

# Falls City Engineer

U.S. Army Corps of Engineers Louisville District

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‘Busy bees’ plant flowers  
to support pollination







## Falls City Engineer

Vol. 9, Issue 3

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**On the cover:** A planting was held at McAlpine Locks and Dam to increase habitat for bees, butterflies and other pollinators. (USACE photo)

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

# Commander's Comments

Ladies and Gentlemen,

As the warm weather is now fully in swing, this issue highlights a lot of great safety efforts in the district. We need to all remember, no matter where you work in the district, that we are all part of increasing safety over the summer months. This not only includes at work but also during non-duty hours when you are all playing hard after working hard! I would encourage all of you to be engaged in what is going on around you and ensure that you are not compromising safety.

I also wanted to take the opportunity to personally thank each and every one of you for what you do every day. This is my last edition of the Falls City Engineer as I depart in July and turn the reins over to Col. Toni Gant. It has truly been my pleasure to be part of this organization and watch and learn from the incredible individuals that make up the Louisville District team. This has been one of the most personally and professionally rewarding opportunities I have had in my military career and that is because I have had the opportunity to be part of a team that is passionate about what we do. You all need to remember that we are very successful each day and that is because each one of you contribute and do your part. We can never stop learning and improving, but at the same time we are built on a strong foundation of delivering our requirements. This is a great organization made up of



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

great people serving our nation!

Please be safe over the upcoming 4th of July holiday, enjoy time with friends and family and remember how critical our team is to the entire nation.

Thanks again or all that you do!

**Building Strong and Taking Care of People!**

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# Biological phenomenon observed at Nolin River Lake



Louisville District Water Quality Biologist Jennifer Thomason and Huntington District Water Quality Biologist Thaddeus Tuggle collect field data to determine if the unexplained bloom of *Daphnia lumholtzi* affected water quality parameters.

Jennifer Thomason, Jade Young and Zac Wolf, Louisville District Water Quality Team

On January 3, 2017, Deryck Rodgers, manager, Nolin River Lake, Bee Spring, Kentucky, contacted the Louisville District water quality team to report an ongoing biological event unlike anything previously observed at the lake. What originally appeared to be an oil slick turned out to be millions of tiny animals, scientifically categorized as zooplankton. The water quality team quickly engaged other water quality programs in the Great Lakes and Ohio River Division to determine if any sister districts were familiar with the type of bloom event described by the lake staff.

The Huntington District water quality team volunteered to assist in a field investigation. Louisville District biologists Jennifer Thomason and Zac Wolf organized the field investigation, coordinating with Huntington District water quality team members Steve Foster and Thaddeus Tuggle, as well as the Kentucky Division of Water (KDOW), U.S. Geological Survey Kentucky Science Center, U.S. Army Engineer Research and Development Center, Nolin River Lake Ranger Libby Watt, and BSA Environmental Services, Inc.

During the field investigation, biological, physical and limited chemical data were collected by the Louisville and Huntington water quality teams. USGS collected physical, nutrient and biological samples. Watt explained the conditions in

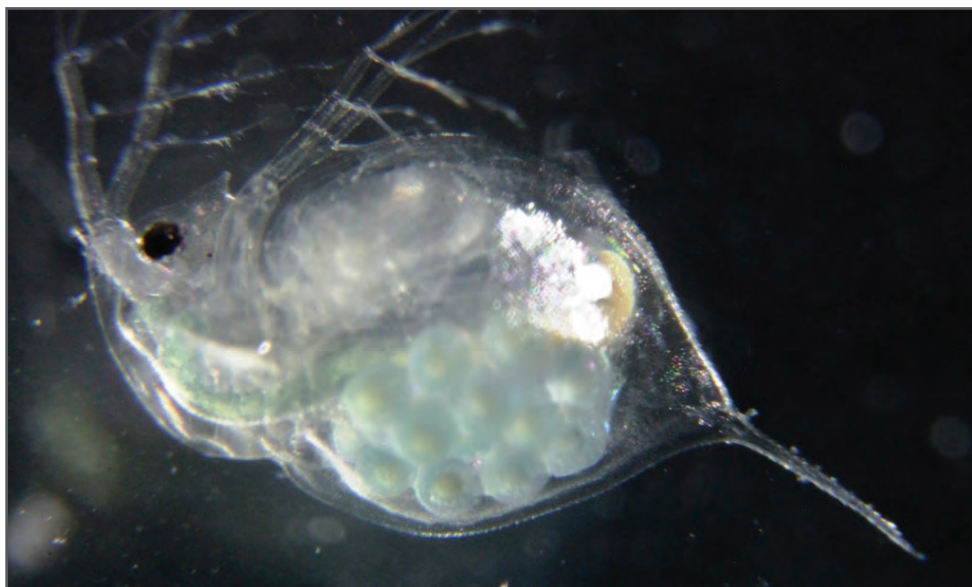
which the bloom was first observed and the initial response efforts by the KDOW and Kentucky Environmental Response Team. Watt also provided the extent of the bloom, which KDOW identified as a type of water flea.

Biological samples were sent to BSA for full characterization. The results from this analysis and the resulting conclusions are what make this event a remarkable phenomenon. BSA determined that the sample was dominated by *Daphnia lumholtzi*, an invasive species that is native to Africa, Asia, and Australia and was only previously known to occur in the Cumberland River drainage in Kentucky. The overwhelming scientific documentation on this species in the U.S. states that the

species prefers temperatures warmer than our native *Daphnia* species. So why was this invasive water flea blooming in a Green River Basin lake during winter?

Initially it was thought that the bloom occurred in response to increased growth in algae—the primary food source—after a precipitation event. However, the short duration of the algae growth and cold temperatures would not likely have driven a bloom this size of *D. lumholtzi*. Further, this species typically has large spines from the head and tail during feeding blooms as a defense to becoming fish food. The organisms in the sample provided to BSA contained small spines and the females were carrying eggs, indicating that this was a reproductive bloom—not a feeding bloom. There are currently no indicators in the scientific literature or in the other data collected during the field investigation to determine why a large reproductive bloom of *D. lumholtzi* would occur in Nolin River Lake during winter.

The Louisville District water quality team has documented the occurrence in the district's files and continues to investigate the available literature on the species to garner any additional details that may help to understand this event. Through inquiry with the experts at BSA there are no concerns that the species may affect water quality conditions at the lake and the species has not been documented to have adverse effects on the lake ecology. The bloom dissipated by January 5, 2017, and no other *D. lumholtzi* blooms have been reported since.



Eggs are visible in this *D. lumholtzi* specimen from Nolin River Lake.



Lots of buzz at McAlpine

# 'Busy bees' plant flowers to support pollination

*Carol Labashosky, public affairs*

The Army Corps of Engineers Louisville District McAlpine Locks and Dam staff sponsored Pollinator Day on May 13. Members of the public were invited to come to the land — a green space — adjacent to the locks to plant flowers and shrubs. The flowers and plants increase pollinator habitat for bees, birds and butterflies. It was the second event of this type at McAlpine; the first pollinator event was held in 2016. LG&E sponsored a BBQ lunch for all participants. Entertainment was provided by Millers Folly Bluegrass Band. Approximately 70 people attended.



USACE

## Josh the Otter program teaches pre-K water safety



Edmonson County Library

Nolin River Lake Ranger Danielle Robertson reads *Josh the Baby Otter* to preschoolers at Edmonson County Library, Brownsville, Ky.

*Carol Labashosky, public affairs*

Army Corps of Engineers Louisville District Nolin River Lake Ranger Danielle Robertson gave a helping hand May 1, teaching young children and their parents about water safety from a different perspective using a character called Josh the Otter. She read them a storybook *Josh the Baby Otter* at the Edmonson County Library Brownsville, Kentucky, and she helped with related arts and crafts so younger kids could learn water safety messages. Seven children and their parents attended the event.

Josh the Otter is a water safety campaign represented by a national annual event held in May — National Water Safety Month. It was designed and created to help children comprehend and remember to stay away from water unless accompanied by an

adult. The children participating are around three to five years old. They take a pledge as part of the activities: "I promise to be a good son or daughter. I promise to get an adult when I go near the water."

The mission is to educate children and hold events about water safety through drowning prevention campaigns and early childhood water safety training, according to Robertson.

It is a perfect match for the Corps' similar water safety messages, and it is aimed at younger children and their parents so they can learn together. One aspect of the campaign is to show the way children and adults perceive bodies of water, according to the website [JoshtheOtter.org](http://JoshtheOtter.org)

The group also learned about otters, swimming lesson options in the area, and to always wear a lifejacket while boating or

near the water at the lake.

The Josh the Otter program includes a book, song, a suggested curriculum, magnets, stickers, a stuffed animal and t-shirts.

"It was a fun opportunity to play, have crafts and masks and to teach our future visitors of Nolin Lake how to be safe around the water," said Robertson. Shortly after the event, the library's Facebook page included a post, "Both my kids loved story time!"

Josh the Otter book, coloring books and masks were donated by the Josh Collins Memorial Foundation. The foundation was started after a child, Joshua Collingsworth, passed away due to complications from a drowning accident near Omaha. His family created the Josh the Otter campaign for water safety in his memory.

### Joshua's Story

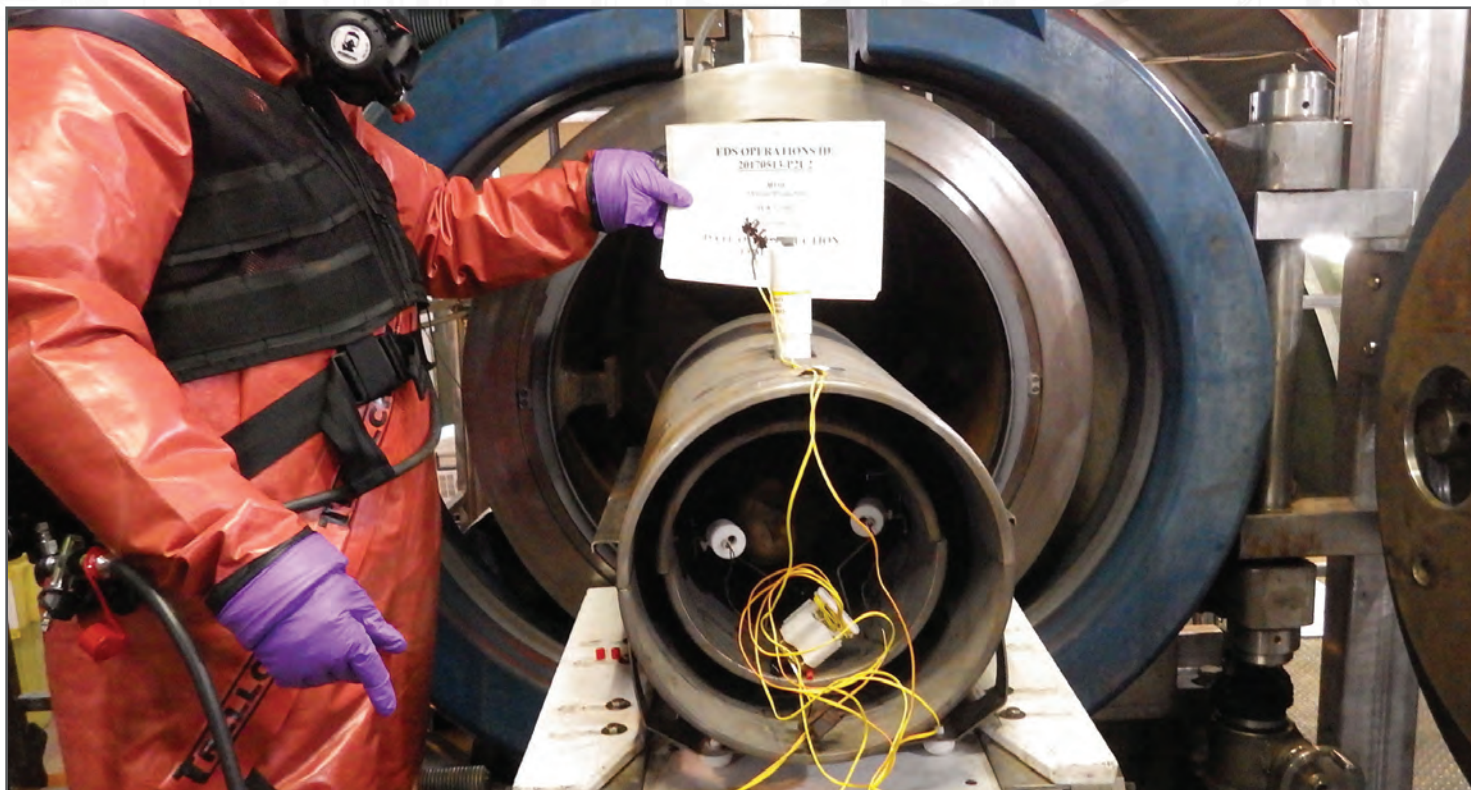
*Kathy and Blake Collingsworth, Joshua's parents*

June 1, 2008 — On a warm spring day in June during a family gathering at our home, Joshua slipped out of sight for just a few short moments. He was quickly discovered in the backyard pool, unconscious and unresponsive. Family immediately started CPR and he was life flighted to Children's Hospital in Omaha. After three days of lying by his side in the hospital, Joshua was taken off life support and passed away shortly thereafter. We know Joshua would have been a great young man if given the opportunity. Therefore we decided to create the Joshua Collingsworth Memorial Foundation in his honor, and from that day forward we committed to solving the problem of drowning. Joshua's legacy will continue through the education of parents and children to keep them safe in and around water with new, innovative, safety education training programs and water awareness campaigns.

Source: [joshtheotter.org](http://joshtheotter.org)



# Mustard agent safely destroyed at Savanna



U.S. Army Chemical Materials Activity

*The U.S. Army Chemical Materials Activity Recovered Chemical Materiel Directorate conducted a destruction mission of a WWII-era munition containing mustard agent that was discovered at the Savanna Army Depot in Illinois last year.*

A World War II-era munition containing mustard agent was safely destroyed at Savanna Army Depot (SVDA) in Illinois May 14.

The 155-mm mustard round was discovered last year during the U.S. Army Corps of Engineers' planned remedial investigation at three sites to look for potential mustard agent.

USACE, which has been working at the SVDA, a 13,062-acre Army installation, to conduct environmental activities since the early 1990s, called on the experts to handle the destruction mission. USACE works closely with the U.S. Army Chemical Materials Activity Recovered Chemical Materiel Directorate (RCMD) out of Maryland for remediation efforts at sites that may have buried chemical munitions. The directorate has decades of experience in destroying recovered chemical warfare materiel.

Nora Hawk, USACE Louisville District Project Manager for SVDA, said the project was "truly an excellent and successful example of multi-agency and multi-discipline team collaboration."

"The SVDA Base Environmental Coordinator, Cathy Collins, remained in close coordination with RCMD throughout the planning, storage and destruction

efforts and USACE team members from both Louisville District and Huntsville Center provided necessary management support," Hawk said.

When items with unknown liquid fills are recovered, RCMD sends specialized assessment equipment and a team of experts from CARA, the Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) Analytical and Remediation Activity, part of the U.S. Army 20th CBRNE Command. They identify the contents of munitions without opening them, which enhances safe, efficient operations.

After the item was assessed in December and confirmed to contain mustard agent, destruction mission planning began. Policy requires recovered chemical munitions to be destroyed at the closest DoD facility capable of hosting a mission, which in this case was SVDA. RCMD provided a temporary storage facility to SVDA, where the munition was secured until destruction.

In April, a team led by RCMD project manager Derek Romitti, with personnel from the Edgewood Chemical Biological Center, arrived in Illinois to set up the site for the Explosive Destruction System, the organization's time-tested destruction

technology to safely destroy the munition.

"Just to ensure the site was ready took months of coordination," Romitti said. "We need to have power, water, security and personnel. Setting up the equipment and actually completing the EDS mission is the culmination of months of effort."

The EDS is RCMD's primary method for destroying recovered chemical munitions. It has destroyed more than 2,600 recovered chemical warfare items in 12 states with an impeccable safety record. The system's main component—a sealed, stainless steel vessel—contains all blast, vapor and fragments from the process. The EDS uses linear shaped cutting charges to explosively access the munition's chemical payload for neutralization. Operators confirm treatment by sampling residual liquid and air from the vessel prior to reopening the EDS.

The process takes place in an environmental enclosure that operates under negative pressure and filters all air through a carbon filtration system. An extensive series of equipment checks, safety evaluations and regulatory approvals are required before operations begin.



# New construction, repairs at Pittsburgh AF Reserve Station

*Carol Labashosky, public affairs*

The program for the Pittsburgh Air Force Reserve Station is for new construction and repairs to existing facilities. The district has a total of three construction contracts for the facility.

A new two-bay corrosion/fuel cell hanger with associated lighting will be built. A large volume of airfield paving – some which is new and some being repaired – will be undertaken. A building addition and newly constructed fuel hydrant system will be constructed. There will also be three existing building renovations, including a flight simulator, aircraft maintenance units, and back shops with offices, equipment and support shops.



USACE rendering

## Louisville team designs Guardian Angel facility at Davis-Monthan AFB, Arizona



USACE rendering

*Carol Labashosky, public affairs*

Pictured is the concept design of the Guardian Angel Operations facility at Davis-Monthan Air Force Base, Arizona. When constructed, the facility will provide operational, warehouse, and equipment storage areas for assigned personnel and equipment. This will allow them to partner with joint and coalition forces to support Combatant Command (COCOM) requirements for personnel recovery and homeland defense.

Guardian Angel is a human-based weapon system comprised of Combat Rescue Officers, Pararescuemen, Survival, Evasion, Resistance, Escape Specialists and uniquely trained support personnel. Also at Davis-Monthan, is the future home of the Air Force Reserve's 306th Rescue Squadron. This Guardian Angel facility has a horseshoe design that was done by Louisville District's in-house designers using best practice guidance from the squadron.



## Family Readiness

The USACE Family Readiness program provides a range of free, confidential services to support deployees and their families throughout the deployment cycle, including 30 days following reintegration.

Services provided include:

- Mental and physical health
- Religious, spiritual support
- Rental and utility assistance
- Services for children, youth and families
- Employee Assistance Program

Questions?  
[LRL-FamilyReadiness@usace.army.mil](mailto:LRL-FamilyReadiness@usace.army.mil)

# EOC expediting repairs on high-risk Illinois levee



The project delivery team meets in the Louisville District Emergency Operations Center to discuss the status of the Russell-Allison-Ambraw Levee System, which sustained damage during May flooding.

*Todd Hornback, public affairs*

The U.S. Army Corps of Engineers, Louisville District Emergency Operations Center personnel continue support on an Illinois levee which sustained damage during the May 2017 Wabash River flooding.

The Russell-Allison-Ambraw Levee system is a non-federally operated and maintained levee system in Lawrence County, Illinois. The system sustained

damage where an existing wing wall used to support a drainage structure and a landslide adjacent to this structure were in an active state of failure. This structure and adjacent levee embankment have a high probability of failure if another flood of the same magnitude were to threaten the area.

“Even though it was late in the event, we determined an area of high risk of failing at the Russell-Allison Levee,” said Chuck Oliver, emergency operations chief

at the Corps in Louisville.

The Corps had worked with the levee local sponsor to stabilize the level during the flood event and is creating the project information report to complete contracting and construction before the end of the season.

“We are working as a team to show the community—the Corps delivers and cares for the communities we serve,” Oliver said.

The process includes sending the inspection report to the Great Lakes and Ohio River Division detailing the damage to the levee system along with potential alternatives and associated benefits to cost ratio for repair. Once approved at the division office, this information will be sent to the emergency operations counterpart at headquarters for final approval. At that point, funding would be provided to the district to be used to assemble plans and specifications for the repairs.

The Corps EOC team monitored levees in the area during the EOC activation April 28 through May 15, 2017. The Corps received funding to initiate the process for the levee repair work and continues on an accelerated schedule for the repairs.

## Louisville emergency management program earns coveted accreditation

*Todd Hornback, public affairs*

The Emergency Management program of the U.S. Army Corps of Engineers Louisville District was granted full accreditation by the Emergency Management Accreditation Program, known as EMAP, on April 27, 2017, along with 16 other programs that earned accreditation. EMAP is the only accreditation process for EM programs and represents a significant achievement — only a handful of districts across USACE have obtained it.

“It was a two-year process for the district to achieve EMAP accreditation,” Louisville District Chuck Oliver, chief, emergency management and security branch, said, “during which the EM and security branch took steps to document compliance with sixty-four industry-recognized standards, endured enterprise wide setbacks and delays, and passed a

comprehensive week long peer-review on-site assessment.”

He added, the Corps observed a significant positive change in our stakeholder’s emergency management programs that earned EMAP accreditation.

“For Louisville District, the EMAP program enabled us to standardize and organize our piece meal policies, plans and procedures into one comprehensive package,” Oliver said. “The Louisville District EM program changed from an outdated ‘Corps Way’ of doing business to the current industry standard.”

As a result of these programmatic changes, the Louisville District developed a Senior Oversight Guidance Committee, referred to as a SOG. This group, composed of internal and external stakeholders, meets quarterly to discuss the status of the emergency management program within the district and to strengthen relationships

with partners.

“The SOG increases stakeholder engagement and allows the EM program to incorporate feedback in our plans, policies and procedures,” Oliver said.

The accreditation process evaluates emergency management programs on compliance with requirements in sixteen areas including planning; resource management; training; exercises, evaluations, and corrective actions; communications and warning; and administration. This forms the foundation of the nation’s emergency preparedness system.

“Congratulations to those programs that have maintained their accredited status as well as those who have joined the elite leaders in emergency management having earned accreditation through the Emergency Management Accreditation Program,” stated Robie Robinson,

*Continued on next page*



Continued from previous page

executive director of public safety, University of Tennessee-Chattanooga and the EMAP commission chair. "Through their commitment and leadership, they have proven to their communities and stakeholders that their programs are sustainable and that they continue to focus on their communities' best interests."

According to EMAP, the process provides emergency management programs the opportunity to be evaluated and recognized for compliance with standards certified by the American National Standard Institute. It goes along with EMAP's mission to build safer communities through credible standards of excellence. These programs demonstrate accountability and focus attention on areas and issues where resources are needed to heighten their preparedness efforts to any technical

or natural disaster that may affect their communities.

To achieve accreditation, applicants must demonstrate through self-assessment, documentation and peer assessment verification that its program meets the emergency management standard. The program uses the accreditation to prove the capabilities of their disaster preparedness and response systems. Accreditation is valid for five years and the program must maintain compliance with the emergency management standard and is reassessed to maintain accredited status.

EMAP revolutionizes emergency management programs that coordinate preparedness and response activities for disasters based on standards. It recognizes the ability of emergency management programs to bring together personnel,

resources and communications from a variety of agencies and organizations in preparation for and in response to an emergency, in addition to obtaining the ability to measure those capabilities. The Emergency Management Standard is flexible in design so that programs of differing sizes, populations, risks and resources can use it as a blueprint for improvement and can attain compliance with those standards in an accreditation process.



## Safety

# Communication key to preventing mishaps

*Todd Hornback, public affairs*

The district is incorporating metrics and targeted informational safety campaigns to communicate safety initiatives in an effort to weave safety into the district culture as part of a Corps of Engineers-wide initiative.

The Corps of Engineers - Safety Occupational Health Management System, known as CE-SOHMs, will help

supervisors and employees become familiar with safety initiatives. These include safety briefings, inspections, reviews and coordination of information.

"I want to have open communication," Barry Wright, chief, safety office, said. "I want to be available for people to call and discuss safety or ask questions. This communication should be ongoing and consistent. When we find violations of

safety regulations, it is not pointing fingers in a judgmental way. It is helping to identify problem areas that may result in injury/illness or damage to equipment," he said.

"From this, it is my philosophy that we assist supervisors and employees in remediating these risk factors to prevent mishaps. It is sitting down and working together for the good of the employees and the district."

To open the dialogue, Wright is working with the district Collateral Duty Safety Officer Committee made up of members from district offices, operations and constructions divisions. This team steers district safety messaging and processes.

The Safety Office will post "Safety Read Files" to their intranet page. These publications will ensure the office is communicating safety information to the employees. It will include updates from regulatory agencies and industry in relation to safety updates, consumer safety and general safety campaign information.

The fliers will be released in a color-coded system. Green for information, safety campaign/general information, yellow for caution, operational impact and supplemental information and red for a warning for immediate hazard alert information. The color system aligns with the Great Lakes and Ohio River Division commander information updates and the new AtHoc alert notification system.

## SAFETY READ FILE

### ANSI/ISEA Z308 1-2015 Minimum Requirements for Workplace First Aid Kits

Volume 1  
Number 50-17-4-1



ANSI/ISEA Z308 1-2015 Minimum Requirements for Workplace First Aid Kits The International Safety Equipment Association (ISEA), in conjunction with leading industry stakeholders, developed this standard in 2014. In an effort to

#### EM385-1-1 Crosstalk

##### 03.B First Aid Kits.

03.B.01 The performance requirements of the first aid kits shall be based on the storage area location of the first aid kit and shall conform to ANSI/ISEA Z308.1. Content of all first aid kits shall be to the level of training attained by the responders using the first aid kit.

a. Type I kits are intended for use in stationary, indoor settings where the potential for damage of kit supplies due to environmental factors and rough handling is minimal. Type I first aid kits are required to contain the minimum fill in Table 3-1.

b. Type II, Type III, and Type IV first aid kits shall, at a minimum, meet the requirements of the minimum fill in Table 3-1:

*This example with the yellow and black border represents a sample topic on operational impact or supplemental information. This Safety Read File discusses OSHA regulation, EM 385-1-1; Minimum requirements for workplace First Aid kits.*



# Beck to relinquish command in July



*District awards ceremony, October 2016*

Col. Christopher Beck will relinquish his command of the Louisville District on July 27, 2017, at a change of command ceremony at the Muhammad Ali Center in Louisville, Kentucky. Beck assumed command of the district in July 2014.

During his tenure, the Olmsted Locks and Dam construction project has experienced its most successful three years to date, doubling the average number of shells constructed and installed.

The Air Force Reserve program grew from a \$35 million program in fiscal year

2015 to \$182 million in fiscal year 2017—the largest since the Louisville District has had the Air Force Reserve mission.

Beck increased employee engagement by hosting annual town halls with each division and monthly virtual town halls, during which viewers could submit questions online. He also encouraged employee growth through leadership development and cross-division training and implemented the district's first knowledge management program.



*2015 flooding at J. E. Roush Lake, Huntington, Indiana*



*The Inland Waterways Users Board visits the Olmsted Dam construction site, summer 2016*



*Addressing the media at Locks and Dam 52, September 2016*



*Corps Day 2016*



*Change of Command, July 2014*