



# Tower Times

Rock Island District's News Magazine

2013 Special Flood Edition

Marseilles Dam  
emergency  
Barges damage gates



District battles  
flood trio






**US Army Corps  
of Engineers** ®  
Rock Island District

# Tower Times

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## 2013 Special Flood Edition

ON THE COVER



Barges rest against Marseilles Dam after Motor Vessel Dale A. Heller lost control of its barges, April 18, during strong river currents from heavy rainfall. Meanwhile, the Corps' Manitowoc 777 assists crews in taking soundings below the dam during a scour survey. See full story on page 4.  
*Photo by Aaron Dunlop*

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### *Tower Times*

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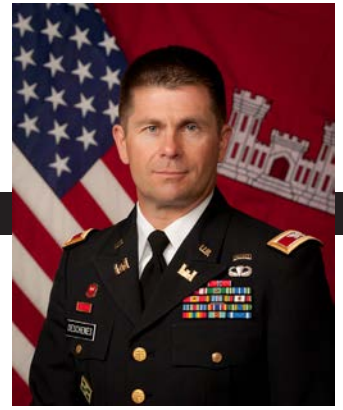
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*A message from....*

## Colonel Mark Deschenes, District Commander



# A tale of two extremes

After nearly a year of drought, District fights floods, responds to dam emergency

The Rock Island District has seen a tale of two extremes during the past year as the Great Midwestern Drought of 2012 fed into 2013 and came to an abrupt end when spring floods drenched much of our District boundaries in mid April. The team was up to the challenge and performed admirably responding to the many emergencies presented by flooding on both the Mississippi and Illinois rivers.

Starting April 17, heavy rains throughout the Midwest caused flooding on much of the Upper Mississippi and Illinois rivers. Most areas experienced major flooding and many of the communities along the Illinois River experienced floods of record. The Rock Island District had two primary emergencies: 1) flood fight throughout the District; and 2) respond to a dam emergency at Marseilles Lock and Dam on the Illinois River.

We stood up our Emergency Operations Center at the Clock Tower on April 17 and within hours we had boots on the ground in many of the affected communities. After standing up our primary EOC, we activated EOCs in both Peoria and Quincy, Ill., to help coordinate our flood fight efforts. Those efforts included deploying specially trained Flood Area Engineers to provide technical assistance to local emergency managers and provide expedient flood-fighting equipment and supplies such as HESCO barriers, sandbags, pumps and plastic sheeting.

The District distributed 232,200 sandbags, 23 pumps, 213 rolls of sheeting, and 4,950 feet of HESCO Bastion flood-fight barriers during the April flood fight. Additionally, 93 of our District teammates were deployed to provide flood-fighting support. It was an impressive, coordinated effort between our District and our partners, both state and local.

While our EOC oversaw our flood fight efforts, a team was forming to address the other emergency that coincided with the flood event. The Marseilles Dam was struck by seven barges after those barges broke loose from a tow on April 18 resulting in significant damage to the dam. The incident left the dam unable to operate as intended meaning quick, concise action was needed.


The District immediately teamed up with the U.S. Coast Guard and the barge industry to respond to the emergency. A Unified Command was formed between our three entities and coordinated operations began to address the dam emergency. Two major issues faced the Unified Command: Recover the seven barges through salvage operations and begin making temporary repairs to our dam project. The coordinated effort between our District, the USCG and the barge industry was a solid example of

interagency teamwork, something we should all be proud of.

Since repair operations began, our team has made many strides. In the initial stages, a temporary rock dike was constructed with more than 40,000 tons of rock stretching more than 300 feet to help control river flows behind two of the dam's inoperable gates. The District's dam emergency project delivery team also coordinated improvement to an earthen dike which is located upstream of the dam but was constructed in the 1930s as part of the project. Improvements to the earthen dike included the placement of thousands of feet of HESCO barriers and fill which increased the height of the dike about three feet. These measures helped us protect the project and had the added benefit of providing some flood risk mitigation to the city of Marseilles. The temporary repairs at Marseilles are ongoing but have been on schedule.

The Marseilles Dam emergency has been the first of its kind within our District but everyone involved has dedicated themselves to outstanding engineering solutions and great project management. In an emergency situation, your District teammates excelled. Of course, the District's performance has been no surprise to me but certainly underscores what all of you bring to the table when it comes to providing value to the nation.

Following the record flooding in April, our District boundaries were hit with two additional flood emergencies. There were no catastrophic incidences but our Emergency Operation Center continued to perform seamlessly with our response. The floods in late May and early June challenged our reservoir operations in Iowa. Although there were concerns early on, the reservoirs at Lake Red Rock, Saylorville and Coralville combined to avert more than \$115 million dollars in potential flood damages. Coralville Lake alone averted \$105 million in damages.

Mother Nature is unpredictable as we have seen over the past year. Whether it is a severe drought or record flooding, she can test our District's mettle. I have now been your commander for a year and your ability to adapt and overcome the multitude of challenges has impressed me. Congratulations on executing outstanding teamwork and cooperative efforts during the recent emergencies. The first year has been a roller coaster but being part of this team and working alongside the professionals who make up this District makes my job easy. Thanks for all you do and continue **BUILDING STRONG®**. 



**Seven barges rest against Marseilles Dam, Marseilles, Ill., after motor vessel Dale A. Heller lost control of its barges April 18, during strong river currents from heavy rainfall.**  
*Photo by Maj. Gen. John Peabody*

# Marseilles Dam damaged

By Hilary Markin, Editor

**A** tow moving barges on the Illinois River lost control in the strong river currents April 18 and seven of the fourteen barges that broke free ended up against the Marseilles Dam.

The Dale A. Heller was approaching the entrance to the Marseilles Lock canal when the current pushed the tow toward the dam. Of the seven barges that impacted the dam three remained floating while the remaining four sunk.

A Unified Command consisting of the U.S. Coast Guard, the barge industry and the Corps of Engineers was quickly established to ensure a coordinated, joint effort in response to the April 18 incident. The Unified Command's main priority was ensuring the safety of the public in the area during removal of the barges at

the dam.

Record high river levels delayed the Corps' inspection of the dam until April 21.

The initial inspection determined that five of the eight dam gates sustained significant damage during the collision. That damage included the bending of the steel skin plates and structural members in addition to concrete abrasion damage.

It also revealed that two of the gates (Gates 2 and 3) experienced a tearing of the upstream steel face resulting in 15 to 20-foot long holes in the gates.

The most critical damage was to the gate trunnions, which are hinges that anchor the gate to the dam. The trunnions between Gates 2 and 3 were severely damaged and the trunnion anchor

beam was completely broken off causing the gates to be inoperable. Gate 2 was also displaced downstream and was wedged within the dam gate piers.

In addition to the damage at the dam, an adjacent earthen dike upstream of the dam, constructed in the 1930s as part of the Marseilles Lock and Dam project, had scour and erosion damage following its overtopping. That overtopping caused several hundred homes and a school in Marseilles to sustain significant flood damage.

“Anytime you have that amount of water overtopping an earthen dike or embankment, the chance for scouring is significant,” said Andrew Barnes, Project Manager for the Marseilles Dam Emergency Response. “The earth dike was overtopped by two feet or more in some places. Our initial assessment discovered many issues that needed our attention.”

One issue that came to bear was easement encroachments. Many of the residents who experienced flooding behind the earthen dike had federal easements on their land. It became imperative that the Rock Island District reach out and communicate to the residents regarding the easements.

“There were a lot of angry residents which is very understandable,” said Ron Silver, the District’s realty specialist assigned to the Marseilles Dam emergency. “We endeavored to contact as many residents as possible – in person. They needed to understand what challenges our federal easements may present to their property.”

According to Silver, some residents had built structures on the easements which may have to be removed to facilitate repairs to



**This photo shows damage to a concrete pier and the Tainter gate after alliding with Marseilles Dam.** Photo by Aaron Dunlop

the earthen dike and allow District engineers to fortify the dike and bring it back to pre-flood event conditions.

The Corps also mobilized Hydrographic Survey crews and their equipment to complete a thorough underwater analysis of the damages to the dam and to gather information on the potential scouring of the riverbed adjacent to the dam and sunken barges.

“There was concern that the barges caused a new flow regime that could exacerbate scour of the bedrock,” said Matt Stewart, the District’s dam safety program manager. “The surveys showed that there was no significant scour present – which is what we were concerned about. Public safety was our number one concern

*Continued on page 6*



**The U.S. Army Corps of Engineers’ Commanding General, Lt. Gen. Thomas P. Bostick (left); the Assistant Secretary of the Army (Civil Works), Honorable Jo-Ellen Darcy; and Mississippi Valley Division Commander, Maj. Gen. John Peabody, visit with the General Maintenance Supervisor for the Illinois Waterway, Brady Beckman, and the Chief of Engineering and Construction Division, Denny Lundberg, at Marseilles Dam, May 2, to survey ongoing repair and salvage operations following damage sustained during an incident April 18.**

*Photo by Aaron Dunlop*


## Corps leaders visit Marseilles

By Hilary Markin, Editor

**T**he Honorable Jo-Ellen Darcy, assistant secretary of the Army (Civil Works) and Lt. Gen. Thomas P. Bostick, commanding general of the Corps of Engineers, met with Marseilles City officials as well as members of the Unified Command, May 2. Maj. Gen. John Peabody, commanding general of the Mississippi Valley Division, also joined them

The secretary and the two generals toured Marseilles Dam

to get a first-hand look at the operations being performed by the Unified Command. During the visit Lt. Gen. Bostick said the work being done at Marseilles was of utmost importance.

“Out of all the flood fighting the Corps of Engineers is doing, getting this dam fixed is our top priority,” said Lt. Gen. Bostick during his visit. 



**Rock Island District employees work to construct a rock dike just below Marseilles Dam. This dike helped reduce river flows and facilitate repairs to the dam. Photo by Aaron Dunlop**

## ***Marseilles Dam damaged (continued from page 5)***

and this survey helped alleviate some of our concerns regarding the safety of the dam.”

With the dam deemed structurally sound, the Corps looked to the next issue of not being able to operate two of the gates, which meant the ability to maintain the 9-foot navigation pool came into question. This would not only affect navigation traffic but also the many recreational boaters, marinas and other users. There is also a nuclear generating station that draws cooling water from the Marseilles pool.

The Corps quickly devised a plan to construct a temporary rock dike which began April 30. The dike, designed to block uncontrolled water flow through the inoperable dam gates, helped to maintain the navigation pool upstream of the Marseilles Lock and Dam.

“The rock dike allowed for the placement of temporary bulkheads over Gates 2 and 3 at the end of June,” said Stewart.

These bulkheads block the flow of water through the bays of the inoperable gates.

To complete the dike, the Marseilles pool was drawn down four feet beginning May 11. The Corps worked closely with the U.S. Coast Guard and the barge industry, as well as local boaters and marinas to facilitate the necessary preparations prior to and during the drawdown.

“Lowering the water levels reduced the volume of water flowing through the broken gates,” said Mike Cox, chief of Operations Division. “The reduction resulted in less erosive forces being placed on the rock dike and facilitated the safe

completion of the dike.”

According to Cox, the decision to draw down the pool was extensively evaluated and was one of many alternatives considered to reduce flows.

The dike, completed May 13, was constructed using approxi-



**Rock Island District employees complete the rock dike just below Marseilles Dam during the four-foot pool draw down. Photo by Aaron Dunlop**

mately 42,000 tons of rock and stretched more than 300 feet.

“It was very impressive to me that our operations crews were able to complete the dike so quickly,” Barnes said. “They worked 24 hours a day knowing that it was critical for us to get the dike in place as quickly as possible.”

The navigation pool was fully restored May 15 allowing navigation traffic to resume.

More excitement was in store two weeks later when the precipitation forecast indicated a high risk of river stages overtopping the earthen dike and the recently completed rock dike around June 2. The contractor for the earth dike initial repairs was mobilized and between May 29 and June 1 the earth dike was raised approximately four feet to counter this risk. The Corps’ Operations crews raised the rock dike a similar amount during the same time frame.

Alongside of the Corps constructing the rock dike, fabricating bulkheads and performing hydrographic surveys, the Unified Command was coordinating salvage operations of the barges – which also included District employees and equipment.

The first barge was removed April 23 followed by three other barges between then and April 30 when operations were temporarily ceased during dike construction.

To successfully remove the barges, most of them needed to be emptied which required some heavy lift cranes and other specialized equipment. The District’s heavy lift crane Hercules and the Manitowoc 777 were used to assist in the lightering of several barges in order for them to be removed safely.

“This required close coordination with all parties involved. It was a challenging process to remove the barges and to do it safely,” said Cox.

Salvage operations to remove the remaining two sunken barges resumed with the completion of the rock dike. Their removal



**The District’s Manitowoc 777 assists the Unified Command in removing steel plates from one of the submerged barges at Marseilles Dam. Photo by Aaron Dunlop**


required the use of specialized equipment and was a very labor intensive process. Before lifting and removing the barges, their cargo was removed. The first one was carrying large heavy steel plates; some as large as 40 feet in length, 8 feet wide and weighing up to 7,000 pounds each.

The final barge was safely removed June 17 marking the end to salvage operations and the Unified Command.

Upon removal of the final barge a comprehensive hydrographic survey was conducted upstream of the dam. To everyone’s relief no significant scour was found said Stewart.

“Now that the salvage operations are complete we can get a closer and more complete look at the damages,” said Barnes.

The District’s Project Delivery Team continues to work on the temporary and permanent repairs of the Marseilles Dam. A temporary repair to the damaged trunnion anchor beam supporting Gates 2 and 3 will be attempted while the existing trunnion anchorages will be evaluated by a specialty contractor. A third bulkhead will be used to allow full inspection and assessment of Gates 4-6 throughout the summer. The full scope of required repairs is expected to be determined by mid-September.

“The response by the entire District to this incident has been an incredible team effort. All of the people working on this, whether they are in Operations, Engineering & Construction, Contracting, Safety – have displayed a remarkable willingness to do whatever it took to complete the job. I think the District should be proud of the effort and the results,” said Barnes. 



**Bulkheads, fabricated by District employees, now block the flow of water through the Marseilles Dam.**

*Photo by Andrew Barnes.*

# Coralville Lake averts flood damages

By Hilary Markin, Editor

This spring's heavy rains caused Coralville Lake to begin storing water in mid-April. Following the crest April 24, pool levels began falling however more rain was in store and levels began rising again May 4. Additional heavy rain in late May forced the Corps to regulate the outflows to lower downstream river levels and minimize flooding in communities from Iowa City to the Mississippi River.

As rain continued to fall, lake levels were a moving target and forecasts showed Coralville going over the spillway by more than one foot.

"We really lucked out. There were I think two rainfall events that were forecasted to occur and they didn't," said Dee Goldman, operations manager, Coralville Lake. "That's what saved us and the communities from incurring even more damage."

When the National Weather Service is forecasting river levels they build into the forecast rainfall expected during the next 24 hours. When that rainfall doesn't happen or if more should fall the National Weather Service updates their forecasts.

Along with the National Weather Service, the Corps was also running hydrologic models based on various scenarios regarding the amount of inflow and outflows at the lake. During flood events, the Corps, National Weather Service and U.S. Geological Survey have regular conference calls to discuss the river levels, forecasts and the various models.

"We work closely with the Weather Service and USGS to align our models and to discuss what is happening in the river basins and what is expected to happen," said Jim Stiman, chief of Water Control.

During the May-June event Coralville's inflows peaked at 40,000 cubic feet per second on June 1.

"There is a delicate balance to the Corps' operation of the reservoirs with the goal and their primary purpose of flood risk reduction for areas below the reservoir," said Stiman. "Coralville




**Curious visitors stand atop the spillway at Coralville Lake to see the high water levels June 3.** Photo by Coralville Lake staff

was in fact built to reduce flooding on the Mississippi River."

This delicate balance includes controlling releases to minimize downstream flooding but also conserving flood storage should it be needed. During the May-June flood event, the maximum outflow was 18,400 cfs which was maintained for several days to conserve flood storage. If Coralville had overtopped as predicted, the combined releases, meaning the spillway plus the conduit outflows, could have been more than 22,000 cfs. The record outflows at Coralville were recorded in 2008 at 39,500 cfs.

The storing of flood waters and reduced outflows lowered the Iowa River by approximately 6.2 feet in Iowa City, Iowa, and 3.8 feet in Lone Tree, Iowa. Coralville Lake also lowered river levels on the Mississippi by nearly one-half foot at Quincy, Ill.

The Corps' estimates show that Coralville Lake prevented more than \$105 million in additional flood damages to downstream areas during the May-June event. Combine that amount with the flood damages prevented in April and early May and more than \$146 million in damages have been prevented by Coralville Lake just this year. 



**High water levels at Coralville Lake forced the closure of many recreation areas including the West Overlook Day Use area.** Photo by Coralville Lake staff





**Anthony Heddlesten, environmental engineer, Environmental Engineer Section, Design Branch, Engineering and Construction Division, inspects a possible boil at Spring Lake Levee near Manito, Ill. Flood Area Engineers notified the Spring Lake Levee and Drainage District who arrived a short time later with plenty of sandbags to ring the boil.**  
*Photo by Felix Castro*

# On the ground providing flood-fight supplies and technical assistance

By Hilary Markin, Editor

**W**hen the National Weather Service's forecasts river levels reaching flood stage, the District's Emergency Management Office starts to take note. As river levels rise and the potential for assistance is on the horizon the Emergency Operations Center (EOC) is activated.

Through the EOC, supplies such as sandbags, pumps, poly sheeting and others are distributed to communities in need. Flood Area Engineers also provide technical assistance to communities and check in with levee sponsors to ensure they are prepared. In some situations an alternative EOC is opened to better serve the community but also serves as an office for the deployed Flood Area Engineers.

The Corps first activated the EOC April 17 in response to the National Weather Service's forecasts predicting major flooding along the Upper Mississippi and Illinois rivers. To better serve the communities, additional EOCs were opened in Quincy, Ill., April 19, and one in Peoria, Ill., April 20.

During the flood-fight, 232,200 sandbags, 23 pumps, 213 rolls of poly sheeting and 4,950 feet of HESCO Bastion flood-fight barriers were distributed to communities to assist them in their flood fighting efforts. Additionally, 93 Corps employees were fully engaged providing support both in the office and in the field.

"Every flood is different," said Rodney Delp, chief of Emergency Management. "We maintain a readiness posture to ensure we are prepared both with supplies and that our Flood Area Engi-


neers are trained and ready to deploy."

The EOC was officially closed on May 2 as the floodwaters moved downstream and there was no longer a threat within the District's area of operations.

However, spring was not over yet. Heavy spring rains fell over much of the Rock Island District in late May causing river levels to once again swell. The EOC was activated May 28 followed by the opening of the Quincy EOC two days later.

Thankfully river levels across much of the District did not reach as high as in April, with the exception of the Iowa River where heavy rains targeted much of the basin. Coralville Lake crested within feet of overtopping the spillway which was once predicted during this flood event.

During this event, 62,000 sandbags, 14 pumps, 210 rolls of poly sheeting, and 4,950 feet of HESCO Bastion flood-fight barriers were distributed to communities. In addition, 22 employees were fully engaged providing flood-fighting support in the field.

For a third time, heavy rains once again plagued the Rock Island District and the EOC was again activated June 26. Communities were well prepared for the high water with minimal requests for support from the District. Four locks were closed on the Mississippi as water overtopped lock gates. The EOC was closed - July 8 when all locks reopened to navigation and river levels continued to fall. 



The Illinois Project Office in Peoria, Ill., is surrounded by water April 22. Corps employees built a temporary walkway to the office which also serves as the Peoria Emergency Operations Center. *Photo by Illinois Waterway Project Staff*

# Record-setting flood on Illinois Waterway

By Hilary Markin, Editor

**R**ecord-setting levels on the Illinois River and tributaries damaged not only private property but a lot of government property too.

The Illinois Waterway Project Office in Peoria, Ill., was damaged by the flood waters. Building 306 which housed five employee offices and all the equipment for building and repairing wickets was flooded with nearly two feet of water.

Since the flood waters have receded, employees have removed all of the saturated building materials and are working on replacing the lower four feet of the building with steel sheeting making it waterproof for the next record-setting flood.

“All of the work is being done with in-house employees, allowing us to make layout changes and improvements,” said Mike Zerbonia, acting operations managers for the Illinois Waterway Project. “Outlets are being raised, offices reconfigured and machinery repositioned.”

In addition to the building, debris and mud was strewn throughout the grounds and in to several other buildings.

“A huge cleaning effort was undertaken using lock and hired labor folks,” said Zerbonia. 



Water from the Illinois River laps at the edge of the Illinois Waterway Project maintenance complex April 22. *Photo by Illinois Waterway Project Staff*



**Flood Area Engineer Felix Castro inspects the landside toe of the Banner Drainage and Levee District levee for possible seepage from the Illinois River April 22. Photo by Anthony Heddlesten**

# Flood Area Engineers support communities along the Illinois River

By Hilary Markin, Editor

**T**o support the flood-fighting efforts in the Peoria Flood Area a remote Emergency Operations Center was opened at the project office on April 20.

“It was just something else,” said Mike Zerbonia, acting operations manager for the Illinois Waterway Project and lead Peoria Flood Area Engineer, regarding the amount of flooding that occurred.

The high water in April busted 16 records previously set in 1943 and 2008 along the Illinois River.

“At one time 23 flood area engineers were supporting the local communities in the Peoria Flood Area,” said Zerbonia.

The Peoria EOC, staffed by administrative and maintenance support employees, distributed 113,000 sandbags, 162 rolls of poly, and seven pumps.

During the flood – yard workers had to build a temporary walkway so workers could access the office while it was surrounded by flood waters. They also had to arrange for temporary power as the facility lost power and the generator on site was also surrounded by water.

“It was really a coordinated effort,” said Zerbonia. “From the waters impacting the project office, to the communities affected and the flood-fight support we provided them, to the flooding at the locks and dams and responding to the emergency situation at Marseilles.”

Through all of it the employees on the Illinois Waterway and those who came to support the flood-fight efforts worked together to minimize the impacts and help those in need.


Flood Area Engineers assisted communities conducting major inspections and providing technical assistance answering questions and giving advice to local officials and the levee and drainage districts.

“At one point in time we had two 12-hour shifts going to assist the local communities in patrolling levees,” said Zerbonia.

Zerbonia divided the flood fight into four areas. Kirk Sunderman led the Peoria area, Anthony Heddlesten led the Liverpool area, James McKeon led the Havana area, and Doug Vercautren led the Beardstown area.

“These guys did an outstanding job coordinating their crew’s patrols, looking at hot spots and addressing levee district concerns,” said Zerbonia.

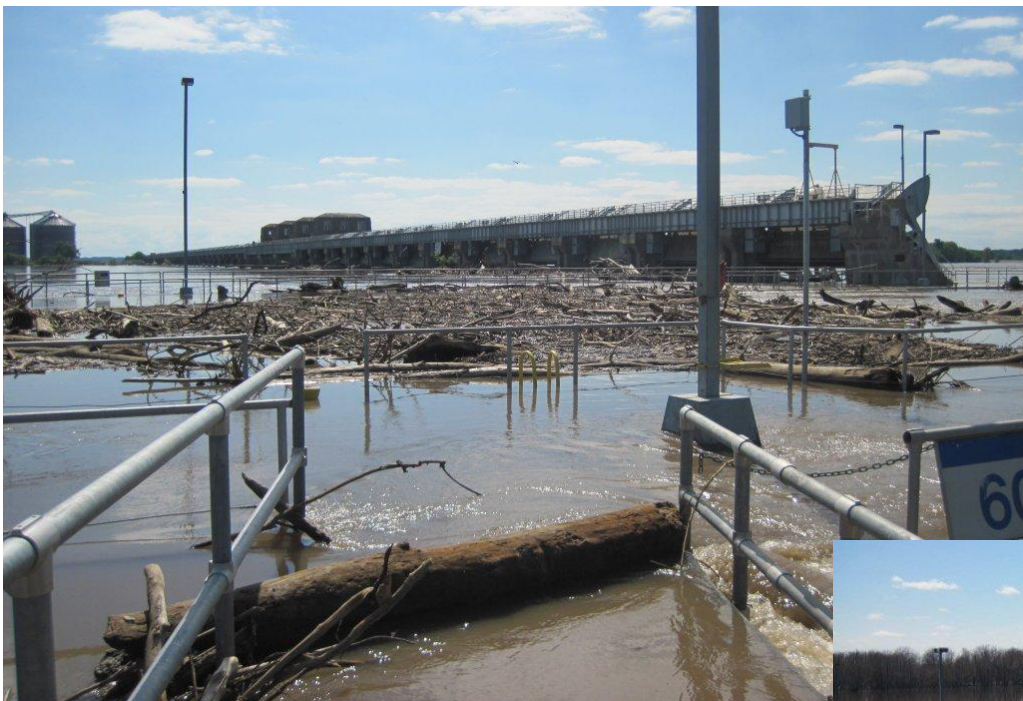
In the Pekin and LaMarsh area, flood area engineers assisted in the raising of the levee to help protect the levee district. The same was done at Liverpool.

Five non-federal levees were breached during the flood event on the Spoon River impacting mostly agricultural land. Although the waters have receded – work continues on cleaning up and repairing all that was damaged. 



**Larry Melaas checks along a concrete flood wall for seepage at Calihan Pork Processing in Peoria, Ill., April 22, In the background is a sandbagging operation to increase the level of protection at the plant.**

*Photo by Kirk Sunderman*



**Above, debris accumulates at Lock 20 in Canton, Mo., during high water June 3.**  
*Photo by Larry Reeve*

**Below, flood waters overtop the lock gates and the wall at Lock 17 April 20.** *Photo by Bill Ford*



# Flooding at the Mississippi locks

By Hilary Markin, Editor

**N**ot only does the high water impact navigation traffic and recreational boaters it also takes a toll on the personnel who work at the locks. As soon as river levels are predicted to overtop lock gates Operations Division begins coordinating with industry partners.

“We coordinate closely with industry and send out a lock status report each day by 11 a.m.,” said Bill Ford, acting chief of locks and dam, Mississippi River Project. “We also do conference calls with the towing industry, Coast Guard and our neighboring Districts every couple of days during high water.”

The lock personnel have it down to almost an exact science when it comes to shutting down the lock. Each employee has a specific role in the process and together they can shutdown the lock in a matter of hours depending on the lock and the conditions. Of course it has taken years for them to perfect this but with each flood they get more efficient.

“Years like this one - when some of the locks are on their third closure - it becomes second nature to them,” said Ford.

The height of the water affects the amount of buttoning up they need to do. In some cases, like at Lock 17 in April, water ran

across the floor of the lock house.


During the closure, lock personnel watch the forecast and as the water recedes they start cleaning up. The challenge however, can be the debris that accumulates.

This spring – Lock 20 saw unprecedented amounts of debris piled up against the lock gates and on top of the walls.

“Additional staff and equipment was sent from the Mississippi River Project Office to assist in the cleanup efforts,” said Ford. Once the debris was safely removed – they worked to reinstall the machinery to reopen to navigation.

“The navigation industry keeps close tabs on the closures and when Lock 20 opened June 20 after the 12-day closure they were ready to go,” said Ford.

The lock personnel work long hours cleaning up after a flood to reopen to navigation as quickly as possible. When they do reopen, they spend the next few days locking boats nonstop until the queue is cleared.

“Years like this one are hard on lock personnel when the river goes up and down. It can be very trying at times working long, hard hours,” said Ford. 

# Corps assists in saving a levee

By Hilary Markin, Editor

The Corps established a remote Emergency Operations Center in Quincy, Ill., April 19, to provide assistance to communities within the Corps' Quincy Flood Area that extends 100 miles along the Mississippi River from Keokuk, Iowa, to 40 miles south of Hannibal, Mo.

The Corps distributed 110,000 sandbags and 2,100 feet of poly sheeting to the local community to assist them in their flood-fighting efforts. Thirteen specially trained Flood Area Engineers deployed to the area and provided direct flood-fight support helping the local drainage and levee districts and river communities to fight flood waters.

In Keokuk, Corps personnel worked with their new public works director, police chief and fire chief to offer technical insight into the City's flood risk management system.

"We walked along the Keokuk floodwall and closure structures with the city's new emergency personnel highlighting what should be monitored and how to best address flood-risk issues as they arose," said Hank DeHaan, lead Flood Area Engineer for the Quincy Flood Area.

In the Mississippi-Fox Drainage and Levee District in North-eastern Missouri, the Corps provided the drainage district with on-the-ground technical assistance during the peak of the flood crest which started to overtop the levee system on April 20.

Additional sandbags were brought in from neighboring areas




**Bryan Snook, Flood Area Engineer assistant, inspects a boil at Indian Graves Upper.** Photo by John Hayes

to help address low spots in the system and the Corps provided 10,000 additional sandbags to help reduce the chance of the levee fully overtopping.

With this focused effort and the help from surrounding areas, the crest of the flood was stopped at the very top of the added protection and thousands of acres of land and numerous buildings were saved from flood waters.

"We were watching the river gages upstream very closely," said DeHaan. "The river reached the very top of the sandbags but did not overtop."

Following the cresting of the Mississippi River within the Quincy Flood Area and as flood waters continued to recede, the Corps demobilized their Quincy Emergency Operations Center on April 27. 



**City workers check the flood water in Keokuk, Iowa, April 19.** Photo by John Hayes



Significant damages occurred during the April flooding on the Illinois River. Left, water rushes over the lower miter gates at Marseilles Lock. Right, the water severely eroded the soil around the concrete wall and stairway just below the miter gate on the right descending side of the lock. *Photos by Larry Rodriguez*

# Impacts to locks on the Illinois River

By Hilary Markin, Editor

The locks and dams on the Illinois River are a bit different than those on the Mississippi – with one big difference being the two that have Wicket dams - Peoria and LaGrange. But there are others too.

The flooding in April forced a 200-mile stretch of the Illinois River to close as flood waters impacted the lock operations but those locks were impacted in various ways.

At Dresden the lock was closed due to heavy flows making it unsafe for lock personnel to open the gates to lock a boat. At Starved Rock the lock walls were under water with the water coming up so quickly that they didn't have time to pull all the necessary machinery.

"They were only out of operation for a few days," said Craig Hess, chief of locks and dams on the Illinois River. "They had everything cleaned and repaired and were back open very quickly."


Both Peoria and LaGrange were in "open pass" meaning the wickets were not needed to maintain the navigation channel and were lowered into the river.

"They just put the wickets up," said Hess. "Peoria's went up July 15 and LaGrange's July 18."

In addition to the barge incident at Marseilles the record flood waters also caused lots of erosion around the power houses and essentially washed away a good chunk of land on the north side of the dam.

"We had a bridge that allowed us access to the Power House, but the severe erosion makes the bridge unusable," said Hess. "We are now looking at the options on how to repair this area."

The island at Marseilles also had significant washouts and erosion as well as the locks walls and areas around the lock chambers were the water flowed over.

"We had everyone engaged during the flood - helping one another out, pitching in wherever needed," said Hess. "It was really a team effort to deal with not only the lock closures but also the incident at Marseilles." 



Significant erosion occurred on the north end of the dam near the Power House. *Photo by Larry Rodriguez*

# Flood inundates Illinois Waterway Visitor Center

By Hilary Markin, Editor

**T**he Illinois Waterway Visitor Center was closed once again as flood waters impacted facilities in April.

The center was closed during renovations in 2010 moving offices and the auditorium out of the basement and into a new addition that included an elevator. The building however still succumbed to the record flood waters in April – closing April 18.

The basement of the old building where offices used to be was completely filled with water with more than 12 inches covering the first floor. The elevator was also impacted. As the water rose, the elevator was moved to the top floor – however when the City of Peru, Ill., turned the power back on, the elevator restarted itself and returned to the first floor and became inundated with flood waters.


After the flood waters receded it was challenging to get the necessary resources to begin cleaning up the damage and to make the necessary repairs.

It also took a while for the roadways leading to the Visitor Center to reopen as they were left covered with debris.

The Visitor Center reopened June 15, however not all repairs were complete.

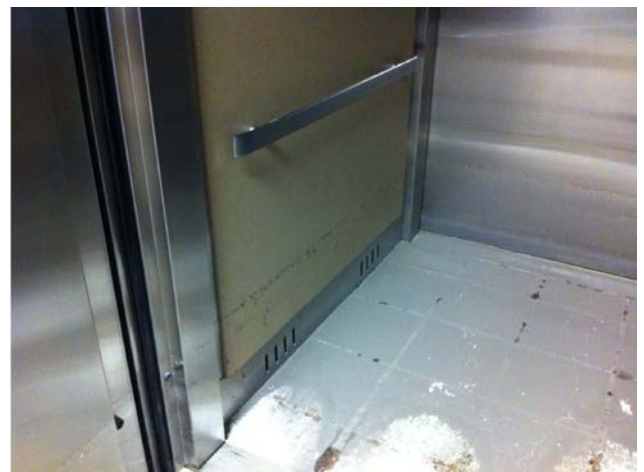
“We opened with only a few card tables for a front entry desk and limited bookstore facilities. Our plywood storage area had to be totally demolished. We’ve been slowly getting back up to speed and visitation has once again returned to normal,” said Gary Shea, natural resource specialist at the Illinois Waterway Visitor Center.

“It’s a work in progress. Visitors have been inquiring about the flood and some of its impacts. There are quite a few regular visitors that missed coming out and watching the boats locking through,” said Shea.

The Illinois Waterway Visitor Center is connected to Starved Rock Lock and Dam on the Illinois River and has been serving the public since 1978. 



**Record setting flood waters on the Illinois River in April inundated Starved Rock Lock and Dam and the adjoining Illinois Waterway Visitor Center.** Photo by Illinois Waterway Project Staff



**The water line remains visible in the damaged elevator at the Illinois Waterway Visitor Center after flood waters receded.** Photo by Kevin Ewbank



# Corps Day

## **Congratulations to the 2013 Employees of the Year**

Matt Stewart - Engineer of the Year

Chris Churney - Supervisor

Bob Romic - Professional

Rod Clausen & Hilary Markin - Technical/Administrative

Natalie Hernandez - Assistant/Clerical

Alan Dickerson - Trades/Crafts

Jason Smith - Public Contact

Jim Homann - Community Service



**S.K. Nanda (left) and Dave Hayes (right) were inducted into the Gallery of Distinguished Employees at Corps Day by Col. Mark Deschenes, commander, Rock Island District.**



**District retirees pose with Col. Mark Deschenes during the annual Corps Day picnic.**



# 2013





# *Spotlight on the District*

## Bill Ford

Acting Chief of Locks and Dams  
**Mississippi River Project Office, Operations Division**

**S**ome people have it in their blood to be competitive – for one District employee that is definitely the case.

Bill Ford, who by day works for the Corps of Engineers but when off duty you can find him cycling for the next race or training horses for the next show. And those are just two of the competitive hobbies he currently participates in - there have been others along the way.

Ford's career with the Corps began while he was still in high school being hired on as a laborer in 1981 working six to nine months out of the year at Lock and Dam 16. After graduating, he also joined the Air National Guard, serving from 1984-1990, and when not working for the Corps, he was working at the air base in Peoria, Ill.

"I was a load crew specialist – organizing and loading stuff in the C5, C130 or C131 airplanes and then we took it all over the country," said Ford.

In 1986 he became a permanent Corps employee officially coming on board as a lockman at Lock and Dam 16. During his time there he volunteered during the winter months to work at LaGrange and Peoria locks. He was selected to become the Assistant Lockmaster at Lock 19 in 1996 and also served in that role at Lock and Dam 14 before being selected as the Lockmaster at 17 in 2000.

In addition to serving as the lockmaster who oversees all the day-to-day operations of the lock and its staff, he is also the Districts Dive Coordinator. For the last four years he has overseen and coordinated all the dive operations, both contract and internal, for the District. Prior to that, he served as the assistant coordinator.

Ford permanently joined the dive team in 1993 after completing the required eight-week PROSPECT course at Key West Community College in Key West, Fla. To stay certified, divers also go to a two-week refresher course in Key West every four years. This is in addition to other required training.

"We have 16 divers currently on the team including myself," said Ford.

One of his most memorable dives was at Lock 19 inspecting the intake screens.

"That is our deepest lock, you go down 60 feet and inspect intake screens," said Ford.

Ford is always looking for opportunities and is currently the first lockmaster to serve as the Acting Chief of Locks and Dams



on the Mississippi River.

"Whenever something like this came up before it was only open to engineers," said Ford. "It has been a great experience working with all the lockmasters on the river and learning more about how they operate and manage their facilities."

This position has allowed him to see the bigger picture of how the District operates and has brought challenges as the District experienced its third flood impacting lock operations on the Mississippi River.

"Sometimes it feels like floods follow me," said Ford. "When I started at Lock 17 in 2000 we had a major flood – but it was a really good learning experience for me. Had it not happened, I wouldn't have learned the things I did or implemented the changes that I saw needed to be made."

Ford got his taste of the river as a kid growing up near Lock and Dam 16 where he lives today.

"I had relatives who often fished near the lock and one of them also worked for the Corps at Lock 16. Those experiences and knowing what a great place the Corps was to work really had me hooked," said Ford.

Ford picked up competitive cycling in 1997 with a typical ride being around 100 miles. Compare that to a typical day on RAGB-RAI which averages about 55 miles a day. Through the course of a year he has been known to log 10,000 miles on his bike.


He is a member of the Muscatine cycling team and helps train

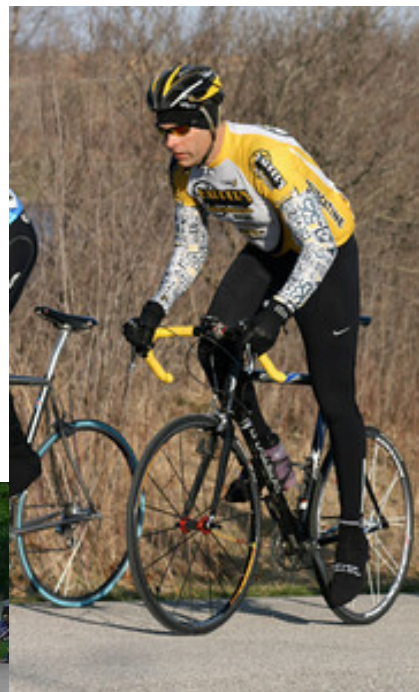
and coach those new to cycling. The races he participates in are usually road races, criteriums and ultra distance events - sometimes competing for 12 hours at a time while some of his teammates do the 24-hour races. His most recent race was in Sebring, Fla., competing in a 12-hour race logging 248 miles, and had strong winds not been a factor that number would have been a lot higher.

“When my teammates start complaining I tell them ‘If you are hot ride faster and the breeze will cool you off, if you are cold ride faster and you will get warmed up’,” said Ford speaking from his competitive nature.

In addition to cycling he also raises and trains quarter horses with his daughter. They currently have three that they take to area shows competing in western pleasure.

Ford and his wife have been married for 29 years this year and their daughter is in high school.

When asked about advice he encouraged others to continue working for the Corps. “Stick with it; it’s a great job with great benefits that you will seldom find anywhere else.” 



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## Recognizing a volunteer and partnership

By Phil Rustad, Saylorville Lake

In 1993, Saylorville Lake entered a Cooperative Agreement Partnership with the Iowa Academy of Science to have a gift shop located in the Saylorville Lake Visitor Center.

Through the agreement the Corps provides the space and in return a percentage of the proceeds are available for lake staff to use for educational programs and outreach efforts. This is just one of 56 cooperative agreements across the Corps - the District has four others.


Phyllis Kingsbury was the original Iowa Academy of Science volunteer who helped get the partnership started before turning the reins over to Gene Lucas who has been managing it since 1996.

Lucas served in the Marine Corps in the 1940s for a year and a half and then as a reservist during the Korean War for more than a year. He was a biology professor at Drake University from 1954 to 1996. Lucas is an artist, author, lecturer and photographer who specializes in Betta fish (Siamese fighting fish).

He has been a volunteer involved with the Iowa Academy of Science since 1950 and is a fellow of the academy. Lucas turns 85 this year and is in his 17th year of volunteering to make the partnership a success. Saylorville Lake thanks him for all of his time and efforts in making the gift shop and partnership a continued success.



**Gene Lucas, a long-time volunteer, has been helping coordinate the Cooperative Agreement Partnership between the Corps of Engineers and Iowa Academy of Science for 17 years.** *Photo by Saylorville Lake Staff*

The Iowa Academy of Science is a 501(c)3 non-profit organization established to promote scientific research, science education, public understanding of science, and recognition of excellence in these endeavors. 

# Around the District



## Retirements ...

**David Purdy**, lock and dam operator, Lock and Dam 17, Mississippi River Project, Operations Division, retired April 2, after dedicating 11 years to the federal government.

**Brian Smith**, maintenance worker, Maintenance Section, Mississippi River Project, Operations Division, retired April 30, after dedicating 27 years to the federal government.

**John Albrect**, Real Estate Division (St. Paul District), retired April 30, after dedicating 12 years to the federal government.

**William Reistroffer**, lock and dam operator, Lock and Dam 12, Mississippi River Project, Operations Division, retired May 31, after dedicating 27 years to the federal government.

**Jeff Sniadach**, regulatory project manager, Regulatory Branch, Operations Division, retired May 31, after dedicating 30 years to the federal government.

**Debra Williams**, Real Estate Division (St. Louis District), retired June 1, after dedicating 30 years to the federal government.

**Dan Leigh**, chief of Rock Island District Logistics Activity, retired June 1, after dedicating 33 years to the federal government.

**John Betker**, regulatory project manager, Regulatory Branch, Operations Division, retired June 29, after dedicating 30 years to the federal government.

**Gary Gagne**, welder, Maintenance Section, Mississippi River Project, retired June 30, after dedicating 30 years to the federal government.

## Sympathy ...



**Elizabeth Davenport**, 87, of Joliet, Ill., passed away Feb. 27 at Presence St. Joseph Medical Center in Joliet.

Davenport was employed as a purchasing agent with the Corps of Engineers.



**Donald 'Buzz' Byczynski**, 78, of Ottawa, Ill., passed away June 19 surrounded by family.

Byczynski was the lock-master at Starved Rock Lock and Dam for 19 years and retired in 1992 after 36 years of federal service.



**Pearl O'Dell**, 93, of Bettendorf, Iowa, passed away May 6 at Trinity Medical Center in Bettendorf.

O'Dell worked as a technical secretary with the Corps of Engineers retiring in 1985.



**Fletcher Shanks**, 98, of Davenport, Iowa, passed away April 22 at Genesis Medical Center in Davenport.

Shanks began his career with the Corps in 1936 and was known as an expert in the formulation of non-corrosive paint. He retired in 1972 and was inducted into the District's Gallery of Distinguished Civilian Employees.

Shanks also served in the Army from 1943-1946.

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## Annual retirees' luncheon Sept. 4


The annual retirees' luncheon will be Wednesday, Sept. 4, at the Quad City Botanical Center, Rock Island, Ill., starting at 11:30 a.m. Cost is \$15 per person, including tax and gratuities.

Checks should be made out to Dudley Hanson and mailed to 3812 N. Thornwood Ave., Davenport, Iowa 52806-5250. Deadline for reservations and payment is Aug. 26. 



## Joe Jordan wins tournament

Congratulations to Joe Jordan, a biologist with the Environmental Compliance Branch, on his recent fishing tournament win! Jordan and pro-angler John Gillman, Freeland, Mich., brought 51.70 pounds of walleye to the scales June 15 to win the Cabela's National Walleye Tour event on Lake Erie at Port Clinton, Ohio.

Jordan is a co-angler participating in the National Walleye Tour. He is currently leading the tour with a total of 386 points. The next tournament is July 26-27 in Sturgeon Bay, Wis. 

## Summer Energy Conservation Tips

Use your windows to gain cool air and keep out heat.

- Turn off your cooling system at night and open your windows while sleeping. In the morning, shut the windows and blinds to capture the cool air.
- Install window coverings to prevent heat gain through your windows.

Operate your thermostat efficiently.

- Set your thermostat as high as comfortably possible. The smaller the difference between the indoor and outdoor temperature, the lower your overall cooling bill will be.
- Keep your house warmer than normal when you are away - a programmable thermostat can make it easy to ensure the house is cool when you get back home.

Use fans and ventilation strategies to cool your home.

- If you use air conditioning, a ceiling fan will allow you to raise the thermostat setting about four degrees with no reduction in comfort.

For more tips and information go to <http://energy.gov/>. 




## Applying for a loan

By Hilary Markin, Editor

Often when you apply for a loan for a new car, house or even to refinance, the lender calls for a verification of employment. Many times they do this automatically without notifying you that it is being done.

When working with your lenders ask if they will need a verification of employment. If so, you can do it yourself. Log into MyBiz and request it. All you will need is an e-mail address for your lender and it will send the lender an official verification of employment that is password protected. You will need to provide the lender with the password separately for them to open up the attachment, the password is only provided to the requesting employee.

To get to MyBiz – go to <http://cpol.army.mil/>, in the left menu mouse over Links-DoD and select DCPDS/MyBiz/MyWorkplace/CSU. Once there you can login and select Army region. Under the Navigator, select My Biz and once on that page select Employment Verification. Note – under My Information you can also view your SF-50s under Personnel Actions. There are two options under Employment Verification one with salary information and one without. Ensure you ask your lender specifically what information they need. This is a safe and reliable process that saves both the government and the lender time in gathering information to process your loan. 

# SAFETY CORNER

## *Beat the heat and sun*

**A**nytime you are out in the heat you are at risk of a heat-related illness, so take precautions and be prepared for those hot summer days.

- Use sunscreens with broad spectrum sun protection factor (spf) values of 15 or higher (apply 30 minutes before going out, and reapply periodically)
- Monitor those at high risk (elderly, small children, people with health conditions)
- Wear appropriate clothing (light weight, sunglasses, and wide rimmed hats)
- Drink plenty of water (avoid sugary, carbonated, or alcoholic drinks)
- Reduce strenuous activities during the hottest time of the day (10 a.m. to 4 p.m.)
- Get use to the heat by pacing yourself and take breaks in the shade or cool areas
- Know the signs and symptoms of heat illnesses and notify your supervisor right away or a family member if at home

**Heat Stroke:** Heat stroke occurs when the body is unable to regulate its temperature. If left untreated heat stroke can have serious consequences including death.

- Signs and symptoms: high body temperature, red, hot, and dry skin, rapid strong pulse, throbbing headache, dizziness/confusion, nausea, unconsciousness, slurred speech.
- What to do: get the victim to a shady area, and try to cool them down, call for medical help. Do not give them fluids to drink, as this may cause them to choke or vomit.

**Heat Exhaustion:** Heat exhaustion happens after several days of exposure to heat and inadequate replacement of fluids.

- Signs and symptoms - heavy sweating, paleness, muscle cramps, tiredness, weakness, dizziness, headache, fainting, nausea or vomiting
- What to do: Go to a cool environment and drink fluids slowly. If not taken care of heat exhaustion can cause a heat stroke.

**Heat Cramps:** Cramps in the arms, legs, or stomach while working or during resting periods.

- Signs and symptoms: muscle pains/muscle spasms.
- What to do: Stop all activity and rest, drink clear juice or sports beverage and do not return to the strenuous activity. If it persists seek medical help.

**Heat Syncope:** Fainting episodes or dizziness.

- Signs and symptoms: light headedness, dizziness, fainting
- What to do: Find a cool place to sit, rest, and slowly drink fluids.

**Heat Rash:** A skin irritation caused by sweating.

- Signs and symptoms: small red pimple like bumps.
- What to do: Provide a cooler, less humid environment. Apply powder to help with the discomfort.


**Sun Burn:** Can appear after sun exposure and without the use of sunscreen.

- Signs and symptoms: Red in color can have blisters, causes unusually warm skin.
- What to do: Apply cool compress, lotion, and if there are blisters do not break them. In the case of a severe sun burn you should seek medical help.

### SUNSCREEN 101

All sunscreens are rated with a “Sun Protection Factor” (SPF). The Food and Drug Administration defines SPF in 21 CFR 352.3(d) as the ratio of the minimum amount of ultraviolet (UV-A or UV-B) energy it takes to produce the first signs of redness on skin that has been protected with sunscreen (2 milligrams per square centimeter) versus the amount of UV energy for the same result on unprotected skin. For example, a sunscreen with an SPF of 2, if applied properly, would take twice as much UV energy to burn the skin compared to skin that is unprotected.

Sunscreen tips:

- A minimum of SPF 15 sunscreen should be used every time you step outside, even when cloudy. A higher SPF should be selected when outside doing strenuous work or you plan to be outdoors for long periods of time.
- Be sure to choose a broad-spectrum sunscreen that protects against both UV-A and UV-B rays.
- Not all sunscreens contain the same active ingredients. If you have experienced any sensitivity to a particular product, try one with different ingredients.
- Be aware of the expiration date on the bottle. Some sunscreens can degrade and lose their effectiveness.
- Shake bottle before use.
- Apply sunscreen 30 minutes before exposure to sun. This allows the product to absorb into the skin.
- Apply generous amounts to all exposed skin. As a general rule, a handful (1 ounce) to cover your entire body.
- Reapply sunscreen every 1 1/2 hours or less if working in full sun or doing strenuous work.
- Select a water-resistant sunscreen if exposed to water (swimming or heavy perspiration). 

# Support & Sacrifice for Corps



*Thanks to the employees who are deployed to the TransAtlantic District - North (TAN) and the TransAtlantic District - South (TAS)! To learn more about volunteering contact Emergency Management at (309) 794-5595.*



*Randall Braley, TAN  
Engineering &  
Construction Division*



*Peter Corken, TAN  
Engineering &  
Construction Division*



*Chris DePooter, TAN  
Engineering &  
Construction Division*



*Stephanie Dupey, TAN  
Real Estate Division -  
North*



*Paul Holcomb, TAN  
Engineering &  
Construction Division*



*Perry Hubert, TAS  
Engineering &  
Construction Division*



*Brian Lane, TAN  
Engineering &  
Construction Division*



*Robert Meyers, TAS  
Operations Division*



*Alejandro Pena, TAN  
Operations Division*



*Kurt Reppe, TAN  
Real Estate Division -  
North*



*Richard Rupert, TAS  
Engineering &  
Construction Division*



*Matthew Schneider, TAN  
Engineering &  
Construction Division*



*Randy Tucker, TAS  
Operations Division*


# Lock personnel assist stranded boater

By Hilary Markin, Editor

**O**n April 30, a call for help was placed to personnel at Lock and Dam 14 about a stranded boater on the Mississippi River. The boater had been out test driving their new boat and apparently lost power near the I-80 bridge and did not have a long enough anchor to hold themselves in place.

Lock personnel quickly launched their boat and headed up river to locate the disabled vessel and tow them to safety.

“We launched our boat and towed them to the landing strip area,” said Roger Harroun, lockmaster at Lock and Dam 14, who has since retired.

Not long after Corps personnel arrived, LeClaire’s water rescue team was also on scene. Thankfully the family was upstream of the lock and dam and their quick thinking saved them from a potentially dangerous situation as river levels were high and the current was very strong. 



**Lock and Dam 14 personnel launch their johnboat to rescue a stranded boater above the lock and dam April 30.** *Photo by Lock and Dam 14 Staff*



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