

Falls City Engineer

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U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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shortens schedule
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On the cover: The Louisville District recently partnered with the U.S. Army Corps of Engineers Huntsville Center (HNC) to conduct a survey of the Castner Range at Fort Bliss, Texas.



Please conserve:
Think before you print.

Commander's Comments

Team,

It certainly has been a challenging summer. First, I want to recognize those among us who are subject to the government furlough. You are never far from my thoughts, and I am aware of the hardship the furlough causes you and your families. This situation is one I had hoped would be avoided; yet, despite the difficulties, you have responded with resilience and dedication, showing the strength of character I've come to know and admire in our nation's public servants. Thank you.

Cuts brought on by the budget sequester have impacted most of our offices and projects, making things tough on many levels. We still strive to provide excellent service; however, it must be acknowledged that during the furlough, some work will inevitably be missed. This goes against the grain of all of us, I know. We simply cannot complete 100 percent of our goals in only 80 percent of the time we had anticipated. Furthermore, the realities of the sequester mean overtime and compensatory time can only be approved in circumstances that would cause a critical mission failure.

For our military mission, my intent is to focus our efforts on getting expiring funds obligated by the end of the FY in support of our many supported commands. If we were to fail in this one area, our future year workload and corresponding workforce would be artificially diminished, and the soldiers and airmen who live and work in the facilities we build would suffer.

The furlough will unavoidably cause us to slip in other missions, and I've asked the division chiefs to keep track of them so that we can quantify the true cost of the



Col. Luke T. Leonard
Commander and District Engineer
Louisville District
U.S. Army Corps of Engineers

furlough on both your pocketbooks and our lost productivity.

Finally, this month we mark the transition of Mr. David Dale, who has been selected to the ranks of the Senior Executive Service and will become the Division Programs Director in Cincinnati. David started here as an intern in 1985 and has been our Deputy District Engineer for the last ten years. I cannot imagine what the District would have done without his leadership through the BRAC, the 2011 flood, the McAlpine Lock rehabilitation project, and now at Olmsted. While I'm sad to see him leave us, I am happy that he's headed for a position to bring his considerable experience and wisdom to our higher headquarters.

Building Strong!

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Dredge's success cuts Olmsted costs, shortens schedule

Jon Fleshman, Olmsted Division

The words “faster, better, cheaper” are sweet music to the ears of any serious steward of the taxpayers’ money, and this summer the Hurley delivered.

“Historical dredging costs have averaged \$16.75 per cubic yard, and the Hurley cost \$6.41 per cubic yard,” explained Olmsted resident engineer Brad Bradley. “The cost savings on the material it removed from the dam construction footprint is well over a million dollars and that doesn’t count the savings from improving the schedule.”

It was the first time in the history of the project a dredge was used to clear the area on the river’s bottom where the dam shells would be placed. The Louisville District regularly contracts for cutterhead dredges to keep the navigation channel open on the lower Ohio River. The U.S. Army Corps of Engineers Dredge Hurley was chosen for its special features.

The 353-foot-long, 108-foot-wide dustpan dredge vessel is out of Memphis, Tenn. Its two 1,500-horsepower motors drive pumps that can remove as much as 5,000 cubic yards of sand and sediment from the river bottom each hour using a vacuum-cleaner type head and deposit it safely outside the navigation channel via a long floating pipeline. It can dredge as deep as 75 feet if conditions require, which they did.

Frank Segree, the master of the Hurley, headed up the 47-member crew who worked 12-hour-shifts around the clock moving the dredged material through 1,150 feet of pipe to be surface-discharged downstream. While the diesels hummed below decks, head cooks like Helen



Jon Fleshman

Surface-discharged material removed by the Dredge Hurley from the Olmsted dam footprint means Sill Shell 5 in the background to the left is closer to being placed in the tainter-gate section.

Howard were busy in the galley ensuring hearty, balanced meals sustained the force. Marine mechanic Cletus Russell from Mumfordsburg, Tenn., endorsed Howard’s culinary skill with a satisfied smile. “These meals are fantastic,” he said.

Though it was the first time Segree had worked the Ohio River, the Vicksburg, Miss., native confirmed in his double bass voice it was pretty much business as usual: “Same kind of work, just a different place.”

Barry Vessels was a key player in getting the Hurley and then the permits. As the Louisville District’s navigation and dredging team leader he’s also a member

of the USACE Mississippi Valley Division’s regional shallow draft dredging team.

“The states require water quality permits for most river work, including dredging and open-water disposal,” Vessels said. “The Kentucky Division of Water (KDW) handles the permits for most of the Ohio River which falls within the state boundaries.”

The original Olmsted permit for clam-shell dredging required on-shore disposal, and Vessels had to establish open-water sites in 2012 for channel maintenance

Continued on page 4



Jon Fleshman

The USACE Dredge Hurley from the Memphis District dredges material from the Olmsted dam construction footprint.

Continued from page 3

dredging due to the extremely low water. This spring he and Olmsted project manager Matt Lowe traveled to Frankfort for a face-to-face to allay KDW's concerns about the potential environmental impact of more open-water disposal.

"The presentation quickly illuminated the time-event progression of large sand waves working past Olmsted which prevented the area from being a stable environment for mussels and fish," Vessels explained. Vessels was also able to address KDW's apprehension about the

fish spawning season April 15-June 15 by pointing out that the area for open-water spawning between Cairo and Smithland, Ill., covered more than 20,000 acres and the dredging and pile driving would impact less than 10 acres.

Bradley said the Hurley performed pretty much as expected. In addition to removing the sand wave, it dredged a large silt trench that he said is helping reduce sediment infill on the foundation footprint.

"The Hurley's work around the pile heads on the tainter-gate footprint for Sill

Shell 5 was experimental for us," Bradley said. "We did not get all the material removed from around the pile heads that we would have liked, but a large amount was removed and dive time on the footprint should be significantly reduced."

He estimated the Hurley has the potential to put the project schedule ahead by about six weeks on an annual basis when normal seasonal low-water conditions return.

Environmental

Louisville engineers survey desert terrain at Fort Bliss



Aaron Steele

The Louisville District partnered with the USACE Huntsville Center to conduct a survey of the Castner Range at Fort Bliss, Texas.

Katie Newton, public affairs

U.S. Army Corps of Engineers (USACE) Louisville District staff members Craig Coombs, environmental scientist and Aaron Steele, environmental engineer recently partnered with the USACE Huntsville Center (HNC) to conduct a survey of the Castner Range at Fort Bliss, Texas.

The pair joined four other USACE experts — two from Huntsville District and two from Fort Worth District — to conduct the 2,500-acre survey June 10-12.

The survey, a search for anomalies or Munitions of Explosive Concern (MEC), consisted of visual and electromagnetic components with a metal detector.

A digital grid was laid out over the property boundary on 50-foot intervals to survey the acreage. "The two teams, each with one person from Louisville, one from Ft. Worth, and one from Huntsville split

up and walked the grid pathways," said Steele. "Each team had a hand-held device with a GPS locator on it that we could follow to the next point on the grid."

As the teams would navigate from one grid point to the next they would perform a visual inspection and sweep with the metal detector. "At 100-foot intervals we would record, on the GPS device, any anomalies that were found," said Steele. "This data was geo-referenced and recorded into an ArcGIS database in real time as we were entering the data we collected."

The next step to completing the survey is to finish surveying a small portion of extremely rugged terrain that wasn't able to be surveyed due to access restrictions. Coombs and Steele have offered their services to help complete the un-surveyed portions at a later date.

"The ultimate goal of the survey will be to make a recommendation to the deci-

sion makers on if additional investigations are warranted and if a risk to users of the site exists," said Coombs.

Additionally, this survey also served as a great training opportunity for the Louisville District staff members. "Our environmental engineering branch doesn't have the same area of expertise in the Military Munitions Response Program (MMRP) realm that they do," said Steele. "Identifying MEC and running the electromagnetic device is something that we still have to become familiar with."

"More partnering like this survey and additional training would be a path towards becoming more valuable to the Huntsville Center," said Steele.

Harmful algal blooms cause concern at Corps lakes

Todd Hornback, public affairs

The U. S. Army Corps of Engineers is cautioning boaters and swimmers at several district lakes about possible contact with blooms of blue-green algae capable of producing toxins that can be especially harmful to small children, those with illness and animals.

Although a natural occurring phenomenon in lakes and streams, higher counts of the harmful algal blooms have been found at Louisville District Brookville, C.M. Harden, Mississinewa, Patoka, Roush, and Salamonie reservoirs in Indiana; Barren River, Nolin River, Rough River and Taylorsville reservoirs in Kentucky; and C.J. Brown and Harsha reservoirs in Ohio. The Corps is monitoring other district lakes to see if there are additional blooms at other reservoirs.

"We want to keep the public informed of the harmful algal blooms and let everyone know of simple precautions lake visitors can take while still enjoying our recreational opportunities," said Diane Stratton, Rough River Lake Corps park manager, one district Corps lake with algal blooms above the 100,000 cell count.

The lakes remain open to recreational users for swimming and boating but visitors should be aware of the possibility of adverse health impacts associated with contact with the water.

Precautionary measures include:

- Avoiding contact with visible algae and not swallowing water while swimming.
- Taking a bath or shower with warm, soapy water after coming in contact with water in ponds and lakes, especially before preparing or consuming food.
- Removing fish skin and organs before cooking; do not consume or allow animals to consume the organs or skin.
- Washing clothing, rinsing lifejackets and equipment with fresh water after use.

Animals should not be allowed to swim in or drink untreated water from these sources. Animals can be poisoned by the toxins produced by some algal blooms. Small animals can ingest a toxic dose quickly.

Dogs are particularly susceptible to blue-green algae poisoning because the scum can attach to their coats and be swal-



Harmful algal blooms at J. Edward Roush lake in Huntington, Ind., this summer.

D.J. Unger

lowed during self-cleaning.

According to World Health Organization guidelines, the algal cell counts are at the cautionary level, and present a higher risk of causing health concerns for all people and animals that come in contact with the water. Clinical signs of blue green algae poisoning in animals include vomiting, diarrhea, decreased appetite, weakness, seizures and in extreme levels of toxins, sudden death, especially in livestock.

The Corps of Engineers is working with state agencies in Indiana, Kentucky and Ohio to:

- Continue water quality monitoring and provide results to the public
- Monitor any potential blooms on site at the lake
- Post advisories at the lake in conspicuous places – either "advisory" (potential health affects) or "caution" (more significant risk of health impacts of HAB)
- Keep boaters, swimmers and those who recreate at the lake informed of the possible risks

"Harmful algal blooms are not typical algal blooms," said Clark Dorman, manager of the Water Quality Branch, Kentucky Division of Water. "HABs are a form of cyanobacteria, or blue-green algae, that may produce toxins that can cause nose and skin irritation and other illnesses in humans and animals....As the summer progresses, we will continue to track these levels and advise the public appropriately."

Barren River, Nolin River and Rough River lakes provide water to local water/utility companies. The utility companies have been notified of the algal blooms. For specific inquiries about drinking water quality, contact the local utility office.

Factors promoting algal growth include sunlight, warm weather, low turbulence, sewage and nutrient sources such as phosphorus and nitrogen. Phosphorous is particularly important in fueling cyanobacteria growth in the harmful algal blooms.

"The presence of harmful algal blooms does not signify toxins are present, but does signify the possibility of toxins and possible impacts to people and animals. It's important that people are aware so that they can make an educated decision for themselves and their families," said Jade Young, Corps biologist. "People need to take into account their individual health concerns before participating in water recreational activities. Harmful algal bloom levels vary and can impact individuals differently."

For more information

Visit the [Louisville District HAB page](#)
If you have questions, contact the U.S. Army Corps of Engineers lake offices:

Barren River Lake: (270)646-2055



Brookville Lake: (765)647-6701

C.J. Brown Reservoir: (937)325-2411

C.M. Harden Lake: (765)344-1570

William H. Harsha: (513)797-6081

Mississinewa Lake: (765)473-5946

Nolin River Lake: (270)286-4511



Patoka Lake: (812)678-3761

Rough River Lake: (270)257-2061



J. Edward Roush Lake: (260)356-8648

Salamonie Lake: (260)782-2358

Taylorsville Lake: (502)477-8882

Corps completes Infantry Platoon Battle Course

Katie Newton, public affairs

The Corps recently completed a sprawling 500-acre Automated Infantry Platoon Battle Course (IPBC) at Fort Knox, Ky., where Soldiers can train.

The project converted a previously used Tank and Bradley gunnery range, known as the Cedar Creek Range, into a new battle course, which will train and test infantry platoons on the skills necessary to conduct tactical operations with direct and indirect live fire.

"It's a very important project because it not only supports all units training here at Knox, but also units who travel here to train so it's very important for the Army overall," said Rodney Manson, installation range control officer, Fort Knox.

The battle course features 43 stationary infantry targets, six stationary armor targets with battle effects simulator, one moving armor target, nine machinegun-observation bunkers equipped with a sound effects simulator, eight mortar simulation devices, 14 moving infantry targets, one trench obstacle, two helicopter landing zones and one assault/defend house to ensure optimal training for the infantry platoons.

One important feature of the new battle course is video recording capability, which provides Soldiers with real-time feedback and allows for after action reviews.



Scott Hennig

The 500-acre Infantry Platoon Battle Course at Fort Knox features trenches, which the Soldiers will use during training scenarios.

"It's one of the few ranges that has that capability," said Manson.

In addition to the battle course, there were necessary site improvements that had to be made including installation of electric service, information systems and demolition of two buildings. Other facilities that had to be constructed include the range operations center, the range operations and control area, which consists of an operations and storage building, class-

room building, covered mess, bleacher enclosure, aerated vault latrine, and ammunition breakdown building surrounding a central parking lot, and building information systems.

The \$4.2 million project was constructed by Barlovento LLC., Dothan, Ala., Construction was completed June 8, and the new range will be in use by the fall after additional computer systems and targets are installed.

Photo Contest



Ashley Warrick

First place: Haylee's favorite thing to do is ride on the boat at Nolin River Lake.

Every dog has her day

Congratulations to Ashley Warrick, winner of the 2013 Louisville District visitor photo contest. Her photo of furry friend Haylee on a boat at Nolin River Lake made the judges say "Awwwww."

Funds permitting, this photo will be featured in the 2014 Louisville District calendar.

In second place is Keith Branauer's shot from an early morning fishing trip, and Brian Churchill's photo of an evening wakeboarder came in third.

The photos, as well as previous year's winners can be viewed on the Louisville District Facebook page: <http://www.facebook.com/LouisvilleUSACE>.

The district thanks everyone who submitted photos. Keep safely enjoying the lakes, and don't forget your cameras!

Corps keeps busy with Reserve projects

Carol Labashosky, public affairs

Newtown (Danbury), Conn.



The Newton (Danbury) Conn., Army Reserve Center is approximately 75 percent complete. "We will see significant progress over the next couple of weeks," said Greg Cardwell, project manager.

Roger Frey, The Korte Company

Belton, Mo.



The Army Reserve conducted a ribbon cutting ceremony in June for the completion of the new Army Reserve Center in Belton, Mo. David Reed, project manager said the completed project was appealing and an extremely functional facility due to the way each building was located on the site. During the ribbon cutting ceremony various troop members expressed how excited and proud they were of the new reserve center. The project began construction in December of 2011.

Frederick Kraft

Michigan City, Ind.



The Michigan City, Ind. Army Reserve Center construction is projected to be complete in the fall of 2013. Tom Murphy, project manager, explained that the successful furniture installation is part of the "final punch report" which is how the Corps reviews and approves a completed aspect of a project. "The facility is very attractive, and the designer, construction team, and the furniture suppliers/installers should be commended for a job well done," said Shanna Miller, furniture project management specialist.

Candace Cornette Milligan

Volunteer first responders balance safety equation



First responders in the equipment conex are (from left to right) casting yard manager Bob Wheeler, carpenter general foreman Bobby Miller, site EMT Melissa Crisman, ironworker superintendent Glen Bragg and batch plant superintendent Rich Hamilton. The crash dummy is used for rescue drills that train removing an injured worker on a stretcher.

Jon Fleshman, Olmsted Division

Men overboard, severe abdominal cramps and a fall from a scaffold are some of the real-life emergencies Olmsted's volunteer first responder team has assisted with since it stood up in 2010, according to casting yard manager and original team member Bob Wheeler.

The Olmsted Locks and Dam construction project is on the Ohio River between Illinois and Kentucky about 17 miles upstream from its confluence with the Mississippi. Southern Illinois is an area of very small towns sparsely scattered across lightly populated expanses of soybean and corn fields. The numbers of hospitals and health care providers reflect this fact.

"We formed the first response team after one of our craft folk was injured during a concrete placement," Wheeler explains. "The emergency responders in the surrounding counties were unprepared for a response to our site and since we're in such a remote location the ambulance took nearly an hour to arrive."

General superintendent Dave Phillips assisted in getting the ball rolling.

"I held a weekly meeting for the core group and we assigned responsibilities to members," Phillips recalls. "As a team, we reviewed and completed our charter, set up and got approval to have a first-aid conex (a movable, metal container) and an on-site ambulance. We also planned and held rescue drills and held a review meet-

ing after each one for lessons learned. As a team we recruited others and held group meetings discussing the charter and defining the responsibilities of each member."

The Corps of Engineers' resident engineer notes that with a project of this size and magnitude—with marine and casting yard activities—there's a high level of exposure to site personnel.

"Having the first responders group on site gives our workers a higher level of protection," says Brad Bradley. "This is the first job I've been on that has such a developed emergency-response capacity and I've been at very, very remote sites."

Wheeler says they started by finding a few volunteers with first-response experience to help write procedure to follow in case of an incident. Then the few looked for others willing to participate and the team was formed with six or seven members. As of June 2013, 55 volunteers from laborers to crafts to office staff comprise the Olmsted first-response team — and the number is likely to increase during the low-water season when the size of the workforce peaks to handle shell-placing activities.

"There are not qualifications necessary to be on the team other than the desire to help," Wheeler says. "We train each member in first aid, CPR and use of a defibrillator. Not everyone is able to assist the injured but many are able to help by directing traffic, escorting the ambulance

and crowd control."

The Washington Group-Alberici joint venture's full-time emergency medical technician says many of Olmsted's first responders already have related training and experience.

"The team includes firefighters or those who were, some who do or did SAR (search and rescue) and some state-licensed first responders in their own communities," explains Melissa Crisman, site EMT. In addition to the classroom training she organizes, Crisman says, the volunteers participate in man-overboard drills once a month and other drills twice a year that involve responding to a variety of job-related scenarios.

"Part of the training is a constant familiarization with their emergency equipment," Crisman says. The equipment is stored in a conex trailer in the casting yard and it includes stretchers, Stokes and aerial retrieval baskets, specialized rigging, backboards, gloves, flashlights and a first-aid kit. The equipment has been compiled with the purpose of assisting the injured until professionals arrive.

"The minute 'clear channel one' happens (the channel used for emergencies on their two-way radios) and the incident location is communicated, a forklift driver goes to the conex and brings it to the incident site or as close as possible," Crisman says. She also points out that a helicopter landing zone has been prepared and setting up the ground guidance lights are part of the team's training.

The emergency response vehicle and the crash dummy used for training were rustled up by the Corps of Engineers' resident government property administrator through GSAXcess. Dave Hawley said the cost to the project was transportation of the items to the site and minor maintenance to ensure they are safe to operate.

Douglas Callor, the full-time site safety and health officer, says the combination of the members' emergency response backgrounds and their excellent reaction times to incidents are some of the team's biggest contributions to the project's safety program.

"We're remote and they can provide almost instant care to an individual," said Callor.

Engineers Without Borders

Civil engineer puts skills to use in Morocco

Katie Newton, public affairs

With a passport and work boots in tow, Brian Phelps, U.S. Army Corps of Engineers Louisville District civil engineer took a break from his desk job and flew to Morocco in June to volunteer with Engineers Without Borders (EWB).

EWB sends professionals and students to developing countries around the world to construct necessary engineering projects. When a friend and former Louisville District co-worker asked Phelps to serve as a professional mentor with a group of students from Columbia University, Phelps couldn't pass up the opportunity.

While overseas, Phelps primarily helped oversee and assist with construction of a 210-foot long footbridge in the Ait Bayoud community. "Consistent access to many facilities and services in the community such as schools, the health clinic and markets was impossible during the rainy season due to severe flash flooding over the Tagawowt River," said Phelps.

Students constructed the bridge along with local labor and two representatives from the Peace Corps. In addition to mentoring the students and troubleshooting problems, Phelps was responsible for installing safety netting on both sides of the bridge.

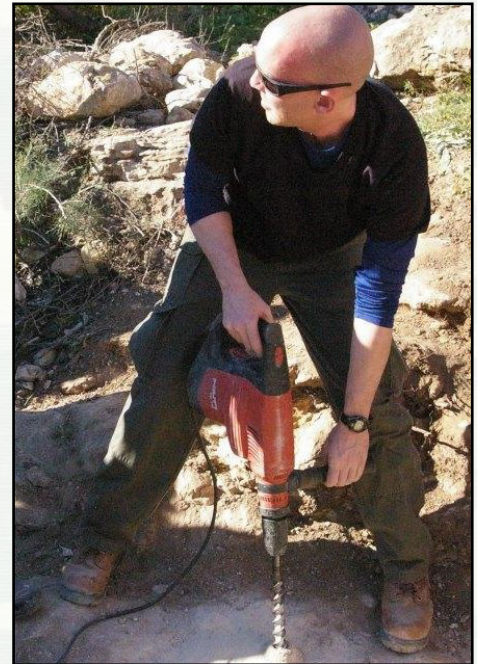
"Working with the students and helping the locals of Ait Bayoud has been an amazing experience," said Phelps. "Watching the residents cross the bridge for the first time is something I'll never forget."

Phelps, who travelled to Morocco twice this year—for ten days in January and most recently in June—says the experience has enriched his life.

"With EWB, I've been able to see a different part of the world that I more than likely never would have and have been able to meet other engineering professionals for possible networking in the future," said Phelps.



Brian Phelps



Brian Phelps, civil engineer, U.S. Army Corps of Engineers Louisville District, deployed to Morocco as a mentor with Engineers without Borders to help construct a footbridge so the Ait Bayoud community could still access their schools and health clinics during the rainy season.

Dale promoted to Senior Executive Service

Jon Fleshman, Olmsted Division

Louisville native and University of Kentucky graduate David F. Dale has been selected to the Senior Executive Service (SES) and assigned to the position of programs director for the Great Lakes and Ohio River Division, headquartered in Cincinnati, Ohio.

The SES comprises men and women charged with leading the continuing transformation of government. These leaders possess well-honed executive skills and share a broad perspective of government and a public service commitment grounded in the Constitution. Members of the SES serve in the key positions in 75 federal agencies just below the top presidential appointees, and are the major link between these appointees and the rest of the federal work force.

As the director of programs he is responsible for the development and execution of civil, military, hazardous, toxic and radiological waste, and support for others programs. The Great Lakes and Ohio Rivers Division encompasses 355,300 square miles and all or portions of 17 states in addition to the nation-wide responsibility

for Army Reserve construction.

Since 2008 Dale served as the deputy district engineer for the Louisville District, including a special assignment as the first chief of the Olmsted Division to manage the Corps of Engineers' most important inland waterways navigation project.

Dale graduated from the University of Kentucky, College of Engineering in 1985 with a bachelor's in civil engineering and since then worked for the Louisville District in a variety of construction and project management positions. Prior to becoming the district's civilian deputy he was the area engineer at Fort Knox, responsible for managing \$100 million in military and civil works construction projects in Kentucky, Indiana and Ohio. As the deputy district engineer Dale had complete oversight for executing the design, construction and operation of the district's national mission, valued at more than \$1.5 billion.

Dale is a registered professional engineer in the Commonwealth of Kentucky and a project management professional as prescribed by the Project Management Institute. He is a member of the Society



David Dale is the new programs director for the Great Lakes and Ohio River Division.

of American Military Engineers and has achieved the highest level of certification by the Corps of Engineers Planning, Programs and Project Management Community of Practice.

Braden brings wealth of experience to mega project

Jon Fleshman, Olmsted Division

Michael Braden brings years of engineering and leadership experience to the \$3.1 billion Olmsted Locks and Dam construction project on the lower Ohio River as the next Olmsted Division chief, Louisville District, U.S. Army Corps of Engineers starting July 28.

Braden has been with the Louisville District since he was a cooperative student 20 years ago and he is currently chief of the design branch in the district's engineering division. The district employs approximately 1,200 people executing civil works and military construction missions with a workforce that includes engineers, architects, planners, economists, biologists, lock operators and archeologists.

Braden holds a BA ('89) degree in European military history and a BS ('94) degree in electrical engineering, both from the University of Louisville. After completing his initial cooperative education rotations and Department of the Army

internship with the Corps of Engineers, Braden went on to Louisville District staff assignments in construction at the Olmsted resident office, architect-engineer contract management, project management for the Reserve support team and chief of cost engineering. He also completed a developmental assignment as a military program manager at the Lakes and Rivers Division in Cincinnati, Ohio, and a one-year deployment in Iraq as chief of engineering for the Gulf Region District.

The Louisville native is a registered professional engineer in Kentucky and holds certified cost engineer and project management professional credentials. Braden is facilities engineer level 2 certified and has completed the Kentucky Engineering Center's leadership PE program. He is a member of the Society of American Military Engineers and the Institute of Electrical and Electronics Engineers.

For information about the Olmsted lock replacement project, visit



Michael Braden is the new division chief at Olmsted Locks and Dam.

<http://www.lrl.usace.army.mil/Missions/CivilWorks/Navigation/LocksandDams/OlmstedLocksandDam.aspx>.