MVD remains vigilant as river levels recede

By Pamela Harrion, MVD Public Affairs

As near-record winter river levels continue to recede on the lower Mississippi and its tributaries, the U.S. Army Corps of Engineers, Mississippi Valley Division flood fighters and its local, state and federal partners remain vigilant to rapidly respond to trouble spots throughout this high-water event. On Feb. 1, the Corps fully closed the Bonnet Carre' Spillway and reduced the flood fight from Phase II to Phase I. Phase I procedures will continue until the river at the Carrollton gauge falls below 11 feet.

Phase I procedures consist of working with local levee authorities to closely monitor the levees along the Mississippi River. Inspections on the Mississippi River levees from Baton Rouge and below on the east bank and Donaldsonville and below on the west bank will continue twice weekly.

Public safety is the Corps number one priority. "The safety of the public is our primary concern," said Maj. Gen. Michael C. Wehr, commanding general, US-ACE MVD. "We want transparent communications that enable risk informed decision making by authorities at all levels to maximize public safety and best utilize limited resources."



Opening of the Bonne Carre' Spillway in Louisiana, Jan. 10.

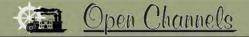
Wehr added: "We are working as a regional team to fight this flooding. The amount of coordination and collaboration with other federal and state agencies, our fellow Corps divisions and with local communities, has been incredibly important to the success of this flood fight."

The Vicksburg and New Orleans district offices continue to stay in close coordination with the NWS as river levels slowly return to normal.

During this flood fight, the Corps and local levee districts have team members on the ground monitoring and conducting inspections so that any potential threats to the integrity of the levee system can be quickly addressed.

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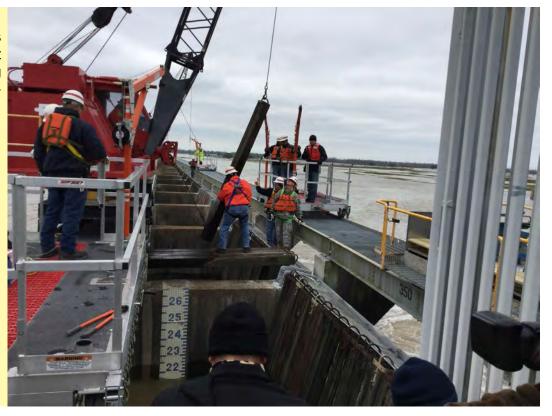


Around the Bend Snapshot: Winter 2015-2016 Flood



Col. Michael Derosier, MVD deputy commander, addresses mayors from Mississippi and Louisiana Jan. 8 about the flood fight along the entire lower Mississippi River during a press conference in Vicksburg, Mississippi. Mayors representing the Mississippi Cities and Towns Initiative included the Mayor of Rosedale, Miss., Carey Estes; Mayor of Tallulah, La., Paxton Branch; Mayor of Vicksburg, Miss., George Flaggs; Mayor of Vidalia, La., Hyram Copeland; and Mayor of Greenville, Miss., Attorney Errick D. Simmons. The mayors also discussed their preparations for rising flood waters. (Photo by Pamela Harrion, MVD Public Affairs)

MVD Commander Maj. Gen. Michael Wehr assists with the pulling of the first needle during the opening of the Bonnet Carre' spillway in Louisiana, Jan. 10.



Around the Bend... (continued from page 2)



Boots on the ground: Soldiers from the Louisiana National Guard patrolling levees alongside the Corps of Engineers and local authorities to help spot any signs of trouble. Here, troops and Corps personnel inspect damage from cattle on a levee near Davis Island and a sand boil near Hodge.



The Rock Island District is partnering with researchers and students from the University of Illinois to review recent flooding in central Illinois. Members of the university were in Beardstown recently as part of the Geotechnical Extreme Events Reconnaissance Association and met with Rock Island District Commander Col. Craig Baumgartner and district emergency response team members (pictured). They will be working with the district to document how the flood has impacted levees and drainage districts.

MVD remains vigilant...(continued from page 1)

"Strong coordination and communication between partners are integral parts of our ability to safely pass this high water," said Col. Richard Hansen, commander of the New Orleans District. "In South Louisiana, we have a robust, well-prepared and experienced team of local, state and federal emergency responders whose top priority is the safety of the public."

The Mississippi River & Tributaries project is being operated, and is performing, as designed. It is one of the world's most comprehensive and successful flood control and navigation systems and has provided unprecedented protection during two severe floods in the past five years. Because of the MR&T project below Cairo, extensive flooding in protected areas was avoided during the Great Flood of 2011,



Memphis District beginning flood-fight patrols in the Memphis and West Memphis areas during the 2015-2016 Winter Flood.

with more than \$230 billion in damages prevented. Additionally, no lives were lost due to the floods in 2011. The system did suffer approximately \$2 billion in damages, with \$1.5 billion invested in repairs, to date. The investment in repairs and improvements are being tested by the current flood and the MR&T remains incomplete (currently 87 percent complete). This is an important consideration given the system was just one large storm event away from potentially reaching the project design flood capacity.

Day-to-day oversight and coordination of the Mississippi River's flow and its watershed are the responsibility of the Mississippi Valley Division's Watershed Division. Division hydrologists and hydraulic engineers keep track of river stages in real time using satellite links to gages and coordinate closely with multiple organizations, including the National Weather Service, to provide an ongoing picture of current and expected river conditions.

The U.S. Army Corps of Engineers and the Mississippi River Commission are coordinating closely with



St. Louis District levee inspections in East St. Louis, Illinois, during the flood fight.

other government agencies, communities, stakeholders, contractors and organizations to ensure the safety and well-being of local citizens along the Ohio, Missouri, Mississippi and other rivers in the system.

R5 Focus Areas



New Orleans District's armoring work wins USACE Innovation of the Year Award

By Bob Anderson, MVD Public Affairs

Hurricane Katrina generated powerful waves that exposed how vulnerable a traditional levee is to erosion on both sides when overtopped by a storm's surge. Breaches in the system during Hurricane Katrina contributed to 80 percent of the flooding in New Orleans and confounded emergency efforts to unwater flooded areas, adding significantly to damages and slowing recovery. This painful awareness led to a congressional authorization to armor the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS), to make the system more resilient to overtopping.

Unfortunately, the two proven armoring types available were concrete slope paving and stone used only on the flood side, and both created prohibitive Operation and Maintenance (O&M) problems. Following a world-wide literature search that provided little applicable armoring knowledge, this one-of-akind work required the development of a new body of knowledge including:

- Establishment of extreme storm wave design conditions.
- The development of infrastructure to determine the performance of new armoring materials under extreme wave loads that would also be maintainable by the local levee districts.
- Successful O&M field-condition testing of viable armoring alternatives.
- Selection and implementation of the best armoring alternative.

The armoring team then undertook a multi-faceted approach to close the design knowledge gap. The team commissioned internationally recognized experts to develop a first-of-its-kind full-scale wave overtopping simulator (WOS). They then performed landside wave overtopping simulations of an extreme storm to

establish the performance ranges of potential armoring materials. The team included: Dr. Jentsje van der Meer, the world's leading expert on wave overtopping and inventor of a mobile WOS used to test actual levees in the Netherlands; Dr. Christopher I. Thornton, director of the nation's leading facility for steady state testing of slope protection products at Colorado State University (CSU); and the Corps' own Dr. Steven A. Hughes, recognized internationally as a leading expert in coastal engineering with a strong emphasis on physical modeling and wave overtopping. As no facilities existed world-wide capable of simulating HSDRRS extreme wave overtopping conditions, the armoring team commissioned CSU to build the world's largest full-scale WOS.

Tests were conducted on several armoring materials, including two species of grass commonly grown on HSDRRS levees; grass bolstered with turf reinforcement mattress; grass strengthened with high performance turf reinforcement mattress; articulated concrete blocks; lime-stabilized clay; and barecompacted clay. Following rigorous and multi-stage testing, the ensuing survival of samples yielded a high level of confidence in the robust high performance turf reinforcement mattress armoring solution.

Following an independent external peer review, the knowledge gained from this compilation of research and development initiatives provided the technical substance for the development of the Armoring Engineering Alternatives Report, which provided the basis for the district to armor 80-miles of HSDRRS perimeter levees, representing a \$400 million federal investment in flood risk reduction in the Greater New Orleans area. Overall, the endeavor to create effective levee armoring against overtopping clearly earned the USACE-wide Award for Innovation of the Year.

Content, communication and collaboration are key to a successful Knowledge Management System

By Gerry Hardin, MVD Knowledge Management

As winners of the Innovation of the Year Award (see article on page 6), the New Orleans District exhibited some of the finest qualities associated with a robust Knowledge Management Program. The district used a multi-disciplined approach to achieve key organizational objectives by making the best use of existing expertise and knowledge, and then applying that knowledge to a unique problem. New Orleans District also focused on processes that helped them acquire, create and share knowledge that could be applied to a real world project solution.

As evidenced by the Innovation of the Year Award story, the key goals of a successful KM program are:

• Content: Identify and capture the organization's most critical knowledge.

- Communication/Connect: Ensuring that knowledge flows where it needs to from those who have it to those who need it.
- Collaborate: Shorten learning cycles and assist others through sharing experiences, lessons learned, best practices and results.
- Integrate: Remove barriers to knowledge sharing through enterprise application of the three Cs: Content, Connect and Collaborate.
- Congratulations to the New Orleans District for their outstanding KM achievements.

Corps and its partners announce juried photo exhibition of the Mississippi River

By Pamela Harrion, MVD Public Affairs

Garry McMichael, The Jacoby Arts Center, Corps of Engineers (Rivers Project) and the Audubon Center at Riverlands have partnered to bring a juried photo exhibit to the Mississippi River.

The exhibit will be featured at the Jacoby Arts Center, the Corps National Great Rivers Museum and the Audubon Center at Riverlands from April 25 thru June 18. Following the closing on June 18, the exhibit will then travel to various locations along the river corridor.

The deadline for submissions is February 17. For more information, you may visit the following website: http://www.mississippiriverphotoshootout.com/.



Aerial photo of the Mississippi River by Robert J. Hurt.

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Lean Six Sigma Black Belt

By Pamela Harrion, MVD Public Affairs

During the Mississippi Valley Divison's staff meeting on January 19, 2016, three employees received a two-star note from MVD Commander Maj. Gen. Michael Wehr for their participation on the Lean Six Sigma Black Belt team, which dramatically improved MVD's Conference Approval Package Process. Pictured below with Maj. Gen. Wehr are (from left to right): Thomas Morrissey, Office of Counsel; Vinai Vinlander (G. Rogers Sloan accepted the note for him in his absence), Office of Counsel; Becky Fuson, Executive Office. In addition, Maj. Gen. Wehr presented a two-star note to Sabine Faltenbacher (also pictured below), for successfully completing all U.S. Army Lean Six Sigma Black Belt certification requirements.



Maj. Gen. Wehr presenting a two-star note to Thomas Morrissey.



Maj. Gen. Wehr presenting a two-star note to Becky Fuson.





Sabine Faltenbacher receiving her Army Lean Six Sigma Black Belt Certification.



MVD Retirements

By Pamela Harrion, MVD Public Affairs

During the past few months, the Mississippi Valley Division hosted several retirement ceremonies. Former employees pictured with MVD Commander Maj. Gen. Wehr below included Rayford Wilbanks, former MVD chief of Planning and Lower District Support Team (Memphis, Vicksburg and New Orleans Districts); Donna Roberts, administrative support assistant, Lower DST; Charles Shadie, former Watershed Division chief; and Stephen Gambrell, former director of the Mississippi River Commission; and Dennis Norris, Operations Division chief. MVD wishes them a long and happy retirement as they move on to their next chapter in life.



(Left) Rayford Wilbanks retired Dec. 8, 2015.



Donna Roberts (center) retired Dec. 16, 2016.



(Right) Stephen Gambrell retired Jan. 7, 2016.



(Left) Charles Shadie retired Jan. 7, 2016.



Dennis Norris retired (Right) Jan. 23, 2016.



Welcome Aboard! (continued on page 12)



Jane Caruthers Office of Counsel

Jane joins the MVD team from the State of Mississippi, where she last served as the staff officer for the state Fire Marshal's office. In that position, Jane served as the Freedom of Information Act (FOIA) officer and assisted in the administration of their ethics program.

In the MVD Office of Counsel, among other duties, Jane will serve as office administrator, conference package processing point of contact, FOIA officer and administrator of the ethics training/financial disclosure program.

Jane's previous federal service includes the Social Security Administration and 8.5 years with USACE as a paraprofessional (including with ACE-IT). Jane's non-federal experience includes 10 years of private paralegal experience, and 21 years as an office manager in private industry and state government.

Jane is also a real estate professional and received recognition from the Vicksburg Warren County Board of Realtors as Realtor of the Year and Top Producer.

Jane and her husband, Mike, live in Vicksburg.



Crorey Lawton MVD Lower DST Program Manager

Crorey comes to MVD from the New Orleans District, where he has served for the past 10 years on a diverse array of Civil Works Planning studies and projects. He has served as a plan formulator, section chief for the Regional Planning and Environmental Division-South, and as a program and project manager for the Protection and Restoration Office.

Crorey was selected to serve on the National Cadre, Local Government Liaison, Emergency Operations; served on the Beneficial Use of Dredged Material Subcommittee of Coasts, Oceans, Ports and Rivers Institute of American Society of Civil Engineering; and served as a research fellow for Tulane University Center for Archaeology.

Crorey brings a diverse background and expertise, and "can do" attitude to foster continued collaboration for delivery of quality planning and execution deliverables to meet mission requirements.

If you have a new employee in your office, or if you ARE a new employ-ee to the Mississippi Valley Division, please contact the Public Affairs Office at cemvd-pa@usace.army.mil, so that we can introduce you to everyone in Open Channels.

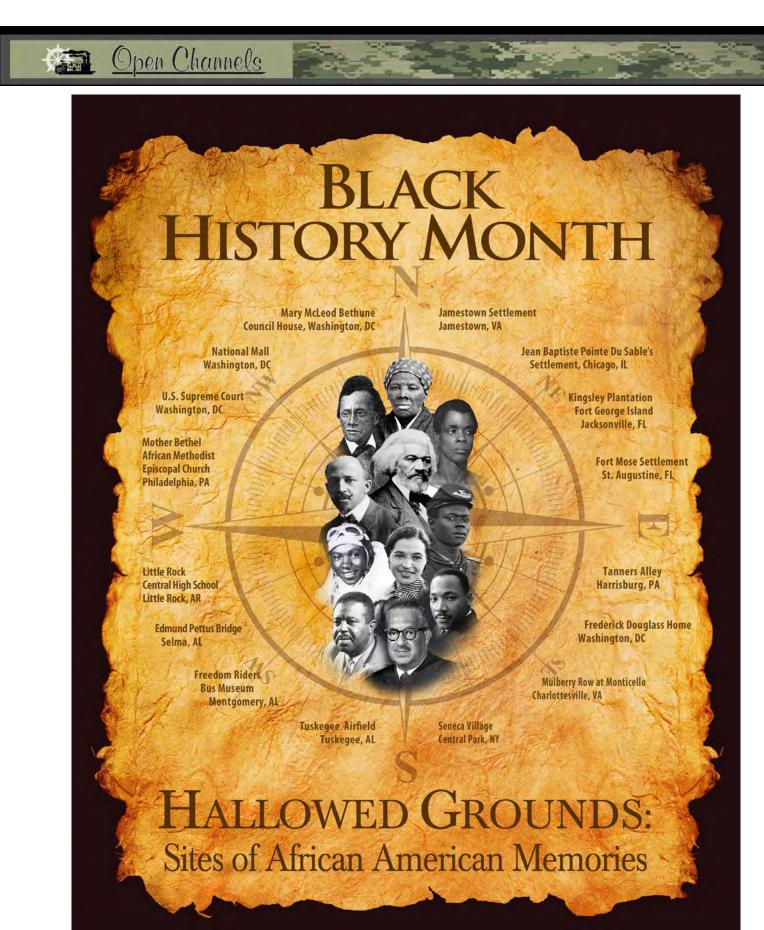


Andy Hall Navigation/Dredging Subject Matter Expert

Andy comes from the Vicksburg District, where he served as the dredging unit chief in River Operations (since February 2010). He was in charge of navigation and dredging. His main duties involved obtaining and managing dredge contracts as well as directing the work of the dredges. Prior to this, Andy was a navigation unit chief, ensuring the waterways/harbors were at authorized dimensions and determining if and where dredging was needed.

Andy also worked in the Vicksburg District's Hydraulics Branch from 2004-2010; the Structures Section from 2002-2004 (co-op and permanent); and the River Stabilization Branch from 2001-2002 (co-op).

Andy is originally from Vicksburg and graduated from Vicksburg High School. His wife is Kristi Hall, who works in Regulatory at the Vicksburg District. They both have two children, Gloria and Sam.



Around the Division



MVD Commander Maj. Gen. Michael Wehr and the MVD Crisis Management team met Jan. 11 in Vicksburg to collaborate on flood fight efforts and procedures during the 2015-2016 Winter Flood. (Photo by P. Harrion)

Welcome Aboard! (continued from page 10)



Alainna O'Bannon Senior Program Analyst Civil Works Integration Div.

Alainna O'Bannon joined the MVD Civil Works Integration Division team in October 2015, where she will help develop and defend the federal budget and prepare the fiscal year work plan execution for the region.

Her previous position was in the **Programs and Project Management**

Division, Vicksburg District, serving as the MR&T appropriation manager. She worked with the regional Mississippi River Levees team, leading the exhibit design team for the Lower Mississippi River Museum, coordinating the district's role during the Low and High Water Inspection trips and deploying to the New York City District's Programs Management Branch following Hurricane Sandy.

Prior to her position with the Vicksburg District, Alainna worked in the Management Integration Office at the Coastal and Hydraulics Laboratory at the Engineer Research and Development Center.

Ms. O'Bannon is also an active member of the Vicksburg community. She has served on the Board of Directors for the Chamber of Commerce, president of the Junior Auxiliary of Vicksburg, vice president of the Bovina Parent-Teacher Organization and chairman of the Carnaval de Mardi Gras Gumbo Cook-off.

Open Channels

U.S. Army Corps of Engineers Mississippi Valley Division



Division Engineer Maj. Gen. Michael C. Wehr

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