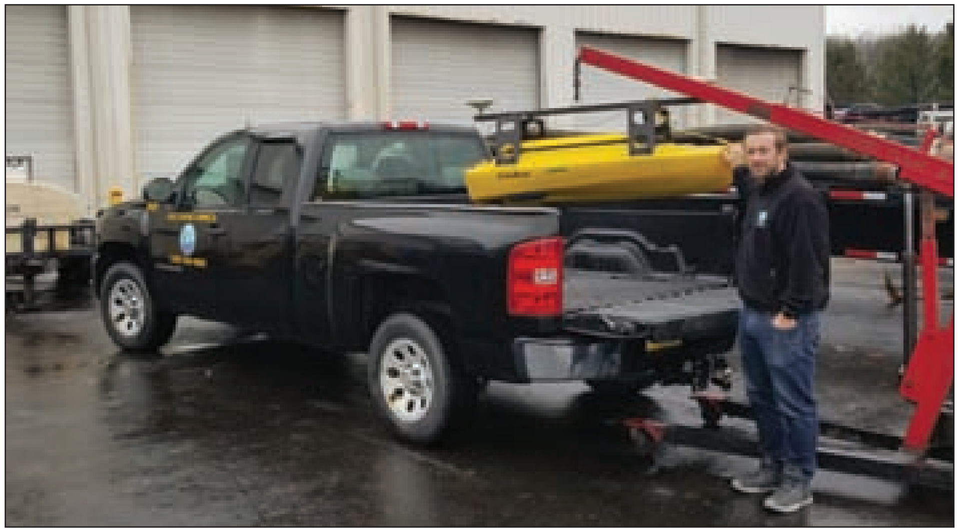
BY JUDITH POWERS

Mobile Dredging & Video Pipe Inc. (MDVP) of Chester, Pennsylvania, purchased a Seafloor Systems EchoBoat-ASV™ last September. Referring to the ASV as a "drone boat", Project Manager Stephen Simpson said that the company used it on three projects in the remaining four months of 2017 and is poised to make wide use of it in 2018.

"The drone boat allows us to quickly and efficiently collect accurate survey data throughout an entire dredge project in a cost-effective manner, while preventing over-dredging and keeping projects on schedule," said Simpson.

The company does maintenance dredging and environmental improvement projects in locations where portable equipment is a must.

The EchoBoat-ASV is an autonomously controlled hydrographic survey platform designed for use in hard-to-access areas. The compact, lightweight EchoBoat is easy to deploy to any job site. A two-person team can transport it in a pickup truck to the water's edge and lift the approximately 100-pound unit between them and set it down in the water.



Steve Simpson directs the loading of the EchoBoat-ASV onto a pickup truck. The vessel weighs approximately 100 pounds, and at the job site, two people can safely unload it and place it in the water. During operation, Simpson changes position to remain about 100 feet from the ASV.

The boat is made from non-corrosive materials for use in fresh or salt water. Survey equipment installed on the boat includes a Pico BM multibeam system, Automap, HYPACK (including Hypack Survey and Dredgepack), an Applanix 115 Inertial Guidance System and Valeport sound velocity probe. Transducers are mounted in alcoves under the bottom deck. It is equipped with dual-DC thrusters and an internal plug-and-play survey deck for installing the sonar and navigation monitoring equipment.

Simpson uses a remote control and his laptop from a nearby position on shore or in a small boat. The data are collected on the EchoBoat and offloaded to the laptop at the end of the survey.

The job can be run by remote control or on autonomous, pre-programmed survey lines.

"It's just as if you're in a manned survey boat," Simpson said.

The EchoBoat allows MDVP to collect current dredge bottom conditions prior to the start of the project to check for debris and other obstacles the owner's pre-check might have missed. Simpson does periodic checks as the dredging progresses to ensure the coverage and grade are correct, allowing them to confidently go to the next section of the project.

Once he had the EchoBoat up and running last fall, Simpson used it on two maintenance dredging projects on the Intracoastal Waterway in Neptune Township and Ocean City, New Jersey.

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Mobile Dredging's EchoBoat runs a survey line near the dredge during the Ocean City, New Jersey, maintenance dredging project. This is an autonomous survey, with all the lines pre-programmed. The two GPS antennas from the inertial guidance system are mounted on the top of the vessel, and transducers for the multibeam system are installed in alcoves under the bottom deck.

Because these were in open channels, he set up line files and used the autonomous mode. The EchoBoat ran the lines automatically while he monitored the job from land.

A third contract was to clear siltation from around water intake pipes on the Schuylkill River in Philadelphia. This job included dredging 4,000 cubic yards of sediment in a half circle area, 200 feet long by 100 feet wide, using an 8-inch Ellicott hydraulic dredge. Simpson positioned himself in various places - in a small boat, on a wall of the intake structure, and on the bank, remaining about 100 feet away from the EchoBoat. Using the remote-control function, he was able to steer the EchoBoat around sticks and other floating debris and to survey on shorter, irregular lines.

The owner was able to use this survey data to help confirm dredging results with the project engineer.

Simpson feels that he will be able to move from project to project to monitor progress more efficiently while programing unlimited projects into the system.

"I can get to a jobsite and back in less than a day," he said. This will enable him to monitor multiple ongoing projects.

The boat provides real-time quality surveying results that benefit all parties involved with dredging projects we encounter, said Simpson. A lot of the industry is using single beam survey equipment, but the multibeam system has been able to provide us a higher quality product, he said. It gives 100 percent coverage, so there is no guesswork. It increases reliability and confidence, he said.

"We are looking forward to utilizing the drone boat on numerous projects this year." he said.

Mobile Dredging & Video Pipe Inc. works across the U.S. while focusing in the East Coast.

Martin Instrument and WDS Merge to Form AllTerra Central

BY JUDITH POWERS

Longtime survey equipment providers Martin Instrument and Western Data Systems (WDS) merged on January 17, and are doing business as AllTerra Central, headquartered in Austin, Texas.

Martin Instrument co-owners Bobby Hempfling and Mike Minick signed the merger agreement with WDS owners Wendy and Michael Hefer.

AllTerra Central will continue to provide sales of both new and used equipment, service centers to repair equipment, and rental/leasing services to industries and municipalities. Additionally, it will operate the most complete virtual reference station (VRS) network in Texas and Oklahoma, and will continue to provide online access to products, services and information

Michael Hefer founded WDS in 1984 as an equipment supplier. It is an authorized Trimble Geospatial Dealer for Texas and Oklahoma. It provides positioning equipment and complementary devices for applications including dredging and hydrography, offshore drilling station-keeping, and marine construction and pile

At the signing of the merger on January 17 are, from left, Wendy Hefer, Michael Hefer, Bobby Hempf ing and Mike Minick.

driving. The company provides sales, rentals, training and technical support for the geospatial, marine, seismic, utility, environmental, fleet management and oil/gas/chemical industries.

Complementary equipment from other manufacturers include echo sounders, UAVs, UASs, inclinometers, software and more, supplied from six company stores in Texas and Oklahoma. Wendy and Michael Hefer retired after the merger was signed.

Martin Instrument is Trimble's Premier Authorized Dealer for survey equipment. It was founded in 1994 by Marty and Gina Richardson. In June 2016, employees Bobby Hempfling and Mike Minick acquired a majority interest in the employee-owned company, while the Richardsons moved on to other endeavors. With Hempfling as president and Minick as vice president, the two have worked at growing the company's business and service to its customers through its sales of new and pre-owned Trimble, Nikon and Spectra Precision survey products, including GPS Systems, total stations, data collectors and accessories, sold from its stores in Austin and San Antonio.

Hempfling leads the AllTerra Central management team as president, with Mike Minick as vice president, with continued operation supported by the employees of both companies. The new company is headquartered in Austin, Texas, with offices in Houston, Dallas/Fort Worth, San Antonio, McAllen, Oklahoma City and Midland/Odessa.

"We have long admired Bobby and Mike and the incredible success story they have created at Martin Instrument. I strongly support the AllTerra vision for the future and the culture of innovation and great customer service," Michael Hefer said.

DREDGING AND HYDRO SURVEYING UNCHANGED

Wade Jordan will continue to provide the dredging, hydrographic and marine construction industries with on-water survey and guidance systems, which he has done since joining the company in February 1997. Prior to that he was in the marine marketing department at Trimble Navigation. Before moving to Trimble, he was in hydrographic systems sales at Rentec International, working with pre-GPS positioning equipment for nine years, and then installing GPS systems when Rentec became a Trimble distributor.

His office in Houston will continue to focus on representing Trimble products, along with equipment from companies that complement those products, to provide hydrographic survey systems and dredge and marine construction guidance systems.

Jordan said that the merger will enable the hiring of people to work with him and take over tasks such as installation and training, freeing him to focus on the sales and consulting roles that best utilize his expertise.

"The merger gives us a lot more resources, and the ability to leverage redundancies," Hempfling said. "It will give our salespeople the ability to focus on the individual customer," he continued.

The combined staff of the two companies, under the AllTerra Central brand, will focus on bringing Trimble Optical, GNSS and GIS systems and field supply availability to the surveying, engineering and construction markets in Texas and Oklahoma, Hempfling said.

"Both of our companies have prospered for more than 25 years because of their technical knowledge, strong customer relationships and focus on great customer service. When the opportunity became available to merge the talents of both, everyone involved knew that something incredible would result. This company will be unstoppable in providing support and high-tech solutions to the industry," he said.

The first of the two Rock Island District survey boats outside the Ross warehouse in Edmonds, Washington. It will remain on the trailer until the equipment is installed inside the building, then trailered to the water for sea trials prior to delivery to Illinois.

Ross to Deliver Two New Survey Boats to the Rock Island District

BY JUDITH POWERS

On February 16, Ross Labs, LLC of Edmonds, Washington, received the first of two boats it is providing to the Rock Island Corps of Engineer District and has begun installing the hydrographic survey hardware and software.

The boats will replace two similar systems Ross delivered to Rock Island in 2001 and 2002 for survey work on the Mississippi and Illinois rivers.

Jon Klingman, chief of the Rock Island District Channel Maintenance Section said, “The boats will be utilized primarily for hydrographic survey in support of the dredging and navigation missions on both the Illinois and Mississippi rivers.”

He continued: “The survey vessels will replace two survey vessels purchased through Ross Labs in 2002. The boats being replaced have served us well but are now past their intended service life and major drive-line and other components need to be replaced. We are also downsizing the new vessels to allow us to trailer each vessel, thereby improving our response time to vessel groundings and other channel emergencies along the approximately 300 miles of each river within Rock Island District.”

The boats being replaced are 34-foot twin-hull work boats with 20-foot transducer beams that provide a 50-foot sweep width. The new boats are 25-foot aluminum catamarans with 10-foot booms that provide a 25-foot sweep width with six transducers.

Additional survey capability will be provided by a R2Sonic multibeam systems, which will be installed by the district when the boats are delivered.

“We were awarded the contract for this last fall. The contract was initially for one boat with an option for the second, which was approved shortly after the New Year. We placed the order for two boats with Armstrong Marine based in Port Angeles, Washington. While the boats were in production we have been manufacturing the boom and electronics systems. These boats and systems are essentially sister ships for Launch 22 and Launch 23 that we delivered in 2013 and 2017, respectively, to the St Paul District,” said Jim Ross, manager of sales and technical support.

The first boat is scheduled for delivery to Rock Island, Illinois, approximately the second week of March. Ross will then install the equipment on the second boat, which will take three to four weeks.

The boats will include the following

equipment:

Ross Sweep Survey system, which include two 10-foot booms port and starboard, hydraulically controlled from helm mounted controls; and six 10-degree transducers, two on each boom and one in each of the catamaran hulls providing full bottom coverage over a 25-foot width;

Ross Model 4810 multi-channel transceiver providing multi-depth sounding capability, correction for sound velocity, setup calibration, user interface, and parameter control, (depth range, blanking), and providing a proprietary serial output string to the Hypack data collection software;

Specially configured desktop data collection computer running Hypack software;

Hypack Survey software for data collection, Hypack multi beam software for data editing and display;

Trimble SPS-461 GPS RTK enabled with GNSS/MSS Global Marine beacon antenna;

Ross 9570 Roll Pitch sensor;

Multiple monitors for 4810 and Hypack data collection, helm station, survey operator position (port side forward), and electronics console (starboard side aft);

Ross Model 5150 one-man bar check system;

Armstrong Marine Hyper-Arm Multi Beam retractable transducer mount.

The Rock Island District is responsible for surveying on 314 miles of the Upper Mississippi River from Guttenberg, Iowa, to Saverton, Missouri, and 268 miles of the Illinois Waterway from Lake Street in Downtown Chicago to the LaGrange Lock and Dam, southwest of Beardstown, Illinois.

Trimble Introduces Marine Equipment Interface to SITECH Dealers at Conference in Peru

BY JUDITH POWERS

At its SITECH® Momentum conference in Lima, Peru on January 30 through February 2, the Trimble Civil Engineering and Construction division introduced its new Advanced Marine Partner (AMP) concept to the assembled general managers and owner principals.

Shea Griffin, Trimble Marine Regional Sales Manager, Americas Civil Engineering and Construction Division, and Lou Nash, president of Measutronics Corporation, the first Trimble designated AMP company, presented on each of the three days of the conference. They explained the benefits of the Trimble Advanced Marine Partnership and how the program will enhance the SITECH dealer channels' ability to provide needed marine positioning and guidance systems for customers requiring on-water construction systems. About 100 managers attended the conference, and Nash estimated that over 20 per day attended their talks.

The SITECH dealer channel is Trimble's network of trained and well-equipped construction technology dealers for Trimble's portfolio of Site Positioning Systems and machine control hardware and software. The channel's services include customer training, installation and support needed for each construction operation.

Trimble has provided GPS hardware and software to the dredging and marine construction industry since its inception in the late 1980s.

In designating an Advanced Marine Partner, Trimble endorses that company's ability as a marine systems integrator and solutions provider through which the SITECH dealers can provide a land/water interface on projects such as bridge building, terminal and berth construction, and other applications involving both land and water-based dredging and construction activities.

NASH ON BOARD SINCE 1997

Trimble designated Measutronics an AMP in the fourth quarter of 2017. Established by Lou Nash in 1997 to support hydrographic surveying and dredge guidance operations, Measutronics became an official Trimble dealer and installer of Trimble's marine construction portfolio in 2001. He works exclusively in water-based operations, and is known for his innovative systems integration. Measurtronics represents more than a dozen manufacturers of sensors and other equipment required for the dynamic positioning and bottom mapping involved in working on the water.

Discussing the move to create an Advanced Marine Partner program, Paul J. Thomas, director of sales and distribution in the Americas for Trimble's Civil Engineering Construction and Marine Division, said that Trimble has always had a significant presence in the marine construction market and continues to look for and develop technologies for these applications.

"We see the marine construction

Lou Nash addresses SITECH equipment dealers at Trimble's Momentum Conference in Lima, Peru in late January.

opportunities as significant, and they tie directly to our core heavy civil construction technologies. Case in point, (Trimble systems are in use in the construction of) the new largest refrigerated container port in the world in Limon, Costa Rica. It is a massive construction project. Trimble thrives in these environments and now we have more to offer with the Advance Marine Partner program."

He explained Trimble's energetic marketing of its machine control and site positioning solutions by saying "Competition continues to arise all around us and will especially when they see the opportunities in developing a new market or capitalizing in an existing market. There continue to be local players all over the world that just specialize in each region or country. They do well, but we also see customers in marine working ALL over the world demanding a stronger worldwide technology presence and support channel."

Scott Crozier, general manager of Trimble Civil Engineering and Construction, added: "There is alignment and overlap with the solutions we provide for civil construction so naturally expanding our reach and applying those solutions into marine construction, augmented by marine application software, provides us with a growth vehicle."

"Trimble's marine construction team will continue to evolve our solutions as we optimize and transform marine construction workflows. Primarily, this will be done through connecting project assets with the office, providing real time data and reducing rework, downtime and poor decision making. Further into the future we see increased levels of automation being brought into the total solution offerings," he said. "Our approach is to provide global solutions and support that combines the strength of our global SITECH channel with the know-how and capability of our marine partners to satisfy contractors that span both civil and marine projects," he said.

NEXT ISSUE:

Product Focus: Automation & Monitoring.

U.S. Dredging Industry Fly-In To Capitol Hill

The resolve of the U.S-flagged dredging industry was very evident during their successful fly-in to Washington, D.C., in early February, reports Dredging Contractors of America (DCA). DCA delegates representing the private sector U.S.-flagged dredging industry were well received by Congressional leaders and Administration officials. These included: U.S. Senators Lamar Alexander (TN), Tim Kaine (VA), Claire McCaskill (MO), Joe Donnelly (IN) and Tina Smith (MN) and from the House Representatives Jim Cooper (TN), Randy Frelinghuysen (NJ), Clay Higgins (LA), French Hill (AZ), Francis Rooney (FL), Peter Roskam (IL) and Randy Weber (TX).

"We thank the U.S. Department of Transportation for their time in meeting with the dredging companies," said Dredging Contractors of America CEO and Executive Director William P. Doyle. "I want to personally thank Admiral Mark Buzby, administrator of the U.S. Maritime Administration; Skip Elliott, administrator of the Pipeline and Hazardous Materials Safety Administration (PHMSA) and Drue Pearce, deputy PHMSA administrator, and their staffs for making time in their schedules to meet with us."

"DCA delegates representing the private sector U.S.-flagged dredging industry were well received by Congressional leaders and Administration officials."

The DCA delegation to Capitol Hill was led by industry leaders Devon Carlock (Cottrell Contracting), Bill Hanson (Great Lakes Dredge & Dock Company), Phyllis Harden (Pine Bluff Sand & Gravel), Dan Hussin (Manson Construction Co.), Chris Kirk (Jay Cashman Inc.), Fred Paup (Manson Construction) and Ted Smith (Marine Tech).

"Our companies ensure that America's ports are big ship ready for expediting U.S. Exports," Doyle said. "The U.S dredging industry has the capacity to fulfill all dredging projects in the United States. The U.S.-flagged dredging fleet totals more than 400 dredges."

DCA's Assistant Executive Director Michael Gerhardt stated, "The U.S.-flag dredging industry is in a period of strong growth. This sector has recently invested over a billion dollars in U.S. shipyards constructing approximately 30 new vessels including dredges, barges, tugs and other equipment."

The Dredging Contractors of America is a non-profit trade association that has represented the interests of the U.S. dredging and marine construction industry and its members for more than 30 years.

Registration Opens for WEDA's Dredging & Expo '18

Registration is now open for WEDA's Dredging Summit & Expo '18. The event will be held in Norfolk, Virginia, at the Hilton Norfolk, June 25 to 28. Dredging Summit & Expo will include presentations and focused panels, an exhibit hall with more than 85 exhibitors, and many networking opportunities.

WEDA is a not-for-profit professional association that shares knowledge and information to benefit the dredging industry, while also protecting and restoring the environment, to meet the goal of long-term success of the industry and the marine environment. For more information on the Dredging Summit & Expo, visit www.dredging-expo.com.

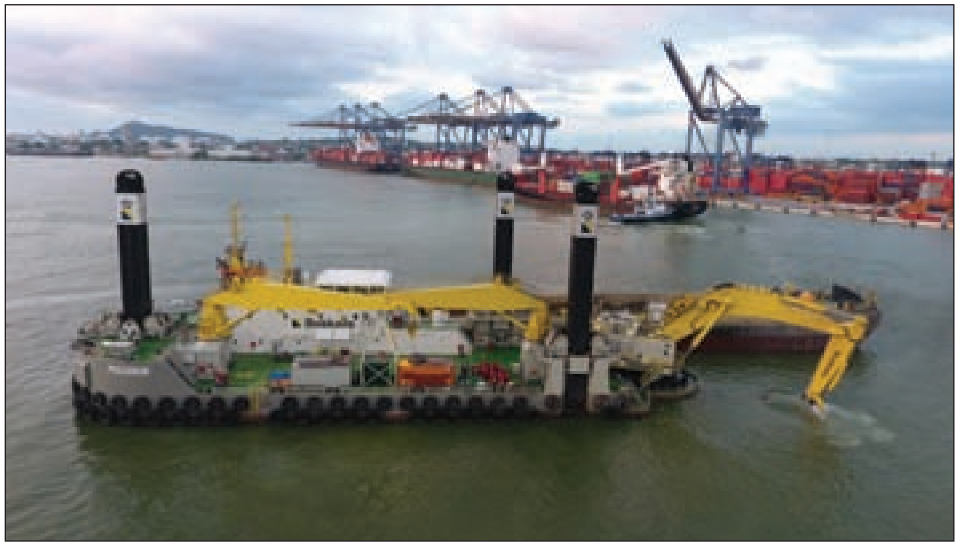
Mega-Dredging ‘Shovels’ to Trench the Fehmarnbelt Tunnel

BY MARSHA COHEN

The Fehmarnbelt road and rail tunnel between Denmark and Germany will be the largest infrastructure construction ever built in Denmark. To achieve this monumental work, the first step will be to excavate the seabed for the tunnel. This will be the largest excavation at sea on Danish territory ever undertaken, and the dredging operations have been awarded to the Dutch dredging contractors Royal Boskalis Westminster, headquartered in Papendrecht, and Van Oord of Rotterdam.

Geographically, the Fehmarnbelt region extends from Hamburg across Schleswig-Holstein and the western part of Mecklenburg-Vorpommern, the Danish islands of Lolland, Falster and Zealand to Skåne in southern Sweden. Two straits have historically separated the region, the Øresund between Copenhagen, Denmark and Malmö, Sweden and the Fehmarnbelt between Fehmarn, Germany, just east of Puttgarden, and Lolland, Denmark. The Øresund Bridge has linked Denmark and Sweden since 2000. Under the stretch of water known as Fehmarnbelt, a tunnel will be trenched and immersed, going from Rødbyhavn on the Danish island of Lolland across to the German island Fehmarn. Presently only a ferry from Puttgarden to Rødbyhavn connects the two countries, creating a serious traffic bottleneck for passengers and freight.

While the Fehmarn connection will in many ways employ methods similar to those used during construction of the Øresund connection between Denmark and Sweden, the Fehmarnbelt project’s dimensions are far more remarkable. The Øresund crossing is comprised of both an immersed tunnel and a cable-stayed bridge. Although it was a ground-breaking project at the time, and provided a game-changing economic boost for both countries, the tunnel trench at the Øresund connection was only 4 kilometers long (2.5 miles). The Fehmarn connection will be 18 kilometers (more than 11 miles) long, 12 meters (39 feet) deep and more than 40 meters (131 feet) wide.



Boskalis’s Magnor is an example of the enormous backhoe dredges that will be used for dredging a variety of thick clays and boulders. (Photos courtesy of Boskalis and Van Oord).

LARGE CAPACITY MECHANICAL DREDGES

Technology and the capacity of dredging equipment has grown enormously in the last 20 years. Boskalis and Van Oord will be deploying some of their largest digging machines at Lolland on the Danish side, which are actually some of the largest excavators in the world. While the exact machinery has not yet been determined, the operations are based on using mechanical dredges like, for instance, the mega-backhoe *Magnor*, launched in 2015. To appreciate the size of this massive shovel: imagine that its bucket capacity is big enough to pick up an entire shipping container with room to spare. Specifically, the *Magnor’s* bucket has a capacity of 40 cubic meters (52 cubic yards). With a total capacity of 4,100 kW, the *Magnor’s* bucket can lift up to 67 tons of dredged material, and can dig to depths of 40 meters (131 feet). It is 72 meters (240 feet) long, with a breadth of nearly 20.5 meters (67 feet) and 40-meter-long (131-foot) spuds. Backhoes are increasingly being used for environmental reasons because they minimize turbidity, which is a key requirement for the Fehmarnbelt project.

Paleogene clay being dredged during geological studies in the Fehmarnbelt waters at Puttgarden along the German coast. Mechanical excavation using backhoe dredges minimizes spill and turbidity. The alignment of the tunnel trench is from just east of Rødbyhavn, Denmark, to just east of Puttgarden on the German side. (Courtesy of Femern A/S)

The design of the *Magnor* is similar to Boskalis’s *Baldur*, which is now the second-largest backhoe in its fleet with a capacity of 24 cubic meters (31 cubic yards). It too was developed in-house. The *Magnor’s* BK 12700 DD Greenline excavator is based on the largest mining machine available today, the Caterpillar 6090. The name ‘Greenline’ reflects the fact that the machine has low fuel consumption and reduced emissions of harmful substances. A Boskalis team modified and assembled the entire excavator and the complete lifting section including the boom, stick, hydraulic cylinders and different sizes of buckets were developed in house.

Van Oord’s mega-backhoe *Goliath*, built in 2009, is likewise of extraordinary large proportions. The *Goliath* is a Backacter 1100 – an excavator with three spud poles fitted to a pontoon. It can be equipped with a bucket of 25 to 40 cubic meters (32 to 52 cubic yards) and can work at a dredging depth of up to 26 meters (82 feet). It has a total installed power of 5,000 hp, comparable to the horsepower of 50 large automobiles. The *Simson*, a sister backhoe with slightly smaller but similar capacity to the *Goliath*, was also launched in 2009.

These mechanical dredges are heavy duty workhorses suited to dredging a variety of soils. In the case of Fehmarnbelt, these soils are characterized on the German side by Paleogene clay and some clay-till with boulders. In the middle or central basin area, soils are comprised of gyttja, sands, silts and clays, and on the Danish side, the soils are primarily thick deposits of clay-till.

“The advantages of such mega-mechanical dredging machines are that they are cost efficient and simultaneously less harmful to the environment because they spill less sediment back into the water,” said Jørgen Andersen, head of the project for Femern A/S.

Even considering the enormous size of these dredges, the excavation is expected to take about 18 months before the trench is ready. Approximately 19,000,000 cubic meters (24,850,000 cubic yards) of sand, rock and clay will be removed, some of which will be used to build more than 3 square kilometers (more than 1 square mile) of new land on the south coast of Lolland.

Once the tunnel is finished and the elements are connected, the dredging contractors will cover the tunnel with layers of sand and gravel that will protect the tunnel from ship traffic and make it invisible to marine animals.

The Fehmarnbelt tunnel will bring the region together and provide new opportunities for consolidating its respective strengths. Work is well underway in a large number of cross-border organizations, including the Fehmarnbelt Committee, Fehmarnbelt Development, Fehmarnbelt Business Council (FBBC), STRING and the Baltic Development Forum.

The Fehmarnbelt tunnel connection has been a multi-year project and requires bilateral approval from both the governments of Denmark and Germany. “The current focus is on the German Plan Approval decision, and the German authorities are making good progress on that front. A plan decision is expected to be finished by summer this year 2018. We expect construction to start in 2020 with the dredging operations as the first order of business,” said Jens Villemoes, head of media relations at Femern A/S.

CDMCS Quarterly Meeting in Washington, D.C., Welcomes New Stakeholders

BY MARSHA COHEN

The Council for Dredging and Marine Construction Safety (CDMCS) held its quarterly meeting in Washington, D.C., on February 7, with an excellent turnout from both the industry and the U.S. Army Corps of Engineers. The agenda was dynamic and forward-leaning addressing hot topics with a variety of key stakeholders, such as the United States Coast Guard (USCG), the National Safety Council, the American Waterways Operators, Texas Water Infrastructure Network, and the National Safety Council.

CDMCS Co-Chair Devon Carlock is enthusiastic about the progress the group is making and remarked, “Thanks to Michael Gerhardt, CDMCS treasurer and Dredging Contractors of America assistant executive director, who has attended multiple conferences, these new stakeholders were present at our meeting and are looking forward to working with us.”

Carlock summarized the success and expansion of the organization in 2017 saying, “This expansion includes a self-produced, studio quality hand safety video; a modern website with the ability to access presentations, safety toolbox meetings and entry of safety statistics; and new partnerships with federal agencies, national safety organizations, and leading manufacturers of safety equipment.”

Also attending his first CDMCS meeting, the new CEO and Executive Director of the Dredging Contractors of America William Doyle was introduced to the council by Gerhardt. Doyle gave his full support to the CDMCS, stressing the importance of close cooperation with the Corps. He also praised the council’s efforts in maritime safety and shared some of his own safety-related experiences of working at sea.

Others present were Albert Wong, senior program manager for Construction, and CDMCS co-chair, who presented incident statistics within the districts, sharing in-depth analysis and suggestions on control measures to minimize risk for each of the highlighted incidents. Luis Bonita, HSE Dredging division manager of Weeks Marine, provided a presentation on the council’s injury statistics. A summary of 2017, trends, and ways to improve our current online safety reporting tool were discussed.

THE FATIGUE FACTOR

Emily Whitcomb, senior program manager, Fatigue Initiative, National Safety Council, provided an in-depth presentation on workplace fatigue and its dangers. Whitcomb spoke specifically about the construction industry and how this fatigue issue also applies to maritime. With fluctuations in work schedules, engine noise and other multiple factors, the maritime and dredging industries have significant challenges to overcome. Whitcomb offered to partner with CDMCS on a fatigue initiative by reporting and sharing information between the two organizations.

CORPS SHIFT FROM COMPLIANCE TO RISK MANAGEMENT

The Corps shared some important information with members. Mark Atkins, Corps HQ chief of safety, said that his team is engaged and listening to what the members of CDMCS are saying. He is supportive of the council's efforts and certainly appreciates the input that the CDMCS members provide. The Corps is shifting its safety approach from compliance to risk management. CDMCS and the dredging industry at large were enthusiastic to learn of this shift in safety culture at the Corps. Atkins also said that the Corps will publish a guide that will help contractors know how to get their APP's approved more universally and consistently. Tiffany Burroughs, Corps HQ coastal program manager, discussed the Corps' actions on the submerged utilities/pipeline issue. The Corps' Pipeline Location Observation Verification Enterprise Repository (PLOVER) is not active yet, and the Corps is still working to resolve potential regulatory ramifications, legal issues and national security concerns.

OSHA UPDATE

Kevin Cannon, senior director of Safety & Health Services at the Associated General Contractors of America, updated the council on upcoming regulatory processes and actions from the Occupational Safety and Health Administration (OSHA). Crane operator certification and employer qualification deadlines were extended to November of this year. Proposed rulemaking addressing the type and capacity issue for certification and the criteria for what it means to be "employer qualified" is forthcoming. OSHA is expected to keep the in-house employer training certification for contractors.

Lee Johnson, U.S. Coast Guard HQ national towing coordinator, presented the uscg.mil website.

Perry Fowler of the Fowler Group Texas and the Texas Water Infrastructure Network, spoke on the importance of improving utility locations and agreed to partner with CDMCS on this issue. Coastal and Marine Operators (CAMO) has already agreed to speak at our next meeting on May 16.

Tyler Gray and Rick Burchfield of Gray Street Solutions engaged the members in a digital strategy discussion for 2018. Increasing the use of social media and news alerts, creating a good catch page on the website with downloadable examples and video footage, publishing an annual report, and possibly creating a learning management system were all discussed.

U.S. COAST GUARD WEBSITE

Lee Johnson, U.S. Coast Guard HQ National Towing Coordinator, discussed the new Subchapter M regulations by walking the group through the uscg.mil website (www.dco.uscg.mil/tvncoe). Subchapter M regulations make inland towboats "inspected vessels," and the compliance deadline is July 20 of this year. Companies will be allotted, however, a four-year timeframe to obtain certifications of inspection (COIs) for all their vessels at a rate of 25 percent each year. To comply, companies have the option to adopt a Towing Safety Management System (TSMS), which the USCG is advocating, or undergo USCG inspections. A vessel must operate under a TSMS for at least six months before it becomes eligible for a COI.

Matt Kent, government affairs associate at the American Waterway Operators (AWO), updated the council on AWO initiatives and AWO member safety statistics. Howard Cooper, safety manager, CSMS at The Dutra Group, discussed Dutra's changes in drug and alcohol testing policy. The group discussed ideas on how to further implement best practice testing procedures and reasonable suspicion techniques being used by some of the member companies. CDMCS will continue to focus on this safety issue in the weeks and months to come.

Gerhardt underscored the CDMCS focus on "continuing the pursuit of the safety of our coworkers, continued sharing and development of safety management systems, control procedures and best practices. This is our priority. Our vision is steadfast and dedicated creating a 100 percent injury free workplace for the dredging and marine construction industry. The numbers show that by sharing best practices and fostering a safety-first culture accidents and incidents can be reduced and are crews can go home safely."

Carlock concurred, adding, "We invite any company that is serious about safety, to please come join us and make a difference."

The Council for Dredging and Marine Construction Safety (CDMCS) held a meeting in Washington, D.C., on February 7.

Trailing Suction Dredge DC Orisant Built for Reimerswaal Dredging Launched at Royal IHC

BY MARSHA COHEN

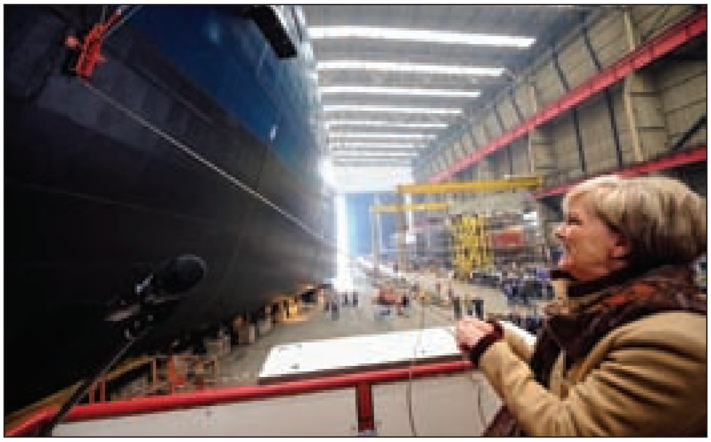
The DC Orisant in the water at the Royal IHC shipyard in Krimpen aan den IJssel, The Netherlands. (Photo courtesy of Royal IHC)

For a joint venture between Reimerswaal Dredging and Group De Cloedt, Royal IHC successfully launched a multi-purpose trailing suction hopper dredge (TSHD) named *DC Orisant*. The launching and naming ceremony took place on January 11, 2018, at IHC's shipyard in Krimpen aan den IJssel, The Netherlands. The contract was originally awarded in August 2016, and the keel-laying took place in July 2017.

Reimerswaal Dredging, located in Goes, the Netherlands, is a family-run business with more than 50 years of experience in the mining of sand and gravel from riverbeds and seabeds. The TSHD *DC Orisant* continues Reimerswaal's goal to improve service by using high-tech ships with state-of-the-art technology. The company works along the Belgian coast as well as in the Netherlands and Germany and the U.K. continental shelf.

The vessel is the first complete diesel electric aggregate dredge on the market, which enables it to sail at the highly economical speeds in all situations. The new trailer suction hopper dredge has a hopper capacity of 5,450 cubic meters (7,128 cubic yards) and has been designed especially for high speeds up to 16 knots to reach concession areas further offshore. It is fully diesel-electric powered, with an overall length of 142.3 meters (466 feet), a width of 23 meters (75 feet) and a dredging draft of 7.8 meters (25.5 feet). The vessel can accommodate 13 people.

The *DC Orisant* boasts full system redundancy at every level, with a view to maximizing flexibility and minimizing downtime in the unusual event that a component fails. State-of-the-art technology includes an advanced Power Management System (PMS) that powers four generators with varying torques for optimum fuel economy and maximum reduction of CO2 emissions. On the ship's bridge, the duty officer controls navigation and the dredging process on 10 large optimized screens, including several 46-inch screens. Dynamic Positioning (DP) is also a standard feature, which enables precision positioning of the ship. The stud poles mounted on the ship's stern and bow allow the duty officer to moor the ship from the control position, even when mooring facilities on-shore are lacking. Given that these spud poles can be extended 18 meters (59 feet) below the ship's keel, no crew is needed to moor the ship or set off, as the duty officer can



Ria den Herder, the wife of Bert den Herder, owner of Reimerswaal Dredging, does the honors at the launching and naming ceremony. (Photo courtesy of Royal IHC)

do it all without assistance.

With its 12 buckets on a vertical bucket wheel, the ship's dry discharge system can scoop a layer of material from the hold in both directions at a rate of 2,500 cubic meters (3,270 cubic yards) per hour. The bucket wheel system subsequently places the material onto the shore conveyor using a specialized system of conveyors. The shore conveyor, which can swivel 300 degees from port to starboard, has a long offloading belt that allows it to discharge at a distance of 60 meters (65 yards). The elevation of the conveyor can be adjusted and the conveyor is equipped with a control slide at the discharge end. The *DC Orisant* has a dredge pipe 1,100 mm in diameter and can also discharge material through the discharge pipe, rainbow nozzle, or the doors in its hull.

The *DC Orisant* is a versatile gravel hopper that is suitable for many types of operations. The dredge installation has been configured to dredge marine aggregates for the construction industry. The TSHD is also highly suitable for performing other operations such as maintenance dredging and beach nourishment. In addition, the DP installation will allow the *DC Orisant* to perform support activities during the construction of offshore wind farms. Delivery of the *DC Orisant* to her owners is scheduled for mid-2018.

Great Lakes Dredge & Dock Appoints New Board Chair

The Board of Directors of Great Lakes Dredge & Dock Corporation (GLDD) has appointed Lawrence R. Dickerson as board chair, effective February 1. Dickerson is assuming the role from Robert B. Uhler, who requested to step down as board chair to accommodate his other professional and personal time commitments. Dickerson has served on the board for the past year, including on the Compensation and Audit Committees. He has 30 years of operational and commercial experience in the oil and gas industry, having spent 34 years at Diamond Offshore Drilling, Inc., where he served as president and chief executive officer from 2008 to 2014. Dickerson has also been a member of the board of directors at Global Industries Ltd., Murphy Oil Corporation and Oil States International, and he served as chairman of the board at Hercules Offshore Inc.

In other personnel news, GLDD announced that Kathleen Mackie LaVoy has been elected senior vice president, chief legal officer and corporate secretary, and Annette Cyr has joined the Great Lakes team as vice president of human resources. LaVoy joined the company in 2007 as assistant general counsel and was promoted to vice president and general counsel, dredging operations in 2012. Since November 2015, she has been serving as the interim chief legal officer. Cyr has more than 25 years of human resources experience with both public and private companies. In her most recent role, she was executive vice president of human resources for Beaulieu Americas. Throughout her career, her key focus areas have included mergers and acquisitions, leadership and talent development, and the implementation of global processes and systems in support of the businesses' objectives.

Jan De Nul Group Orders Two New Dual-Fuel Dredges

Jan De Nul Group has ordered a 6,000-cubic-meter (7,847-cubic-yard) and an 18,000-cubic-meter (23,543-cubic-yard) trailing suction hopper dredge. Cosco (Dalian) Shipyard Co. Ltd. will build the larger vessel in its shipyard in Dalian in China, and Keppel Singmarine Pte. Ltd. will build the smaller trailing suction hopper dredges in Singapore.

Both hopper dredges are dual fuel, diesel-electric, with all main drives electrically driven via frequency converters and power generated by three diesel-driven generator sets. A-symmetric load sharing, 'fuel-mapping,' and engines that automatically start and stop depending on power demand combine to reduce fuel consumption and emissions. In addition, each vessel also has a selective catalytic reduction (SCR) system installed so the engines exceed International Maritime Organization (IMO) Tier II and Tier III requirements for reducing nitrogen-oxide (NOx) emissions. IMO requirements are similar to the U.S. Environmental Protection Agency's Tier 4 requirements that emissions from non-road diesel engines reduce particulate matter and NOx by about ninety percent.

A rendering of one of Jan De Nul's new trailing suction hopper dredges.

The 18,000-cubic-meter vessel is equipped with a single suction pipe, with a submerged dredge pump. The hopper is subdivided in two parts, enabling sailing on even keel, at all loading conditions. Two double-walled shore-discharging pumps with a total power of 14,000 kW are installed. The dredge is 166 meters (544 feet) in length and can dredge to a maximum depth of 86 meters (282 feet). The 6,000-cubic-meter dredge is 111.7 meters (366.5 feet) long with a maximum dredging depth of 35 meters (115 feet).

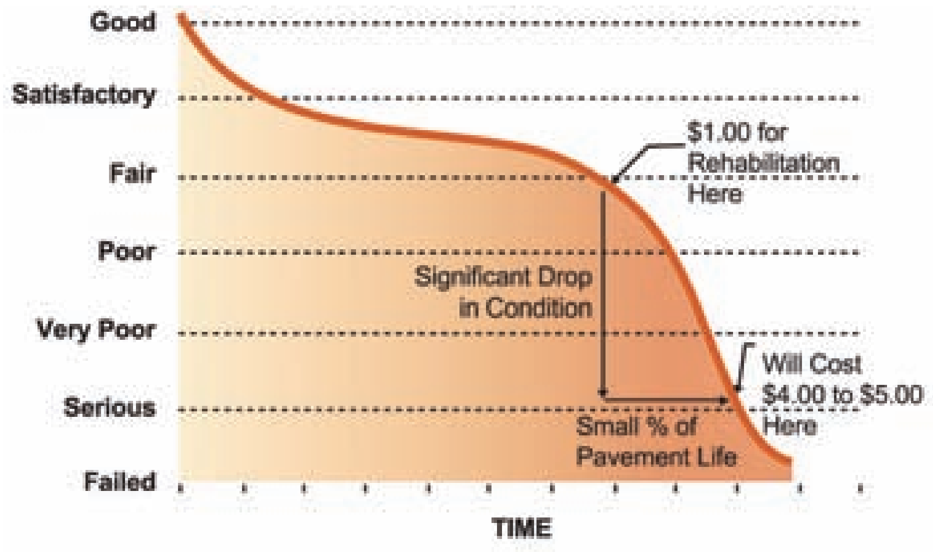
World Dredging Congress Issues Call for Papers

The 22nd World Dredging Congress & Exposition (WODCON XXII) has issued a call for papers. This year's event, April 25 to 29 in Shanghai, China, will feature the theme, "Enhance the Harmony Between Dredging and Ecology." Topics of focus include: sustainable dredging strategy; environmental and ecological assessments of dredging projects; efficient dredging and reclamation technology; construction technology; beneficial use of dredged material; green and efficient dredging and ocean engineering equipment and more. More details can be found at http://woda.org/wodcon-xxii. One-page abstracts containing a descriptive title and author contact information can be emailed to the chairs of the respective regions-the Central Dredging Association (CEDA), CHIDA, and the Eastern Dredging Association (EADA), while those directed to the Western Dredging Association (WEDA) region should be sent to both info@westerndredging.org and RcRamsdell@GLDD.com. The deadline for submission is April 10.

Editorial, continued from page 5

the "fix-as-fails" process, namely higher project costs. Projects with less funding upfront will require more funding in the long run. The report said that for every dollar of deferred maintenance, taxpayers will need to invest four to five dollars later on. The graph below demonstrates this relationship.

FUNDING AND DELIVERY



Source: Federal Aviation Administration (FAA) 2010.

Water resource projects with a federal interest fall into two categories: a federally owned and operated project, or one under a shared-responsibility agreement between a federal agency and a non-federal partner. Federally owned assets, referred to as reserved works, for which the federal government holds the title and O&M responsibility, include inland waterways, navigation channels and some flood risk management projects, as well as dam and water supply projects.

Cost-shared or transferred works include flood risk management projects and ecosystem restoration projects, but cost-share agreements for projects from different federal agencies differ greatly. While in some cases, cost-share projects with the U.S. Bureau of Reclamation (USBR) mean the agency retains the title, with the Corps, it often does not.

The funding and delivery method becomes even more important when considering alternative finance delivery structures, like P3s. The report argues that the discussion is "complex and nuanced" because issues of asset ownership and life-cycle responsibility can impact Office of Management and Budget (OMB) scoring and project prioritization.

Projects also lie on a spectrum of delivery structures, ranging from traditional delivery to public-private partnership to privatization. See the chart on page 28 for a description of delivery models

What are the benefits of private involvement and public-private partnerships? For the federal government and its strapped funding, P3s can mean full funding is available at the outset of a project with the help of private financing. In terms of risk, P3s transfer that to the private partner and incentivize performance. All these combined are said to improve the quality of public infrastructure and leverage innovative approaches, the report said.

In her testimony before the T&I committee, Jamison took time to squash some misnomers about P3s. They are not a funding strategy but a delivery tool. The current system, she said, is flawed. It has failed to deliver quality infrastructure for the long-term, and legislative and policy details have impacted the effectiveness or reach of P3s on infrastructure projects, especially water resources.

Without a long-term budget, finance structures like P3s "are in direct conflict with the federal pay-as-you-go budget system," the report said.

Public infrastructure and services are funded primarily via two structures: usage-based or budget-based payments. P3 projects need a funding stream to compensate investors for their costs and risks.

In the case of the federally leveraged taxes or fees, as in the Harbor Maintenance Trust Fund (HMTF), the money collected is sent back to a general fund and subject to future appropriations. It cannot go directly to projects, unless appropriated by Congress. "Without the ability to commit project-specific revenues to project costs, most federal P3 projects are thus entirely dependent on budget-based payments," the report said.

For budget payments, appropriations are performance based and contingent upon OMB budget scorekeeping rules, which mandate that the entire federal funding obligation for a project is scored upfront in a single year, at the time the contract is executed. Very few large-scale projects can command their entire budget in one year, where funds are already tight.

REVENUE GENERATION AND RING-FENCING

Federal authority to assess fees varies significantly depending on the type of water resource. Most fees or taxes assessed for the use of federal

water resource assets are deposited in the Treasury's General Fund, or into specialized trust funds, such as HMTF. "These revenues are not available for dedicated project-specific purposes. This inability to commit project-related revenues to specific project purposes represent a significant constraint to P3," the report said.

Alternative finance and delivery structures like P3s need federal revenues for project-specific purposes, but current specialized trust funds do not allow that. To be used for project-specific purposes, funds would need to go to an escrow account or revolving fund ("ring-fencing" the funds), the report suggested.

Even if dedicated fees could be used for project-specific purposes in the short-term, it means little for infrastructure in the long-term, where federal agencies' fees cannot be leveraged to finance and deliver projects and commit future revenues in advance of their collection.

This notion is also counter to the Anti-Deficiency Act, which prohibits a federal agency from entering into a contract that would obligate more money than the federal agency has on hand. When federal authorities can't use future cash flows generated from user fees, they must pre-fund the work or separate the whole project into many phases that can be funded annually.

"If federal agencies hope to utilize revenues for project-specific purposes, they would need contract authority to allow them to enter into contractual arrangements on the basis of future revenues," the report said.

Since federal trusts or revolving funds currently do not have legal authorities to be used for project-specific purposes, "significant legislative changes would be required," to make that happen, the report said. Specifically, to facilitate P3 projects, federal water resource authorities would also need multi-year contracting authority.

BUDGET PRIORITIZATION AND PILOT PROGRAMS

The report also argues that P3 projects do not receive credit for the benefits of their alternative financing and delivery approach in the budget prioritization process. "The ability to accelerate the delivery of an infrastructure asset through P3 not only results in efficiency savings, but also accelerates the resulting public benefits of the project. This should be considered when establishing budget priorities. Moreover, the value of risk transfer should also be considered," the report said.

Federal budget scorekeeping rules by OMB were established in the early 1990s in reaction to perceived abuse over federal real estate acquisitions. The report concludes that these same 25-year-old rules should not apply to all infrastructure projects. Investments are currently prioritized based on their Benefit-Cost Ratio (BCR), without consideration for federal return on investment, Value-for-Money, accelerated benefits and risk transfer.

"Federal return on investment refers to public benefits deriving from each federal dollar appropriated to a project," the report said. Value-for-Money (Vfm) analyzes the total life-cycle costs of service delivery and evaluates the benefits to the public at large.

"Consideration should be given in the BCR calculation to the accelerated benefits and life-cycle cost-savings resulting from a P3," the report said. Quantifiable benefits are also associated with the transfer of project risks to private entities.

To help expand P3s for water resource development projects, the Water Resources Reform and Development Act (WRRDA), Section 5014, established a framework for the Corps to establish a P3 pilot program for water resources. "However, activities related to the program were only authorized to the extent specifically provided for in subsequent appropriations, which have not been granted," the report said. Likewise, the legislation, the report concludes, sets up the parameters to develop a program, but does not provide the specific authorities necessary. And the program hadn't received any appropriations to develop the program.

It clear that P3s could be an important part of delivering water resources infrastructure in a more timely and cost efficient manner, but it is not a one-size-fits-all solution. The Corps also needs new authorities, such as long-term contracting authority, to make P3s work, and changes to the annual funding process would make P3s more attractive to the non-federal partners that the federal government needs to support projects. In order to be competitive for funding, P3s also need a more even playing field with OMB, which rates projects strictly on BCR.

The next water resources bill, expected this year, could explore some of these options. Proposals from the administration's infrastructure plan also address some of the issues addressed in the Ash Center report.

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Sandscaping: British Translate Dutch 'Sand Engine' Coastal Restoration Method

BY MARSHA COHEN

Coastal erosion on the East Coast of the United Kingdom (U.K.) is a well-documented, long-term phenomenon. The normal coastal protection systems of beach replenishment, groynes and seawalls have long been recognized as being insufficient, but the issue at hand was: what could be done instead? Heavy storms in 2007, followed by more storms in 2013, increased the erosion on the already depleted North Sea coastline in the area of Norfolk. At Bacton, where an important gas terminal is located, plus a series of smaller villages along the shore, beaches, cliffs and seawalls were left exposed.

According to Jaap Flikweert, flood resilience leading professional at Royal HaskoningDHV, a Dutchman living for quite some time in England, "Without intervention, the sand on the coastline will certainly in the long run recede, endangering coastal towns. The sand has been slowly ebbing away for a very long time. The moment was ripe to explore some innovative systems to remedy England's worsening coastal erosion."

Twenty sites were identified where improvements could be made and in a confluence of events, Bacton emerged as the first candidate location. "The Bacton Gas Terminal is an important energy asset and a critical infrastructure, which receives up to one-third of the U.K.'s gas supplies. The groynes, revetments and seawalls built in the 1950s and 1960s to protect the villages, the terminal, the pipelines and the shoreline have reached the end of their life cycle and are at increased risk as a result of falling beach levels. One traditional solution would be rock or concrete to protect cliffs and pipelines, but that would cause more erosion. Another traditional solution would be regular beach nourishment, but that wouldn't work because it is so costly. Mobilization of vessels and pipelines is expensive, can only be justified for a large volume of nourishment," Flikweert said. "A comprehensive, innovative solution was needed."

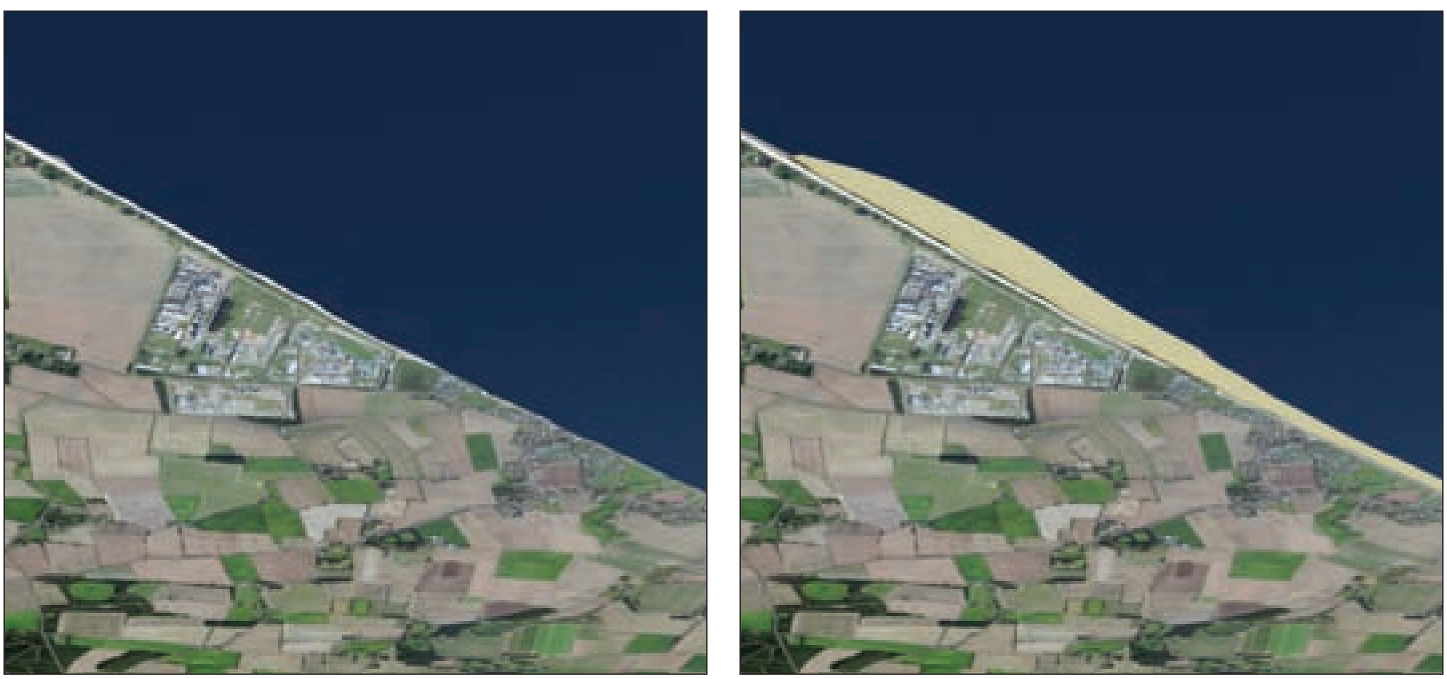
A possible answer to the impending threat to the terminal and villages came when British maritime experts looked across the English Channel to the Dutch and saw the success of the so-called "Sand Engine" project south of The Hague. The Sand Engine, an outgrowth of the Building with Nature movement, represents an experimental, innovative "soft" solution, as opposed to hard seawalls and groynes. In 2011, dredges placed 21.5 million cubic meters (more than 26.1 million cubic yards) of sand in the coastal waters of the Netherlands and waited for the waves, wind and currents to slowly spread the sand. The question was would this naturally replenish the beaches and restore the coastal equilibrium. Now, seven years later, the answer is yes. The system is proving to be successful and sustainable and can be a financially viable solution.

FINANCIAL VIABILITY

Financial viability is crucial in planning and implementing coastal protection. With parts of the U.K. coastline being owned by The Crown Estate, the appropriate British authorities and private industry acknowledged the seriousness of the problem, and they were willing to try to translate the Dutch Sand Engine to a British coastal situation.

Studies were undertaken by several partners including the National Oceanography Centre (NOC), the British Geological Survey, The Crown Estate, the Cardigan Bay Coastal Group, Royal Haskoning DHV, the Environment Agency, Natural England and National Grid. Some of this was funded by the Natural Environment Research Council (NERC) through a program to support knowledge exchange between research and the commercial practices.

The British are calling it "Sandscaping," a play on the word landscaping. Royal HaskoningDHV, which had an important role in developing the design of the original Dutch Sand Engine concept, is uniquely qualified to examine the U.K. bathymetry but also institutional settings, and conduct the necessary Environmental Impact Assessments (EIA). The baseline design, which is being fine-tuned now, is to dredge and



Sandscaping is a plan for beach-widening, based on the Dutch Sand Engine model, to reduce flooding and erosion along the U.K. coast. Schematic drawings show before and after placement of dredged sand.

place 1.5 million cubic meters (2.5 million cubic yards) of sand along a stretch of coast 5 kilometers (about 3 miles) long, which will protect the Bacton Gas Terminal, operated by Shell and Perenco, as well as nearby villages. That volume of sand is approximately equal to the volume of a typical large soccer stadium.

Sand will be mined from existing licensed dredging areas. The idea behind the plan is that wider beaches can reduce the impact of waves on coastal defenses by causing them to break further offshore, as well as offer additional protection from erosion. The terminal, where the cliffs are totally covered by sand, will not be reached by waves at all. The villages will have a higher, wider beach that reduces the exposure of the seawall to waves. Models indicate that this natural defense should stay in place for 15 to 20 years.

DREDGING CONTRACTORS INVOLVEMENT

Flikweert adds, "Working with dredging contractors early on was an important part of developing the design. The knowledge that the contractors have about sand mining and methods of sand placement was an important contribution. We issued an open invitation to any interested contractors to think along with us. They shared insights that only they have – that were unique and useful."

The procurement process has begun, and the goal is to start working this summer. The period from May to October is the window of opportunity before the autumn storms with possible devastating results set in. But a lot depends on how quickly the environmental and other licensing processes proceed.

Funding for the project is a public-private venture of Bacton Gas Terminal and the North Norfolk District Council (NNDC), where NNDC is the operator. The project is a great example of positive collaboration between organizations with very different roles and cultures to achieve shared objectives.

Flikweert explains, "In the Sandscaping initiative we are working with our British partners to translate the Dutch Sand Engine to the very different context of the U.K. The bathymetry of the U.K. is different than that of the Dutch waters. Therefore, for instance, instead of placing large quantities of sand at sea, we will use pipelines and pumps to place the sand. But the aim is the same – to use the natural energy of the sea to distribute the sand, which can make sandy solutions affordable. It enhances the natural coastline without leaving permanent marks, and can be adapted and extended easily if needed in the future. Sandscaping also means a design for multiple functions and stakeholders to generate benefits and funding."

Public consultation has taken place and Royal HaskoningDHV's work on the Environmental Impact Assessment (EIA) is underway. The company has also prepared the business case to secure national government funding, as well as develop the operations, maintenance and monitoring plan for the scheme with placement scheduled to take place during summer 2018 or 2019. The University of Liverpool and other academic institutes have worked closely with The Crown Estate in developing their Sandscaping approach, which offers additional benefits in terms of habitat creation and environments that may provide a catalyst for economic development.

This is an important step to increase the resilience of the English coastline against storms and sea-level rise. Flikweert said, "The Bacton project is the first time the Sand Engine concept will be applied outside the Netherlands, and it is certainly not a copy-paste project. But it is a solution that merits further observation and could perhaps be adapted and applied in other areas of the UK and even coastal areas in the United States."

CPRA Approves FY19 Annual Plan; $17.7B for Marsh Creation

For the Bayou Bonfouca Marsh creation project, dredged sediment from Lake Ponchatrain created 620 acres of marsh habitat.

The Oyster Bayou Marsh Creation project encompasses four areas totaling 740 acres, including a 135-acre expansion of the original footprint. The sediment is held in place by more than 50,000 linear feet of earthen containment dikes.

On February 21, the Coastal Protection and Restoration Board (CPRA) approved the Fiscal Year 2019 Annual Plan, a three-year outlook of projected revenues and expenditures, project activity and implementation schedules. The plan identifies $17.7 billion in marsh creation projects using dredged material.

In 2007, Louisiana State released the, "Integrated Ecosystem and Restoration and Hurricane Protection: Louisiana's Comprehensive Master Plan for a Sustainable Coast." At the time, Governor Bobby Jindal by way of executive order, directed all state agencies to administer their activities in accordance with the 2007 plan recommendations.

To accommodate the dynamic nature of coastal systems, the plan would be a living document to be updated every five years, incorporating new data and planning tools. Two updates have been submitted and approved through the Louisiana legislature since the original in March 2012 and April 2017. In 2009, the state legislature directed CPRA to produce an annual plan each year to inventory projects, implementation schedules and identify funding opportunities. The latest master plan was adopted by the Louisiana Legislature in April 2017.

In 1990, Congress authorized the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) to identify, prepare and fund construction of coastal wetlands restoration projects. In 2015, CWPPRA celebrated 25 years with 150 projects and 100,000 acres of restored wetlands. (Read more about those projects in the *IDR* Nov/Dec 2015 issue.)

CWPPRA is managed by a task force of members from the state and five federal agencies – the Environmental Protection Agency, The U.S. Fish and Wildlife Service, the National Resources Conservation Service (NRCS), the National Marine Fisheries Service, and the U.S. Army Corps of Engineers. For FY19, the state will administer funds for the implementation of 21 CWWPRA Phase 1 projects (engineering and design), and 10 CWWPRA Phase 2 projects (construction and monitoring).

CWWPRA projects with appropriated funding in the FY19 budget include the Northwest Turtle Bay Marsh Creation in Barataria Basin in Jefferson Parish at $33.6 million. Wetland loss in the area stems from shoreline erosion along Turtle Bay and interior marsh loss from subsidence, sediment deprivation and construction of oil and gas canals. The plan aims to create approximately 700 acres of marsh with dredged material from Turtle Bay or Little Lake. This would create marsh habitat in the open water (484 acres) and nourish existing marsh (216 acres).

The Cameron-Creole Watershed Grand Bayou Marsh Creation project will receive $28.1 million for restoring and nourishing hurricane-scoured marsh in the Cameron Prairie National Widlife Refuge and adjacent brackish marshes of the Calcasieu Lake estuary. Approximately 3 million cubic yards of material will be dredged from a borrow site proposed in Calcasieu Lake and placed into two marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh.

In Terrebonne Basin, the Lost Lake Marsh Creation project will receive $31.5 milion to create approximately 465 acres of marsh between Lake Pagie and Bayou DeCade, north of Bayou DeCade, and along the northwestern Lost Lake shoreline. Material will be taken from within Lost Lake and pumped via a hydraulic dredge into the marsh creation sites.

The Cole's Bayou Marsh Restoration project received $25.6 million to create 365 acres of brackish marsh in newly formed shallow open water; nourish 53 acres of existing brackish marsh; and increase freshwater and sediment inflow into interior wetlands by improving project area hydrology. Material will be dredged from nearby Vermilion Bay. The project will encourage additional freshwater nutrient and sediment inflow from Freshwater Bayou Canal by dredging a portion of Cole's Bayou along with the installation of a series of culverts throughout the project area.

PROGRAM SUCCESSES

The annual plan also chronicles some of CPRA's successes in accomplishing goals and projects (completed and on-going) during the past fiscal year. Some of last year's notable projects include Oyster Bayou Marsh Creation and Terracing project. In Cameron Parish, dense marsh once protected the area from storm surge. Sediment was dredged from three miles offshore to create and nourish marsh in an area behind the Gulf Beach Highway. The marsh creation project encompasses four areas totaling 740 acres, including a 135-acre expansion of the original footprint. The sediment is held in place by over 50,000 linear feet of earthen containment dikes.

The Bayou Bonfouca Marsh Creation project restored 620 acres of marsh, nourished 310 additional acres and reestablished the Lake Pontchartrain shoreline rim that was breached during Hurricane Katrina near Bayou Bonfouca, allowing saltier water to degrade the marsh. It had been turning into open water at an increasing rate, mostly through wind-driven erosion and shorelines breaches that allowed saltwater to intrude into the fresher interior marshes. The project used sediment dredged from the lake.

The chain barrier islands are Louisiana's first line of coastal defense. At a Louisiana barrier island, part of the Caillou Lake Headlands, Whiskey Island is being refurbished with sand dredged from offshore. Appoximaety 10.4 million cubic yards of dredged material was removed from a borrow area nine miles offshore. The project will create 172 acres of marsh habitat and 730 acres of dune and beach habitat. Almost five miles of beach and dune are being created using sand from Ship Shoal in the Gulf of Mexico, along with restoration of the marsh platform along the western half of the island. Restoration of the island provides a buffer to help reduce the full force and effects of wave action, saltwater intrusion, storm surge and tidal currents on associated estuaries and wetlands. It also provides wetland habitat for a diverse number of plant and animal species. This project was paid for with funds from the Deepwater Horizon Natural Resources Damage Assessment Early Restoration Program.

Approximately 10.4 million cubic yards of material was dredged from a borrow area nine miles offshore to restore more than 900 acres of barrier island and marsh habitat. The project was paid for with funds from the Deepwater Horizon Natural Resources Damage Assessment (NRDA) Early Restoration Program.

DEEPWATER HORIZON RECOVERY FUNDS

Louisiana coastal restoration projects got a boost in funding for 2017, following the first of 15 annual payments to the state from Deepwater Horizon funds. The settlement with BP, combined with prior Deepwater Horizon-related settlements and recoveries, total $8.7 billion over 15 years.

The Natural Resource Damage Assessment (NRDA) is the process used by Natural Resource Trustees to develop a claim for natural resource damages against the responsible party or parties for an oil spill. In April 2011, the trustees and BP announced an agreement, committing BP to provide $1 billion toward implementing early restoration projects. This was the initial step toward BP fulfilling its obligations as a responsible party to fund complete restoration. About $370 million went to early restoration projects.

In February 2016, the Deepwater Horizon Trustees released the Programmatic Damage Assessment and Restoration Plan and Programmatic Environmental Impact Statement (PDARP/PPEIS), to establish the framework for allocating the $8.7 billion from Deepwater Horizon funds.

In January 2017, Louisiana finalized its first post-settlement, project-specific restoration plan, which approved approximately $22.3 million in engineering and design work for six restoration projects.

In 2017, of the $267 million allocated from Deepwater Horizon funds, $22 million from NRDA was allocated for the engineering and design for the Terrebonne Basin Ridge and Marsh Creation.

In 2012, Congress passed the Resources and Ecosystem Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act of 2012 (the RESTORE Act), which dedicates 80 percent of all Clean Water Act penalties related to the Deepwater Horizon oil spill to a Gulf Coast Restoration Trust Fund. In February 2013, Transocean Deepwater Inc. agreed to pay $1 billion to resolve federal CWA penalties associated with the oil spill.

In December 2015, a final judgment was issued against Anadarko Petroleum Corporation for CWA penalties in the amounts of $159.5 million for its role in the oil spill. Finally, as part of the April 2016 BP consent decree, BP agreed to pay $5.5 million for CWA civil penalties. Under the RESTORE Act and over a 15-year period, these settlements totaling $988.4 million will go to the state of Louisiana and $876.8 million will be allocated to CPRA for implementation of master plan projects.

On January 18, 2017, the state's first amended RESTORE Plan was approved by the CPRA board. The U.S. Department of Treasury and the RESOTRE Council approve expenditures of the funds. In March 2017, Louisiana became the first state to have a plan accepted by both for the expenditure of all its funds.

Contractors, Corps officials discuss dredging at AGC Mississippi Valley construction roundtable

BY FRANK MCCORMACK

Representatives of the Mississippi Valley Branch of the Associate General Contractors of America (AGC) gathered in New Orleans, Louisiana, February 28 and March 1 for the organization's 2018 construction roundtable meeting at the Hyatt Regency Hotel. In total, about 140 AGC stakeholders took part in the two-day event.

"The MVAGC Conference was extremely beneficial because it brought together federal leaders and administrators that understand the process of delivering projects and the leaders in industry that understand the practice of delivering projects in a very dynamic system found along the mighty Mississippi super highway," said AGC Mississippi Valley Branch Executive Vice President Stephen Gambrell following the meeting.

A dredging issues roundtable, a program execution and policy session, and a specifications-focused session highlighted the conference, which also included an awards luncheon, a scholarship trust meeting and even a dinner at the nearby National WWII Museum.

Gambrell said tackling all of those topics together was not only helpful but crucial as contractors and federal agencies, particularly the U.S. Army Corps of Engineers, work together to improve and maintain the nation's infrastructure.

"The issues of dredging, specifications, performance and safety ultimately refine and help assure that we learn and improve the process of developing and delivering infrastructure in today's climate," he said.

The dredging session, held on day one of the conference, offered Corps representatives and dredging industry professionals an opportunity to not only ask and answer questions but to discuss potential solutions for specific issues.

Andy Hall, the Corps chair for the dredging session and dredge program coordinator for the Corps' Mississippi Valley Division, read topics of discussion and information requests for the dredging session, while Greg Ford with Choctaw Transportation Co., the AGC chair for the session, read the Corps responses.

The first item discussed was the plan to deepen the Lower Mississippi River to 50 feet. The Corps' tentatively selected plan calls for deepening the river to 50 feet from 22 miles below Head of Passes to 232.4 miles above Head of Passes at the Port of Greater Baton Rouge. The current benefit-cost ratio is 7.2:1.

"In Southwest Pass, material will be removed with a combination of cutterhead and hopper dredges," Ford said. "Material from dredging from river mile 6 [above Head of Passes] to river mile 19.5 below Head of Passes will be used for beneficial use, under the federal standard."

Material below river mile 19.5 will be placed in an approved disposal site.

Ford said the Corps anticipates completing that stretch of the project within one year from start to finish.

Farther upriver, deepening the crossings will occur in a second phase and will take an estimated four years.

"On the upper portion, material will be removed from the 12 crossings with a dustpan dredge and placed in adjacent crossings for natural depth disposition downriver," Ford said.

Total cost for the project is $237.67 million.

A member of the roundtable group asked about using hopper dredges on the crossings rather than dustpan dredges. Another Corps representative said hoppers have been used on the crossings before, but that was when dustpans were in high demand on shallow draft channels.

The group also discussed how the Corps and dredging contractors share information on pipelines and utility crossings in waterways and the risk of dredges damaging those crossings. Industry representatives urged the Corps to form a relationship with the CAMO Group, also called the Coastal and Marine Operators Pipeline Industry Initiative. CAMO Group, they said, could be a valuable partner for tracking down the precise location and current owners of pipelines and utility crossings within waterways. There was some back-and-forth discussion between Corps and industry representatives over which group was ultimately responsible for identifying and avoiding impacts to pipelines and submerged utility crossings. Ultimately, all agreed it was a partnership between the Corps, contractors and utility companies.

"The Corps was also asked to address several contracting issues, including multi-year dredging projects, contract periods and option hours, and government estimates, particularly in relation to fuel prices."

The group also delved into funding the Mississippi Valley Division will receive for navigation projects in fiscal year 2018. The U.S. government—and by extension the Corps of Engineers—is again operating this year under a continuing resolution and not a full budget, which hampers the total amount of funds available for Corps projects. Congress has typically bolstered the Corps' budget through supplemental spending plans. This year is no different, although much of the supplemental funding to the Corps will go to areas impacted by hurricanes in 2017.

The Corps was also asked to address several contracting issues, including multi-year dredging projects, contract periods and option hours, and government estimates, particularly in relation to fuel prices. The contract period, in particular, led to discussion from the panel.

"AGC requests that contract periods realistically reflect the actual amount of work to be performed as well as the actual funding available to perform the work," the contract periods and option hours item read. "The Corps should not hold the contractor to unreasonable length of time without work nor should the Corps hold the contractor to an IDIQ contract after all funds have been expended and the Corps has no expectation of additional funds for the contract."

Ford said he believed that issue was connected to the Red River, which he called a "flashy system."

"In recent years, we've definitely made a concerted effort to release the contractor after all the requirements are met and there is no reasonable chance of additional funds," Ford said, reading the Corps response. "This requirement is included to mitigate non-routine river stage fluctuations resulting in siltation and requiring additional dredging."

Hall elaborated that sometimes contracts require a dredge to remain in an area for 365 days or be able to remobilize within seven or 10 days.

"For a cutter dredge, this essentially means the contractor has to plan on the equipment being there for the entire year, even after the initial assignment is or was complete, with a good portion of the year being idle," Hall said. "The contractor's got to pick up that fixed cost during the expected work window."

Panelists admitted that Corps contracting of late has been somewhat less restrictive.

"We believe it's going in the right direction and we appreciate it, but we believe you should have a fixed period of time in your contracts," one panelist said.

Day two of the conference featured remarks from both Maj. Gen. Richard Kaiser, commander of the Corps' Mississippi Valley Division and president of the Mississippi River Commission, and the newly-elected president of the Associated General Contractors of America, Eddie Steward.

Kaiser praised the Mississippi River for the critical role it plays in the day-to-day wellbeing of the United States.

"You can go east, west, anywhere you want to, because of the Mississippi River," Kaiser said.

Kaiser said he is eager to see President Donald Trump's infrastructure plan takes shape, adding that he fully anticipates regulatory and permitting reforms to be a part of the infrastructure funding coming the Corps' way.

Stewart assured members of the AGC's Mississippi Valley Branch that their organization has a seat at the table within the Trump Administration and that AGC is pressuring congressional leaders as they craft the infrastructure plan.

AGC members then heard annual reports from each Corps district located within the Mississippi River Valley with regard to anticipated funding and dredging and construction schedules. The conference finished out that afternoon with a session focused solely on specifications issues, with Kaiser and Jamey Sanders from Choctaw Transportation Co. chairing the session for the Mississippi Valley Division and the AGC, respectively.

BY MARSHA COHEN

VAN OORD'S FOUR YEAR DREDGING PROJECT IN KAZAKHSTAN IS COMPLETED

In mid-December 2017, Van Oord dredging and marine of Rotterdam, the Netherlands, announced that it had finished dredging operations in Kazakhstan on a 72-kilometer-long (44.7-mile) access channel to the Caspian Sea. The new Prorva Access Channel was constructed to allow for the transport of construction modules to the Tengiz oil field, where new facilities are being erected to increase the production capacity. Tengiz oil field is located at an extremely remote location in northwestern Kazakhstan's low-lying wetlands along the northeastern shores of the Caspian Sea. It covers a 2,500 square kilometer area (970 square miles) and is 19 kilometers (12 miles) wide and 21 kilometers (13 miles) long, making it one of the largest discoveries in recent history. The city of Atyrau, located 350 kilometers (220 miles) north of Tengiz, is the main transport hub of Tengiz oil field. Many nations are involved in a large geopolitical competition to secure access to this source of oil.

Prorva Channel creates a sea access to these attractive oil reserves. Kazakhstan has over 150 oil fields, of which the Tengiz field is one of the largest. It has developed into an important link between Russia, China and Europe and is reinforcing this position by expanding its oil and gas industry. The new channel is an important part of new infrastructure being created to facilitate this growth.

The remoteness of the location and the very harsh winters required resourceful measures during project execution and dredging was only possible between April and October. Furthermore, the region's limited infrastructure and facilities made logistics unusually complex. Four cutter suction dredges, including the Ural River and Mangystau, assisted by more than 30 support vessels, worked simultaneously to get the job done. To allow for in-situ repairs and maintenance of the support vessels, Van Oord designed and built a floating workshop barge complete with ship lift facility, hydraulic crane and on-board workshop.

Another priority was to protect various endangered species, such as birds and seals, during dredging operations. Van Oord closely cooperated with independent wildlife observers in order to protect the local flora and fauna. In addition, 32 sand deposit sites were created alongside the access channel. Sixteen of these form islands which are already attracting animals for resting and breeding. This video link shows the work (vimeo.com/245190054).

JAN DE NUL GROUP-PAYRA PORT AUTHORITY, PAKISTAN IN A JOINT VENTURE

Jan De Nul Group (JDN), the Luxembourg based dredging contractor, has signed a Joint Venture Company agreement with Payra Port Authority (PPA) to proceed with a contract for the Payra Deep-sea Port capital dredging project of the port's main channel to facilitate entry of large ships that cannot berth now at Chittagong and Mongla ports. The Chittagong port, the country's biggest seaport, can only accommodate berthing ships with draft of up to 9.5 meters (31 feet) at high tide while vessels with draught of up to 7 to 8 meters (23 to 26 feet) can enter Mongla port.

The agreement was signed on December 11, 2017 in the presence of the Honorable Minister of Shipping Shajahan Khan Frank Vanwingh de Credendo and the Belgian Ambassador Jan Luykx. The value of the contract is 550 million euro (more than $680 million). The Government of Bangladesh considers the development of Payra Deep-sea Port vital for speedy and efficient development of Bangladesh's infrastructure, trade and commerce. Successful operation of the new port requires dredging and land reclamation works.

Under this agreement, JDN and PPA have set out the basis for long-term cooperation and they will be able to commence with the first phase of the dredging. Of the 19 components of the Payra Port project, capital dredging is the lead one. The dredging of the 36.5 nautical-mile channel is expected to begin in September 2018. Once the first phase of dredging is completed, by 2020, vessels with draught of up to 11 meters (36 feet) will be able to berth at the seaport at high tide. The second and third phases are likely to end by 2022, facilitating the entry of ships with draught of up to 14 meters (45 feet) to the seaport in Patuakhali.

Artist's rendering of cutter suction dredge Spartacus.

In the first phase, JDN will deploy up to nine dredges from its fleet, among which some of the most powerful cutter suction dredges (CSD) in the world. These CSDs will reclaim more than 13 million cubic meters (17 million cubic yards) of sediment to create land and dredge more than 60 million cubic meters (78.5 million cubic yards) to initiate the development of the new Payra Deep-sea Port. The Government of Bangladesh has been investing steadily and heavily in the transportation and energy infrastructure to support trade driving the economy to higher growth rates. The Payra Deep-sea Port therefore plays a crucial role in the country's economic growth. It will gradually develop in a major transport hub for the region.

DEME ANNOUNCES KEEL LAYING CEREMONY CUTTER SUCTION DREDGE 'SPARTACUS'

Belgian dredging, environmental and marine engineering group DEME announced in late December the keel laying ceremony of its newest cutter suction dredge *Spartacus*. The combination of power, size and new innovations of CSD *Spartacus* sets a new benchmark for mega-cutters. The vessel is 164 meters (538 feet) long and has a total installed power of 44,180 kW, allowing it to cut harder soils at faster speeds than are presently possible. With this power, the mega-cutter should be able to execute work that until now has relied on the use of dynamite and blasting. The ceremony took place at the Royal IHC shipyard in Krimpen aan den IJssel in the Netherlands and marked a milestone in the construction of powerful cutter suction dredges.

CSD *Spartacus* will be able to dredge in waters of up to 45 meters (147 feet) deep, compared to the 35 meter (115 feet) depth, which is now the upper limit in the market. Given the vessel's fuel autonomy and accommodations capacity, the new cutter suction dredge can operate in very remote locations. Other innovations include environmentally friendly options, such as a waste heat recovery system that converts heat from the exhaust gases to electrical energy. The Spartacus will also be the world's first dual fuel cutter suction dredge. It will have a Green Passport and Clean Design notation.

All of DEME's newest additions to its fleet are designed as green vessels equipped with next generation dual fuel engines, capable of running on LNG or diesel fuel, reducing carbon emissions, almost eliminating particulate matter, Sulphur oxides (SOx) and Nitrogen oxides (NOx). CSD Spartacus will join the DEME fleet in 2019.

PIETER VAN OORD NAMED PORT MAN OF THE YEAR 2017

On January 9, in Rotterdam, the Netherlands, Pieter van Oord, CEO of Van Oord marine and dredging, was named "Port Man of the Year 2017." This title has been awarded since 1981 to recognize outstanding contributions toward the development of the Port of Rotterdam. The award was presented by the chair of Port Man/Woman of the Year Foundation, Frank de Kruif, who is also a well-respected journalist. The prize was originally instituted by the Rotterdam Press Club, "Kyoto."

Despite difficult times in the maritime industries, Van Oord has continued to invest in innovations. The company, guided by van Oord, is one of the leaders in expediting the transition of the energy supplies in the Netherlands. Dredging, offshore oil & gas, and offshore wind energy have become the mainstay of Van Oord. As well, the company has invested in modernizing its fleet to meet the demands of the modern maritime activities.

According to the jury, the honor of "Port Man of the Year" is partially a recognition of Van Oord's social involvement and entrepreneurial role in contributing to the European and Dutch goals to combat climate change by lowering the discharge of CO2 gases. In his acceptance speech, Pieter van Oord suggested that the international shipping companies, despite the challenges, will be fueling ships more frequently with clean LNG.

Pieter van Oord (left) received the Port Man of the Year 2017 award from Frank de Kruif.

Pieter van Oord was named CEO in 2008 of the family company, which was founded in the middle 19th century. Under his direction, in 2012 the company moved to a new headquarters in Rotterdam. Van Oord is well known from its projects in Dubai, the creation the Maasvlakte II in Rotterdam's harbor and offshore windfarms built in recent years.

TURKEY ANNOUNCES ROUTE FOR "KANAL ISTANBUL"

The Bosphorus is one of the world's narrowest shipping channels, complicated by strong changing currents and several sharp turns and headlands. This creates an obstructed view of the waterway, which has made navigation highly risky. Since its founding in 1936, maritime traffic in the Bosphorus has increased more than ten-fold annually from some 4,400 ships to an average of 48,000 vessels in recent years. The number of maritime incidents has also increased dramatically. In addition to being an important waterway in northwestern Turkey, the Bosphorus forms the continental boundary between Europe and Asia. It separates Asian Turkey from European Turkey and connects the Black Sea with the Sea of Marmara, and, by extension via the Dardanelles, the Aegean and Mediterranean Seas.

Long before he was in office, President Recep Tayyip Erdo wanted to create a bypass around the Bosporus. The proposed channel, which is being called Kanal Istanbul, will run parallel to the Bosphorus Strait. In mid-January 2018, the government of Turkey released information finalizing a route for this second shipping channel between the Black Sea and the Sea of Marmara. According to some projections, the canal construction will take from 5 to 8 years to complete, require 100 million cubic meters of dredging with the estimated costs being $17 billion. The channel will measure around 45 kilometers (28 miles) in length and 150 meters (490 feet) in width, and will run between Istanbul's Arnavutkoy-Avcilar districts. Excavation work on the canal began in early January.

The new Kanal Istanbul would increase capacity for shipping to and from the Black Sea. The route selected would run between Küçükçekmec in the south, near Istanbul's Ataturk Airport, to the Sazlıdere Dam and then north to Durusu. The total length will be about 25 nautical miles. It represents the largest infrastructure project ever undertaken in Turkey. It is designed to accommodate 160 vessel transits per day, which is approximately the same as the current volume of traffic passing through the Bosporus.

The existing Bosphorus channel is protected by the Montreux treaty of 1936, which does not allow service fees to be charged for transits. The new canal would allow Turkey to charge a service fee, meaning the Turkish government could raise revenues from users. In addition, Turkey will look for private partners to raise the funds necessary for construction. A bidding model that includes a build-operate-transfer model, and other public-private partnership alternatives are being considered.

The final route that was recently announced was the result of studying many factors including geological studies, earthquake risks and groundwater effects. Despite the many studies, the project still remains controversial. Excavated material may be used to create artificial islands in the Sea of Marmara.

VAN OORD DELIVERS MORE THAN 600 ACRES OF NEW LAND FOR TAIWAN'S PORT OF KAOHSIUNG

The Port of Kaohsiung, located on the South China Sea, is the largest Taiwanese port and plays an important role in Taiwan's export-oriented economy. To remain competitive and maintain its trade advantage, expansion of the port was a clear necessity. Containership traffic is about 150 vessels per day, which results in more than 10 million containers being transshipped annually. In 2015, Van Oord was contracted by Taiwan International Ports Corporation (TIPC), to handle this expansion. This was the first time Van Oord had been engaged as a main contractor in Taiwan.

The project involved the dredging and reclamation of 37 million cubic meters (48.4 million cubic yards) of sand. After less than two years, in early December 2017, Van Oord was able to create 250 hectares (617 acres) of new land for the Kaohsiung Intercontinental Container Center Phase II. By utilizing some of

Dredging Roundup / INTERNATIONAL

its largest trailing suction hopper dredges, the *Vox Máxima, Volvox Terranova, and Rotterdam*, the job was completed eight months ahead of schedule. The new land will accommodate many terminals and wharves, some of which will be able to handle container vessels of up to 22,000 TEU. The port's focus is to develop facilities and businesses that continue to increase the freight it can handle.

The port is also expanding its facilities to accommodate cruise ship and passenger services. These efforts by the Taiwan International Ports Corporation have resulted in growth for the port's cruise business. An estimated 127,000 cruise passengers are expected to visit the Port of Kaohsiung in 2018. Star Cruises' *Virgo* has inaugurated a "three home port" cruise itinerary this year, traveling between its three regional home ports of Kaohsiung, Hong Kong and Manila. Additionally, Princess Cruises' *Sapphire Princess* has inaugurated five new home port routes. In 2017, more than 530,000 passengers traveled on the Budai-Penghu route during the tourist season, a 5.4 percent increase over the same period the previous year, a new, historic high. The ferry pier is also being extended so that it will be able to berth two ferries of more than 500 metric ton simultaneously, giving Budai Port sufficient wharf space to concurrently berth up to nine ferries.

The Volvox Terranova working at the Port of Kaohsiung, Taiwan.

Dredging Roundup / LATIN AMERICA

BY LÉO SIQUEIRA

BRAZIL TO AUCTION STATE-RUN PORT ADMINISTRATOR

The Brazilian Ministry of Transports, Ports and Civil Aviation (MTPA) has included Maranhao state-run Port Administrator Companhia Docas do Maranhao (Codomar) in a nation's concessions program, also known as the Investment Partnership Program (PPI). Brazil expects to "privatize" the state-owned company, in a move to help the country increase tax revenues while reducing debt. There's no timeline for Codomar to be sold or auctioned. Brazil's MTPA will handle the privatization process for Codomar, under the watch of the Ministry of Planning, Development and Management.

JAN DE NUL DREDGES ECUADORIAN PORT OF MANTA

Jan de Nul has started dredging at the Ecuadorian Port of Manta, following a crowded tender last year, which was awarded to Envisan, the environmental division of the Jan de Nul Group. Local Port Authority Autoridad Portuaria de Manta (APM) said it expects Envisan to dredge the access channel as well as the port's four berths. The project will help the port increase demand, as it currently operates only berth No. 4. APM expects to bring the port's depth to 12.5 meters (41.01 feet). As a result, the Port of Manta will have the country's largest draft, surpassing that of Port of Esmeraldas (11.5 meters, 37.73 feet), Port of Guayaquil (9.75 meters, 31.99 feet) and Port of Bolivar (10 meters, 328 feet), it estimated. The Ecuadorian Port of Manta was last dredged between 1998 and 1999 on an 18-month project. APM said the project will last four months and should remove 600,000 cubic meters (785,000 cubic yards) of sediments. Jan de Nul is using backhoe dredge Postnik Yakovlev, trailing suction hopper dredge (TSHD) Pedro Alvares Cabral and split hopper barges Astrolabe and Concepcion.

PORT OF SANTOS COMPLETES EXPANSION WORKS

Latin America's busiest port, the Port of Santos, Brazil, expects to receive larger vessels following recovery works that deepened berths between warehouses 12-A and 23 in a 1,700-meter (5,600-foot) area. The country's Ministry Transports, Ports and Civil Aviation (MTPA) spent BRL 229 million ($706 million US) to reinforce the structure of the port's pier in order to allow a further expansion of the berths. As a result of the recovery works, expected dredging will allow the port to welcome larger vessels. The works were performed by a consortium made up of Andrade Gutierrez, OAS, Brasfond and Novatecn, both MTPA and Port Administrator Codesp said. The project was concluded in two different phases. In the first stage, the existing pave stone was structurally recovered. In a second step, about 60,000 meters (646,000 feet) of jet-grouting were installed.

VENEZUELA HIRES CHINESE COMPANY TO DREDGE ORINOCO RIVER

The Venezuelan Instituto Nacional de Canalizaciones, INCANAL, has contracted China Communications Construction Company LTD (CCCC) to dredge the navigation channel of the local Orinoco River, the nation's government said in mid-February. The project aims to keep navigability levels near the Matanzas-Boca Grande section of the river, INCANAL's president, Jose Angel Simoza Liendo, said. Under the terms of the deal, CCCC will perform maintenance dredging in specific sections of the river. CCCC will use TSHD dredge *Xin Hai Ma* and hopper dredge *Hang Jun 5001*, which are expected to remove about 5 million cubic meters (6.5 million cubic yards) of sand in about 116 days, effectively on February.

ARGENTINA'S CAP DREDGES LOCAL CHICO RIVER

Argentina's CAP has cleansed and dredged the north stretch of the Chico River, in the nation's Santa Cruz province, the local government said in late February. CAP dredged about 600 meters (1,970 feet) of the north section of the river, as well as a nearby treatment plant owned by state-run energy and water company Servicios Publicos Sociedad del Estado (SPSE). The government of Santa Cruz province said works aimed to expand the river's bed, since trees have moved on the riverbank of the Chico River hindering water flow.

Works Aimed to Expand River's Bed

BRAZIL AWARDS JAN DE NUL DREDGING AT PORT OF MUCURIPE

The Brazilian Ministry of Transports, Ports and Civil Aviation (MTPA) has awarded Jan de Nul a dredging project at the nation's Port of Mucuripe, according to a document filing at the country's official gazette released in early February. Under the terms of the contract, Jan de Nul's Brazilian subsidiary, Jan de Nul do Brasil Dragagem, will dredge an area near the access to the pier and the port's new passenger terminal to between 10 to 13 meters (32.8 to 42.6 feet). Jan de Nul was awarded the contract after winning a tender and will receive BRL 20.4 million ($6.25 million US) to complete the project.

SECOND HEMISPHERIC SEMINAR ON MARITIME AND PORT LEGISLATION TO BE IN MONTEVIDEO, URUGUAY

The Inter-American Committee on Ports (S/CIP) of the Organization of American States (OAS) has announced the II Hemispheric Seminar on Maritime and Port Legislation: Key Elements for the Modernization of Legislation to be held April 11 to 13 in Montevideo, Uruguay.

The seminar will provide an international platform for public-private dialogue on trends and challenges in port and maritime industry legal frameworks, with the aim of promoting the development of a competitive, secure, sustainable, and inclusive sector.

Organized by the National Port

Administration of Uruguay (ANP) and the Secretariat of the Inter-American Committee on Ports (S/CIP-OAS), the event will focus on the key aspects of port legislation modernization, with special emphasis on adequate regulation for efficiency, security, and environmental sustainability. Decision-makers from public and private entities will present successful practices on the following topics: Modern Legislation for Efficient Port Management; Automation in Ports-Modernization of Legal Frameworks; Regulatory Policies in Risk Management; and Environmental Legislation for Sustainability.

In addition, during Port Dialogue Roundtables, National Port Authority representatives and industry experts will offer a series of recommendations for tackling the legal and regulatory challenges of the region's port and maritime industry. For more information, please contact Mona Swoboda, S/CIP Project oordinator, mswoboda@oas.org

CARP Awards Martín García Dredging to Boskalis Consortium

BY LÉO SIQUEIRA

The Rio de la Plata Administrator Commission (CARP), a bi-national commission of Argentina and Uruguay, has awarded a Boskalis consortium the $128.9 million contract to dredge the Uruguyan Martín García Channel in early February.

The deal was awarded to a consortium, made up of Boskalis International B.V, and DEME Group's Dredging International, for a five-year term, effective on February 1, CARP said.

The deepening and maintenance dredging contract will bring the channel's hard boom to 34 and 38 feet. The deal covers the channels of the La Plata and the Uruguay Rivers between kilometers 37 in Barra del Farallón and kilometer 0 in the Uruguay River.

Boskalis had already won a similar project in October 2016, as previously reported by International Dredging Review (IDR).

At the time, Boskalis International S.A signed a deal with CARP to dredge the same Uruguayan channel for a six-month term. The project aimed to recover and keep the navigability of the deep waterway that cut through the otherwise shallow Rio de la Plata at 9.75 meters or (about 32 feet).

Executives from both the Boskalis JV and CARP sign $128.9 million contract for Martín García dredging.

The Martín García channel is the entry to the Uruguay River. Its counterpart, the Emilio Mitre channel, accesses the Paraná river from the Buenos Aires entrance channel.

OUTBID COMPETITORS

While competing for the five-year contract, the Boskalis joint venture (JV) outbid other competitors, including the Van Oord Dredging and Marine Contractors consortium, Chec Dredging Co. Ltd., and Jan de Nul Nassbaggerei Und Wasserbau GMBH.

A CARP's document on the bids said Chec's proposal for the project wasn't accepted.

CARP said the offer was insufficient and inadmissible as it didn't comply with specific requisites set in the tender.

"Both scenarios proposed by the bidder regarding volumes to be dredge were analyzed, including minimum and maximum values. (We concluded) the minimum scenario was insufficient, since it was below the volumes calculated by CARP," the bi-national Administrator Commission said.

CARP also said the established Chec Dredging Co. Ltd. legal entity was set to expire in 2021, two years before the 2023's project deadline.

CARP argued, among other points, that Chec's proposal lacked the consistency, equipment and ability to respond emergencies.

THE PROJECT

CARP said the project will be completed in two stages.

First, the Boskalis JV will deepen the channels of the La Plata River between kilometer 37 and kilometer 0 of the Uruguay River to 34 feet and then to 38 feet in the hard bottom areas.

In a second stage, maintenance dredging will take place to keep the channel at 34 feet.

CARP labeled the deal as an "important project" that will allow the navigation of vessels with larger drafts, "increasing cargo possibilities and strengthening the regional and foreign trade."

Savannah Harbor Project Reaches Halfway Point

At the end of February, the U.S. Army Corps of Engineers Savannah District marked the end of the deepening Savannah Harbor entrance channel. This $134 million leg of the Savannah Harbor Expansion Project (SHEP) deepened the entrance channel of the harbor and extended it an additional 7 miles into the Atlantic Ocean. This marks the halfway point for the overall project. Great Lakes Dock and Dredge performed the dredging, removing around 12 million cubic yards. The project started in September 2015, and the Corps said the project will wrap in March, ahead of schedule and under budget.

"The completion of entrance channel dredging is perhaps the most significant milestone to date for the Savannah Harbor Expansion Project," Col. Marvin Griffin, Commander of the Savannah District, said. "As of today, approximately half of the Savannah harbor's 40-mile channel is deepened and better equipped to handle post-Panamax vessels.

The overall $973 million project will deepen the harbor from 42 to 47 feet, and is expected to be completed in 2022.

The Dredge Padre Island discharges one of the last loads of material dredged from the outer Savannah harbor to mark the end of deepening for the oceanside of the Savannah Harbor Expansion Project (SHEP). The Savannah District of the U.S. Army Corps of Engineers manages the expansion of the Savannah harbor. The deepening of the outer channel marks another major milestone in the $973 million project to deepen the harbor from 42 feet to 47 feet. Approximately 12 million cubic yards of material were removed to make this portion of the shipping channel deeper. The outer channel deepening was completed ahead of schedule and under budget. U.S. Army Corps of Engineers photo by Billy Birdwell. (Photo by Billy Birdwell)

NORFOLK HARBOR DEEPENING PROJECT MOVES ONE STEP CLOSER

At the end of January, the U.S. Army Corps of Engineers approved the plan outlining the national economic benefits of the Norfolk Harbor deepening. A final review by the Corps is expected in June, and pending a positive outcome of that review, the state has $20 million pending in the state budget to immediately begin preliminary engineering and design work on the project. The project would deepen the harbor and channel from 50 to 55 feet.

"This is an infrastructure project that holds value for Virginia, the national economy and national defense," said John F. Reinhart, CEO and executive director of the Virginia Port Authority. "The long-term economic benefits of this project include job creation, economic investment and the efficient flow of goods to Virginians, to multiple markets in the Mid-Atlantic and into the nation's Heartland. Additionally, there are benefits to the U.S. Navy and all the users of the harbor."

The National Economic Development benefit (NED) plan estimates the value to the nation of large civil works programs. A program's value is expressed in terms of each program's contributions to NED benefits and revenues to the federal government.

"This positive outcome is the result of collaboration within our agency, with The Port of Virginia, and the many stakeholders that rely on this critical infrastructure," said Col. Jason E. Kelly, commander, Norfolk District, U.S. Army Corps of Engineers. "Today's event is a great example of Army Corps process evolution. This project will greatly impact existing inefficiencies in a positive way."

CORPS AND PORT AUTHORITIES HOST PUBLIC MEETING FOR NEW HAVEN HARBOR NAVIGATION PROJECT; FULL STUDY EXPECTED IN APRIL

In January, the U.S. Army Corps of Engineers New England District, the Connecticut Port Authority, and the New Haven Port Authority held a public information meeting on the status of the New Haven Harbor Navigation Improvement Feasibility Study and Environmental Impact Statement (EIS) in New Haven, Connecticut. The Corps and the Connecticut and New Haven port authorities provided a status update on the study and allowed the public an opportunity to ask questions and provide comments.

The study is considering navigation improvements, including deepening and widening the federal navigation channel. Inadequate channel depths result in navigation inefficiencies in transporting goods into and out of the harbor. Deeper and wider navigation features (main channel, maneuvering area, and turning basin) are needed, the Corps said.

The feasibility study will coordinate a workable solution to the navigation inefficiencies at New Haven Harbor, including analyzing various incremental channel depths and widths based upon net economic benefits and design requirements for deeper draft vessels. In addition, the study will evaluate various dredged material disposal alternatives such as beneficial use (e.g., oyster habitat and marsh creation, beach nourishment, historic disposal mound capping, nearshore placement), open water placement, and upland placement.

The Draft Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) is scheduled to be completed in April 2018 and will be available for public review and comment.

CONNECTICUT PORT AUTHORITY BEGINS MONITORING PROJECT FOLLOWING HOUSATONIC RIVER DREDGING

The Connecticut Port Authority, in conjunction with the Connecticut Audubon Society, is beginning a program to monitor the population of Piping Plovers at Hammonasset Beach State Park in Madison.

The program is part of the follow up work required as a condition of federal approval for a dredging project that took material from the Housatonic River to re-build part of the beach at Hammonasset. The project was funded and completed by the Connecticut Port Authority at the end of 2017.

Monitoring of the restored section of beach, supervised by Connecticut Audubon, will begin on March 15 and continue at least until mid-July. If plovers begin to populate the rejuvenated beach area, appropriate fencing and signage will be put in place to prevent beach-goers from disturbing the bird's nesting areas. Up to $100,000, covering the next five years, was set aside in the project budget to pay for this environmental protection initiative.

CORPS AND PORT OF EVERETT MAINTENANCE DREDGING CONTINUES LONG-TIME MAN-MADE ISLAND PROJECT

The U.S. Army Corps of Engineers and local sponsor the Port of Everett in Seattle, Washington, began maintenance dredging of the upper and lower channel of the Everett Harbor and Snohomish River on November 18, and the material will be beneficially used on Jetty Island.

The Corps awarded a contract to Portable Hydraulic Dredging, LLC. of Anchorage, Alaska for $1.5 million. Approximately 100,000 cubic yards of material will be dredged from the upper channel and placed on an adjacent upland site. The Corps will also dredge 40,000 cubic yards from the lower channel, which will be beneficially placed on Jetty Island's west shore.

The port-owned Jetty Island is a man-made island made of sediment dredged from the Snohomish River. It began as a riprap jetty in the late 1800s and provided a protected harbor and navigation channel. The Port of Everett gained ownership of Jetty Island in 1929 and, with the help of the U.S. Army Corps of Engineers, built a new marsh of dredged river materials in 1989.

The original dredged material placed on Jetty Island has been added to over time and is more than 100 years old. The project has been added to overtime as the result of maintenance dredging of the Snohomish River Channel. Juvenile salmon, waterfowl and bald eagles are just a few examples of the wildlife living around and on Jetty Island. Continuous work is being done to improve and expand the island's wildlife habitat.

Jetty Island is as educationally important as it is for summer recreation, serving as the perfect teaching tool regarding the importance of wildlife preservation and the nearby estuary. There are several educational walks and tours offered to learn about the local ecosystem. Many visitors come to observe the wide variety of bird species that have made Jetty Island their home. More than 50,000 people visit the Jetty Island each year.

PORT NY/NJ AUTHORITY ANNOUNCES POLICY TO IMPROVE CONTRACTOR PERFORMANCE AND ACCOUNTABILITY

As part of the Port Authority of New York and New Jersey's continuing effort to assure completion of port authority construction projects on time and within budget, the port authority will make an important change in how it selects contractors for future construction projects and in how it selects firms to manage and oversee construction on behalf of the Port Authority.

Going forward, bidding firms' past performance record on previous port authority projects will become a decisive factor in contract award determinations. Poor performance on past projects will severely handicap firms' ability to get future work. Good performance on past projects will continue to be a positive consideration in the selection process.

Performance evaluations will be prepared for all contractors, subcontractors and construction management firms on all port authority construction projects, and less-than-satisfactory ratings received at any time during the previous three years will be formally considered in contract award determinations. Performance evaluations will be performed during and at the completion of construction projects, and will be conducted by the port authority professionals overseeing the work.

PORT OF WILMINGTON PURCHASES NEARBY PROPERTY IN HOPES OF EXPANSION

In November, the Port of Wilmington closed a deal with the Diamond State Port Corporation (DSPC) and The Chemours Company to purchase the former Chemours Engineering site on Hay Road, located to the north of the port's existing facility. The Port of Wilmington hopes to expand its port facilities there.

"While this purchase does not guarantee that a new port facility will be built at Edgemoor, it does give us a valuable option to market to potential investors," said Secretary of State Jeffrey Bullock, the chairman of the DSPC. "The Edgemoor site will be marketed with Riveredge, located south of the Delaware Memorial Bridge, as DSPC's two primary options for expansion. We are hopeful, of course, that in time both will be developed."

"The purchase of the Edgemoor property by the Port of Wilmington from Chemours is an investment that is critical to growing our region's economy," said Sen. Carper, who was governor when the port was purchased by the state. "Making investments in transportation and infrastructure like this one create a nurturing environment for job and economic growth, which Delaware needs to remain competitive going forward."

"The focus of securing tens of millions of dollars for the Delaware River deepening project was to create opportunities just like this one," said Sen. Coons. "This is outstanding news for Delaware primarily because of the creation of well-paying jobs and subsequent strengthening and expansion of the middle class. I am also grateful to the good faith negotiations on the part of Chemours, the Diamond State Port Corporation, and the state of Delaware."

This spring the DSPC released a strategic plan that concluded that expansion is vital to the port's long-term survival. It also detailed the taxpayer cost of maintaining the current facility at $300 million over the next twenty years just to maintain existing businesses and their anticipated growth. The plan provided several scenarios for long term growth, which the port board endorsed, including the development of the Chemours site at Edgemoor.

The sale is expected to close in early 2017. The agreed sale price is $10 million.

BY WENDY LARIMER

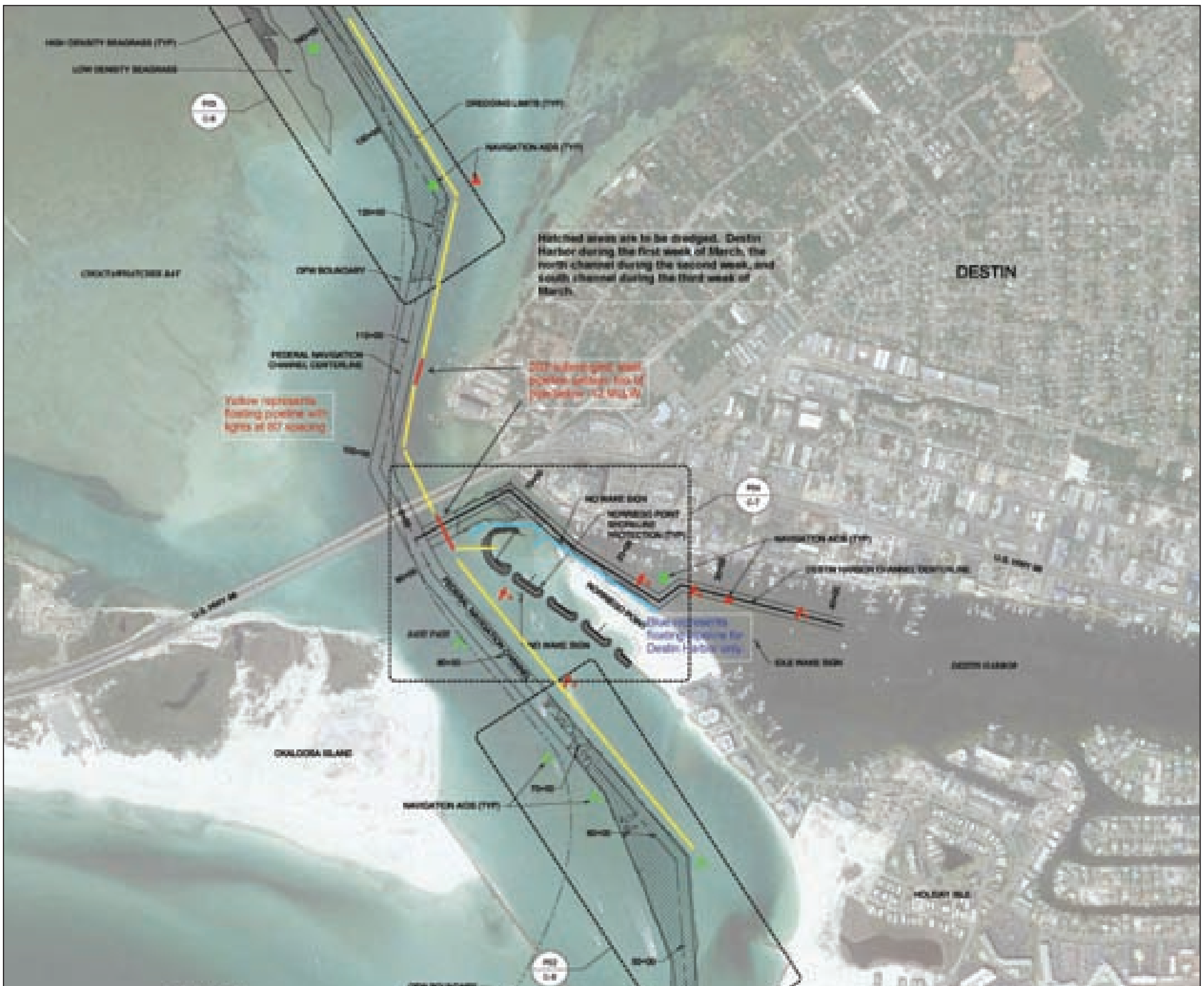
DESTIN FLORIDA OFFICIALS AIM TO ATTACH HOLIDAY ISLE RENOURISHMENT TO NORRIEGO POINT STABILIZATION PROJECT

City of Destin officials are planning to tag onto an existing dredging operation, the Norriego Point Stabilization, to replenish the severely eroded beach on Destin's Holiday Isle. Moving forward with the project first required agreement from several sources. The Okaloosa County commissioners voted to spend approximately $2 million in bed tax money for the project. The City of Destin will use its existing maintenance dredging permit to do the work, and Destin officials agreed to undertake contract negotiations and construction management and the county's Tourist Development Department will reimburse the city for its costs.

To do the Holiday Isle renourishment, a planned county and city interlocal agreement requires Destin officials to contract with Inland Dredging Company of Tennessee, which would dredge sand from the pass for the Reach 1 area of the beach. The Inland Dredging Company is a subcontractor for Norriego Point stabilization project contractor Luhr Bros. of Columbia, Illinois. The eroded Reach 1 project area would receive about 130,000 cubic yards of sand. Beach restoration at Holiday Isle would begin when Inland Dredging Company completes dredging sand for Norriego Point, which is expected to start in mid-March and be completed within 45 to 60 days. The 24-inch cutter suction dredge *Kelly L* will be used for the project along with several deck barges and land-based bull doziers and back hoes.

The Norriego Point Stabilization project was contracted at $9.7 million and work began in October. The project has three components, shoreline stabilization, beach and dune restoration and recreation improvements. Dredging the East Pass Channel will supply approximately 5 acres of upland sand to the point. The point will be armored with sheet pile and large armor stone, and T-groins and existing embayments will be rehabilitated. One new embayment will be added. The stabilization and dune restoration are expected to be complete by the fall of 2018.

The next phase will be a $2.8 million recreational improvement project to start in fall 2018 with completion tentatively in the spring 2019. This project received $10 million in early restoration funding and $3.7 million in additional funding from the Florida Department of Environmental Protection (DEP), which secured money through the Beach Management Funding Assistance program and the Natural Resource Damage Assessment (NRDA) restoration process, which evaluates and restores natural resources that were impacted by the 2010 Deepwater Horizon oil spill. DEP is overseeing the project.



NEW BEDFORD HARBOR SUPERFUND SITE CLEAN-UP CONTINUES

Dredging of the Lower Harbor of the New Bedford Harbor is underway with a $14.9 contract awarded to Cashman Dredging and Marine Contracting of Quincy, Massachusetts. The harbor accommodates the needs to the Port of New Bedford, which is a break-bulk handler of perishable items and also serves as the harbor for a major commercial fishing fleet. The dredging will remove 130,000 to 170,000 cubic yards of sediment that will be placed in the Lower Harbor confined Aquatic Disposal Cell. Work will be completed using the clamshell dredge with a closed environmental bucket, *Dale Pyatt*.

New Bedford Harbor is a U.S. Environmental Protection Agency Superfund site, as it was contaminated with polychlorinated biphenyls (PCBs) and heavy metals from two previous companies that manufactured electrical devices and improperly disposed of industrial wastes. The 18,000-acre harbor was placed on EPA's National Priorities list in 1982 and continues to require significant time and funding to clean up.

Outside of the Lower Harbor, the clean-up also includes the Upper Harbor and Marsh Island.

The last round of remediation of subtidal contamination in the Upper Harbor started in October 2017. About 50,000 cubic yards of contaminated sediment is expected to be removed between the fall and early winter of 2018. Sediment is removed with a mechanical bucket, transported to EPA's de-sanding facility by a pipeline, and finally to EPA's dewatering facility by a floating/submerged pipeline. At the dewatering facility, the sediment is treated until it is a sludge "cake," which is loaded onto trains for transport to a PCB landfill in Michigan.

Remediation of certain PCB-contaminated areas of the Marsh Island peninsula began in August 2017. Approximately 1,800 cubic yards of contaminated shoreline sediment was removed and disposed of at an offsite landfill, after being stabilized with cement. The impacted shoreline areas were backfilled with clean sand and topsoil, then restored with native saltmarsh plantings.

BREVARD COUNTY BEACHES REPLACE SAND LOST TO HURRICANES

The U.S. Army Corps of Engineers Jacksonville District announced the Brevard County Shore Protection Project got underway on February 1. Great Lakes Dredge and Dock Company was awarded a $17.5 contract to remove approximately 1.1 million cubic yards of sand from the Bureau of Ocean Energy Management (BOEM) regulated offshore Canaveral Shoals Borrow Area II. A total of 13.4 miles of shoreline will be renourished, with 825,000 cubic yards of sand placed on North Cocoa and Cape Canaveral beaches, and 397,000 cubic yards placed on the Indialatic and Melbourne beaches.

Brevard County beaches were last renourished in 2014. Beaches are scheduled for this work every five to six years, but Hurricane Matthew in 2016 and Hurricane Irma in 2017 expedited the replenishment schedule. The project will restore the shoreline back to its designed level of storm protection to reduce damage to property and infrastructure and maintain the beaches use for recreation and wildlife habitat.

The project is 100 percent federally funded with work slated for completion by April 1.

DREDGING PROJECT TO RESTORE SAFE NAVIGATION TO SMITH ISLAND RESIDENTS

Approximately 80,000 cubic yards of silt and sand is being removed from two 60-foot wide federal channels, Big Thorofare and Twitch Cove in Maryland. Vortex Marine Construction Inc. of California was awarded a $3.1 contract for the maintenance dredging project, which will bring the channels to an authorized depth of 7-feet mean lower low water with 2 feet of overdepth. The channels will be realigned with the authorized channel to be extended about 425 feet northwestward bringing the total length of the federal channel to 1,900 feet.

Material from the dredging will be beneficially reused to restore dune habitat and create marsh habitat on part of the Martin National Wildlife Refuge on Smith Island.

In addition, work also includes the construction of two jetties and the creation of a stone sill along the shoreline to prevent shoaling in the channel thereby reducing the need for dredging. The jetties will be approximately 1,150 feet and 650 feet long with both having a width of about 50 feet. The 850-foot long stone sill will be 30 feet wide and built to an elevation of 3 feet Mean Lower Low Water. Coastal Design & Construction Inc. of Gloucester, Virginia, began sill excavation November 30.

The U.S. Army Corps of Engineers Baltimore District, in coordination with the Maryland Department of Natural Resources and Somerset County, contracted for this project to give boaters from Smith Island more direct access to the Chesapeake Bay, in turn boosting the economy of this small island population. Smith Island supports a fleet of commercial fishing vessels and its residents rely on water transportation for the delivery of critical supplies and for access to schools.

The full Rhodes Point project will cost $6.88 million. Work began in January and is slated for completion in late spring 2019. Dredging should be finished in spring 2018.

BEACH RENOURISHMENT AT WRIGHTSVILLE BEACH UNDERWAY

Weeks Marine is working under a $13.2 million contract from the U.S. Army Corps of Engineers Wilmington District to dredge sand from offshore and place it on North Carolina beaches.

Approximately 700,000 cubic yards of sand will be dredged from Mason's Inlet and pumped via pipe along about a mile of Wrightsville's Beach's total 4.5-mile span. The renourishment is addressing the area with the worst erosion. This part of the dredging project will cost about $9.5 million of the total contract.

The remaining contract will be to dredge approximately 250,000 cubic yards of sand off Ocean Isle Beach and pipe sand to those eroding shores. The Wrightsville Beach portion should be complete by the end of March and the Ocean Isles project will start immediately following.

Weeks Marine is using its 30-inch cutter suction dredge McCaskill. As of February 27, the dredge was pumping sand on the southern end of the beach where bulldozers push the sand to shape it as designed.

Wrightsville Beach, New Hanover County and the state are all contributing funding for the work with some federal dollars also coming in as part of disaster relief funds after Hurricane Matthew.

IADC Safety Awards 2018 Now Accepting Nominations

As of February 28, the International Association of Dredging Companies (IADC) is accepting nominations for its 2018 Safety Award. Innovative ideas to improve on-the-job safety, avoid accidents and save lives should be submitted to the IADC's Safety Committee. The registration deadline is May 31.

The IADC Safety Award is open to all companies active in the dredging industry. There is no limit to the number of submissions that can be made by any one individual or company. To submit a solution for consideration, the complete guidelines for submissions can be found at www.iadc-dredging.com.

The IADC's Safety Committee and Board of Directors will select the winner from the submitted nominations based on the criteria set forth in the guidelines for submission. The winner will be announced at the IADC Annual General Meeting, held in September 2018 in Budapest, Hungary. In addition to receiving a bronze prize, the winner is invited to present the award-winning safety innovation in Terra et Aqua, the organization's quarterly journal.

Five years ago, IADC established a Safety Committee of QHSE experts from its member companies to encourage the implementation of safety standards and to enable the sharing of safety practices among its members. As a result the Safety Committee developed a "Charter of Best Practices" and the Safety Award.

The IADC Safety Award encourages the development of safety skills and rewards individuals and companies for professionally demonstrating special diligence in safety awareness. The award is a recognition of the exceptional safety performance demonstrated by a particular project, product, ship, team or employees.

House T&I Committee Meets to Discuss Enhanced Project Delivery

BY ANNA TOWNSHEND

On January 18, the House Transportation and Infrastructure (T&I), Subcommittee on Water Resources and Environment held a hearing on America's Water Resources Infrastructure: Approaches to Enhanced Project Delivery.

Garret Graves (R–LA), chairman of the T&I Subcommittee on Water Resource and Environment opened the hearing focused on the challenges.

"The numbers speak for themselves, when you look at the challenges we're facing, right now we have an estimated $100 billion of Corps of Engineers authorized projects; a backlog of $100 billion, yet the appropriations yield in the $4 to $5-billion-dollar range on annual basis, with less than $2 million of that for construction," Graves said. He pointed out that many projects in Florida and Texas could have prevented some of the recent hurricane damage.

Graves said improvements could be made to the implementation process. Right now, he said, it takes an average six years to go through the environmental impact statement process, it takes on average about 4.5 years to go through the environmental permitting process. "These statistics are unacceptable when you look at the necessity of these projects," Graves said.

Ranking Member Grace Napolitano (D–CA) agreed that the hearing was to examine the challenges. "How can local communities afford to pay for navigation projects, and who gets to decide what projects are to be funded?" she asked. On the later point, Napolitano said that she was pleased to point out that the President has opened the discussion on ending the moratorium on "congressionally directed spending requests" or earmarks. In February 2011, Congress imposed the temporary ban.

"This moratorium did not curtail spending, nor did it increase transparency," Napolitano said. "It simply transferred decision making authority from locally elected individual to executive brand employees in Washington. She said those decisions were made in public with legislators' names attached to them. "Now those decisions are made with no names or transparency attached to them," she said.

Napolitano advocated for more sufficient and predictable funding for projects. She referenced a December 2016 Department of Treasury report, which concluded that a lack of public funding is the most important factor contributing to the incompletion of infrastructure projects.

While she supports the use of public-private partnerships (P3s), she wanted to clear up a widespread misconception that P3s increase financing available to local communities. "State governments are constrained by the lack of revenue needed to pay for the investment, and P3s do not alone solve this problem," Napolitano said. P3s will work for some communities, she said, but not all communities. She said there may be tradeoffs to using P3s, as, "there is no free lunch," she said. Using P3s may mean locking future appropriations to repay private lenders or allowing other mechanisms, such as new tolling tax or taxing authority to repay the cost of financing provided by the private entity.

FUNDING SHORTFALL AND PROJECT DELIVERY OBSTACLES

General Ed Jackson, deputy commanding general of the U.S. Army Corps of Engineers, opened the floor for the hearing's witnesses, focused on the challenges of funding and project needs.

"The Corps faces a multitude of challenges, some old and some new. Much of our infrastructure is far beyond its design life, yet the requirements have never been greater. And the demands on the federal budget continue to grow, and as our infrastructure ages, we find more and more of our annual appropriations go to operations and maintenance at the expense of investments in investigations and construction," Jackson said.

He said the Corps has $15 billion of work in authorized but unconstructed work. The Corps also has 97 ongoing feasibility studies, "which if authorized would simply add to the federal budget requirements," Jackson said. In addition, he said, the feasibility studies are formulated with the assumption of efficient funding.

Jackson was critical of annual appropriations. "Most all projects take multiple years to implement, yet we budget on an annual basis with no assurances that adequate or consistent funding will be available from year to year," Jackson said. He said this created uncertainty for project sponsors, drives up project costs and delays the realization of project benefits. Jackson said at the current funding rate, it would take more than 100 years to address the current backlog of projects.

To address the problem, Corps solutions and plans include working with the Environmental Protection Agency to leverage their capacity to explore new finance tools and programs, modeled on the success the EPA has had at the Water Infrastructure and Resiliency Finance Center, an information and assistance center that helps communities make informed decisions for drinking water, wastewater, stormwater and infrastructure.

In terms of project delivery, Jackson said that the Corps' role in the future may be different than it has been in the past. "It could include no involvement at all, technical assistance or the standard cradle-to-grave Corps delivery model," he said.

Jackson said the Corps is engaged with the administration to streamline the regulatory process, including establishing discipline and accountability in the environmental review process and reviewing the nationwide permit program to increase efficiency. "We are committed to looking at old problems in new ways," Jackson said.

PERMIT PROCESS REFORMS

In introducing James Dalton, director of Civil Works at the Corps, the top civilian in the organization, Chairman Graves thanked him for the work he has done to reform the 408 process. Under the Clean Water Act, a Section 408 permit is needed to change a previously authorized project, but repeated environmental authorizations can slow down the planning process.

Dalton said he has been committed to changes to the Corps delivery process to be more efficient and effective, and he discussed some of the initiatives. He talked about "flattening the organization." Echoing what Rep. Napolitano discussed with regard to earmarks and project appropriation, this means moving decision-making authority closer to the project, rather than in Washington.

He said the Corps is working to transform to a more risk informed decision-making organization. Rather than rely on lengthy analysis and modeling, the Corps technical experts can make engineering judgments based on their knowledge, experience and competence. He said they should be free to do that, outside of a "rigid process that dictates a more lengthy analysis" and decisions shouldn't be subjected to numerous reviews after an initial decision.

He said the Corps is examining existing authorities that it already has but has not fully utilized, such as WRDA 1986, section 203 and 204. The former is for studies and the later is for construction, and each authorizes a non-federal interest to undertake a project or study without Corps involvement.

Another authorization the Corps is examining is WRDA 2014, Section 1043, which establishes a pilot program to allow non-federal sponsors to provide full management control for construction of water resource development projects.

Regarding the 408 permit issue, Dalton said the Corps is finalizing changes to that program, those it has already made and those it wants to make, and will release the formal engineer circular soon.

Leah Pilconis, senior counsel for environmental policy law and policy, The Associated General Contractors of America, said contractors find the permitting process to be "cumbersome and uncertain." That uncertainty is priced into bids and drives up costs.

"Critical projects are getting caught on a NEPA treadmill," she said, of the permitting process. The National Environmental Pollution Act guides much of the environmental review and permitting process. She supports a "one federal decision process," so one lead agency conducts one NEPA review that ends with a single record of decision. Pilconis also advocated for a merger of NEPA and the Clean Water Act 404 permit processes.

Lastly, she urged Congress to "limit the scope for reevaluation" of projects. "ACG urges

Congress to consider a reasonable approach to citizen suit reform to prevent the misuse of environmental concern," Pilconis said.

P3S: INFRASTRUCTURE DELIVERY TOOL, NOT FUNDING STRATEGY

Jill Jamison, managing director at Jones Lang LaSalle has 25 years experience advising public authorities at the state ad federal level on complicated project implementation.

Of the $1 trillion infrastructure bill, "I just want to put that in perspective," Jamison said. She referenced a recently released report from the Global Infrastructure Institute by McKinsey & Company. The report said the U.S. will need $7.7 trillion in infrastructure by 2030. "So excuse the pun, but a trillion dollars is really a drop in the bucket," Jamison said. A one-time cash infusion will not be the solution, she said. "We need a long-term strategy for building and maintaining this great nation's infrastructure," Jamison said.

On the topic of P3s, she said they are "not a funding strategy. They are an infrastructure delivery tool," Jamison said. "P3 does not equate to free money." She said the current infrastructure delivery system is "fundamentally flawed," citing protracted appropriations, uncertainty about project timing and funding, which escalates project cost. The value in enhanced delivery models, such as P3s, is that they provide greater security in terms of cost and schedules. "You don't get paid until you deliver infrastructure and that definitely changes behavior," Jamison said.

In a life-cycle approach, project planning links design and construction with operation and maintenance. "Let's build these things to last and figure out how to fund them over the life of the asset," Jamison said.

Product and Performance News

Red Meters Provide Non-Nuclear Density Measurement in Slurry Transport

BY JUDITH POWERS

The Red Meter is an in-line, real time, non-nuclear density measurement system that was introduced to the market in 2016. It has been installed in dredging operations in the United States and elsewhere, and is used in a variety of industries where product is transferred by pipeline.

The company is headquartered in Orlando, Florida.

The system consists of an in-line rubber chamber that replaces a section of the discharge pipe, with a precision displacement laser sensor installed below the chamber. These elements are enclosed in a red steel housing.

The laser produces 3,000 interrogations per second of the slurry, and relays the measurement data to a PLC, along with raw data from multiple sensors, which are processed using a patented algorithm to produce 20 or more density readings per second. The chamber is a flanged, industrial rubber hose the diameter of the discharge pipe. A natural gum rubber lining provides a clear path that allows a full-volume reading by the laser. Technicians from Red Meter install and calibrate the system, which can weigh approximately 700 pounds.

The Red Meter can accommodate pipe sizes from two inches to 60 inches.

As is common when dredging abrasive materials, the cartridge can be rotated 90 degrees when showing signs of wear, providing a long life for the installation. Because there is no sensor contact, wear is only a concern inside the chamber.

The real-time, direct measurement provides a certified accuracy of +/- .25 percent. Readings are automatically compensated for pressure, temperature and vibration. The customer can choose any or all of eight parameters: percent solids, density, temperature, pressure, mass flow, granular density, SG wet and SG dry. All the sensors report continuously.

Thef anged rubber chamber of the Red Meter installed in a user's pipeline, with the displacement laser sensor system below it. The chamber provided the laser with unhindered access to the f ow. The installation is fully encased in a steel housing during operation.

A 7-inch integrated touch screen on the outer wall of the housing can display six parameters simultaneously, in either numerical or graphic format. A USB port allows download and transfer of data. Communication is by a 4/20 mA loop, Ethernet, Modbus or Wi-Fi.

The system is customized to the user's application. The algorithms incorporate parameters specific to each application. By continuously monitoring all parameters, the system can detect problems, such as a rapid rise or fall in slurry density, instantly.

The Red Meter was introduced to the market in 2016, after five years in research and development.

On the company website, www.redmeter.com, a case study of a dredging project using a Red Meter shows the readouts of the parameters the customer is following, as well as the record of the dredging process that shows a rise in density followed by a return to normal flow.

CODA RELEASES DA4G™-USB

Coda Octopus has released the DA4G™-USB, a new variant of the DA4G™. The system takes the digital acquisition and conversion components from the DA4G and presents them in a smaller package for analogue and digital acquisition. The DA4G™-USB runs GeoSurvey™ software for either single sensor acquisition (sidescan or sub-bottom profiler) or dual sensor acquisition (DA4G™-USB 1000 or 2000).

Existing DA4G™ owners will be able to recycle their DA4Gs into the new model through a re-cycle and upgrade program. The existing DA4G™ chassis can be returned to Coda Octopus where selected key components will be tested and re-housed in a new chassis. Customers can also upgrade their system from DA4G™ 500 to dual trigger, 4 channel acquisition on the DA4G™-USB 2000. Customers will need to add a PC or laptop to the DA4G™-USB to complete their acquisition package. The GeoSurvey™ software dongle can either be embedded in the new DA4G™-USB or issued separately depending on the customer's preference.

Coda Octopus DA4G™-USB, a new variant of the DA4G™.

FURUNO'S NEW SIMPLIFIED VOYAGE DATA RECORDER MEETS IMO SAFETY STANDARDS

In response to the International Maritime Organization's mandate that vessels be equipped with safety devices, Furuno has developed the VR7000S Simplified Voyage Data Recorder. The device records all crucial data from onboard interfaced sensors and stores it in a shock and heat proof Data Recording Unit (DRU). After a catastrophic event, the box can be recovered and the data reviewed to investigate the cause of the accident. The DRU has Live Player software included, which extracts and plays back the recorded information on networked PC's. Data recorded includes: bridge audio and VHF, Radar and ECDIS data, AIS, Bridge Alert Management, thrusters, inclinometer and information from electronic logbooks. The VR7000S can record 48 hours of data in both fixed and float-free units and provides storage for up to 30 days. The system can integrate with existing INS networks. A Video LAN converter can be used to record the data from DVI or RGB Radar outputs into an Ethernet signal for data recording..

Furuno R7000S Simplified Voyage Data Recorder.

SBG SYSTEMS INTRODUCES ELLIPSE 2 MICRO SERIES

SBG Systems of France has introduced a smaller, more cost effective high inertial sensors for volume projects. The Ellipse 2 Micro Series comes as an IMU for calibrated sensor data or as an AHRS/INS running an Extended Kalman Filter. The sensor combines MEMS-based gyroscopes, accelerometers and magnetometers and is calibrated in temperature. The Ellipse 2 Micro Series can be connected to an external GNSS receiver for navigation data and comes with a Heave feature making it a reliable sensor for motion monitoring, wave measurement, and stabilization and orientation of onboard equipment. SBG Systems offers a 2-year warranty on this series.

SBG Systems Ellipse 2 Micro Series.

TWIN R2000 ULTRA LOW DRAFT TOOL INTRODUCED

In response to client needs, James Fisher Subsea Excavation (JFSE) has developed the Twin R2000 Ultra Low Draft controlled flow excavation tool for use in extremely shallow waters. JFSE re-engineered one of its existing fleet to make it capable of excavating in depths of just one meter (3.3 feet). The Twin R200 Ultra Low Draft will be based in Aberdeenshire, United Kingdom, making it easily accessible to clients in the North Sea and other European markets. It has already completed its first project to uncover sections of damaged cable and trench the repaired sections.

James Fisher Subsea Excavation (JFSE) Twin R2000 Ultra Low Draft Tool.

WÄRTSILÄ DEVELOPING HYBRID TUG DESIGN

Wärtsilä is developing a harbor tug design for a new port facility being constructed in São Mateus-ES, Brazil. The work stems from a memorandum of understanding (MOU) between Wartsila and Petrocity, the parent company of the port. The new facility has stringent environmental regulations, prompting Petrocity to seek a harbor tug with low fuel consumption and emissions, but high operational efficiency.

The harbor tug will be designed based on the Wärtsilä HYTug that has hybrid propulsion and energy storage using batteries. HYTug's engine, energy storage system, and power electronics work together through an Energy Management System providing high efficiency. The use of batteries eliminates exhaust smoke, and reduces noise levels, while also reducing operating costs.

"Green port operations are completely aligned with Petrocity's corporate philosophy and values. We look forward to working with Wärtsilä in developing the kind of harbour tug that meets the criteria that have been established for this project. This will be the first of many others in a huge logistics project, which aims at the regional integration of the Espirito Santo, Minas Gerais and Bahia states. It represents a definitive guarantee of the interiorization of the economy in the north of Espírito Santo," José Roberto, CEO Petrocity, said.

Rendering of the Wärtsilä HYTug.

SEATOOLS DELIVERS PRESSURE COMPENSATORS

Subsea technology company Seatools has completed the development, manufacturing and testing of two 250-liter subsea pressure compensators for Bakker Sliedrecht.

The ultra-long life compensators will be applied to 1.7 MW submersible electric motors installed on a new hopper dredger under construction at Wenchong Shipyard in China. The dredge is being built for the Chang Jiang Waterway Bureau (CWB), which anticipates the vessel will work in harsh environments with vibrations, shock loads, dirt and temperature changes. The compensators were built to endure long-term submerged applications by minimizing the dynamic components that are exposed to seawater and assuring the integrity of the moto seals. Extensive modeling and testing was undertaken to analyze non-linearity, holding pressure and hysteresis to ensure the compensator met pressure tolerances within .05 bar.

Seatools subsea pressure compensators.

ECHOSCOPE4G® RELEASED BY CODA OCTOPUS

Coda Octopus has released the Echoscope4G® Surface as the first product in the company's 4th generation of real-time 3D sonar. The new sonar is 50 percent lighter and nearly half the size of previous models and requires 30 percent less power. It also offers a better plug-and-play solution that requires less tuning.

While previous Echoscope® products have been used for ROV's, AUV's and vessels, the new Surface is specifically made for shallow

Coda Octopus Echoscope4G® Surface.

water operation on projects such as breakwater construction, port security and underwater inspections. It is available in three different frequencies and opening angles. The Echoscope4G® Surface uses topsides Underwater Survey Explorer (USE) and Construction Monitoring Software (CMS) to generate real-time 3D images and maps. It is compatible with all other Coda Octopus 3D hardware products and accessories.

JAMES FISHER SUBSEA EXCAVATION FORMS JOINT VENTURE WITH OCEAN TEAM ASIA PACIFIC

James Fisher Subsea Excavation (JFSE), part of James Fisher and Sons plc, has formed a joint venture with Ocean Team Asia Pacific (OTAP) to form James Fisher Ocean Team Ltd., a global subsea excavation specialist.

OTAP provides solutions to help global energy businesses expand in China and overseas, while JFSE is a leading M/CFE specialist working in 46 countries.

The new venture will provide better service to customers in China by having equipment and personnel permanently in the country. The new company will work on developing opportunities in the oil and gas sector, as well as the offshore renewables sector, combining its global experts with regional knowledge. JFSE has worked with OTAP for more than four years and has been working in China for eight years on projects such as pipeline and cable trenching, deburial and freespan correction works.

Richard Beattie, regional director Asia Pacific at JFSE and Roger Wang, CEO of OTAP.

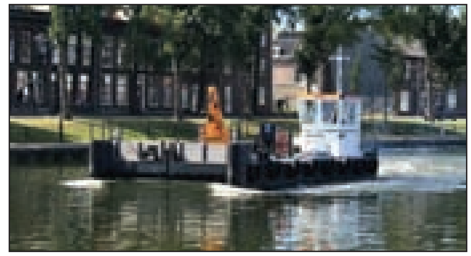
DAMEN DELIVERING MULTI CATS TO GROUP OCEAN OF CANADA

Damen Shipyards Group has signed a contract with Group Ocean of Canada, for the delivery of two Modular Multi Cats 1205 that will be used as dredging support vessels on an oil sands project in northern Canada. The oil sands project location is inland and difficult to access, so the project needed equipment that was transportable and easy to assemble. The vessels are standard, container sized to allow for easy transport anywhere in the world.

With a Multi Car in stock, Damen will supply the first vessel in February. The second is being built at Damen Shipyards in Kozle, Poland, with expected delivery in the second quarter of 2018.

The contract helps support Group Ocean's goal to become a world-class organization providing towing, pilot boat, marine services, equipment rental and dredging. Group Ocean operates mainly in Quebec, Ontario, New Brunswick and Western Canada

This is the second contract between Damen and Group Ocean who have been working together since 2011.



Damen Modular Multi Cat 1205.

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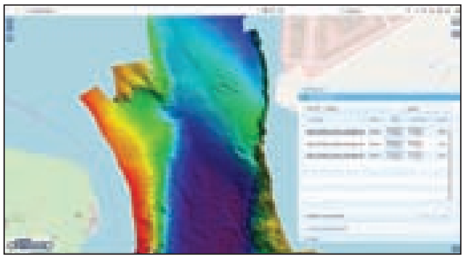
Teledyne CARIS™ released the CARIS Onboard™ 2.0. CARIS Onboard, which enables users to apply processes automatically to their data in near real-time, resulting in minimized data conversion and processing times. By making the processed products available at

Product and Performance News

the office or on a survey vessel during survey operations, CARIS Onboard helps improve survey efficiency by valuably reducing the turnaround time and helping to ensure that data quality and coverage requirements are met before leaving an area. Focused around the latest web map technology, the redesigned control centre dynamically controls and monitors the automated system. Products generated including surfaces, backscatter mosaics, and the survey track lines are live-streamed during acquisition and accessed through a web browser. With this increased information about survey is available to operations when and where needed.



Teledyne CARIS Onboard™ 2.0.

MERGER FORMS DAMEN MARINE COMPONENTS NETHERLANDS

As of January 1, Damen Marine Components (DMC) and Van der Velden Marine Systems (VDVMS) are operating together as Damen Marine Components Netherlands. Both companies have been operating as part of the Damen Shipyards Group; however, the merger allows for combining the companies' market knowledge and providing customers with an increased portfolio of products available in one place. DMC NL will have Steef Staal as managing director, Wim Knoester will be commercial director and Peter Schipper is financial director. The Van der Velden Marine Systems' brand will continue to be used as trademark for DMC NL's rudder and steering gear products.

Van der Velden Marine Systems in the Netherlands, supplies steering gear, rudders and hydraulic systems to the marine industry. Damen Shipyard Group operates 34 shipbuilding and repair yards worldwide with 10,000 employees.

Damen Marine Components and Van der Velden Marine Systems announce merger.

Contracts

FRAC Sediment Testing. To Legend Technical Services, Inc. for $17,875 on December 17, 2017 by St. Paul Engineer District. W912ES-18-T-0019/W912ES-18-P-0012.

Detention Pond Dredging. To Rocky Hill Contracting Inc. for $1,365,500 on December 20, 2017 by NAVFAC MID-ATLANTIC FEAD MCAS Beaufort. N4008516R5516X011/N40085-17-D-8311.

Nome Harbor Maintenance Dredging, Nome Alaska. To Alaska Marine Excavation LLC for $1,507,000 on January 10, 2018 by Alaska Engineer District. W911KB-18-B-0001/W911KB-18-C-0003.

Coos Bay Dock Repair. To West Coast Contractors for $584,329 on January 16, 2018 by Portland Engineer District. W9127N-18-B-0002/W9127N-18-C-0012.

Maintenance Dredging at USCG Indian River Inlet; Rehoboth Beach, Delaware. To Lindstrom Excavating Contractors Inc., for $207,000, on January 18, 2018 by Department of Homeland Security, USCG Civil Engineering Unit Cleveland. 70Z08318BPCR03300/70Z8318CPCR-0-3300

Maintenance Dredging Anchorage Alaska. To Manson Construction Co. for $10,519,000, line items 1, 2, 2AA, 2AB, 3 through 8 and 10, on January 23, 2018 by Alaska Engineering District. W911KB-18-R-0001/W911KB-18-C-0004.

Dredge CG Station Eaton's Neck Entrance Channel (FY 18) Northport, New York, PSN #6642210. To Coastline Consulting and Development LLC, for $366,625, on February 1, 2018 by Department of Homeland Security, USCG Civil Engineering Unit Providence. 70Z0G118BPRV04500/70Z0G118CPRV04500.

Furniture for Dredge Merritt. To GFS Supply & Services Company, for $7,622, on February 7, 2018 by Wilmington Engineer District. W912PM-18-T-0043/W912PM-18-P-0049.

Knapps Narrow Maintenance Dredging. To Southwind Construction Corp., for $1,403,593.78, on February 12, 2018 by Baltimore Engineer District. W912DR-18-B-0003/W912DR-18-C-0007.

Tybee Island Shore Protection Project. To Great Lakes Dredge & Dock Company, LLC, for $4,896,900, on February 13, 2018 by Savannah Engineer District. W912HN-18-B-5001/W912HN-18-C-5001.

Boston Harbor Improvement Dredging. To Cashman/Dutra, JV, for $122,223,000, on February 15, 2018 by New England Engineer District. W912WJ-18-B-0004/W912WJ-18-C-0010.

Inspect, Repair and Recertify the Firefighting System on Dredge McFarland. To The Hiller Companies, Inc., for $45,777, line item 1, on February 23, 2018 by Philadelphia Engineer District. W912BU-18-Q-0009/W912BU-18-P-0025.

Events

2018

March 28, DSC's Dreducation™ Class at the Omni Royal Orleans in New Orleans, Louisiana. For more information, contact Stephanie Rauch at sprauch@dscdredge.com or call (985) 479-1355.

April 8 –12, 2018 Battelle Conference, in Palm Springs, California, at the Palm Springs Convention Center. For more information, visit www.battelle.org.

May 7 to 12, 34th PIANC World Congress in Panama City, Panama. For more information, visit www.pianc2018.com.

June 25 to 28, Western Dredging Association (WEDA) Dredging Summit & Expo in Norfolk, Virginia. For more information, visit https://dredging-expo.com/

October 23 to 25, Western Dredging Association (WEDA) Pacific Chapter Meeting at Hilton Waikiki Beach on Kuhio in Honolulu, HI. For more information, visit www.western-dredging.org.

2019

April 25 to 29, WODCON XXII, hosted by the World Organization of Dredging Associations (WODA), China Dredging Association (CHIDA) and Eastern Dredging Association (EADA) in Shanghai, China. For more information, visit www.chida.org.

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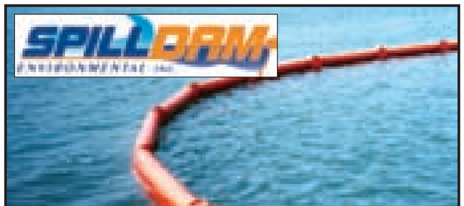

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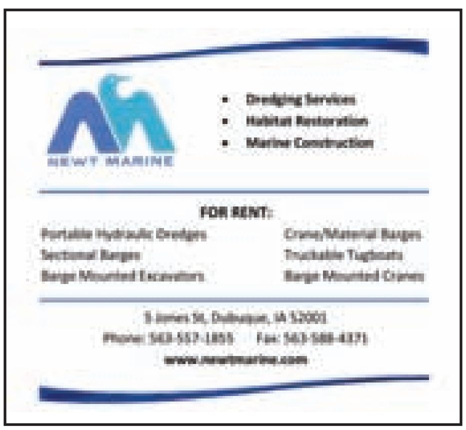

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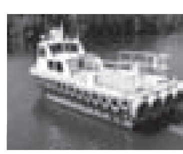

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PROFESSIONAL SERVICES

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Senate EPW Committee Discusses Administration's Infrastructure Plan

BY ANNA TOWNSHEND

On March 1, the Senate Committee on Environment and Public Works (EPW) held a hearing entitled, "The Administration's Framework for Rebuilding Infrastructure in America." The EPW committee was joined by Elaine Chao, secretary of the U.S. Department of Transportation and the Honorable R.D. James, assistant secretary of the Army for Civil Works.

Senator John Barrasso (R–WY), chairman of the EPW committee, opened the meeting noting the committee has "historically taken the bipartisan lead on infrastructure issues in the Senate." He also criticized the lack of prioritization for infrastructure systems, unsufficient funding and burdensome federal regulations as the cause for slow and inefficient projects.

Barrasso was supportive of President Trump's infrastructure plan and proposed changes. To make significant investment in infrastructure, "Part of this can be accomplished by cutting Washington's red tape," he said. Barrasso also championed the President's plan for its focus on rural communities and more federal money for those that need it.

The EPW committee is making good bipartisan progress toward more water infrastructure legislation later this year, Barrasso said.

EPW Committee Ranking Member Tom Carper (D – DE) outlined the President's infrastructure plan with less praise and more criticism. He expressed concern about states' ability to cover higher project costs, in lieu of federal funding. "It hard to make up that slack," Carper said. "It's one of a number of places where I think the math of the administration's plan does not add up."

Economists in Philadelphia from the University of Pennsylvania analyzed the proposal and concluded that it would only general an additional $30 billion in investment. "That is a far cry from what the administration is promising," Carper said.

He also raised concerns about efforts to streamline the environmental permitting process, "by the degree to which the administration is focusing on sweeping rollbacks to our nation's bedrock environmental protectionism" Carper said. He said that efforts such as ensuring adequate funding for permitting agencies and implementing new tools. The administration instead, he said, proposes cuts to permitting agencies and infrastructure programs, such as the TIGER program.

"It is particularly hard to take this administration's proposal to spend $200 billion on infrastructure seriously when that proposal is paired with a budget that would cut $240 billion from existing infrastructure programs," Carper said.

Casper also concluded that the Congressional session had plenty of time to address infrastructure issues.

In his opening statement, Secretary James was hopeful about the ability of the administration's infrastructure plan to "remove barriers and provide new authorities to expedite the delivery of infrastructure project," he said. For permitting specifically, James referenced work the Corps is currently doing to streamline the Section 404 and Section 408 permit programs and reduce redundancy. The goal, James said, is to reduce environmental review timelines to two years.

In the question and answer period, Sen. Moran (R–KS) questioned Sec. James about the three-phase process for Corps project (feasibility study; pre-construction, engineering and design (PED); and construction). He said it used to be two phases and asked if the first two phases could be combined into one, so monies remained for construction.

"To answer your question, those are three completely different things. We are looking at streamlining," James said. James insisted that three phases were necessary but additional steps could be taken to streamline all phases.

Sen. Cardin (D–MD) wasted no time in addressing an important project for his state, Popular Island, and one that he called "the first of its kind that would be a win-win situation for our navigation and our environment." He was critical of the administration's proposed FY19 budget, which he said reclassified the project to compete solely as a navigation project, rather than also as an environmental restoration project. The newest budget allocated $21 million, which Cardin called "an inadequate amount of money," and he hopes to address that during the appropriation process.

James wanted to confer with his staff before giving a definite answer on Popular Island, but he offered a general opinion about dredging and sediment placement. In areas where dredged material placement is rejected for environmental reasons, the increased costs prevent many dredging projects. It is partly an issue with other permitting agencies, but James committed to working with Congress and other agencies on the issue.

Sen. Whitehouse (D–RI) said of the FY19 budget, which allocated $1.481 billion for its flood and coastal storm damage reduction program, only $40 million of that is marked for coastal programs. The remaining $1.44 billion is for inland projects. In light of climate change and sea level rise, Sen. Whitehouse said this 37 to 1 ratio "is really hard for me to understand."

Sec. James had some discrepancies about the 37 to 1 ratio, but he did acknowledge a severe need along the inland waterways. "That tells me there is just a lot more inland projects that require flood damage assistance than coastal, " James said.

Earlier in the hearing Sen. Carper raised questions about whether Congressional leadership had signaled that time had already run out for infrastructure legislature, or that it would not have the time needed during the current session.

Sen. Sullivan (R–AK) reiterated surprise that Republican leadership in the Senate had indicated that there might not be time for infrastructure. "We should make more time. If we do not have time, let us work weekends," Sullivan said.

DREDGING HIGHLIGHTS FROM THE PAST

40 YEARS AGO – 1978

Three land surveyors took a week to verify the locations for Trisponder transmitter stations at Jubail, Saudi Arabia, in preparation for the hydrographic survey to position a planned 40-mile-long approach channel to the new Port of Al Jubail on the western shore of the Arabian Gulf.

35 YEARS AGO – 1983

Potashnick Construction Company doubled production in its contract to deepen a portion of the Los Angeles shipping channel by installing a ladder pump on the dredge Hydro-Pacific. The pump was installed under the supervision or dredging engineer Robert Jantzen.

30 YEARS AGO - 1988

Rod Maddox of the Mobile District Survey Section told attendees at the Corps Survey Conference in Savannah that "GPS will likely provide the greatest impact to surveying technology yet seen and is here to stay." He told the group that the Mobile District surveyors started using GPS, then known as Nav-Star, in 1984, first with in-house equipment and then on a contractual basis with Corps personnel as administrators.

25 YEARS AGO - 1993

The St. Louis Engineer District was in the process of installing bendway weirs on 16 Mississippi River bends that were subject to groundings due to build-up of point bars on the inside of the bends. The bendway weir concept, developed by Rob Davenroy of the St. Louis District, comprises a series submerged rock structures placed at a 30-degree angle to the current on the outside of the bend to direct siltation to the center of the channel, keeping the channel shallow and wide and eliminating buildup on the inside of the bend.

20 YEARS AGO – 1998

Hagler Engineering Inc. formed a joint venture with German company Krupp Fodertechnik's Marine Technology Division to sell dredging equipment in the U.S. Krupp Hagler, headquartered in Augusta, Georgia, represented Krupp Fordertechnik, Krupp Vosta of the Netherlands and GIW Industries of Grovetown, Georgia.

15 YEARS AGO - 2003

In an early example of complete automation on an aggregate dredge, Kruse Controls, Inc. (now Kruse Integration) teamed with DredgeMasters International to produce a dredge that is fully automated, with all systems integrated to respond to changes in any system on the dredge. The dredge, named the Woodington, was built for Phoenix Pinelands of Barnegat, New Jersey.

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