

# Falls City Engineer

January/February 2014

VOL. 6, Issue 1  
www.lrl.usace.army.mil

U.S. ARMY CORPS OF ENGINEERS  
LOUISVILLE DISTRICT



***Raising the wickets at  
Locks and Dam 52***  
page 3

***Presentation students  
hop aboard STEM train***  
page 7



## Falls City Engineer

Vol. 6, Issue 1

**District Commander**  
Col. Luke T. Leonard  
**Public Affairs Chief**  
Todd Hornback

Send articles to Louisville District  
Public Affairs office at:  
sarah.r.mattingly@usace.army.mil

U.S. Army Corps of Engineers  
CELRL-PA  
P.O. Box 59  
Louisville, KY 40201-0059

Falls City Engineer is an unofficial publication under AR 360-1, published bimonthly for Louisville District employees and members of the public by the U.S. Army Corps of Engineers, CELRL-PA, P.O. Box 59, Louisville, Ky. 40201-0059 under supervision of the public affairs office. Views and opinions expressed are not necessarily those of the Department of the Army or the Corps of Engineers.



**On the cover:** Luther Helland and Tim Morris raise one of the massive wickets making up the dam at Locks and Dam 52.

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

# Commander's Comments

Team,

2014 is shaping up to be a much different year than last year. In the news, I'm sure that you've read about the idea of significantly reducing the size of the Army, the wrap up of operations in Afghanistan and the inactivation of an infantry brigade at Fort Knox and one at Fort Campbell. These inactivations have caused the delay and perhaps eventually the cancellation of the Ambulatory Care Center at Fort Knox and of some on-post schools in development.

Despite these signals, I believe strongly that 2014 will be less turbulent for us in the Louisville District. With the passage of a budget, the threat of a government shutdown is no longer significant; and the sequester cuts that we faced last year are unlikely to return. Even though it is early in the year, we have already awarded some large contracts including the Kingsolver School at Fort Knox, the Air Force Museum Expansion at Wright Patterson Air Force Base, the Training Center at Fort Hunter Liggett, Calif., for the Army Reserves, and a barracks at Fort Campbell. Those projects alone are worth nearly \$150 million dollars and it is still early in the year.

In the executive office and at division, we're using this part of the year to develop emerging opportunities for supporting other federal agencies in and out of the Department of Defense; and we're keeping a watchful eye on our operating costs. By working both ends of the workload to workforce equation, we'll continue our tradition of being a vibrant district.



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

I want to thank those of you that participated in our recent Equal Opportunity Survey. While I'll characterize the tone of the results as overall positive, there certainly are some areas that we must improve, and I'll share those with you through the chain of command in the next few weeks.

Building Strong!

Luke

# Contents

District hosts levee safety meeting	3
Raising the wickets at Locks and Dam 52	3
USACE awards contract for Air Force Museum expansion	4
Contaminated lagoons restored to pasture land	4
Pease Army Reserve Center to be memorialized for WWII Soldier	6
Presentation students hop aboard STEM train	7
Long-serving team members share closer look at lives of distinction	8
Hearne takes QA helm at Olmsted project	9

# District hosts levee safety meeting



(Left to right) Aaron Fricke, civil engineer, Burke LLC; Rachel Wilson, and Allen Sparks, Department of Public Works, Indianapolis, review meeting topic notes such as vegetation maintenance, levee pump stations, and how building on levees affects their integrity.

Carol Labashosky, public affairs

The Army Corps of Engineers Louisville District held its annual levee safety meeting in December. The meeting brings together levee sponsors in the region, Corps' levee safety subject matter experts and levee service providers and contractors. Nearly 100 people attended.

Nathan Bryan, geotechnical engineer, Louisville District, presented on levee encroachments. He noted that a buffer zone of 15 feet is required where no structures or vegetation can exist on the levee. These

encroachments, including low hanging utility lines from light poles dug into the levee, can increase seepage risks in the levee foundation undermining its integrity.

"That's what we look for during our inspections," he said. "We look closely at the system individually and in its entirety to see how much impact encroachments can have," Bryan said.

University of Kentucky College of Agriculture Professor Gregg Munshaw spoke to the group on best practices of vegetation management on levees. Vegetation means

different things to different audiences, especially to levee safety experts. Generally, vegetation refers to trees, shrubs, bushes or weeds. Munshaw's presentation, "The Power of Turf," asks why use vegetation – meaning turf or grass – as an erosion control measure on a levee and how it can help. "It creates a barrier and fast establishment for some protection," he said. "It matters what we're planting on these levees."

According to Munshaw, the density of grass reduces the amount of water running through the levee during a rain storm. "You want to promote dense grass and deep roots," he told the group.

Munshaw gave these suggestions for levee vegetation management:

- Mow to a certain height which promotes better grass roots.
- Provide for weed control.
- Fertilizer choices make a difference.
- Improve the soils.

His presentation aligned with Corps vegetation guidance.

Attendees walked away from the meeting with new knowledge from their peers and the Corps. The goal of the meeting was to help sponsors keep levees functioning as they were designed and to ensure the levee system reduces the risks of flooding. The Corps' message was to have levee sponsors create public awareness for flood risk reduction and to promote early warning systems and preparedness.

Carol Labashosky

## Raising the wickets at Locks and Dam 52

On Jan. 27, 2014, the team at Locks and Dam 52 worked into the night to raise the wicket dam, maintaining the pool level above the dam and keeping the Ohio River open to navigation.

Locks and Dam 52, on the Ohio River at Brookport, Ill., and Locks and Dam 53 at Grand Chain, Ill., are remnants of the original 1929 river navigation system and have wicket dams that require crews to manually raise wickets one at a time.

Raising the dam is an intricate process. Aboard a maneuver boat, crew members use a long, crochet-like hook – a wicket hook – to probe the murky waters, grab the

"eye" of each wicket and pull it out of the water. All of this is done while fighting the powerful current of the Ohio River.

Following the completion of the Olmsted Locks and Dam project in 2020, the antiquated Locks and Dams 52 and 53 will be dismantled, making the specialized process something of a lost art.

Luther Helland and Tim Morris use the wicket hook to raise one of the massive wickets that makes up the dam at Locks and Dam 52.



Bryan Ammon

## USACE awards \$35.5 million contract on National Air Force Museum expansion

*Katie Newton, public affairs*

In December 2013, the U.S. Army Corps of Engineers Louisville District awarded a \$35.5 million contract for a mega-expansion at the National Air Force Museum at Wright-Patterson Air Force Base in Dayton, Ohio.

The award, made to Turner Construction Co., Washington, D.C. includes construction of a new 224,000 square foot exhibition hangar, which will mirror the design of the three existing museum hangars.

Construction is scheduled to begin in the spring of 2014 with completion expected by August 2015. The museum should open to the public later that year.

“We look forward to working with the Air Force Museum Foundation and Turner Construction Company to provide an excellent space for displaying historic



*A rendering shows the completed expansion of the National Air Force Museum.*

artifacts that will continue to tell the story of the U.S. Air Force for years to come,”

said Michael Moore, USACE Louisville District project manager.

# Environmental

## *Blue Grass Army Depot*

## Contaminated lagoons restored to pasture land



*The contaminated lower lagoon in May 2010 before remedial action began to drain the lagoon and restore it to pasture land.*

*Katie Newton, public affairs*

In 2010, Blue Grass Army Depot (BGAD) faced a great regulatory challenge with wash-out facility operations due to contaminated lagoons. The U.S. Army Corps of Engineers (USACE) Louisville District worked with BGAD to successfully restore contaminated lagoons back to pasture lands at the ammunition and storage depot in central Kentucky in record time of less than three years.

The wash-out facility at BGAD, which had long been utilized for washing and removal of energetic material from munitions items, was discharging excess water to two lagoons, known as the upper and lower lagoons when the Kentucky Department of Environmental Protection (KDPEP), ordered immediate cessation of

*Courtesy BGAD*

*Continued on page 5*

*Continued from page 4*

discharges in July 2010 due to potential contamination problems.

USACE was called in to perform a Resource Conservation Recovery Act (RCRA) investigation and remediation, which got underway immediately.

“The installation’s commitment to environmental stewardship really helped guide this project,” said Clayton Hayes, USACE project manager. “Our coordination with them, and the KDEP allowed us to chart the path and achieve a successful full restoration.”

The area, known as Solid Waste Management Unit #25 (SWMU), consisted of a lower lagoon which was the primary point for facility discharges, and an upper lagoon. The wash-out facility in a nearby building removes explosive materials—TNT and Composition B—from obsolete ammunitions using jets of hot water. The explosive materials, which dry and form into flakes, are packaged for storage and shipment, but the excess water is cleaned with carbon filtration and pumped into holding tanks to be tested before being



*Former Blue Grass Army Depot Commander Col. Brian Rogers presented Clayton Hayes, Louisville District Project Manager, with a coin on behalf of the entire USACE team during a ribbon cutting ceremony in June 2013 for being instrumental in keeping the project on a fast track and on schedule.*



*The former lagoon area in September 2013, just eight weeks after remediation, shows re-established vegetation.*

discharged into the lagoons.

By the summer of 2011 soil and surface water sampling began in the lagoons to determine the nature and extent of contamination.

“Ultimately, the investigation found no indication of contamination in the upper lagoon,” said Hayes. “But the lower lagoon—which was the primary point of water discharges—had contamination caused by decades of operation.”

Excavation and disposal of the soils at the lower lagoon was recommended. BGAD faced great regulatory challenges to correct the situation, and ultimately, the BGAD installation commander made a stewardship decision to permanently sever the lagoons from the wash-out facility. Additionally, operational changes prevented further contamination.

In February 2013, USACE awarded the project to ERT, Inc. ERT was instrumental in developing an approved work plan which involved the use of decision units and multi-increment soil sampling. This method enabled the generation of data which showed that the constituents were below the screening levels. Subsequent efforts involved regulatory coordination that led to expeditiously completing a full

restoration.

“Coordination with the installation and KDEP was paramount in getting all permits and reports processed quickly to get this project closed out,” said Hayes. “Thanks to all for great teamwork which resulted in success for this project.”

On Nov. 14, 2013, KDEP issued BGAD a letter of approval for Site Close-out/Response Complete for SWMU #25. This helped BGAD meet their regulatory and environmental commitments, while ensuring health and safety of the public and the environment.

“The former lagoon area is now fully remediated and restored with rolling hills and native grasses to match the topography,” said Hayes. “It’s like the lagoons were never there.”

Courtesy BGAD

Courtesy BGAD

## New Pease Army Reserve Center to be memorialized for World War II Soldier

*The Louisville District has constructed many Army Reserve Centers (ARC), each in its own right a tribute of concrete and steel to all Soldiers who serve America. In this story, readers will go behind the Pease, N.H., Reserve Center structure itself and explore how it came to pass that it salutes a Soldier who served his country with distinction during World War II.*

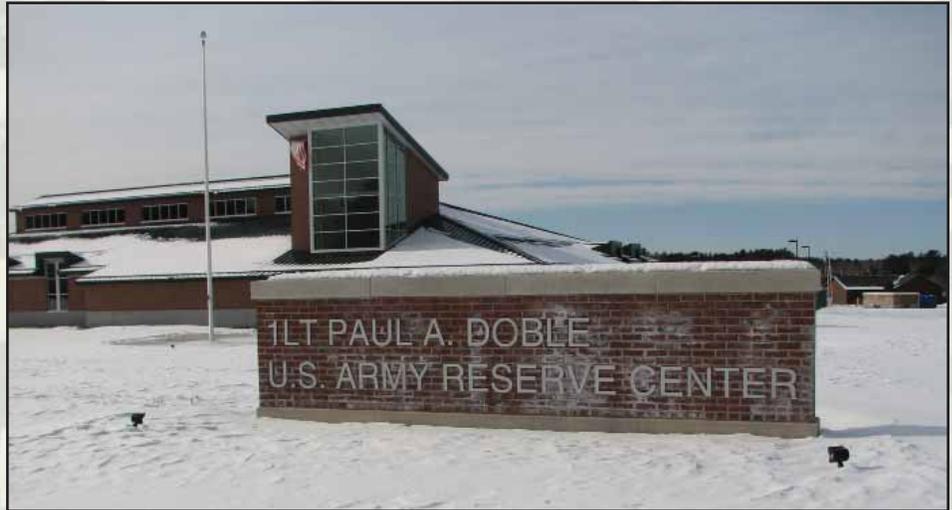
*Shawn Morris, 99th Regional Support Command Public Affairs Specialist*

The new ARC in Pease, N.H., will be named for 1st. Lt. Paul A. Doble, a Soldier with Company D, 180th Infantry Regiment, 45th Infantry Division who was killed in action in France on Sept. 25, 1944.

When the old ARC was closed as part of Base Realignment and Closure (BRAC), the Doble family began a new initiative to have the new Pease ARC



*Paul A. Doble was commissioned as a second lieutenant in the Army after completing the Officer Candidate course at the infantry school at Fort Benning, Ga.*



USACE

named for 1st Lt. Doble. The former ARC in Portsmouth, N.H., had been named for 1st Lt. Doble many years ago.

This new initiative gained the support of U.S. Sens. Jeanne Shaheen and Kelly Ayotte, U.S. Congressman Frank Guinta, and the Soldiers who will call the new Pease ARC home. The memorandum to memorialize the new Pease ARC in the name of 1st Lt. Doble was signed by the 99th Regional Support Command commanding general last year.

Doble began his Army career in the enlisted ranks in 1936, before earning his commission through Officer Candidate School in January of 1943. He was awarded the Silver Star for gallantry in action during the period of November 5-7, 1943, near Venafro, Italy.

The citation reads that Second Lieutenant Doble, accompanied by his platoon sergeant, moved to an area 50 yards ahead of forward rifle troops in order to observe mortar fire. The position selected was on top of a peak of rocks and offered no cover or concealment. 2nd Lt. Doble and his assistant remained at this observation post for three days and four nights, under heavy enemy artillery, mortar and small arms fire. During this time, in addition to adjusting the fire of their 81 mm mortars, they killed three enemy snipers. Under 2nd Lt. Doble's skillful direction, more than 800 rounds of ammunition were fired

into strong enemy positions. The courage and devotion to duty displayed by 2nd Lt. Doble exemplifies the high traditions of the Army of the United States.

The new Pease ARC will be home to nearly 90 Army Reserve Soldiers from Detachment 2, A Company, 399th Combat Support Hospital and the 378th Minimal Care Detachment. The new 21,000-square-foot center will feature state-of-the-art facilities to include educational and training space, a library, weapons simulator and physical-fitness area. The new center will be more energy-efficient and cost-effective than its predecessor.

This \$9.16 million project was awarded in July of 2011, to GM2 Associates, Inc., (builders) and Tai Soo Kim Partners (architects). The center will soon be completed.

## Presentation students hop aboard STEM train

Corps regulators teach ecology students their craft with soils, plants and preserved aquatic insects in tow

*Carol Labashosky, public affairs*

Louisville District regulators shared their knowledge and expertise on wetlands and stream ecology with Louisville's Presentation Academy junior and senior ecology students as part of the Corps' STEM (Science, Technology, Engineering, Math) outreach program.

Rosemary Gilbertson, engineering division, initiated the curriculum of regulatory projects with the school. Jamie Beach, an ecology teacher at Presentation, coordinated with the Corps. Senior Regulatory Project Manager Patti Grace-Jarrett, Ph.D., took the reins working closely with her associates to develop class material on wetland ecology, wetland applied science, stream ecology and stream applied science. Regulators Jane Archer, Jennifer Thomason and Grace-Jarrett created and gave the two stream presentations. Kimberly Simpson, Meagan Chapman and Leslie Estill designed and presented the two wetlands classes.

For wetlands and streams, the first presentation was on fundamentals of ecology. The second presentation was on the use of the ecology in an applied setting. Presentations were hands-on.



Leslie Estill

*Meagan Chapman, regulatory, presents to Presentation Academy ecology students.*

The wetland team brought wetland soils and plants for students to see. The streams group brought preserved aquatic insects. For the applied streams presentation, jars of preserved aquatic macro invertebrates, mostly aquatic insects, were passed around so the students could see what the organisms looked like. For the applied wetland presentation, wetland soils were collected that morning and

brought to class so the students could examine the color, texture and odor - all of which are important characteristics of wetland anoxic soils. A few wetland plants were also harvested; however, given the time of year, few were available. In that case, dried and labeled specimens were brought in so that students could get an idea of typical herbaceous wetland plants.

"It was very interesting that we had wetlands in our own backyard," said twelfth grader Marjorie Sheehan. "Before the Corps came I thought the wetlands only existed in the muck of Mississippi and the swamps of Savannah."

"One of the main goals of the Science Department here at Pres is to expose young women to various professions in STEM areas that they do not even know exist," said Science Department Chair Jamie Beach. "Finding good role models to share their real world experiences and knowledge from various areas of STEM is the very best way for students to discern what career path they might want to pursue."

Jim Townsend, regulatory branch chief, said, "My folks enjoyed the experience and the challenge of putting together presentations for a completely different audience than we normally interact with."

View the presentations produced by the Louisville District regulators:

[What is a stream?](#)

[Applied Stream Science](#)



Debra Hunter

*Louisville District regulators are awarded for teaching classes at Presentation Academy in wetlands and stream-related ecology. (Rear) Left to right Leslie Estill, Patti Grace-Jarrett, Kimberly Simpson, Col. Luke Leonard; (Front) Left to right Jane Archer, Jennifer Thomason, Meagan Chapman.*

*How well do you know your partners?*

## Long-serving team members share closer look at lives of distinction



Courtesy Joe Kissel

Concrete whiz Joe Kissel is also a corporal in Co. G, 114th Illinois Volunteer Regiment and a good shot with Civil War firearms.

*Jon Fleshman, Olmsted Division*

**Joe Kissel** has posted the colors for presidents Ford and Bush Sr., for presidential candidate Reagan and traveled to seven states in his Union blues since he started Civil War reenactment at the age of 15.

“I started as a FARB, for fantastic and ridiculous buffoons – guys who put on cotton dress coats and polyester pants instead of 100 percent wool because it’s cheap and from 200 yards away it looks OK,” recalls Kissel, an engineering technician for materials on the Olmsted Locks and Dam construction team. “Everything a reenactor has he has to buy on his own. Then there was a big push to become more authentic and we started looking at original uniforms in the Smithsonian.”

The military reenactors learned about weights and types of cloth and delved into Civil War-era military regulations for the fabrication and wearing of the uniforms, explains Kissel. The former Army National Guard combat engineer and commissioned officer began his reenactment enlistment as a private in Company A, 114th Illinois Volunteer Infantry Regiment, which became the governor’s official honor guard when it was reacti-

vated in 1969. These days the Springfield, Ill., native says he does more live-fire competitions and living history demonstrations than reenactments. When he moved to Olmsted he joined Company C, 31st Illinois Volunteer Infantry Regiment, and he is also a corporal and team inspector in Company G, 114th Illinois Volunteer Regiment and a member of the North-South Skirmish Association.

In addition to his half-a-dozen reproductions, Kissel owns eight original functional firearms from the Civil War era. His collection includes carbines, smooth bores, rifles, muskets and pistols.

“I typically compete with original firearms because they’re often better made than the repros,” Kissel says.

The team targets are clay birds, four-inch tiles and four-inch flower pots at 50 yards and eight-inch tiles at 100 yards arrayed on wire or cardboard backing. In 2010 at the 121st Nationals in Winchester, Va., Kissel’s crew went up against 37 teams in its class and took first place in the carbine Class A-2. In 2012 at the 123rd Nationals, Kissel took fourth place in the Class II 50-yard individual musket competition, with a score of 92 out of 100 in a class field of 142 shooters.

*Continued on page 9*

*Jon Fleshman, Olmsted Division*

Geologist and quality assurance specialist **Ken Parsons** joined the Olmsted project back when the Louisville District still had its own drilling rigs and drill rig teams.

“As a member of the Engineering Division’s drill rig team I traveled the country,” Parsons says. “One year I traveled to 11 states, from Twin City Arsenal, Minn., all the way down to the Savannah River Plant, Ga., and as far north as New Hampshire.”

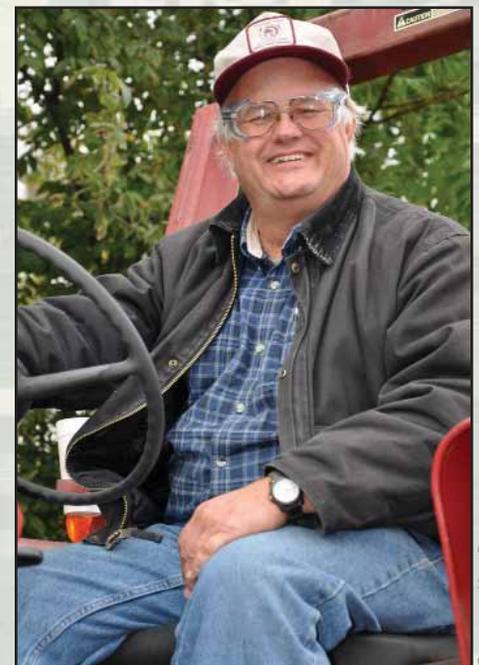
After earning a degree in geology from Ohio State and a master’s in geo chemistry from Kent State, Parsons joined the federal government in 1983. The Steubenville, Ohio, native recalls that he came down to Olmsted in 1993 to monitor drill rigs for cofferdam construction and during the next 20 years one opportunity led to another. He’s monitored the construction of the dewatering system, the massive

caissons to anchor the locks’ floating guide walls, the quality, size and pattern of the rebar mats and the placing of concrete both in the casting yard during shell construction and in the river when the shells are filled with tremie.

So far it looks like his oldest apple has not fallen far from the family tree. His 21-year-old son graduates from the University of Kentucky’s College of Engineering, Paducah, Ky., Campus, in June with a degree in chemical engineering. And when it comes to his off-duty activities, the same could be said of Parsons. He remembers when his father and grandfather had cattle and dairy farms, and he now devotes his own summer and fall weekends to making hay while the sun shines. His farms are located in Murray, Ky., south of Paducah. Parsons says he has about 115 acres split almost evenly between two parcels one and a half miles apart.

“I’d like to retire to them and put livestock on one and hay on the other,” he

*Continued on page 9*



Courtesy Ken Parsons

Ken Parsons looks forward to spending a lot more time behind the wheel when he retires to his farms.

Some of his recent successes as a Department of the Army Civilian at the Corps of Engineers are his contributions to concrete production and placement for Olmsted dam construction. Thanks to a call from a previous resident engineer, Rick Schipp, Kissel says he came to the Olmsted project 19 years ago as a quality assurance representative. Later he worked as a computer-aided design and draft-

ing technician and in 2008 he became a materials engineering technician. Kissel has been in on the customizing of mixes for the tremie concrete and the self-consolidating concrete being placed inside the steel-crowded, tight spaces of the lower pier shells and developing warm-joint placement to reduce the time required between lifts.

“Concrete mixing is exactly like bak-

ing,” Kissel explains. “You use the same basic ingredients and it depends on how you mix them whether you get a cookie, cake or loaf of bread. And yes, I do bake cake, cookies and bread from time to time. I know, for example, if you want to make a white cake don’t use egg yolks, just the whites.”

---

Parsons - Continued from page 8

explains, adding that they’re both already working farms.

He’s in the process of getting equipment for livestock production but right now he says he limits his weekend activities to raking, mowing and baling.

“That’s why there’s no cattle yet,” Parsons says. “They’re like big babies and

need a lot of attention. You can’t let them be alone by themselves.”

His wife, Oksana, has the same thoughts about rabbits and chickens which she hopes to raise once they move from Paducah to the farm. She says she also plans to have a good vegetable garden that will include tomatoes, green peppers,

egg plants, squash and pumpkins. In the meantime, Oksana says they’ve got their orchard going with apple, peach, plum and pear trees.

Can Ken make it down on the farm? “Yes, I think so,” says Oksana. “He’s good with his hands. Good with fixing stuff.”

---

## Hearne takes QA helm at Olmsted project

Jon Fleshman, Olmsted Division

His knowledge of construction on the Ohio River will hold Scott Hearne in good stead as the new chief of quality assurance (QA) for the Olmsted Locks and Dam project.

“His deep navigation civil works experience garnered while assigned to the McAlpine Lock project will translate well to our operating environment,” said Mike Braden, chief of the Olmsted Division, Louisville District.

In addition to his track record of superior performance, Braden said Hearne also has extensive supervisory and quality assurance know-how.

The Owen County, Ky., native began his career with the Corps of Engineers and the Louisville District in 1987 on the Mill Creek Flood Protection Project in Cincinnati, Ohio.

Just before the Olmsted assignment, Hearne was the chief of the construction management section for the Reserve branch in the Fort Knox, Ky., Resident Office. He said one of his most challenging projects on Fort Knox has been a mounted urban training complex for its “special effects and unique features.” He also worked on the Fort Knox Human Resource Center for Excellence, an award-winning \$200-million, 880,000-square-foot project



Madge Hearne

Scott Hearne is the new chief of quality assurance at the Olmsted Locks and Dam project.

to accommodate 4,418 employees.

As the Olmsted QA chief, Hearne will perform both technical and administrative oversight of construction at the resident office.

In addition to serving as the administrative and operational expert for construction management, Scott will coordinate

with contractors and ensure construction fabrications and inspection is accomplished according to plans, specs and the terms of the contract,” explained Mick Awbrey, Olmsted Division’s deputy chief.