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Louisville District

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On the cover: *A new wicket is lowered by crane into the dive deflector box at Locks and Dam 53, which allows divers to replace deteriorating wickets while being protected from the strong flow of the Ohio River.*

Please conserve:
Think before you print.

Commander's Comments

Ladies and Gentlemen,

As the end of the fiscal year quickly approaches, I appreciate everyone pushing hard to deliver on our commitments. We have had the opportunity to host several Corps of Engineers senior leaders recently including USACE Command Sgt. Maj. Antonio Jones; Maj. Gen. Mark Yenter, Deputy Commanding General for Military and International Operations; Transatlantic Division Command Sgt. Maj. Ronald Johnson; and Mr. Stacey Hirata, chief, Installation Support Division.

During all of those visits we have highlighted the hard work our team constantly puts forth to deliver for our stakeholders and they all left very impressed with our district. Those successes are highlighted in this issue as we celebrate the Locks and Dams 52 and 53 Innovation of the Year Award and Keith Chaney's Castle Award.

These and many other awards are indicative of the Louisville District's great reputation, but as always we must never rest on the past and always push to ensure we deliver in the future—hence the importance of the end of the fiscal year and delivering on our commitments.

Another key area of our annual program that largely goes unnoticed because the entire team consistently delivers is our environmental program. Delivering this program is an entire district effort as it takes Project Management, Engineering, and Office of Counsel among many other players to ensure we execute these projects. Regardless of the specific area—Formerly Used Defense Sites, Military Munitions Response Program, Environmental Quality—our team monitors and protects the environment so DOD remains a good steward. Some of these requirements are highlighted with our support to the 88th Regional Support Command and our new requirement for Green and Sustainable Remediation techniques in our FUDS work.

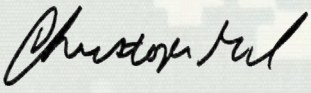
Col. Christopher G. Beck
Commander and District Engineer
Louisville District
U.S. Army Corps of Engineers

Finally, our district's routine support to other districts and enterprise priority missions is extremely impressive. Whether it is overseas contingency efforts, national disasters, or the recent flooding in one of our sister district's areas (West Virginia) our team is prepared to answer the call and I applaud you all for that selfless service.

Thanks again for all that you do.

Building Strong!

Chris



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Work surges ahead at Olmsted during low water season

Carol Labashosky, public affairs

The stars have aligned for the Army Corps of Engineers Olmsted Locks and Dam project on the lower Ohio River at Olmsted, Illinois.

The project team has leveraged optimal low water river conditions, mixed batches upon batches of concrete to make shells, and has activated all its workforce during the busiest year of construction. Funding has propelled the project forward.

The amount of river construction, shoreline activity, and massive equipment moving 4,000-ton pieces of the dam around is staggering. The dam is 80 percent complete. It nearly spans the entire river, and construction has begun on the left boat abutment, which is the feature that will tie the dam into the Kentucky bank. The dam shells sit on top of the adjacent shells connecting together with a "tolerance" of an incredible half inch.

Integral to the dam are more than 100 glistening white wickets—parts of which resemble huge blow darts—that are now side by side in the lay-down yard. The dam's navigable pass will consist of 140 wickets that will be manually raised and lowered by a wicket-lifter barge. When raised, the dam will hold pool allowing tows to safely navigate between Louisville District's Olmsted and Smithland locks and Kentucky and Barkley locks in the Nashville District.

Several coats of treated paint help protect the wickets because they are usually submerged. This paint process saves money which would otherwise be spent on maintenance. Interestingly, the wickets' treated paint was originally the color gray. The team creatively posited that the final coat be white instead, making them more visible in the water to aid in operational safety and to give a better view of how they are operating. Many wickets are already installed.

Capt. Jeremy Nichols

Following the successful set-down of a navigable pass shell, tremie concrete is poured through the lift frame legs to tie the foundation pilings and shell together, thus making it a permanent feature on the river bottom. The tremie mix is specially designed to withstand the underwater environment encountered on the bottom of the Ohio river while maintaining a consistent flow and strength.

The project is surging toward the finish line, and now is the time to consider a visit. The overlook provides a platform with a great view of the 180-acre site. There is no better place for Corps employees or the public to learn about engineering, construction and navigation than at Olmsted. Paducah, Kentucky, the largest city nearby, is where the project's floating lock walls were constructed in 2002.

There are so many cranes of different heights operating from working barges and land, that it's hard to count them. More than 600 welders, carpenters, operators and craftsmen work in unison in 12-hour shifts like musicians playing a symphony.

Jeremiah Manning, Olmsted resident engineer, summed it up when he said the Corps is truly finishing strong at Olmsted Locks and Dam. The project is scheduled to begin operating in 2018.

USACE

In the precast yard at the Olmsted project, the Super Gantry Crane is pictured. The crane can lift a maximum of 5,100 tons, and is required on this project to lift and carry the large precast concrete shells set in the river to construct the dam.

Dive deflector is USACE innovation of the year

Craig Moulton

A new wicket is lowered by crane into the dive deflector box at Locks and Dam 53, which allows divers to replace deteriorating wickets while being protected from the strong flow of the Ohio River.

Carol Labashosky, public affairs

The project team for the Five Wicket Self-Supporting Dive Deflector was recently honored as a recipient of the U.S. Army Corps of Engineers Innovation of the Year Award.

The dive deflector is a specially crafted dive box placed in the Ohio River that deflects the river's strong flows so divers can safely replace old wickets at Locks and Dams 52 and 53. The steel dive box supports itself by sitting on structures on the bottom of the river.

"The purpose is to mimic calm water, like a swimming pool, so divers can work safely," said Craig Moulton, chief, Louisville District maintenance section.

Unlike the new dive box, which distributes the force from the river to the concrete sill at the base of the wickets, the old dive box transferred the pressure to the wickets themselves. The condition of the dam wickets—built in the 1930s—have reached a critical point where they can no longer support the loads from the traditional dive boxes, especially at Locks and Dam 53. This called for a specialized piece of equipment.

The Louisville District Engineering and Operations Divisions designed it in-house, the Louisville Repair Station fabricated it, and the Locks and Dam 53 dive team used it with major success during the 2015 low-water season. The box sealed water flows better than any previous dive box and was larger, which led to increased efficiency and safety. The divers and the team were able to replace 64 wickets at Locks and Dam 53, the most ever replaced in a season.

"It was a banner year for wicket replacement," said Moulton. These repairs greatly improved the reliability of Locks and Dam 53, which will need to operate until Olmsted Locks and Dam is finished. The dive deflector box will be used to replace more wickets during the 2016 low-water season.

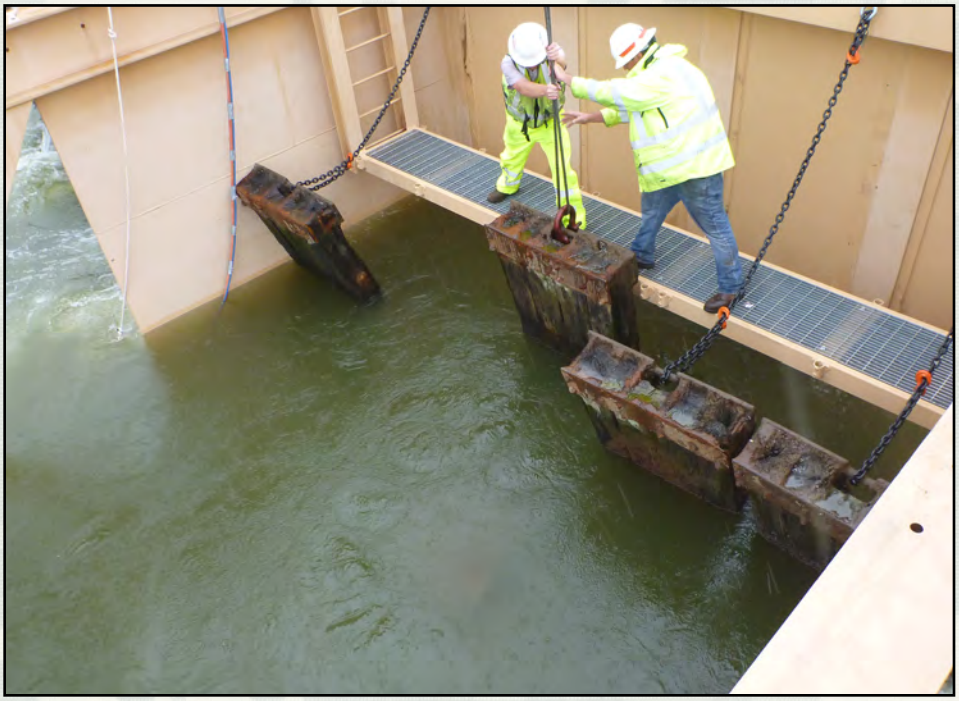
"This is engineering problem solving at its best," said Col. Christopher Beck, Louisville District commander.

Award recipients

Eric Fry • Larry Kelley • Jonny Meyer
David Smith • Matthew Stivers
Charmaine Warren • Keith Fleck
Randy Robertson • Alex Hamilton
Shawn Kenney • Todd Scholl
Ray Smith • Nick Turpen
Craig Moulton • Brad Stout

Craig Moulton

A deteriorated wicket is removed from the dam.



Craig Moulton

The rushing water of the Ohio River is diverted by the Dive Deflector box, creating a safe working environment for the crew at Locks and Dam 53 to remove old wickets from the dam.

Castle Award a 'dream come true' for Chaney

USACE

Chaney is the recipient of the 2016 USACE Operations and Maintenance Castle Award

Sarah Mattingly, public affairs

Keith Chaney, chief of maintenance at William H. Harsha Lake, Batavia, Ohio, is the 2016 recipient of the U.S. Army Corps of Engineers Operations and Maintenance Castle Award. The Castle Award recognizes employees who work in support of the operations and maintenance of civil works infrastructure while demonstrating Army values, Corps vision, as well as command mission.

"Winning the Castle Award, particularly at the national level, was quite an achievement," said Chaney. "I had hoped to win the Castle Award at the Louisville District level during my career, but to win it at the national level is a dream come true."

Chaney was commended for consistently demonstrating high standards in operations and maintenance, customer service, safety and professionalism.

"Mr. Chaney's superior work ethic and professionalism make him a role model for all Corps of Engineers employees" said Matthew Palmer, C.J. Brown Dam and Reservoir manager, who nominated Chaney for the award.

Palmer explained Chaney's numerous contributions to the Miami River Area, which included overseeing the cleanup at Harsha Lake following 2011's record pool, ensuring new lighting at the lake would not adversely affect nocturnal wildlife, and teaching about water safety at community events.

"He provides the same level of detail to small, thankless jobs as well as high profile jobs," said Palmer. "If a job is not up to Mr. Chaney's high standards for the federal government, he will re-do the job to ensure the government receives the best product that will withstand the test of time and reduce future operations and maintenance costs."

When the stilling basin was dewatered at C.J. Brown Dam and Reservoir, Springfield, Ohio, Chaney even rescheduled his family vacation to participate.

There was minimal experience in stilling basin dewatering in the Miami River Project, Palmer explained, "Mr. Chaney was the local subject matter expert, based on his experience at Harsha's dewatering in 2012. He acted as consigliere to the maintenance chief at C.J. Brown, demonstrating dedication and the Army values of loyalty and selfless service."

Chaney has made the safety of the general public a top priority at the lake as well. Improvements to the Visitor Center overlook deck, stilling basin, and boat ramp have all been done under his guidance and have improved fishing and boating opportunities and public enjoyment of the project's recreation facilities.

"Mr. Chaney is constantly striving to make these types of incremental improvements, which accumulated over time, will make significant improvements to the safety of the workers and public at Harsha Lake," said Palmer.

"The nominations for this year's award were extremely competitive, which made the selection of a single best candidate a difficult undertaking," wrote Edward Belk, Jr., Operations and Regulatory Division, USACE Directorate of Civil Works, in a memo to Chaney. "Considering your accomplishments, everyone wins – particularly the Corps and the public we serve."

Chaney insisted his success was directly due to the contributions of the team at Harsha Lake.

"This is not just an individual award," he said. "It is a recognition of the entire Harsha Lake team. The accomplishments that helped win the award were achieved by all the teamwork and trust of the Harsha Lake team."

James O'Boyle

Keith Chaney, chief of maintenance at William H. Harsha Lake, Batavia, Ohio, reads the piezometers during a safety inspection of the dam in March 2015.

Louisville lends hand to Reserve's 88th RSC

USACE

Controlled burns at the Sunflower Local Training Area in Kansas are an example of environmental services provided by the Louisville District to the 88th Regional Support Command.

Katie Newton, public affairs

As part of the environmental quality program, the U.S. Army Corps of Engineers Louisville District provides an array of environmental services for the U.S. Army Reserve 88th Regional Support Command (RSC), from ensuring Reservists have safe drinking water to performing prescribed burns for invasive species control.

While the Louisville District supports all of the U.S. Army Reserve Regional Commands with environmental services, this year the 88th RSC, which makes up a 19-state area from the Midwest to the Northwest coast, is the biggest customer with 14 projects on the docket.

"A vast majority of the 88th RSC Environmental Division's work goes to the Louisville District as the environmental service program managers are very diligent and responsive, not only in the execution of the work but to any questions or concerns we have," said Melani Tescher, chief, Department of Public Works Environmental Division 88th RSC.

The district provides support services and contract management for a multitude of environmental service projects including Safe Drinking Water Act surveys, air emission surveys, invasive species control, natural resource management plans including forest management, indoor firing range cleanups, NEPA support, radiological surveys, radon mitigation, storm-water pollution/prevention plans and preparing environmental condition of property reports.

"We're happy that the 88th continues to choose us as their preferred mechanism for environmental services," said Craig Coombs, Louisville District environmental engineer. "We've been cultivating this relationship since 2006, and they're great customers."

Recently, the Louisville District completed asbestos surveys at 14 U.S. Army Reserve Centers within the command. The contractor conducted visual inspections throughout the facilities, collected samples and prepared reports for the 88th with their findings.

"The surveys intent is to identify asbestos containing materials at the Reserve Centers," said Coombs. "To protect the workers, the 88th then decides whether to abate or manage in place."

USACE also conducts drinking water surveys for the Reserve under the Safe Drinking Water Act. Surveys have been completed at 15 facilities in Wisconsin and Minnesota with two more facilities scheduled.

The contractor selects two locations at each facility—the closest and the farthest from the tap—and sends off samples to be used for comparison to drinking water standards.

"If there are any exceedances we make recommendations for the 88th to implement," said Coombs. "We're ensuring our Reserve Soldiers have a safe source of drinking water when they're in their facilities."

Another environmental service USACE provides is cleaning up lead dust from historical indoor firing ranges in many Reserve Centers nationwide. The process is simple, but necessary: wash it, vacuum it, put a sealer on it and test it again for any contaminants/lead particles. "By doing so, it maximizes the Army Reserve's usable space by reusing the area as office space or storage," said Coombs.

USACE also prepares Forest Management Plans that maintain a diverse and healthy ecosystem while supporting mission requirements. "This entails taking inventory of forests on site and making recommendations for managing them," said Coombs, "Sometimes it's harvesting, sometime it's leave it be, or maybe even a controlled burn is necessary."

Controlled burns, which are used for invasive species control, help maintain healthy and diverse ecosystems for fire-dependent species like pine trees.

The 88th RSC had issues at the Silver Springs Local Training Area in Wisconsin and Sunflower LTA in Kansas, as tree growth in certain areas was so dense vehicular and foot traffic, necessary for field training exercises, was constrained and there were potential dangers from falling trees.

"The forest management plans will make recommendations for maintaining a healthy ecosystem that supports the 88th RSC's mission requirements," said Coombs.

Because of the district's relationship with the 88th, when any environmental issue comes up they can call for a quick-fix. In April 2016 the 88th requested support at Fort Snelling in Minnesota to remove 19 ash trees that had been infested by the invasive Emerald Ash Borer.

"We enjoy the diversity of the work," said Carla Heck, USACE Louisville District project manager. "Although some of these projects are smaller, seeing them through to completion makes it nice, and we feel good knowing we're helping the 88th maintain and maximize the size of its facilities."

Corps program promotes green cleanups

Katie Newton, public affairs

In an effort to reduce the environmental footprint of field work at Formerly Used Defense Sites (FUDS), the U.S. Army Corps of Engineers Louisville District has embraced the Green and Sustainable Remediation (GSR) initiative—a pilot program designed to encourage contractors to be more environmentally conscious.

"Including GSR into FUDS projects is important because we have an opportunity to set the example," said Corey White, Louisville District environmental engineer. "Implementing sustainable approaches to accomplish our mission is the economically and environmentally responsible thing to do. It is important to ensure that the Corps is a good steward of the environment."

The pilot program began in 2016 in response to a USACE Headquarters request to increase the number of FUDS projects where GSR is considered and implemented. By the end of the year there will be seven contracts with the Louisville District utilizing GSR including work at FUDS sites in Michigan and Ohio.

"All of our environmental contractors were okay with it when surveyed," said White. "A lot of them do this anyway as their own sustainable practices, so it's not a big deal for them to implement these things.

Quyet La

At the former Raco Army Airfield and Missile Site in Michigan, Geo Consultants, LLC., used sustainable practices during field work.

Josh Van Boggert

Geo Consultants, LLC., used green cleanup techniques at former Raco Army Airfield and Missile Site in Michigan as part of the new Green and Sustainable Remediation initiative.

"We supply them with a list of typical best management practices," said White. "Then they decide whether or not to implement them on the project and report back on what they're doing that is green and sustainable. The contractor can also come up with their own sustainable practices and report them back to us."

The GSR strategy includes implementing sustainable considerations through best management practices that are expected to improve the environmental, social, or economic aspects of the cleanup process.

"We like to see that they attempt to reduce their environmental footprint for field work," said White. "A smaller footprint could be attained by reducing emissions, conserving resources and minimizing waste generation."

Additional examples include using teleconferences rather than meetings when feasible, using recycled materials, using alternate fuel options, or even running electrical equipment during times of lower energy demand to reduce stress on the energy grid during peak periods.

"It could even be as simple as deciding when to use electronic report submittals versus hard copies to save on paper," said White.

At the former Raco Army Airfield and Missile Site in Michigan, 50 best management practices were implemented as part of the remedial investigation activities—one of which included integrating schedules to allow for resource sharing and fewer days of field work. Geo Consultants, LLC., contracted to do the field work, reduced days in the field by planning as many tasks as possible during one mobilization.

The contractor also implemented green techniques with water and soil waste. Rather than having to transport excavated soil off-site for disposal, anything deemed clean, non-hazardous soil was left or reused on site.

Water resources were handled in the same way. After the borings were complete, drilling fluids from soil borings that were deemed acceptable quality were able to be released back into the aquifer versus being stored and hauled off-site. This significantly reduced transportation costs.

"Implementing GSR practices was challenging at first due to the nature of the site and the task at hand," said Kim Morris of Geo Consultants. "Team facilitation between GEO and USACE proved very positive not only for GSR, but also for successful completion of field activities. GSR alternatives provided cost savings, reduced field time and an optimized technical approach."

Moving forward, all new FUDS contracts in the district will have a GSR component included. "The reports from our contractors who have completed the exercise are showing implementation of several practices that are resulting in significant cost savings," said White. "So far it's been very successful and we hope to see that continue as these contracts move forward."

USACE assists in debris cleanup after W. Va. floods

Eric Cheng, engineering division

In late June 2016, West Virginia experienced a train of storms that brought record rainfall, resulting in the flooding of many of its businesses and communities. When a federal disaster declaration was signed by President Barack Obama, the Federal Emergency Management Agency deployed personnel to assist the affected communities in their recovery.

At the request of FEMA, the Corps of Engineers sent debris subject matter experts (SMEs) Kevin Jasper, Great Lakes and Ohio River Division, and Tracey Keel, Stan Akin, and Eric Cheng, Louisville District, to assist with the debris recovery mission in West Virginia. These debris SMEs are a part of a national multi-district cadre dedicated to providing FEMA and state and local governments with technical assistance during recovery missions for disasters such as flooding, tornadoes, hurricanes and wildfires.

Eric Cheng

A temporary debris storage and reduction site in Clay County, West Virginia, where USACE representatives assisted with cleanup after the area experienced devastating floods.

In past disaster recovery missions, Debris SMEs have helped to ensure state and local governments properly plan, implement and document their recovery activities to facilitate the provision of much-needed federal funding assistance. The personnel, circumstances and execution of each disaster recovery mission can vary widely, so it is essential that Debris SMEs are capable of utilizing their skills, knowledge, and experience to perform a broad range of tasks while remaining flexible to the conditions. Such tasks commonly include advising on mission planning, preparing scopes of work for contracts, conducting field reconnaissance and assessments, monitoring debris collection and hauling operations, and training staff.

Throughout the first three weeks of July, the Debris SMEs deployed to the West Virginia storm debris recovery mission in support of FEMA. During this time, the SMEs assessed disaster-related debris and helped to monitor debris management activities conducted by the affected counties and their respective contractors. The SMEs also conducted debris monitoring training for West Virginia Army National Guard personnel and provided training and mentoring to FEMA debris specialists.

Recovery operations in West Virginia are ongoing, and USACE is poised to provide further assistance to FEMA as the debris recovery mission continues.

Eric Cheng

Storm-related debris blocks the waterway beneath a roadway bridge in Kanawha County, West Virginia.

Eric Cheng

Debris SME Tracey Keel reviews the locations of current debris storage and reduction sites and available landfills for the affected counties.