

Falls City Engineer

September/October 2015

VOL. 7, Issue 5
www.lrl.usace.army.mil

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

***Construction
underway on Fort
Campbell High School***
page 6



***District's Leadership
Development Program
thrives***
page 9



Falls City Engineer

Vol. 7, Issue 5

District Commander
Col. Christopher G. Beck
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: Construction is underway on the new Fort Campbell High School project in Kentucky.



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

Commander's Comments

Ladies and Gentlemen,

As I said in my email earlier this month, we had a very good year last fiscal year and were able to achieve almost all of what we set out to accomplish. That doesn't happen without everyone on the team pulling their weight and remembering that we are here to deliver value to the nation; so, thank you for your efforts. This is an amazing organization that is involved in a remarkable number of very diverse requirements with many different customers and stakeholders – that only happens when we deliver quality and timely products.

I really would encourage all of you to read through this entire issue (and all of them, for that matter). You will see the great things your peers are doing and the awesome capabilities of this district.

Specifically as highlighted this month, the support we provide to Fort Campbell is a feature in this edition, but we are truly critical to enabling installations throughout our footprint as they take care of Soldiers and their families every day.

As a team, we also work with and support multiple state and federal agencies just as several areas of our organization have supported the Department of Energy work in Paducah. Our combination of technical expertise along with diversity of capabilities make us a key enabler for much of the progress you see locally and throughout the region.

Finally, we must always work hard to develop our team for the future and the Leadership Development Program is a great example of that. This program helps develop those senior leaders of



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

the future and improves their skills to be better leaders for today as well. I am glad we are able to highlight this effort because we have seen many of our current senior leaders start with development opportunities similar to LDP II and go on to great things.

Thanks again for all that you do!

Building Strong!

Chris

Contents

Flooding raises dam safety questions at Markle, Ind.	3
Schueler honored for excellence in civil works	4
Community hospital expands at Fort Campbell	5
DoDEA school projects serve as learning tool for students	6
Construction underway on Fort Campbell High School	6
New boilers up and running at Paducah Plant	7
Optimization study aims to expedite Nike CD-78	8
Waldorf, Md., Army Reserve Center contract awarded	8
District's Leadership Development Program thrives	9

Flooding raises dam safety questions at Markle, Ind.

Carol Labashosky, public affairs

During the spring/summer 2015 northern Indiana flood event, the Markle Dam, Markle, Indiana, was near “fully loaded” for a record 33 days. Fully loaded means the dam had high water against it (high pool), hydrologic loading, or pressure—so much that it was near its engineered design maximum for this extended time-frame. The duration of the dam holding water was approximately three times longer than any previous high pool event.

When the waters abated and Markle residents set their umbrellas to dry, they had time to reflect on what that really meant and wonder about the future.

Markle Dam is part of the J.E. Roush Lake flood risk management project, and it protects the majority of the town’s center. For most of the year, Markle Dam holds back no water at all. As the lake’s pool rises during flood events, however, Markle Dam keeps the waters from inundating the part of the original river channel where the town is located in somewhat of a bowl. This configuration essentially creates an oxbow, and during normal conditions, small inlet and outlet structures allow some water to flow through the town and the original Wabash River channel.

During the heavy rains, the Corps dam safety team and Roush Lake personnel kept track of some minor seepage around the ends of the earthen dam. Roush Lake



Donald Unger

This photo shows the water at high elevation during the summer 2015 flooding event at Markle, Indiana.

Manager Tony Schoenecker’s duties were to maintain 24-hour operational control of the dam, its releases, the Markle pump station and the levee at Star of Hope Cemetery during the high water event. In addition, lake staff did dam safety inspections and read the dam instrumentation.

The situation was critical. Cometh forth the dam safety experts to Roush Lake and Markle. Nathan Bryan, Alex Hamilton, Chun-yi Kuo, Steven Shifflet, A.J. Fleming, Robby Wheeler, Jacob Neinaber, Cody Sunderhaus, Ross Wright and Duane Pfouts formed two-person teams for 24-hour surveillance, reviewed

the instrumentation and inspected critical areas during the high pool loading.

“There was so much going on during that time period. It was an interesting symphony of people doing a great job so the work goes as well as it can,” said Schoenecker.

The dam safety staff and the operations (lake) staff worked closely together during these events. Scot Dahms, Upper Wabash area project manager, established two-person second-shift and three-person first-shift teams, enabling project staff to cover the 24-hour rotations that became necessary during the prolonged high-water event. Teams that focused on Markle Dam included staff from Roush, Salamonie, and Mississinewa lakes. Donald Unger, Garth Stout, and Jared Perrott from Roush Lake were joined by Daniel Unger and Alex Selig from Salamonie Lake, and Grady Stout from Mississinewa Lake. As the high water conditions persisted—more than 19 inches of rain fell in a 33-day period—even Nolin River Lake in Kentucky answered the call sending Aaron Sullivan to assist. Together, the teams ensured all bases were covered at the Markle Dam, as well as the main dam in Huntington Township, and the levee at the Star of Hope Cemetery in Rock Creek Township.

With more activity and surveillance around Markle Dam, the public inquired about the integrity of the dam, seepage and public safety: “Were there issues with the Markle Dam? Did it need to be fixed?” Questions and unease lingered, even after



Jack Sweeney

This aerial photo shows the Markle Dam during a 2011 flood event. The proximity of the dam to the town illustrates the importance of inspecting the dam during a high pool event, which the Corps accomplished during the 2015 spring and summer flooding.

Continued on page 4

the waters receded.

At the request of Markle Town Council President Jeff Humbarger, in mid-September, Jeff Esterle, Louisville District dam safety program manager, and Bob Anderson, district dam safety emergency action plan coordinator, accompanied Roush Lake operations staff, Schoenecker, Unger, and Stout, to the Markle town council meeting to discuss the dam conditions and seepage.

The seepage turned out not to be a big concern. "The dam performed very well during the flood event," said Esterle, "and no follow up activities are necessary beyond continuing the USACE routine surveillance and monitoring program."

Several questions from the wastewater treatment plant manager came up at the meeting about the Markle Pump Plant's capacity having been exceeded for several hours during one night of heavy rain. During that brief episode, the water level in the town continued rising despite the pumps removing their designed maximum output of 43,500 gallons per minute. Some discussion occurred on possible ways to eliminate this rare kind of circumstance. The treatment plant manager appreciated the Corps' feedback, concluding that as long as the pumps and back-up generators in the event of a power failure worked, there were no major issues.

Esterle explained that the increase in activity at the dam was more due to the duration of the event rather than the condition of the dam. The increased loading

time at a high level increased the need for close monitoring. "When dams are loaded to historic levels and durations, we want to closely monitor their performance," he said.

Markle Dam did see an increase in seepage amounts, but it was in areas observed during previous events, and the seepage was not carrying soil particles. "That would be a mechanism referred to as 'internal erosion' and would be a distress indicator. No distress indicators were observed during our efforts."

After the meeting, the local newspaper quoted Humbarger saying that he feels the

dam is safe and operating properly.

"When there are questions concerning the integrity of one of our projects, we feel it is important to address the public's concerns," Esterle said. "This is even more important with a project like Markle Dam where the project is in such close proximity to residents, and its operation has a noticeable impact to the community annually."



Donald Unger

The same waterway is shown in October long after the flood waters had receded.

Schueler honored for excellence in civil works



Debra Hunter

Carol Labashosky, public affairs

The Ron Keeling Civil Works Programming Excellence Award was presented to Matt Schueler, program manager, civil works, Louisville District. Schueler was selected to the district's team leader position in a temporary capacity, and then—based on his stellar performance—assumed the position permanently. His award citation sites his selfless service, integrity and dedication. The award was presented to Schueler by Louisville District Commander Col. Christopher Beck at the End of Year Ceremony Oct. 8, 2015.

NOTE A special edition of the Falls City Engineer highlighting the Oct. 8 awards ceremony will be released by the Public Affairs Office in the coming weeks.

Community hospital expands at Fort Campbell



USACE Rendering

This rendering shows the finished hospital alterations at the Blanchfield Army Community Hospital on Fort Campbell.

Katie Newton, public affairs

The Blanchfield Army Community Hospital (BACH) at Fort Campbell, Kentucky, has a new, overhauled look as the U.S. Army Corps of Engineers Louisville District wraps up a 45,000-square-foot addition and a 17,000-square-foot alteration to the existing hospital.

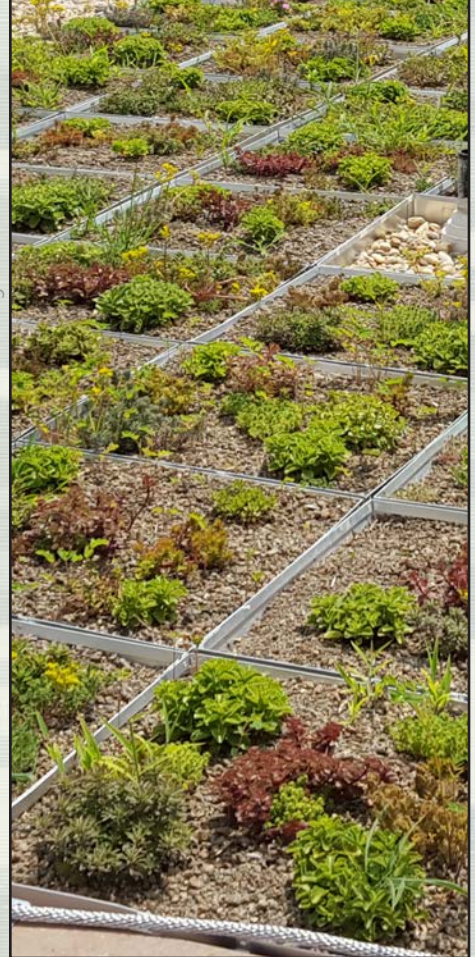
By the end of October, the \$56.4 million project will be complete and will include a state-of-the-art Emergency Center, a Behavioral Health Unit, and a brand new expansion of the Mother-Baby Unit, which was finished in July.

The project was constructed by

Mortenson Company, Minneapolis, Minnesota, in a little over three years.

“The positive attitude the entire team kept through construction was amazing,” said Steve Farkus, Louisville District project manager. “A large group of stakeholders coming together to make it happen—it’s a thing of beauty to witness.”

The project was designed to be (LEED) Leadership in Energy and Environmental Design silver certifiable and meets all construction standards for a silver rating being an energy efficient building. All lighting systems and windows were designed with energy efficiency and emotional well-being in mind.



Steve Farkus

A green roof with native plants that require minimal or no irrigation was included in the project to meet LEED standards.



Steve Farkus

Shown is the completed interior work at the Blanchfield Army Community Hospital (BACH) addition/alteration project.

DoDEA school projects serve as learning tool for students

Katie Newton, public affairs

Steve Farkus, USACE Louisville District project manager for the Department of Defense Education Activity (DoDEA) program, led a presentation at the Society of American Military Engineers (SAME) Kentuckiana Post meeting Oct. 20, 2015, on the district's support of the DoDEA program and how the projects are serving as a learning opportunity for students.

USACE is the design and construction agent for DoDEA schools and the Louisville District is doing five different projects—three currently under construction at Fort Campbell, one at Fort Knox, and the Fort Knox High School addition, which is still in the design phase and will be ready to advertise in January.

Amidst the construction activities taking place at the Fort Campbell projects, the construction contractor, Walsh Construction, has coordinated with USACE and DoDEA to use the construction projects as an educational tool for the students who will occupy the finished schools.

"It's a unique application of how we're interacting with the community on a very special set of projects," said Farkus.

The \$35 million Marshall Elementary School project, slated to be complete by May 2016, was used as an on-site learning tool for students next door to see what the construction is all about. The project shut down for three hours out of an afternoon, put a number of planned safety measures in place and conducted



Students from Marshall Elementary toured the project site of their new Marshall Elementary school, which is under construction at Fort Campbell in Kentucky. The new 21st-Century DoDEA school is scheduled to be complete by May 2016.

on-site demonstration of trades at multiple stations.

"We wanted to show them how we're building the school that they'll be in next year," said Charles Buhagiar, Walsh Construction quality control manager.

In May 2015 the Walsh team led Marshall Elementary school students through the site and showed them many aspects of construction with stations manned by subcontractors. "All the students were given opportunities to ask questions at each station," said Buhagiar.

"It was really important for us to show the children how we have to do the project, and do it safely," said Buhagiar. "It was a very rewarding part of our project."

Additionally, the \$51 million Fort Campbell High School project, which is now underway, is planning the same

type of outreach for the high school students in November. The Walsh team is coordinating project education tours for high school students and demonstrating the application of CAD/engineering on a construction job site.

"Our construction activities are making a lot of noise right next door to where they've been learning so we need to show them what we're doing over here," said Joe Scappaticci, Walsh Construction, senior project manager.

"The presentation highlighted how the delivery team of the construction contractor, the Corps of Engineers, DoDEA and the Fort Campbell Department of Public Works can bring some real value to the children of our Soldiers and their families," said Farkus.

Construction underway on Fort Campbell High School



Contractors work on the forms for the vertical walls of the new school.

Katie Newton, public affairs

Construction is underway on the new Fort Campbell High School project in Kentucky. The 184,000-square-foot school is being constructed to make room for the more than 800 students who will fill its halls in the 2017-2018 school year.

The \$59 million project will replace the existing school, which was built in 1985 and can no longer accommodate the growing student enrollment. The long term plan is that the current high school will remain in place and become a middle school. The project, includes a soccer field, running track, field house and lighted

Steve Farkus

Continued on page 7

Continued from page 6

tennis courts, creating a middle school/high school campus.

This is the first high school in the United States designed under the 21st Century Education Initiative set forth by Department of Defense Education Activities (DoDEA). Following the new concept, the high school will have eight neighborhoods with a central hub and five to six learning studios, one-to-one and group learning spaces, career and technical education labs and science labs. There will be outdoor classrooms, a student garden and an outdoor amphitheater. Another special feature is that the high school will also have a JROTC rifle range on site.

"This project will serve military families and help produce future generations of leaders in our communities," said Steve Farkus, Louisville District project manager. "It is an awesome project that will help so many people."



This rendering shows how the completed Fort Campbell High School will look when it is complete.

Environmental

New boilers up and running at Paducah Plant

Katie Newton, public affairs

The U.S. Army Corps of Engineers (USACE) Louisville District helped to oversee the design and quality control of a massive new steam boiler unit for the Department of Energy at the Paducah Gaseous Diffusion Plant in Kentucky.

The new boiler system started up Oct. 16, just in time for the cold weather to hit. It replaced the old C-600 Steam Plant and fuel oil tanks on site with more efficient boiler units to provide heat for the facility.

"The Corps of Engineers was asked to provide quality oversight of this project due to the importance and complexity of the project," said Carl Lindsay, USACE construction management specialist, and Jeff Cannady, construction representative. "This project took the only steam plant on the facility offline and brought it back online with the newly installed system."

The project was time sensitive in that it needed to be in complete working order to provide heat for the facility before freezing temperatures started.

The work was done in two phases. Phase I was site preparation and demolition of the existing fuel oil tank, asbestos abatement, earthwork and preparation for the concrete pad and ground rods. Phase II required



The new five steam package boiler units are shown at the Paducah Gaseous Diffusion Plant.

construction of the concrete pad, setting of the steam package boiler trailers on-site, piping supports and installation, power poles, and running wire, cable and conduit to tie-in services to the mobile boiler units.

The project saw challenges from to a change in the prime contractor during construction and having to get a new contractor on board to complete the work, which caused a slight delay in the project.

"But once the new contractor got their training completed and procedures

approved they developed and met a schedule that allowed for successful completion of the contract," said Cannady.

"It was a great opportunity to work with another government agency toward a common goal. The successful completion of the construction contract will help to allow the decommissioning of the Paducah Gaseous Diffusion Plant," said Lindsay.

Optimization study aims to expedite Nike CD-78



Shown here is a 2015 view of closed missile magazines at the Nike CD-78 in Oxford, Ohio.

Katie Newton, public affairs

In September, the Louisville District awarded a new contract to conduct a remediation optimization study at Nike CD-78 in Oxford, Ohio, to enhance the existing remedy for groundwater and to more quickly achieve the response complete stage at the site.

The study for the Formerly Used Defense Site (FUDS) includes a review of current and historical data and assessment of options to move the project ahead.

"This entire effort is very good news," said Dave Becker, Corps of Engineers Environmental and Munitions Center of Expertise. "The district is moving forward and thinking ahead about the actual implementation of technologies based on the optimization data study."

The FUDS site was a Nike-Hercules missile battery used to protect the Cincinnati-Dayton area from possible hostile aircraft attack in the 1960s. Since

the site was closed and excessed in 1970, the approximately 14-acre site has been used for a small-arms firing range and a radio tower site.

The Corps of Engineers has been conducting environmental investigation activities at the site since the mid-90s and achieved a decision document in 2007 approving demolition/closure of the underground Nike missile magazines and monitored natural attenuation of groundwater as the remedial activities. Demolition of the Nike magazines was completed, and groundwater monitoring began in 2009.

"Monitored natural attenuation is an effective remedy for groundwater if it is determined that contaminants can be degraded under natural conditions," said Mark Nichter, Louisville District geologist.

But that's where the optimization study and the motivation for a more timely

response complete come into play.

"Current groundwater monitoring activities suggest that degradation of the contaminants is clearly occurring at the site; however, the rate of degradation may be limited or inadequate," said Nichter.

This remediation optimization study, which will get underway in 2016, will evaluate innovative technologies and other forms of enhanced remediation to support monitored natural attenuation. This includes possible nutrient amendments, biological amendments, chemical remediation, green and sustainable remediation and an evaluation of delivery methods.

Completion of the study is anticipated by January 2019, which could possibly accelerate the closure of the site.

"It has the potential to reduce the remediation time by approximately ten years," said Glen Beckham, Louisville District project manager.

In addition to the new contract helping the project move ahead, Beckham said its award was a huge success for helping the Louisville District meet FY15 programmatic objectives and a great end-of-year team effort that included coordination with Headquarters and the Center of Expertise.

"This was the last FUDS contract identified for award in FY15 and the PDT was able to execute it on an extremely short timeline in order to help achieve the program's obligation goals," said Andrew Dettmer, FUDS program manager.

Reserve

Waldorf, Md., Army Reserve Center contract awarded

Carol Labashosky, public affairs

An Army Reserve Center will be constructed in Waldorf, Maryland, to be used for training and day-to-day activities for approximately 600 Army Reservists. The Army Reserve is consolidating three existing facilities in Maryland: Annapolis, Riverdale, and Upper Marlboro.

The new facilities will include an ARC training building, organizational maintenance shop, an unheated storage building and a recruitment and retention office. Supporting facilities include land clearing, paving, fencing, general site improvements, and extension of utilities to serve the project. Accessibility for the disabled will be provided and anti-



This rendering shows an Army Reserve Center that will be constructed in Waldorf, Maryland. Completion is expected in fall 2017.

terrorism/force protection and physical security measures will be incorporated into the design.

The contract was recently awarded for \$20.8 million. The design-build contractor

is Sheffield-Korte, Lawton, Oklahoma.

The Corps expects to break ground in the spring of 2016 with completion slated for the fall of 2017.

District's Leadership Development Program thrives



Jack Sweeney

Shown here with District Commander Col. Christopher Beck, (back row left to right) Nora Hawk, Waylon Humphrey, Jason Root, Jeremy Cobb, Kierra Washington, Adam Warren, Brandon Brummett, Matt Lowe; (Front row left to right) Kevin Mieczkowski, Ed Vincent, Roxanne Keeling, Sarah Ignacio, Sarah Keller, Michelle Hellinger and Eric Sternberg comprised the 2014-2015 class. Members of the 2015 LRD LDP class were Amy Babey and Ryan Jeffries (not pictured).

Carol Labashosky, public affairs

The next batch of Louisville District leaders of tomorrow have just begun the district's Leadership Development 2015-2016 Program. The new class has 20 students, up from 16 last year. The class meets monthly, and it lasts for 11 months.

Dana Craig, district and division lead, LDP steering committee, said, "The exodus of retirees means we need employees to step up. The LDP prepares employees for opportunities in the future."

There are two components of LDP. Classmates learn about themselves and communicating with others. Relationship building and becoming well-rounded are skills of the program taught by Dr. Michael Evans, Evans and Associates Consulting Corporation, Oneida, N.Y. He is a seasoned professional and long-time asset for instructing district employees on communication, interpersonal skills and leadership.

The other half of the curriculum brings a new and thorough understanding of the district's many offices' operations. The section chiefs give briefings, and there are meetings and lunch and dinner sessions with senior leaders. Students are paired

with mentors. Every month students fill out an evaluation so they get quick feedback while topics are still fresh in their minds.

"The training sessions are focused so the knowledge base has not been lost in light of the departing retirees," said Craig.

Field trips to projects like military construction sites, reservoirs or locks and dams give classmates hands-on experience of how the district serves the nation. During the fall, the class will visit the Olmsted Dam construction project on the lower Ohio River and see Locks and Dam 52 that Olmsted will replace, which are far, far beyond their engineering design life. An LDP class had visited Nashville District's Wolf Creek Dam while it was undergoing rehabilitation.

The division has a regional LDP which Craig oversees. Chris Inlow, program management, military section; and Ian Mitchell, chief, management support section, are participating this year. Amy Babey, planning, and Ryan Jefferies, dam safety were in the 2015 class.

Every year the LDP class has a project which is implemented within the district. With the workforce shift, retirements and

fewer personnel, the process experience and knowledge has significantly changed in the last few years for the Louisville District, according to Roxanne Keeling, who had oversight of the team's project. "The LDP Team focused on establishing a standard operating procedure for management to ensure that training is provided at least quarterly so that the expertise and knowledge of the Louisville District is current and retained."

The 2014-2015 LDP class prepared an outline for implementation of a Louisville District training program as their class project. "The class worked together well, representing several branches throughout the district and division during the course of preparation of the training program," said Sarah Ignacio, business oversight branch.

The class met with senior leaders and the commander to address concerns and logistics to implement the program. This would ensure participation at the broadest levels, she said.

The district LDP began in 2007, and the 2015 regional LDP is in its 6th year.