

# Falls City Engineer

U.S. Army Corps of Engineers Louisville District

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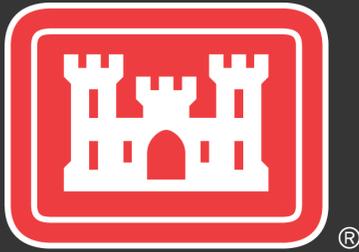


USACE Louisville District responds to flooding across Kentucky



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# Commander's Comments



## Falls City Engineer

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On the cover: Jon Burk, USACE Detroit District, documents a debris location in Hazard, Kentucky, Feb. 26, 2025. The USACE debris team is currently providing federal support throughout an 11-county area in Eastern Kentucky after recent flooding. (USACE photo by Michael Maddox)

Team Louisville,

As this is our first edition of the Falls City Engineer this year, I want to take this opportunity to wish everyone a safe and prosperous 2025. This new year has brought change, both challenges and opportunities, as we fight through winter weather and natural disasters, uncertainty and the normal complexities of delivering our massive program across the globe. I want to state how proud I am of this district and all the people who are quietly going about their daily duties to ensure we never fail the Armed Forces we support, our industry partners who depend on us, or our fellow citizens who count on us to keep them safe. Across the enterprise, USACE will continue to do what it has for almost 250 years: perform the mission as directed by our elected leaders, tackle and solve many of our nation's toughest challenges, and serve the nation.

One thing that has not changed in the new year is that we continue to lead the region with world-class excellence, delivering for our partners and stakeholders. In February, the Louisville District jumped into action, working around the clock to monitor and mitigate flooding impacts across Kentucky. I am extremely proud of the Emergency Management, Operations, Hydrology and Hydraulics, and Public Affairs teams who provided flood response support since before Presidents' Day weekend through current efforts today. We remain in close coordination with federal, state, and local agencies, as well as navigation industry partners, to reduce flood risks and protect our communities. Of course, we have not taken our eyes off Western North Carolina where this district continues to lead the debris removal effort, post Hurricane Helene. Our volunteers have answered the call to help fellow Americans through these bad days and months of recovery.

Please enjoy the January/February edition of Falls City Engineer, where we



**Col. L. Reyn Mann**  
Commander and District Engineer  
Louisville District  
U.S. Army Corps of Engineers

highlight the incredible work of our people and projects. This issue showcases our flood response efforts across Kentucky, the completion of Fort Campbell's 101st Division Artillery Maintenance Facility, our Maintenance and Repair Army Reserve Program and much more. Our district continues to excel, and these stories reflect the hard work and impact of our team.

Let this be a reminder that you are part of an organization making a real difference. You are part of America's varsity team. YOU make a difference and bring value each day. Thank you for all that you do!

Stay safe (and warm) and keep up the great work!

Building Strong... Together!

LOUISVILLE PROUD!

Col. L. Reyn Mann

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# USACE Louisville District responds to flooding across Kentucky

Abby Korfhage, public affairs

The U.S. Army Corps of Engineers Louisville District team jumped into action, working around the clock to actively monitor and mitigate flooding impacts across Kentucky in mid-February. Widespread moderate to major flooding occurred throughout the Commonwealth and resulted in elevated water levels at many of the district's Flood Risk Management reservoirs.

In response, the district's water management, dam safety and operations teams were closely monitoring conditions to manage potential flooding and minimize impacts on navigation.

"Our Operations, Engineering and Emergency Management teams have been closely monitoring the weather forecasts and are proactively making adjustments to reservoir operations," said Col. L. Reyn Mann, USACE Louisville District commander in a news release Feb. 14, 2025. "We remain in close coordination with federal, state, and local agencies, as well as navigation industry partners, to reduce flood risks and protect our communities."

Throughout the event, USACE flood risk management projects functioned as designed, holding back water to prevent further downstream flooding. During the event, Carr Creek Lake in Sassafras, Kentucky, reached its second highest pool of record at 1049.3 feet Mean Sea



Michael Maddox

Bret Ludwig (left), USACE Chicago District, and Jon Burk (left), Detroit District, document a debris location in Hazard, Kentucky, Feb. 26, 2025. Members of the USACE debris team are currently providing federal operation support to an 11-county area in Eastern Kentucky after a recent flooding event.

Level (MSL) and nearby Buckhorn Lake in Buckhorn, Kentucky, also reached its second highest pool of record since 1963, at 837.2 feet MSL. USACE maintenance staff at the projects remained on-site 24/7 to actively monitor water levels and perform gate operations as necessary to manage flood storage.

"Operations never takes a day off," said Willie Whitaker, operations manager for the Upper Kentucky River Area.

Dedicated Louisville District team members worked diligently across Kentucky to make a difference in their

communities.

"Our Operations Division staff in the Green River Area, including personnel from Nolin, Barren, Green and Rough River lakes delivered more than 4,400 sandbags to protect critical infrastructure in Canmer, Kentucky," said Chris Boggs, operations manager for the Green River Area.

Additionally, USACE responded to multiple requests for assistance, distributing 11,000 sandbags across several counties in Kentucky.

Meanwhile, the Dam Safety team conducted thorough inspections to ensure dam integrity at seven of the district's lake projects. The inspections, following high-water events, are a standard part of USACE's comprehensive dam safety program.

"Dam safety is a 24/7 responsibility," said Kyle Murray Louisville District geotechnical engineer who conducted an inspection of Nolin River Lake Dam Feb. 17. "At the end of the day, it's all a matter of public safety."

The Louisville District Water Management team worked tirelessly to evaluate forecasts and manage reservoir operations, to avoid millions of dollars in flood damages for downstream communities.

The Navigation team and lock and



Marti Allen

Kyle Murray, Louisville District Dam Safety coordinator and geotechnical engineer, along with project staff from Nolin River Lake conduct a dam safety inspection at Nolin River Dam in Bee Spring, Kentucky, Feb. 17, 2025.

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dam operators worked closely with the U.S. Coast Guard and the towing industry to maintain safe navigation on the Ohio and Green Rivers. High water on the Ohio River temporarily caused locking operations to cease at Newburgh Locks and Dam, but industry was able to transit over the fixed weir.

In a broader coordination effort, Louisville District Outreach Coordinator Brandon Brummett organized a call with more than 40 representatives from Kentucky Emergency Management, the Kentucky Division of Water, FEMA, U.S. Geological Survey, the National Weather Service, and USACE's Huntington, Nashville and Memphis Districts to discuss ongoing operations and opportunities for interagency cooperation.

The Louisville District's Emergency Operations Center is assisting the state and FEMA with any requests for assistance. The State of Kentucky received a Major Disaster Declaration Feb. 24, 2025, authorizing individual and public assistance for 10 counties in Eastern Kentucky.

As of Feb. 26, USACE has deployed 11 personnel to provide technical expertise for Water/Wastewater and Debris. Seven debris team members are performing initial debris assessments in the affected areas.

"It takes a dedicated team and strong partnerships to mount an effective response to these types of catastrophic events," Mann said. "We are prepared to support any State requests that FEMA directs us, and we remain committed to our partners as recovery efforts continue across Kentucky."



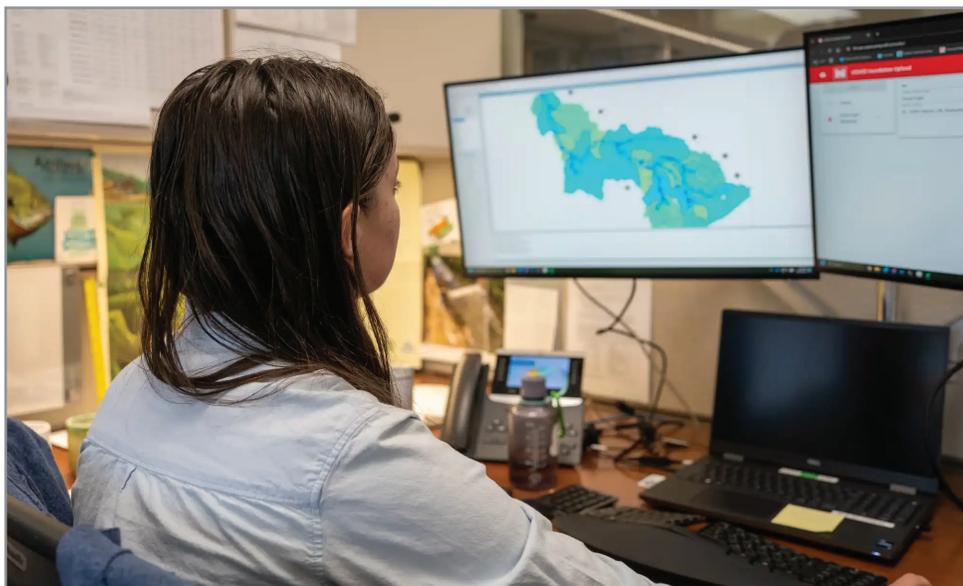
Kate Brandner, Dam Safety Section chief, and Robbie Wheeler, geotechnical engineer, review a map of Rough River Lake in Falls of Rough, Kentucky, and discuss the monitoring plan to ensure the ongoing safety and integrity of the dam, Feb. 18, 2025.

Kelsie Hall



Wide-spread moderate to major flooding occurred throughout the Commonwealth and resulted in elevated levels at many of the district's Flood Risk Management reservoirs, as shown at Nolin River Lake in Bee Spring, Kentucky, Feb. 17, 2025.

Katie Newton



Melanie Babin, Louisville District Hydrology and Hydraulic civil engineer with the Water Management team, looks at modeling to evaluate forecasts and manage reservoir operations to reduce flood risks, Feb. 18, 2025.



Jared Hall and Roger Stewart, maintenance workers at Carr Creek Lake, take piezometer readings in Sassafras, Kentucky, Feb. 19, 2025.

Kelsie Hall

USACE

# The Louisville District kicks off Flood Risk Management Study in Eastern Kentucky



Brandon Brummett, Louisville District outreach coordinator, meets with the Breathitt County Fiscal Court and local officials in Eastern Kentucky to provide an overview of the Eastern Kentucky, Upper Kentucky River Basin Feasibility Study, Jan. 28, 2025.

## Abby Korfhage, public affairs

The U.S. Army Corps of Engineers Louisville District is spearheading a Flood Risk Management study in Eastern Kentucky, aiming to develop long-term solutions for communities historically impacted by severe flooding.

The study area covers the basins of the North, Middle and South Forks of the Kentucky River, spanning over 2,600 square miles. This region, known as the upper forks, lies within the Eastern Coal Field physiographic region and includes the counties of Breathitt, Leslie, Lee, Estill, Owsley, Perry, Clay, Letcher, Wolfe and a portion of Harlan County.

“Historically, this area has been disproportionately impacted by flooding, with the most recent disaster in 2022 claiming 39 lives and causing catastrophic damage,” said Laura Mattingly, Louisville District planner and project manager. “This study will provide a foundational strategy to reduce flood risk in this 10-county area.”

The Flood Risk Management study is currently in the scoping phase, expected to last until April 2025. During this phase, USACE is collecting crucial data, including locations of frequent flooding, infrastructure impacts, utility locations, flood modeling and ongoing studies within the region.

“We are conducting public outreach through an interactive comment page and individual workshops with the counties,” Mattingly said. “Our goal is to understand

existing conditions, identify problems and explore opportunities. By the end of this phase, we aim to develop a set of potential conceptual measures.”

As the lead agency, USACE is responsible for plan formulation, environmental compliance and minimizing negative impacts through advanced modeling. The final report, expected to be complete in Fall of 2027, will outline the study process and present the selected flood risk management plan.

“The desired outcome is a comprehensive plan that combines structural solutions, such as small dams, levees and stream widening, with non-

structural solutions like raising structures in place, floodproofing and buyouts,” Mattingly said. “We will also consider nature-based solutions, including tree planting and wetland creation, to enhance water retention and ecosystem health.”

Eastern Kentucky, part of the Appalachian region, is rich in history and culture. Its people have strong community pride and have shown resilience through many hardships and disasters, added Mattingly.

“This study aims to improve the lives and safety of residents of Eastern Kentucky across 10-counties, to increase the economic resiliency of the region, to protect important historical structures, and to reduce the risk of flood damages to homes, businesses and cornerstone structures that help maintain the viability of the communities there,” Mattingly said. “This study isn’t just about flood prevention; it’s about safeguarding the homes, businesses and landmarks that make Eastern Kentucky unique.”

USACE is committed to helping Eastern Kentucky build a safer, more resilient future.

“We are honored to be a part of such a vital project that will protect the people and places of Eastern Kentucky,” Mattingly said. “This region has faced numerous flood hazards over the years, and we are eager to help develop a comprehensive, effective flood risk management plan that will allow Eastern Kentucky communities to thrive for years to come.”



Laura Mattingly, Louisville District planner and project manager, meets with the Perry County Fiscal Court in Eastern Kentucky to discuss the Eastern Kentucky, Upper Kentucky River Basin Feasibility Study and collect data and feedback from the local community.

# USACE successfully completes 101st Division Artillery Maintenance Facility

Charles Delano, public affairs

The U.S. Army Corps of Engineers announced the completion of the Medium Tactical Equipment Maintenance Facility at Fort Campbell, Kentucky, with a ribbon-cutting ceremony, Feb. 25, 2025. This \$30.6 million facility is designed to support operational readiness by providing advanced maintenance capabilities for military vehicles.

“This is the first new modern-design field-level vehicle maintenance facility to open in the division in the last 14 years,” said U.S. Army Col. Tobias Bennett, commander, 101st Division Artillery. “This facility not only promotes our mission of modernization and readiness but saves lives by providing a safe work environment for our soldiers.”

The 36,000-square-foot facility plays a critical role in ensuring Fort Campbell’s vehicle fleet remains mission-ready by offering a top-tier maintenance infrastructure, which includes four 3,168 square foot structural bays, 14 dedicated repair areas, 16 maintenance areas and two specialized welding areas.

“This was a team effort in safely finishing the quality Vehicle Maintenance Shop project on time for the Army,” said Miller Moore, USACE Fort Campbell area engineer.

USACE successfully completed this cutting-edge facility while maintaining a safety record of more than 103,000 man-hours with zero recordable incidents.



Charles Delano

The new Medium Tactical Equipment Maintenance building is a 36,000-square-foot facility that plays a critical role in ensuring Fort Campbell’s vehicle fleet remains mission-ready by providing a top-tier maintenance infrastructure, which includes four 3,168 square foot structural bays, 14 dedicated repair areas, 16 maintenance areas and two specialized welding areas.

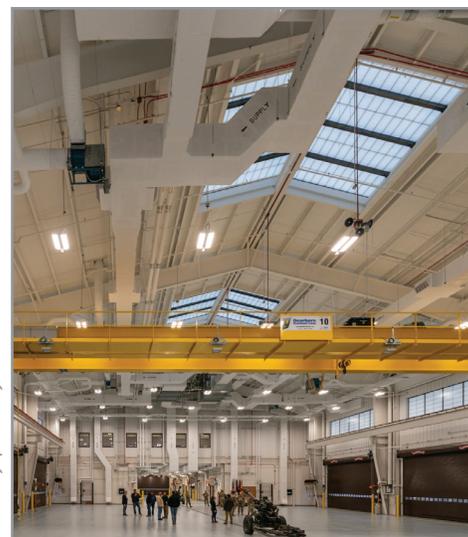


Charles Delano

A view of the office space inside Fort Campbell’s new Medium Tactical Equipment Maintenance Facility, Feb. 5, 2025.



The Leaders and members of 3rd Battalion, 320th Field Artillery Regiment, along with USACE Fort Campbell Area Engineer Miller Moore, cut the ribbon during their vehicle maintenance facility ribbon cutting ceremony on Fort Campbell, Kentucky, Feb. 5, 2025.



Charles Delano

Inside view of the Medium Tactical Equipment Maintenance Facility at Fort Campbell, Kentucky, Feb. 5, 2025.

# USACE supports readiness through the Maintenance and Repair Army Reserve Program



USACE

The U.S. Army Corps of Engineers managed the successful repair of Camp Shelby's Equipment Concentration Site in January 2025, as part of the Louisville District's Maintenance and Repair Army Reserve Program. Camp Shelby is located in Hattiesburg, Mississippi, and is part of the Camp Shelby Joint Forces Training Center.

## Abby Korfhage, public affairs

The U.S. Army Corps of Engineers Louisville District continues to play an important role in supporting Army Reserve soldiers through its Maintenance and Repair Army Reserve program, also known as the MRAR program. This program ensures that aging facilities receive needed repairs and upgrades, extending their service life and enhancing soldier readiness.

The MRAR program, formerly known as the Full Facility Restoration program, is designed to make significant repairs to Army Reserve facilities, including Army Reserve Centers, vehicle maintenance shops, barracks and storage facilities. The work done through this program extends the life of these facilities by up to 25 years, providing safe, functional spaces that meet current design codes and mission requirements, according to the USACE team.

Currently, the Louisville District is overseeing seven technical assessments and managing 25 projects in various stages of design or construction, with most project budgets ranging between \$10 million and \$25 million.

"We are the execution agent for both the design and construction of the Army Reserve MRAR program," said Sonia Jackson-Suggs, USACE Louisville District project manager. "Our role includes program management, project management,

and design and construction oversight to ensure successful project execution."

USACE and its design partners conduct thorough technical assessments in collaboration with the Army Reserve Installation Management Directorate (ARIMD) and other stakeholders to determine which projects to take on. These assessments involve detailed inspections of the facilities to identify design and compliance deficiencies. Once the scope of work is determined, a cost estimate is developed to execute the MRAR project efficiently, according to Jackson-Suggs.

Not every Army Reserve site can receive a brand-new building, and available funding must be strategically allocated. The MRAR program helps older facilities meet modern standards through improvements such as upgraded HVAC systems, enhanced fire protection with sprinkler systems, Americans with Disabilities Act (ADA)-compliant accessibility features and improved layouts to support training and operational efficiency.

"Through the MRAR program, we're able to provide the best facilities possible within the constraints of available funding," said Ram Vuddagiri, Louisville District MRAR project engineer/architect. "These upgrades directly support soldier readiness and improve their quality of life."

Despite its benefits, the MRAR program presents its own set of challenges like managing costs while meeting

stringent design and safety requirements. Additionally, aligning stakeholder expectations and ensuring all parties understand the project scope and limitations requires continuous communication.

"Communication is key," Jackson-Suggs said. "We work closely with stakeholders to understand their needs and constraints while delivering the best possible outcome within the project's scope, funding and design criteria."

Success in the MRAR program depends on collaboration among multiple key players. The Louisville District leads the program execution, working alongside the geographic USACE districts responsible for construction, the ARIMD, project officers from the U.S. Army Reserve Command (USARC), Readiness Divisions, Installations and individual units.

"Our team takes a mission-first attitude to ensure projects are awarded and executed efficiently, meeting the needs of Army Reserve soldiers," Vuddagiri added.

Through dedicated teamwork, strategic planning and a commitment to improving Army Reserve facilities, the Louisville District continues to support soldiers by providing safe, modernized spaces that enhance readiness and mission success.

"We really enjoy and take pride in this program," Jackson-Suggs said. "To walk into a failing facility and complete repairs, making it look attractive, current and code compliant – it is sincerely rewarding."

# Army officer gaining engineering experience at Canandaigua VA Medical Center project

Michael Maddox, public affairs

U.S. Army Corps of Engineers' Capt. Matthew Purdy has had an interest in engineering and how things work since he was a preschooler. That lifelong interest has led him to his current role as a project engineer on the Canandaigua VA Medical Center project in upstate New York.

Purdy began his military career when he enlisted into the Vermont Army National Guard in 2012 as a combat engineer. He later earned a Mechanical Engineering degree from Norwich University and commissioned through Officer Candidate School in 2015 as an engineering officer. His home unit is Headquarters Co., 572nd Brigade Engineer Battalion in Rutland, Vermont.

His career journey was sparked by a chance visit to the local library and a fascination with steam engines.

"There was a VHS tape at my local library I borrowed weekly from five years old until it wore out, about the live steam hobby—regular folks who make functional miniature steam locomotives. They bring them to club tracks and ride them around.

I was obsessed with trains, and I was always trying to learn how it was I could make my own steam engine," he said. "That never went away, so my natural choice for a college major was mechanical engineering."

Purdy was recently assigned to the VA Canandaigua project through the Personnel Force Innovation (PFI) Program that is used to augment active-duty units with reservists, where needed.

"I've been a project engineer at VACAN for three months and it's been excellent. The VA in Canandaigua has a unique history that is engrained into its original construction—having been built during the second world war, the structure was made to last 100 years using the materials available in a wartime shortage," he shared. "Refurbishing the buildings on this site is certainly harder than starting from scratch, but the architecture is an important piece of U.S. history and of the town's identity."

Working on such a project with so much history has provided Purdy a unique learning experience.

"Engineers in this office divide and

conquer by leveraging expertise on a tight team to become fluent with special topics. I've been reviewing door hardware, signage and concrete anchors. While this isn't as technical as a steam heat system or floor load calculations, the sheer number of doors and signs alone requires a lot of attention," he said. "On this particular project, we have a lot of change cases. Learning what each stakeholder wants from the process is critical to progress which is a lesson applicable to any organization."

"Challenges arise daily, and the faster engineers on all teams react, the faster the contractor can achieve on the jobsite. We must be thorough and timely. There are enough applicable specifications that a single person couldn't read them all in a year," he explained. "Balance is the buzzword, but it's true. You have to study the specifications and leverage what's learned with feedback from subject matter experts and solve problems quickly."

Purdy said he feels military assignments at USACE projects adds valuable experience for military engineer officers.

"For active duty members assigned to a VA project, this is an excellent opportunity to socialize with civilians, learn if you like working in the construction industry after transitioning, and even networking for when you do decide to transition. For reservists, it's a great way to stretch your engineer officer skills and add value to the organization you're going back to," he said. "For any tour of duty assignment, be prepared to bootstrap your personal readiness, especially for remote positions like this. People are there to help, but you need to go to them and ask questions early and often."

"This project is unique as it's still an active medical center while construction is ongoing. The customers at the VA are proud of their service. Seeing someone on-site in uniform stirs up a lot of memories for them," he added. "Folks saying 'thank you for your service' can be an awkward experience, but people in Canandaigua go out of their way to do it. That doesn't happen everywhere. If this kind of opportunity presents itself, I can't recommend it enough. It'll give you more perspective on why what we do is important, and to shake the Veterans' hands and thank them back."



Capt. Matthew Purdy (left), who is currently serving as project engineer on the Canandaigua VA Medical Center project, participates in a site tour of the project Dec. 18, 2024.

Ryan Campbell, USACE Buffalo Public Affairs

# Spotlight: Around the District



As part of National Engineers Week, U.S. Army Corps of Engineers Louisville District Engineering Division, Civil Branch Chief Monica Greenwell, participated in the Transition to Engineering (T2E) Project Roundtables at the University of Louisville J.B. Speed School of Engineering Garage in Louisville, Kentucky, Feb. 21, 2025.



Will Ailstock, Civil Programs and Project Management Branch chief, presents at the Louisville District Open House held in Louisville, Kentucky, Feb. 5, 2025.



Construction continues rain, shine, or snow at the Louisville VA Medical Center, Jan. 16, 2025.



The U.S. Army Corps of Engineers Louisville District hosted its annual Open House at the Louisville Marriott Downtown in Louisville, Kentucky, Feb. 5, 2025.



Construction progresses on a new 41,000-square-foot Child Development Center at Wright-Patterson Air Force Base, Ohio. The project broke ground May, 13, 2025, and is expected to be complete in fall 2026.