

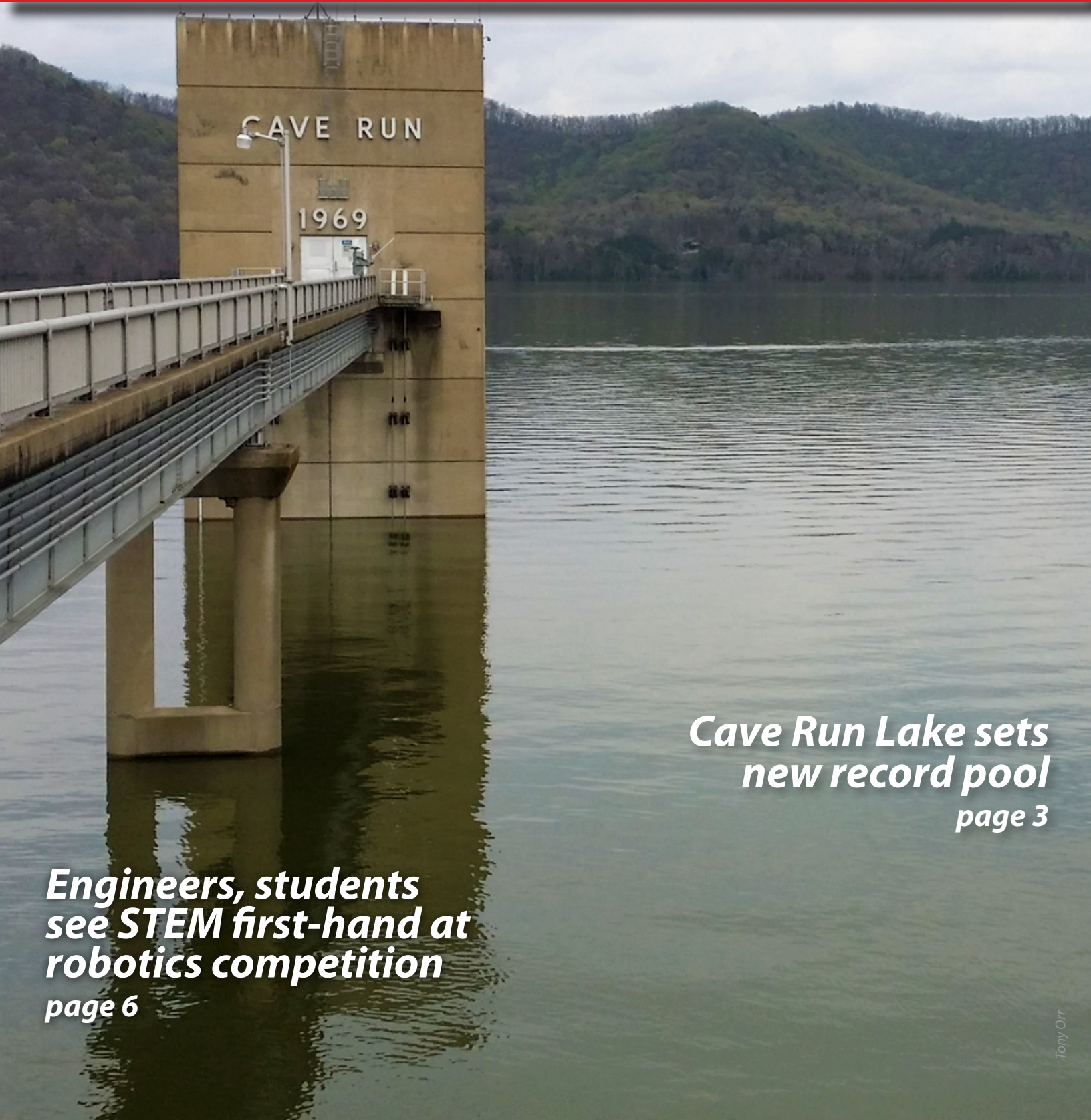
# Falls City Engineer

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U.S. ARMY CORPS OF ENGINEERS  
LOUISVILLE DISTRICT



***Cave Run Lake sets  
new record pool  
page 3***

***Engineers, students  
see STEM first-hand at  
robotics competition  
page 6***



## Falls City Engineer

Vol. 7, Issue 2

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**On the cover:** Spring rains raised Cave Run Lake, Morehead, Ky., to a new record pool.



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

# Commander's Comments

Ladies and Gentlemen,

As the Derby quickly approaches, I hope that many of you are able to take part in the festivities in the Louisville area this time of year. Unfortunately, while the snow has stopped, Mother Nature has definitely done her best to ensure we have had plenty of rain over the last month or so. The flooding has been a learning process for me as I get to watch our experts in the district work through the challenges along the rivers, at the lake projects, and throughout our footprint. I am continuously impressed with the hard work required to keep the projects operating properly to keep industry moving and to prevent significant flooding adjacent to our lakes. These instances provide a very tangible example of how we continue to provide value to the nation, and you should all take pride in being part of the team that makes that happen.

Not only is the Derby a big deal this time of year, but volunteers from the district also got to support the VEX Robotics World Championships this month as well. This event brought teams from all over the world to Louisville as they competed in challenges with their robots. We had 15 employees who volunteered to serve in several different capacities during the competition. I greatly appreciate these individuals taking time out of their busy schedules to support these opportunities. They have very far-reaching impacts on the students and show that USACE is committed to building our nation's STEM capabilities.

Finally, as the summer approaches we will again take the opportunity to pause for a minute and have fun with as many folks as possible at Corps Day June 11. I



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

know not everyone can make it to Corps Day but for those employees in the district office area I would encourage you to come out and bring your families. It will be a great day for friendly competition and an opportunity to relax a little as we get ready to head into the fourth quarter and all of the requirements that go with that each year.

Thanks again for all that you do!

Building Strong!

Chris

## Contents

Cave Run Lake sets new record pool	3
Safety at Olmsted: Speaker tells how injury changed his life	3
Dog rescued at Markland Locks and Dam finds new home	4
Community park gives Wright-Patt families place to play	4
Remedy chosen for TNT washout facility contamination	5
Engineers, students see STEM first-hand at robotics competition	6
District staff saluted for involvement in national dam meeting	7
Markland staff tries out new, required fall protection gear	7
Louisville emergency planner wins national preparedness award	8

## Safety at Olmsted Speaker: Injury changed my life



Tony Crow discusses safety with the staff at the Olmsted Locks and Dam construction site.

*Carol Labashosky, public affairs*

On March 12, the Army Corps of Engineers Olmsted Division staff hosted a motivational speaker at the project site in Olmsted, Illinois. Tony Crow made the trip from Winnsboro, Texas, to address safety practices. The company Crow started is called INJAM (It's Not Just About Me) which promotes safety in all aspects of peoples' lives. Crow spoke to all the craft and management staff, both contractor and government, on safe practices. One day, one moment, changed his life forever after an accident. His professional attitude despite his injury helped to set the tone for the start of the 2015 construction season.

Crow discussed not only how an accident can change a life forever but that it also changes the lives of others around the person.

His compelling message and personal story of "Safety 24/7" is a reminder to all that safety doesn't just start or stop at the workplace, but at home and play as well, said Veronica Rife, Olmsted project risk manager. "This message connected with all in attendance to foster a strong emotional commitment to safety," she said.

Crow was involved in a hunting accident when he and his son were quail hunting in Texas. They had split up. Tony

jumped some birds, and the birds headed toward his son. His son took a shot, and the pellets struck Tony in the face. His son was unaware of his father's exact location at the time but immediately knew his dad was injured. The area they were hunting in consisted of chest-high grass and brush, and he was not wearing his hunter orange so he blended in with the environment.

Crow lost his eyesight in both eyes due to the accident and will remain blind for the rest of his life.

"His speech talks on how at his work he always wore the appropriate personal protective equipments, or PPE, and how safety is so important there," said Bryan Hovekamp, Olmsted safety and occupational specialist. "But away from work people tend to not always do things as safely as they should," he said.

Crow also discussed how safety takes everyone to work together as a team.

"At the Olmsted Locks and Dam project safety is the number one priority for each and every employee. We want to make sure everyone arrives safely to the jobsite and that everyone leaves each day in the same condition or better," said Hovekamp.

Approximately 225 people attended the presentation.

## Cave Run Lake sets new record pool

*Carol Labashosky, public affairs*

Several big rainstorms in the area of the Cave Run Reservoir, Morehead, Kentucky, caused the Louisville District Emergency Operations Center to activate so a close watch and systematic communications with local emergency officials in the area could occur.

The reservoir crested at 761.12 feet on April 20 at 4:45 p.m., less than four feet from the spillway. The lake exceeded its previous record pool of 759.7 feet, which was set on May 5, 2011.

The slow drawdown process of the lake to normal pool began the week of April 20.

The U.S. Army Corps of Engineers continued to monitor the lake the week prior when heavy rains hit the area.

"Since we are currently 31 feet over summer pool, we'll be releasing excess storage into June," said Mark Philips, hydraulic engineer with the U.S. Army Corps of Engineers, Louisville.

As part of the ongoing dam safety plan, the dam is regularly inspected and is structurally sound. The structure is inspected annually by a licensed professional engineer, and every five years by a team of engineers.

The Cave Run Reservoir set numerous "record pools" before finally cresting due to the heavy amounts of rain the basin received. Spillway elevation for this project is 765 feet.



Cave Run Lake, Morehead, Ky., crested April 20 at 761.12 feet.

# How “Lucky” he is

## Dog rescued at Markland Locks and Dam finds new home

Carol Labashosky, public affairs

Lucky’s route to a new home began with his rescue at the Markland project site.

In March, at Markland Locks and Dam, Warsaw, Kentucky, staff members Allen Craigmyle and Wayne Adams rescued a foundering husky dog from the upper outside river wall.

It had come to pass that a representative from ORSANCO (Ohio River Sanitation Commission) was at the Markland Locks and Dam project site collecting water samples. She told Craigmyle that there was a dog on the outside of the river wall.

As the story unfolded, Adams and Craigmyle went to investigate the situation and threw a line on the husky and pulled him up.

“The husky had one brown eye and one blue and no collar,” said Craigmyle, who then gave the dog a temporary home and named him Lucky. “I did take him home with me the first night and wanted to keep him, but I really didn’t have a good place

(to house him).”

The next day, Craigmyle put a notice in the county paper about the dog, found in such a precarious situation. “I was sure some family was missing him; he was such a pretty dog and very mannered.”

Two days passed, and no calls came in. Another Markland lock staff member, Jason Heivly, had a friend who worked at a pet store nearby. Heivly told his acquaintance about the mysterious missing husky and how he had been rescued. In a turn of good fortune, Heivly’s friend said she knew a family that already had a husky, and that she would make inquiry to see if “Lucky the Husky” might have a home with this family. The husky introduction proved fortuitous. “They fell in love with him right from the start, and they took him home with them,” said Craigmyle.

The family sent Heivly a video of “Lucky” and their husky running through the backyard playing and having a great time. A very happy ending, Craigmyle said.



Wayne Adams (left) and Alan Craigmyle rescued Lucky the husky at Markland Locks and Dam, Warsaw, Ky.

## Military

## Community park gives Wright-Patt families place to play



The Corps recently completed this ADA accessible community park at Wright-Patterson Air Force Base, Dayton, Ohio.

Katie Newton, public affairs

The Corps of Engineers and the Air Force have worked together to create a new ADA accessible community park at Wright-Patterson Air Force Base in

Dayton, Ohio, just in time for spring.

The community park complete with playground equipment, sidewalks, benches, picnic tables and bike racks gives families and children in the Kitty Hawk

area a new space to play.

The \$248,000 community park, funded by non-appropriated funds from Air Force Services, was constructed by Tunheim Construction, Moorehead, Minnesota, on a short timeline. Construction work included pouring sidewalks, installing all playground equipment and structures and new landscaping all while meeting Americans with Disabilities Act (ADA) standards so the park is accessible to everyone.

“It was a collaborative effort by Mobile District, the Air Force and the Louisville District Corps of Engineers, and with a short timeline the contractor was able to deliver a quality product,” said Kevin Jefferson, area engineer, Wright-Patterson Air Force Base. “It was a successful project, and this contractor handled it really well.”

## Remedy chosen for TNT washout facility contamination

Katie Newton, public affairs

A remedy has been selected for the former trinitrotoluene (TNT) washout facility and adjacent lagoons at the Savanna Army Depot in Savanna, Illinois, where soil and groundwater contamination occurred from washing out bombs and ammunition from 1945 through the early 1970s.

The remedy, selected by the U.S. Army Corps of Engineers the U.S. Environmental Protection Agency, and the Illinois Environmental Protection Agency will allow the 7.5 acre area in the northern portion of Savanna Army Depot to now be used for recreational activities.

“We’ve selected a remedy that will ensure public health and protection of the environment, while allowing the land to be used for recreational purposes,” said Dick Kennard, Louisville District geologist.

Site 1 includes four inactive buildings, which made up the TNT washout facility, where cleaning of bombs, ammunition, and projectiles with high-pressure and high-temperature water took place, and the upper and lower lagoons, which received the wastewater generated from the facility.

Remediation of the soil, surface water and groundwater at the lower and upper



One of the buildings within the boundary of the former TNT washout plant at the Savanna Army Depot, Illinois.

lagoons took place in 1991–1995, and there was a focused soil removal near Building 2208 in 2009, but this last remedial action addresses all residual contamination in the soil and groundwater.

The selected remedy for the residual contamination at the site is Monitored Natural Attenuation, meaning natural

destructive and non-destructive subsurface attenuation mechanisms will reduce the mass of residual contaminants in the groundwater.

USACE will continue sampling groundwater quarterly with site monitoring wells to ensure that contamination levels are improving. Additionally, there will be five-year reviews and institutional controls implemented, which prohibit groundwater being used as a potable water source and prohibits land use other than recreation. These institutional controls will be in place until the concentrations of hazardous substances are at such levels that allow for unrestricted use and exposure.

“We will follow this site through until it’s deemed safe enough for unrestricted use and exposure,” said Kennard.

Recreational land use will be maintained during and after the transfer of property. The land south of West Road will remain federally-owned and be transferred to the jurisdiction of the U.S. Fish and Wildlife Service; the land north of West Road will be given to the Illinois Department of Natural Resources.



An aerial view of the Savanna Army Depot TNT washout facility in Illinois. The Corps, EPA and the Illinois EPA have selected a remedy to allow the 7.5 acre area in the northern portion of Savanna Army Depot to be used for recreational activities.

# Engineers, students see STEM first-hand at robotics competition



Along with many other Louisville District representatives, Corey White (right), environmental engineer, and students from Scott Middle School, Fort Knox, Ky., volunteered at the VEX Robotics world championship in Louisville.

*Sarah Mattingly, public affairs*

Spring of 2015 brought groups from around the world to Louisville. No, not for the Kentucky Derby. April 15-18, Louisville hosted the VEX Robotics World Championship, in which more than 850 teams hailing from 29 countries gathered for an intense battle.

This year's game, called Skyrise, involved a 12-by-12 foot square playing arena in which four teams making up two alliances—red vs. blue—face off by having their robots move and stack blocks as quickly as possible.

For the first 15 seconds, the four robots operate autonomously based on previous programming and design. After that, students operate their robots with controllers and try to rack up more points than their opponents before the two-minute time limit is up.

In addition to the Skyrise game, the teams competed in numerous categories from design to programming to sportsmanship. It was in these areas that 15 representatives from the U.S. Army Corps of Engineers Louisville District assisted in judging.

"We actually go to the pits and talk to the teams," said Marilyn Lewis, Louisville District engineering division chief. "We talk to them about their designs and their individual roles on the team. We try to determine if they had a plan for their design, if they had tried different iterations, and so on."

USACE involvement in the VEX competitions came about through an

order from Lt. Gen. Thomas Bostick, USACE chief, in which the Corps was directed to provide support to the U.S. Army in influencing, engaging, and encouraging future generations of science, technology, engineering and mathematics professionals.

"I had a great time," said Corey White, environmental engineer and volunteer VEX judge. "We were able to speak with kids from all around the world and to see them have a blast competing in a friendly competition. Every kid I spoke with said that this has definitely inspired them to consider a STEM career in the future."

The VEX competition even extended STEM lessons to students who weren't competing. Over the last few years, the Louisville District has worked with students from Scott Middle School, Fort Knox, Kentucky, as part of the STEM ED program, a partnership between the Department of Defense Education Activities schools and USACE designed to inspire students to pursue careers in STEM fields, said Lewis who serves as the STEM Team point of contact for the Great Lakes and Ohio River Division.

"We've made several trips (to Scott Middle School) over the last two years to introduce the students to the engineering career field and demonstrate how engineering ties back to what they're studying right now in class," said White.

As a fitting culmination to this relationship, a group from Scott Middle School volunteered during the worldwide competition to help make the VEX games



Students from Scott Middle School reset the competition field between robot battles.

a success.

"Students helped out with the competition in multiple events, but they enjoyed doing the field reset—restoring the cubes and skyrise pieces back to their preset places after each match—so much that they requested to continue doing it the second day," White said.

White said it is important to remember the impact this kind of interaction can have on the students. "It's our responsibility—and our pleasure—to speak to them encouragingly and to urge them to continue to develop their interests and abilities."



Middle school competitors in the VEX IQ Challenge show off their robot for Marilyn Lewis, Louisville District engineering chief.

## District staff saluted for involvement in national dam meeting



Attendees at the meeting view a Corps of Engineers display.

*Carol Labashosky, public affairs*

The Army Corps of Engineers Louisville District staff gave presentations and project-site tours during the U.S. Society on Dams Annual Meeting and Conference held in Louisville, April 13-

17, 2015.

Troy O'Neal, geotechnical engineer, was the moderator for the session titled Dams on Karstic Foundations, in which Trace Henn, geologist, gave an overview of poor performance on dams on karstic rock, a common geologic feature found in Kentucky. The session also covered investigative techniques and alternative measures for these foundation conditions. Additionally, several case histories, including Nashville District's Wolf Creek Dam recent remediation, were presented. O'Neal also presented as a technical expert in his field.

Kan Lamkin, hydraulic engineer, led a tour group of conference attendees to the Cannelton Hydroelectric Project, constructed on the Cannelton Dam on the Ohio River near Hawesville, Kentucky. The project is one of AMP's four

hydroelectric projects currently under construction on the Ohio River.

The McAlpine Locks and Dam staff hosted a tour for conference participants. A Chinese delegation also visited the project during the week.

Tom Hagman, regulatory specialist and biologist, gave a presentation on the Corps' perspective on key permitting issues. It focused on water supply projects and the challenges associated with getting to the least environmentally damaging practicable alternative in accordance with government guidelines.

Louisville District Commander Col. Christopher Beck gave remarks at the start of the conference. Robert Anderson, civil engineer, also coordinated support for the conference.

## Safety

## Markland staff tries out new fall protection gear

*Mark Ostbloom, safety office*

**D**id you know that after surviving a fall you could die while hanging in your body harness after just seven minutes while waiting to be rescued?

On April 1, workers at Markland Locks and Dam, Warsaw, Kentucky, who use fall protection gear for their job took time out to train on a new piece of equipment that alleviates the effects of a little-known condition called "suspension trauma" or "orthostatic shock while suspended."

When people fall, they are suspended in the fall protection harness and all their body weight presses against the webbing. They remain vertical and sedentary constricting the venous flow causing blood to pool in the veins of their legs. Restricted blood flow to the brain and other organs causes the orthostatic shock or pre-fainting condition. Most describe the feeling as lightheadedness, muscular weakness and blurred vision.

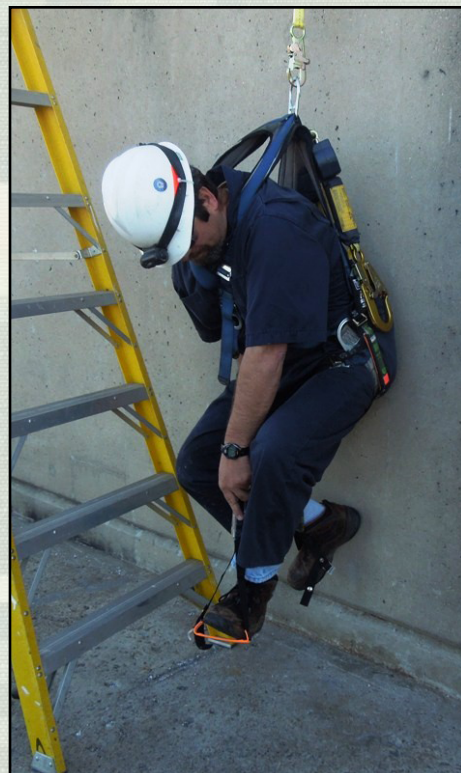
After about five minutes, the brain recognizes the blood pooling and as a last resort it decides the only way to survive is shut the body down. It causes fainting, at which point the body slumps over in the harness. Now, the person is at extreme risk for organ damage and eventually

death. Death can occur in as little as 7-40 minutes.

It is hard to believe that someone would survive the initial fall with no injuries but suffer serious organ damage or death from the gear that just saved his or her life.

The good news is that the new USACE Safety and Health Manual, EM 385-1-1, Section 21.I.06 (3), now requires all full body harnesses be equipped with suspension trauma preventers such as stirrups or relief steps to provide short-term relief from the effects of orthostatic tolerance. USACE employees should not use any fall protection gear without suspension trauma preventers installed on their harnesses.

During a recent safety assistance visit to Markland Locks and Dam, Mark Ostbloom, Louisville District safety specialist, reviewed Markland's fall protection program and equipment. They had just purchased relief steps and had not had an opportunity to put them into use. Ostbloom recommended to Gary Birge, lockmaster, that they take some time to do fall protection training in a controlled



John Cavanaugh, maintenance mechanic, practices using relief steps installed on his harness. The relief steps prevent suspension trauma after a fall.

*Continued on page 8*

environment. They could safely practice tasks such as adjusting body harnesses, getting the feel of hanging in the harness and practicing deploying, adjusting and standing in the new relief steps. Being suspended in a harness is not as easy or fun as it may look.

The next day Birge organized his team and spent some worthwhile time putting their fall protection gear into use on the side of Markland's operations building. All five of the team members spent time practicing their fall protection

skills in a controlled environment that was only six inches off the ground but simulated the exact same conditions one would encounter 100 feet in the air. Birge's maintenance team includes Allen Craigmyle, maintenance mechanic leader; and Shawn Riley, John Cavanaugh and Bill Meeks, maintenance mechanics.

"We all agreed that (the harness relief step training) was very beneficial," said Birge. "It really drives home the importance of harness adjustment, relief step placement and how to adjust them

in a controlled environment, before you really need them."

All fall protection body harnesses should be equipped with suspension trauma preventers. It is up to each project to determine which type of straps works best for them. The project's Competent Person for Fall Protection should install and inspect the straps, conduct academic and practical training with workers in accordance with manufacturer's guidance. In addition, projects should review and update their fall protection rescue plan.

## Spotlight

### Louisville emergency planner wins national preparedness award

*Sarah Mattingly, public affairs*

**B**e prepared.

It's the motto of the Boy Scouts, but one could also call it the credo of the Louisville District's George Minges.

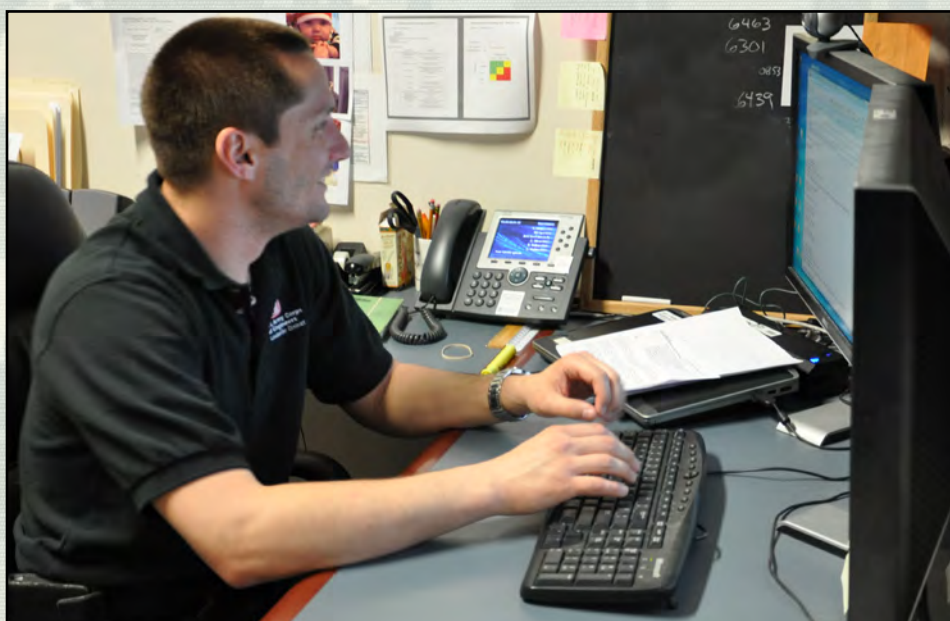
A former Scout himself, Minges, an emergency management specialist at the U.S. Army Corps of Engineers Louisville District, was recently named USACE Civil Preparedness Planner of the Year. The award recognizes his contributions and accomplishments related to overall preparations and planning for all hazards activities in 2013.

"George has completed several projects that increased the district's preparedness and ability to respond to any disaster," said Don Walker, Louisville District emergency operations manager, who nominated Minges for the award.

Minges recognized the need for a virtual emergency operations center plan to be used when district employees are unable to travel, Walker said, and he demonstrated his planning skills in the development of standard operating procedures for the district's crisis action team and flood fight team.

Another of Minges' achievements was the development of the Fast Assessment Screening Tool, which uses qualitative, empirical data to determine the risk of levee failure during a flood response mission. This critical information enables emergency operations personnel to respond quickly to a flood event, Walker said.

"It is great to be recognized by my peers for my contributions," Minges said. "I am passionate about and enjoy working for the Emergency Operations Center."



*George Minges, Louisville District emergency operations, is the U.S. Army Corps of Engineers Civil Preparedness Planner of the Year.*

In addition to his work for the Corps, Minges spends his off duty hours as a first responder within his local community. He serves the fire department in Oldham County, Kentucky, as a volunteer fire fighter. As such, he has been involved in several successful fire suppression operations and medical calls and was recognized as the Volunteer Rookie Fire Fighter of the Year.

Minges also started the county's first search and rescue team, which works in conjunction with other emergency services including the fire department, law enforcement, and the county's chapter of the Red Cross.

If that weren't enough, Minges even takes time to share his knowledge and expertise with organizations such as the Red Cross and the Boy Scouts of America.

"We're fortunate to have you on our team," USACE Commander Lt. Gen. Thomas Bostick told Minges in a letter. "Your efforts significantly increased the disaster response capability of the Louisville District."

Minges also received congratulatory letters from Maj. Gen. John Peabody, USACE Deputy Commanding General for Civil and Emergency Operations; and Brig. Gen. Richard Kaiser, USACE Great Lakes and Ohio River Division Commander.

"I consider this award and the letters to be the highest honor I have received during my career with the Louisville District," Minges said. "It's not something that happens every day."

*Sarah Mattingly*