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U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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David Hagman



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On the cover: Louisville District employees sorting mussels by Lock and Dam No. 6 as part of the mussel rescue on Green River in Kentucky.



**Please conserve:
Think before you print.**

Commander's Comments

Ladies and Gentlemen,

This year has picked up right where 2016 left off as all of us have been very busy.

In this issue we will highlight key areas where we are celebrating successes as well as taking care of our people. One example of this is later in February we will celebrate National Engineers Week. This event gives us an opportunity to outreach with many prospective STEM professionals of the future while acknowledging our current engineers in the organization. We also highlight the LDP I class as they continue to progress through their time in that program. Both of these examples focus on our team and your commitment to personally challenge yourselves to be better employees and make our organization better.

These efforts coupled with the continued strong project performance with work like the Nike SL-10 cleanup and the mussel rescue on Green River at Lock and Dam 6 reinforce why we had such a strong turnout at the recent Louisville District Open House. I had the opportunity to talk with many of our contractors past and present at that forum and they all wanted to tell me how good it was to work with our team – you should all be proud of that. They also want to see how they can work with us in the future and, again, that is a testament to the professionalism and dedication of you all.

Finally, I want to conclude by welcoming Barry Wright as the district's new safety chief. Barry brings a wealth of experience to the job and an equally



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

impressive level of energy. That is a fitting wrap-up to us taking care of our people and executing our mission because all of that has to happen safely or we can never be a success.

Thanks again for all that you do!

Building Strong and Taking Care of
People!

Chris

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Corps assists in mussel rescue on Green River

Carol Labashosky, public affairs

During November, Lock and Dam No. 6 on the Green River, Kentucky, developed a breach that subsequently began lowering the upstream pool putting many mussel beds at risk of exposure.

Due to the combination of lowering of the pool and reduced discharges from Nolin and Green River Lake dams, approximately eight shoals or islands were exposed that were home to mussel species. Mussel beds, in this circumstance, became exposed due to the decrease in water level due to drought and the dam deterioration.

A collaborative effort was then set in motion, to help relocate the mussels. Mussels need to be underwater to survive. It was led by the Kentucky Department of Fish and Wildlife Service.

The Green River Pool 6 mussel salvage was organized by Kentucky Department of Fish and Wildlife Resources (KDFWR) and Mammoth Cave National Park, U.S. Fish and Wildlife Service and the Army Corps of Engineers.

Four planning biologists Mike Turner, Todd Hagman, Drew Russell and Lynn Jarrett along with Nolin Lake Park rangers Jonathan Fillingham and Libby Watt assisted with the relocation of approximately 2,000 mussels on a 3.5-mile stretch of the Green River. The mussels were moved to an area of the river where the water levels are not likely to fall.

"I felt really fortunate to be able to



Todd Hagman

The team takes the exposed substrate and pours buckets of water to clean the area to distinguish the difference between rocks and the freshwater mussels.

help participate in the recovery efforts on this emergency situation," said Hagman. "As an Aquatic Biologist who conducted my Master's thesis research on federally endangered freshwater mussels, it was very rewarding to finally get my hands wet and work with mussels again in a professional capacity," said Hagman. "This group of animals are some of the most highly imperiled in the world and the general public has little understanding of them. The Green River is an ancient river that predates the Ohio River. It has several species of fish, mussels and crayfish and others that are endemic and only found

within the Green River and nowhere else in the world."

USACE personnel, supported by KDFWR and park service boats and equipment, assisted to collect, inventory and relate the mussels, some of which were federally-listed endangered species. A 100 plus year-old washboard mussel was identified. The rescue took place between the Green River Ferry downstream to Lock and Dam No. 6.

KDFWR retained several rare species to return to the Center for Mollusk Conservation in Frankfort for propagation and restorative efforts.



Todd Hagman

The search efforts for the mussels began in the areas along the shorelines where there was a distinct band of where the original waterline was prior to the sudden drop of water level.



Todd Hagman

Collection of mussels salvaged from Lock and Dam No. 6 on the Green River.

Innovative technology to aid in environmental investigations

Katie Newton, public affairs

The Louisville District, working with U.S. Army Engineering and Support Center, Huntsville, will be using cutting-edge geophysical technology at three Formerly Used Defense Sites this year.

The munitions response projects—Lockbourne Air Force Base and Camp Sherman Artillery Range in Ohio and Camp Breckinridge in Kentucky—will be some of the first in the nation to use the technology for purposes of determining nature and extent of munitions contamination.

“Although this technology was developed primarily for site remediation, there are numerous benefits of using it in the characterization phase such as more reliable data obtained without the need to make physical contact with items that have the potential to explode,” said Nick Stolte, environmental engineer with the U.S. Army Engineering and Support Center, Huntsville (HNC).

Munitions response activities involve detection and inspection of buried metallic objects—or anomalies—that may be Munitions and Explosives of Concern (MEC) and because traditional munitions response actions using single loop sensors require a significant amount of digging to determine if they are MEC or other metallic debris, an innovative solution was needed.

“Often, less than one percent of the



The Geometrics Metal Mapper 2x2 allows for Advanced Geophysical Classification to differentiate between Munitions and Explosives of Concern or other non-hazardous metallic objects.



New geophysical technology allows teams to detect and classify anomalies as Munitions and Explosives of Concern or other metallic debris more efficiently at Formerly Used Defense Sites. The man portable vector (MPV) shown above is a handheld technology designed for use on sites where vegetation or terrain limit access to the vehicle-based Metal Mapper.

detected anomalies are actual MEC; thus, this method expends a huge amount of resources digging up items that turn out not to be hazardous,” said Stolte.

The Department of Defense, through its Environmental Security Technology Certification Program, developed new geophysical sensors capable of detecting and classifying anomalies as MEC or other metallic debris for use in munitions response activities. This process, known as Advanced Geophysical Classification (AGC), allows geophysicists to locate and distinguish between ordnance and other metallic items more efficiently.

“The AGC fits physics-based models to the observed sensor responses to determine physical characteristics such as geometry and wall thickness. The physical properties are compared to a library of known MEC items to classify them based on the closest match and then the library match forms the basis for determining if anomalies are potentially MEC or other metallic debris,” said Stolte.

Additionally, advanced classification has been shown to significantly reduce the

cost of a munitions response.

“The project teams are developing creative and innovative approaches with the technology that will set a precedent for the Defense Environmental Restoration Program,” said Stolte.

“This is a huge national initiative coming to fruition via the HNC and Louisville District partnership we have developed,” said Chris Karem, chief, Louisville District Environmental Branch.

“In 2013, HNC and the Louisville District signed a memorandum of agreement to form a Combined Support Center (CSC) for munitions response. These projects are a great example of how this partnership works, with scientists and engineers from Louisville and Huntsville forming virtual teams to contribute their expertise and promote coordination and cross training,” said Karem. “Nick’s expertise, dedication to excellence and excitement about this technology is contagious and has happily spread to myself and my staff.”

USACE shares proposed cleanup plan at Nike SL-10

Katie Newton, public affairs

The U.S. Army Corps of Engineers (USACE) Louisville District hosted a public meeting Jan. 9 to share the proposed remedy at the former Nike SL-10 launch area—a formerly used defense site (FUDS) near Marine, Illinois.

The Corps' recent remedial investigation concluded that there is a small groundwater contaminant plume remaining in the southwest corner of the site, which are assumed to have originated from the former missile assembly building where solvents were likely used.

"Remedial action must be taken to protect human health from exposure to site-related contaminants of concern in the groundwater at the site," said Karen Rabek Louisville District geologist.

The site, which was used during World War II for Nike Hercules surface-to-air missile systems, became excess in 1968 when the mission ended. As part of the Defense Environmental Restoration Program-FUDS cleanup program, USACE manages the cleanup at properties where there is Department of Defense generated

contamination.

The recent feasibility study, which evaluated the cleanup alternatives against nine different criteria ranging from cost, short-term effectiveness, and even community acceptance, found the best remedy for the site to be Monitored Natural Attenuation (MNA) and Institutional Controls (ICs).

"This proposed remedial action provides protection of human health and the environment while having the lowest impacts to workers and the environment," said Rabek.

"Since the groundwater contamination is currently stable, and possibly even shrinking due to naturally-occurring processes, the recommended remedy of monitored natural attenuation was proposed," said Rabek. "We will conduct groundwater monitoring to verify that contaminants of concern concentrations continue to decrease, that the plume does not appreciably expand, and that natural attenuation processes remain effective."

ICs are administrative and legal land use controls that place limitations



Katie Newton

Members of the public gather at a meeting Jan. 9, 2017 to comment on the Proposed Plan for the Former Nike SL-10 Launch Area near Marine, Illinois.

on what activities can take place on a property and thereby limit exposure to site contamination.

"The IC recommended for the onsite property is an environmental covenant restricting onsite groundwater use until groundwater remedial goals are met," said Rabek.

USACE will incorporate any comments received during the public comment period into the Decision Document which will be finalized in spring 2017.

Emergency Operations

Corps helps with aftermath of Hurricane Matthew

Abby Korfhage, public affairs

Louisville District's Tracey Keel deployed in support of Hurricane Matthew cleanup operations after the storm swept across the Atlantic Ocean in fall 2016 and made landfall in the U.S. leaving behind



Tracey Keel

The helicopter pilot prepares for an aerial tour of North Carolina's coastline so the team can better assess the flood damage.

massive damage. At the request of Region IV Federal Emergency Management Agency (FEMA), Keel deployed to the Joint Field Office in Raleigh, N.C., October 13, as the debris subject matter expert on site.

The hurricane dumped more than a foot of rain 100 miles inland, swelling streams and rivers to levels above what Hurricane Floyd produced in 1999. About 1 million homes were without power, some for days. Hundreds of roads were closed, including major interstates, and thousands of people were forced to leave their homes.

During his 16 days, Keel provided debris support with aerial surveys, debris strategies and initial estimates to the FEMA team.

"My mission was to work with the state agencies to give them guidance in debris removal and disposal and to ensure they conducted their operation such that



Tracey Keel

A house in North Carolina surrounded by water from Hurricane Matthew.

FEMA would reimburse them their full cost share," Keel said.

Gerald Thornberry was also tasked to support the mission, here in Louisville District's emergency operations center, by providing Geographic Information System support.

Louisville District welcomes new safety chief

Abby Korfhage, public affairs

Barry Wright is Louisville District's new chief of safety and occupational health bringing with him 30 plus years of experience in industrial hygiene, public health, safety and occupational health management. He has served as the safety chief in the Walla Walla District and most recently spent three years as the safety program manager for the Department of Veterans Affairs.

Wright started with the district in November 2016 which gave him a month with his predecessor, Matthew Burg.

"This transition gave me a better perspective and knowledge in the fundamental operations of not only the safety office but the district as well," said Wright.

Wright has big goals for the safety program. "One of my primary goals is making safety accessible, integrating education and crusading our purpose that we are here to serve the district. We work for you," said Wright.

In his new role, Wright is responsible for managing the District Commander's Safety and Occupational Health Program. He provides consultation and assistance to



Lt. Col. Robert Newbauer with Barry Wright, the district's new safety and occupational health chief.

the uniquely specific design and construction programs for the military and reserve operations. His office also provides assistance for the safe operations and maintenance of the district's navigation locks and dams and 20 flood risk reduction lakes.

"We want everyone to know that my staff is here to help," said Wright. "We have over 90 years of experience in our

office and subject matter experts in all facets of safety and occupational health. We are a resource for the district and I look forward to getting out and seeing our operations and meeting the personnel that makes us the excellent organization that I am extremely proud to be a part of."

Illustration by Jack Sweeney

Spotlight

Lamkin nominated for HQ award



Carol Labashosky, public affairs

Ken Lamkin, Louisville District Hydrology and Hydraulics (H&H) section, engineering, is the Great Lakes and Ohio River Division nominee for the USACE Hydrology, Hydraulics, and Coastal Community of Practice Professional of the Year Award.

Lamkin has been with the Corps of Engineers for more than 16 years and is currently the lead H&H engineer for all design and construction issues of "Mega" Olmsted Locks and Dam project. "Lamkin has worked diligently with Olmsted Division leadership and construction personnel to make decisions towards successfully achieving the safest, least risk, least cost project for construction and

long-term operation and maintenance," Kyle McCune, P.E., Chief, Water Management Division.

Great Lakes and Ohio River Division, U.S Army Corps of Engineers said in an email: "In addition to his excellent support of such a substantial project Ken continues to be a great mentor to the many new engineers starting their career with the Hydrology and Hydraulics Design Section, and has led many of their development by providing exposure to and requesting their assistance with the several challenging projects currently being undertaken in the Louisville District," said McCune.

Lamkin will now go on and compete at the headquarters level. A winner will be announced in March.

USACE

Open house opens doors to opportunities

Carol Labashosky, public affairs

The Army Corps of Engineers Louisville District held an open house and Federal Forum on Jan. 19 at the Marriott Hotel, downtown Louisville where Col. Christopher Beck, Louisville District commander encouraged the audience of approximately 300 to think about what makes a successful team and project.

Beck welcomed the group which included members of Society of Military Engineers (SAME) Kentuckiana post and businesses who could potentially do work to support the Louisville District missions.

“The purpose is to deliver the project,” said Beck. “That is the most strategic thing we do.”

Beck asked the audience to think beyond the concept of partnership and to consider interdependence. “Keep in mind why we are doing the project – whether it be so soldiers can train or to support veterans – we need to keep the commitments we make.”

Problem solving during the project’s timeline was another point, Beck stressed.

“Site conditions can change or getting materials, but at the end of the day, if there is a problem, we sit down at the table, roll up our sleeves and solve problems.”

Sharon Bond, chief of civil works, planning, programs, and project management Branch, provided an overview of the district’s civil works



A crowd of approximately 300 attended the open house hosted by the Louisville District Jan. 19, 2017.

program, including project updates, programmatic funding outlook and future contracting opportunities. Besides mentioning the district’s two mega-projects, the Olmsted Locks and Dam construction project and the Rough River Dam Remediation, she discussed flood risk management projects such as one in Paducah, Kentucky, where pump stations are being reconstructed and the White River Indianapolis North levee and floodwall project. Ongoing flood risk management, ecosystem restoration, and emergency stream bank protection projects being implemented under the Continuing Authorities Program were also covered.

Under the Planning Assistance to States program (PAS) watershed planning projects may become opportunities for business. The district is also looking at projects that can be “deauthorized, and the disposal process undertaken.” The Kentucky Locks and Dam 1-4 is one such project that is underway, starting with a feasibility study. Environmental documentation is required to complete the studies leading to disposition of federal property. In the case of Kentucky River Locks and Dams 1-4, the Kentucky River Authority currently operates and

maintains the projects and is interested in assuming future ownership of the facilities.

Bond mentioned the Ohio River Basin Alliance which is an organization that looks at ways to advocate for protection and preservation of the Ohio River, similar to the Great Lakes Coalition. The Corps assists in this endeavor by helping to develop priorities with other organizations. She also provided a brief update on the status of development of the FY 19 budget, and the recently enacted Water Infrastructure Improvements for the Nation bill.

Other presentations included military, interagency and international services, small business, and architect-engineering opportunities.

“The Louisville District has a long history of success hosting the annual open house,” said Crystal May, deputy of small business.

“This event provides invaluable information to both large and small businesses as district leadership provides an overview of our entire program. We have a strong commitment to help make these businesses successful and being able to network throughout this event enables us to make these connections.”



Russ Boyd, deputy, planning, programs and project management, presents on the Louisville District military programs.

LDP I: Preparing for tomorrow

Lori Kullberg, executive office

The Louisville District 2017 Leadership Development Program (LDP) Level I is underway with 15 employees from various offices throughout the district working to lead where they stand.

"We are very excited to move forward with LDP I as this is the first time we have had a level I class in the Louisville District in recent history," said Col. Christopher Beck, Louisville District Commander. "The target audience is lower graded employees that are not yet eligible for LDP II. The course goal is to help these individuals learn more about themselves and their potential as future leaders."

With a diversity of talents, background and experience, the LDP I participants exhibit the desire to develop personally and professionally. The employees selected for the 2017 LDP I are Jake Allgeier, Abby Korfhage and Rachel Williams, engineering; Michael Crain, Larry Dunning, Shawn Riley, William Edwards and Danielle Robertson, operations; Dawn Cook, construction; Sabine Cox and Jeremy Davis, planning, programs and project management; Tre Barron, regulatory; Lori Kullberg, executive office; and Glenn Moon and Casey Ross, contracting.

"I was excited to apply when I realized this wasn't a supervisor development program, that anyone can be a leader,"



Col. Christopher Beck presents an overview of the Louisville District to the LDP I class in February.

said Tre Barron, environmental protection specialist, regulatory. "You don't have to be a supervisor to lead; you can lead by example, work ethic and character."

The objective of the LDP Level I Program is to provide participants the skills to gain better understanding of themselves and how to lead informally through formal training, mentoring, and life-long self-development. The group met for the first time in October and will meet every other month face-to-face and have virtual meetings on the off months. The group will do self-assessments, read leadership articles, view a Technology, Entertainment, Design

(TED) talk, and prepare a short presentation. In addition, district senior leaders and LDP II and III graduates will meet with the class and offer leadership sessions and mentoring.

"One of the program requirements that I believe is especially beneficial is having a mentor," said Dana Craig, Great Lakes and Ohio River Division regional workforce development specialist.

"LDP participants can learn so much from a mentoring relationship: it provides opportunities to improve networking and leadership skills; builds knowledge; offers an improved understanding of their role in the organization; gives insight to the culture and unwritten rules of the organization; and provides a supportive environment in which successes and failures can be evaluated."

District senior leader session topics will include interpersonal skills, public speaking, written and oral communication, time management, learning about leadership styles, career development, resume writing, and interview skills.

In November, the LDP I class met with Brig. Gen. Mark Toy, Great Lakes and Ohio River Division Commander, when he conducted a town hall in Louisville. The group had the opportunity to have a question and answer session with Toy in a more casual lunch-time environment.

The LDP I program will conclude in July 2017.



Jerry Edwards, Casey Ross, Danielle Robertson, Sabine Cox and Jake Allgeier met in a small group to discuss Technology, Entertainment, Design (TED) talks and the articles each of them read as part of the program's curriculum at the face-to-face meeting on Feb. 7, 2017.

Students 'dream big' during engineers week



Louisville District engineers demonstrate Building Information Modeling to students at Scott Middle School at Fort Knox during a previous STEM event.

Katie Newton, public affairs

"Engineers Dream Big" is the theme behind this year's National Engineers Week, which the Louisville District is supporting in full force through a series of educational events designed to inspire young minds.

"National Engineers Week is a great opportunity to celebrate our teammates that have achieved professional accreditation," said Col. Christopher Beck, Louisville District Commander. "It is also an opportunity for our team to reach out to universities in our area and excite future engineers about the career upon which they are embarking. All of these efforts let us celebrate STEM education and its criticality to the future of our organization, enterprise, and nation."

Civil Engineer Corey White, who is spearheading the outreach events during the week of Feb. 19-25, says it's important to support Engineers Week to introduce students to the engineering career field.

"For me personally, I like talking to the high school students about engineering because when I was in high school I didn't even know what engineering was; I had to Google it. I read about engineering and I still didn't understand fully what it was," he said. "I really enjoy doing this and sharing it with students so they can understand a whole career field that they didn't even know about."

A number of events are planned by the

Louisville District including support at four different engineering career fairs at the University of Kentucky, Virginia Tech, and Centre College on Feb. 21 and the University of Louisville on Feb. 23 where Louisville District staff will be on-hand to provide information about a career with the Corps of Engineers.

On Feb. 22 there are two separate speaking engagements planned for Mercy Academy High School and approximately 160 students at Presentation Academy.



Students at Noe Middle School in Louisville, Kentucky work to design a bridge during a STEM event held by the Corps of Engineers Louisville District as part of the district's ongoing outreach program to introduce students to the engineering field.

"This presentation will give students an insight on the engineering field, the different types of engineers, and what you have to go through in college to become an engineer," said White.

In addition to speaking engagements, the Louisville District is participating in the Kentucky Science Center's annual Engineers Week program from Feb. 23-25 where kids can do hands-on activities and have one-on-one interactions with STEM professionals. "We will demonstrate a flood scenario using a model city containing levees and floodwalls so we will be able to show the kids what we do as engineers to reduce flood risk," said White.

The week's events will conclude on Feb. 24 with White, and fellow engineer Lucy Schurr speaking to approximately 40 students at the University of Louisville's J.B. Speed School of Engineering about the Corps and what job opportunities might exist as well as the district's missions and important role in navigation, construction and flood risk management.

"Our support of Engineers Week programs and activities will help cultivate great minds across all STEM fields, not just engineering," said White. "Our hope is that we can inspire students to pursue careers where they can have a positive impact on the world through engineering or other STEM fields. This is an investment that will have great returns."

