Crosscurrents

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Serving the St. Paul District since

District employees take on maintenance repair at Lock and Dam 10

U.S. Army Corps of Engineers
St. Paul District

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On the Cover

Jerry Stussy, left, Lock and Dam 9 operator, and Chad Stellflug, Lock and Dam 8 operator finish cutting distressed concrete at Lock and Dam 10 in Guttenberg, Iowa, Jan. 19. They are part of a 44-person crew that is doing repairs to the lock and dam during the winter. The project will be completed by March 15, in time for the reopening of the navigation season.

Photo by Patrick Moes

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Views and opinions expressed in *Crosscurrents* are not necessarily those of the Department of the Army or the U.S. Army Corps of Engineers.

Articles and photography submissions are welcome and must arrive by the 15th day of the publishing month for consideration. Submissions can be mailed or e-mailed.

Submissions should be in Microsoft Word format for all written copy and photos should be no smaller than a 5 x 7 at 300 dpi. All photographs appearing herein are by the St. Paul District Public Affairs Office unless otherwise accredited.

The mission of *Crosscurrents* is to support the commander's internal information program for the St. Paul District and its stakeholders.

Crosscurrents also serves as the commander's primary communication tool for accurately transmitting policies and command philosophy to the St. Paul District community and its customers.

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Crosscurrents
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Comments from the top

Col. Michael J. Price
U.S. Army Corps of Engineers
St. Paul District Commander

Team,

As we start 2011 and I continue to meet more of you, I am hearing about many of your work experiences with the public, the media, other government agencies and our stakeholders. This has convinced me that all of us are part of the Corps' "greater public affairs team."

Because of this experience, I'd like to discuss some ways we can work with our district public affairs team to help them tell the Corps' story in an efficient and coordinated way so our message is being conveyed to the public.

MEDIA RELATIONS:

The public affairs team would like to remind district employees on the importance of informing and coordinating with them on all media issues.

If the media calls, please remember to refer them to the public affairs team. In order to be responsive, employees are asked to get the reporter's contact information, what information he or she needs and his or her deadline for the story and then contact the public affairs team. The off-duty telephone numbers for the public affairs team are on the district's Internet page under "Pressroom."

Chances are great that you, as the subject matter expert or project manager, will be the one conducting the interview either on TV, radio or telephone, but we need to keep the public affairs team informed.

In addition to interviews, please inform the public affairs team of potential media issues well before they appear in the press. To help prepare for this issue, the specific division/office/branch must work with the public affairs team to develop a strategic communications plan that can be used to get a unified message out to the public through the media.

The public affairs team offers media training. If you think you could benefit from this training, contact the team to schedule it.

COMMUNITY RELATIONS:

Talk to the public affairs team before you agree to stage a community relations event at least two months before the tentative event date. Discuss items such as: possible speech for the event; drafting and printing a factsheet, brochure or display for the event; working with local media to publicize the event; and staffing the event.

For annual public events at your facilities or public meetings, let public affairs know at least four weeks in advance of when you need their help.

COMMAND INFORMATION:

I've written a number of editorials for the district newsletter, *Crosscurrents*, and I think it's a good vehicle for district employees to see what other district employees are doing.

The public affairs team tells me that they welcome stories and photos from all corners of our district. I encourage all of you to contact them and coordinate story ideas about district employees and the unusual and interesting work going on.

Time permitting, employees should also take a few minutes a day – if you can spare it – and check the stories in the "PAO News Articles" folder on the district's Intranet to remain situationally aware of media stories on the Corps. There are also informative stories in this folder that apply to you as a federal employee.

BROCHURES AND FACTSHEETS:

All district brochures have to be reviewed and approved by the district visual information section and public affairs office before being printed. This helps to ensure the information is accurate and up-to-date. It also ensures proper logos are being used and design standards are being maintained.

WEB INFORMATION:

The district's public website received thousands of views last year. The Army is working with the Corps in 2011 to revamp the look of the public websites to make them standard across the Corps. I ask you to work with the public affairs team to keep the content on our website as accurate as possible.

Cold, snow just a part of the job at Lock and Dam 10 dewatering

Story and photos by Patrick Moes

Stan Marg, operations, lowers cables down to a maintenance team working on the miter gates at Lock and Dam 10. The maintenance team includes members of the St. Paul and Rock Island districts.

The Mississippi River was frozen solid just north of Lock and Dam 10 in Guttenberg, Iowa, Jan.19. Ice and snow covered much of the landscape and the temperature reading was a mere 10 degrees.

Despite the frozen conditions, workers from St. Paul and Rock Island districts braved the weather and the challenges to work on a dewatering project at the lock and dam.

The challenges began from the very beginning, said Bryan Peterson, maintenance repair section chief. "Initially it was the ice flows that came in and really hampered our ability to move barges around," said Peterson. "After that, it's just the cold weather and the amount of snow that we've got this year. It's a pretty big challenge, because you have to move all of the snow to go to work."

Operating around the snow and weather conditions is just one of the obstacles the crew of 44 people has encountered on this project that occurs at this site approximately every 20 years. The lock and dam was last dewatered in 1990.

Working in shifts, the crew puts in at least 16 hours a day. While one crew sandblasts gates at night, another paints them by day. This process has been repeated over and over and will continue until the project is completed before the March 15 deadline. "The amount of work that we have to do and the compressed work schedule that we have makes the whole project fairly challenging," added Peterson.

In addition to sandblasting and painting the 76-ton miter gates, the crew is busy cutting and jack hammering distressed concrete along the entire length of the lock chamber. Teams of two or three people cut four to six inch cuts into the distressed concrete at one or two inch intervals. The teams will then jackhammer the concrete out so it can be replaced.

All of this work is done with four to 18 inches of water in the lock chamber. Twenty deep wells located on the lock floor and trash pumps help keep the rest of the chamber dry by pumping out excess water. "Bryan [Peterson] and his staff were innovative in the design, building and installation of the deep well pump's discharge piping," said Neil Helming, project

Water is pumped out of the Lock and Dam 10 chamber into the Mississippi River during the district's dewatering project. The project began in November 2010 and will be completed by March 15.

Chad Stellflug, operations, controls the elevator for workers so they can cut the distressed concrete to jackhammer it out before replacing it Jan. 19. The crew works through all weather conditions to ensure the job is finished on time.

manager.

Helming said the crew used new ideas from past experiences and many of these activities are now more efficient.

"The result of this innovation is saving the government money," added Helming.

While the innovative process runs with precision, it is hard work. "The guys that we have here do a bang-up job getting everything that we need on time so we're not having to wait for anything," said Peterson. "We've got people working day and night through these weather extremes. I can't say enough about them keeping a positive attitude. They are just going out and getting the work done."

Helming said, "It is impressive to see the quality work the crew does in these adverse conditions. "

Coordination

The project planning actually began more than a year ago, said Peterson. All the contracts needed to

be in place before they dewatered the lock. One of the reasons for this was the heavy equipment they are using on site. The cranes were too heavy to be lifted into the chamber, so they were loaded on a barge and floated into the lock before it was dewatered.

Peterson said everything needed to be ready and staged before they began dewatering the lock.

"It's pretty much a team effort with engineering and our guys," added Peterson. "They work really well together."

The coordination for this project included monthly meetings with district members that included operations, project management, contracting, engineering, information technology and environmental resources. The meetings helped bring all the ideas together to create the well-organized project, said Helming.

Working with other districts

While the St. Paul District has the vast majority of employees working on the dewatering project, people from the Rock Island District have also been helping out.

Having people from other districts has actually been a learning experience, said Peterson. "Rock Island has learned some things that we do, and we've learned some things from them so it's good."

(left) Bob Brockway, operations, cuts distressed concrete at Lock and Dam 10 in Guttenberg, Iowa. The district is conducting winter maintenance Jan. 19. (below) The lock and dam chamber is dewatered during the maintenance. The project began in November and will be completed no later than March 15.

Red Lake fish passage nears completion

Story and photos by Shannon Bauer

The St. Paul District completed construction of a fish passage for its Red Lake Dam this past fall, putting to rest an issue that has been a point of contention between the Red Lake Band of Chippewa and the district for more than 50 years.

The district inherited this dam, which is located on the outlet of the Lower Red Lake, north of Red Lake, Minn., in 1951. Originally built by the Bureau of Indian Affairs in 1931, it then consisted of four stop-log bays. Upon taking over ownership, the district replaced the dam with a concrete structure and channeled 3.2 miles of Red Lake River, mainly for the purpose of flood control and water supply.

According to a 2002 report on the history of the Red Lake project compiled by project manager Roland Hamborg, the band began to voice concerns about the fish passage through the dam soon after it was built. Tribal leaders said the increased water velocity resulting from the new slide gates and river channelization resulted in fish congregating below the dam and being unable to migrate back into the lake to spawn.

In 1954, the district installed an experimental temporary fishway at the dam, but the available technology at the time was ineffective for passing non-salmonid fish species and it was abandoned a few years later. Subsequently, a number of other improvements were made during the years, but a number of issues prevented the district from building an effective fish passage earlier.

According to the report, the district, the Fish and Wildlife Service and a private consulting firm completed a number of environmental assessments between 1975 and the late 1990s that concluded constructing a fish passage would not greatly improve the fish population of the lake. As construction could not be justified by traditional economic or biological criteria, the district was unable to obtain the authorization it needed to build such a project. Further, since a passage was not mentioned in the original contract between the agency and the band, the district's Office of Council determined that the contract could not be modified to include one, according to

Pat Trudell, construction representative for the Red Lake fish passage, stands inside the concrete passage before it is placed in the ground.

the report.

"When we first took over the dam, I don't think the Corps or the tribe ever thought about the consequences to fish passage," said Steve Clark, district biologist and former project manager on this project. "It wasn't a clear [environmental] issue at the time. … Soon after it was built, though, it became a big issue with the tribe. During the years, it became detrimental to the district's relationship with the tribe."

Building this passage enabled the district to meet its obligation to the band," added Clark. "It should finally close this issue at this facility."

Former district commander Col. Mike Pfenning was instrumental in obtaining authorization for the project in 2006, said Clark. He and Pfenning spent the good part of a year working with Corps' higher headquarters and the Assistant Secretary of the Army for Civil Works. And although the district completed the plans and specifications for the project the following year, in 2007, the plans had to be shelved due to a lack of funding. It was not until the passage of the American Recovery and Reinvestment Act, or ARRA, in the fall of 2009 that the project was appropriated for.

The district awarded a $738,000 contract for construction of the project in January 2010 to Meyer Contracting of Minneapolis. Meyer is a Native American, woman-owned, small business, who won the bid in a competitive 8A process, said Paul Kosterman, current Red Lake project manager. Construction started in the summer of 2010.

Although the bulk of heavy lifting is done, said Kosterman, a few

cosmetic touches will be completed on the project in the spring when the weather improves. Plans are also in place to commemorate completion of the passage with the Red Lake Band sometime this spring.

The project consisted of excavating 600 feet of river channel and constructing 300 feet of levee, as well as building a hydraulic control structure and fish trap to prevent the passage of undesirable species. "The fish trap will allow the Red Lake Band DNR [Department of Natural Resources] to trap walleyes and strip the spawn out of them," explained Kosterman. "They will use the spawn in their hatchery to produce more walleyes."

Construction of the project required a great deal of caution. The contractor had to build a levee around the work to ensure they didn't pull the plug on the reservoir and have water gushing through the site, carrying off the project into the river, explained Kosterman.

Further, the design of the fish passage is unique. The fish trap is constructed to allow the Red Lake DNR to trap and sort fish, or to allow all fish to pass unimpeded to the lake. Also, construction engineer Pat Trudel said that a new cement water passage was installed into the dam, which includes staggered cement cubes in the bottom. Fish swimming through the passage can swim up behind the cubes and rest, he explained, helping them complete their journey to the lake.

Construction workers from Meyer Contracting of Minneapolis work on building the fish passage this past fall. Meyer Contracting is a Native American, woman-owned, small business.

Channels and Harbors keeps the river rollin'

Story and photos by Patrick Moes

The Mississippi River is the navigational highway for the Midwest. Towboats push commodity-filled barges up and down the river throughout the entire navigation season, which usually starts in March and ends around November. During 2010, the St. Paul District's 13 locks and dams, collectively, had more than 75,000 vessels pass through their gates.

Ensuring the river remains open for the shipping industry during the navigation season is one of the many responsibilities of the district's Channels and Harbors Project Office.

To meet the demands of the federally mandated 9-foot navigational channel, the Channels and Harbors Project Office relies on hydrographic surveys to locate and evaluate the dredging needs of the river from above Upper St. Anthony Falls in Minneapolis to Lock and Dam 10 in Guttenberg, Iowa. The office is located along the Mississippi River in Fountain City, Wis.

Dan Cottrell, operations, said the primary mission of the office is maintaining the 9-foot navigation channel where the dams are not located. He said they use two types of dredging to complete the maintenance requirement — mechanical and hydraulic.

The hydraulic method uses water to help move the material through pipes to designated locations. Mechanical methods remove only the material with excavators or cranes on a barge.

Dan Cottrell, operations, uses a ruler to measure dredging cuts on the Mississippi River, Jan. 18. Cottrell works in the Channels and Harbors branch in Fountain City, Wis., and is responsible for ensuring the district maintains the federally mandated 9-foot navigational channel.

Regardless of the method used, the dredge cuts can last anywhere from several months up to several years, said Cottrell, a Cook, Minn., native and Minnesota State University, Mankato alumnus. He said the Betsy Slough dredge cuts require the most frequent dredging in the district. Located just north of Lock and Dam 5A near Fountain City, Betsy Slough is usually one of the first areas surveyed in the spring.

"At Betsy Slough, we dig 13 to maintain nine," said Cottrell, referring to the need to dredge the river to a depth of 13 feet to ensure the 9-foot channel is maintained in that area. "In most areas of the district, 12 feet is sufficient to maintain nine."

He said it is not uncommon to get 35,000 cubic yards of material during a dredging event at Betsy Slough. This is enough material to cover a football field to a depth of 16 feet.

The Boats

Hydraulic dredge plants, such as the Corps' Dredge Goetz or the retired Dredge William A. Thompson, are two pieces of equipment used to dredge for river navigation within the district. The William A. Thompson, or WAT, was a hydraulic dredge that served the St. Paul District for more than 70 years until it was retired in 2008. The WAT is currently located in Fountain City, and the district is in the process of nominating it to the historic register, said Marc Krumholz, operations.

In addition to the Corps' dredge fleet and the district's maintenance and repair's mechanical plant and hydraulic Dredge Dubuque, contractors are a critical tool used to maintain the district's 280 miles of navigation channels.

The winter "downtime"

While the barges move to warmer climates and the navigation season freezes in for the winter, the Channels and Harbors Project Office, led by Steve Tapp, continues its work.

One of the many projects they work on during the winter is the Channel Maintenance Management Plan, or CMMP. This plan is a long-term guide for channel maintenance activities within the district. It details the completed dredging activities, as well as the placement sites for the material, said Cottrell.

He added that there are several planning and coordination meetings as well as topographic work and ice surveys conducted by the office's survey crew during the winter. It is also a busy time preparing contracts and developing plans to make sure placement sites are ready to hold the 800,000 cubic yards of material that is dredged each year. Cottrell concluded, "There is never a shortage of work or challenges in the Channels and Harbors Project Office. Every spring brings new challenges keeping the navigation channel open for business."

The Dredge William A. Thompson on the Mississippi River in Fountain City, Wis. The dredge served the district for more than 70 years until it was retired in 2008. The district is in the process of nominating it to the historic register.

Flood fighting preparedness starts now

Story by Patrick Moes

The National Weather Service announced on Jan. 27 that the chance of flooding within the St. Paul District is higher than normal.

The three major river basins — the Red River of the North, the Minnesota River and the Mississippi River — all have chances of exceeding their historic crest levels.

The district's emergency operations center, or EOC, has already started making preparations.

"Our area engineers are beginning to work with communities within their assigned basins to ensure they are all prepared," said Teri Alberico, operations. "[We] are working with [officials from] North Dakota, Minnesota and Wisconsin to ensure they understand what we are authorized to do and the processes required to engage our assistance."

District employees interested in volunteering for the flood fight in the EOC or the field can start their preparations right now.

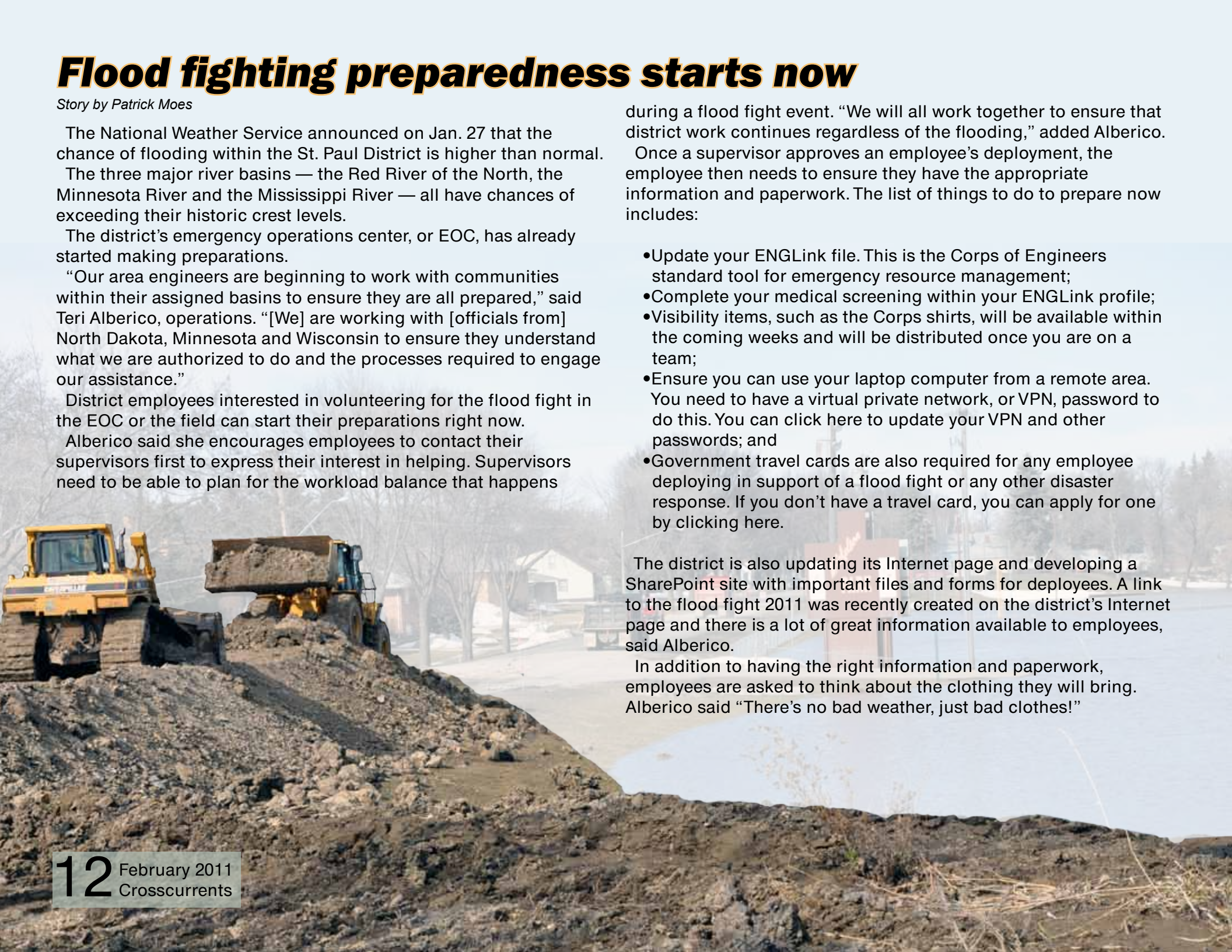
Alberico said she encourages employees to contact their supervisors first to express their interest in helping. Supervisors need to be able to plan for the workload balance that happens during a flood fight event. "We will all work together to ensure that district work continues regardless of the flooding," added Alberico.

Once a supervisor approves an employee's deployment, the employee then needs to ensure they have the appropriate information and paperwork. The list of things to do to prepare now includes:

- Update your ENGLink file. This is the Corps of Engineers standard tool for emergency resource management;
- Complete your medical screening within your ENGLink profile;
- Visibility items, such as the Corps shirts, will be available within the coming weeks and will be distributed once you are on a team;
- Ensure you can use your laptop computer from a remote area. You need to have a virtual private network, or VPN, password to do this. You can click here to update your VPN and other passwords; and
- Government travel cards are also required for any employee deploying in support of a flood fight or any other disaster response. If you don't have a travel card, you can apply for one by clicking here.

The district is also updating its Internet page and developing a SharePoint site with important files and forms for deployees. A link to the flood fight 2011 was recently created on the district's Internet page and there is a lot of great information available to employees, said Alberico.

In addition to having the right information and paperwork, employees are asked to think about the clothing they will bring. Alberico said "There's no bad weather, just bad clothes!"



District joins in program that combines culture, science

The district's EEO Special Emphasis Program Committee participated in the Science Fusion: Bringing Cultures Together event at the Science Museum of Minnesota in St. Paul, Minn., during January. The event included three separate weekends to highlight various cultures. The cultures included: African Americans in Science, Jan. 15; American Indians in Science, Jan. 22; and Amantes de la Ciencia, Jan. 29.
(1) Vanessa Hamer, planning, works with kids at the museum. (2) Angie Phipps, equal employment office, explains water safety and the locks and dams. (3) Brian Siljenberg, engineering, helps kids create geometric domes. (4) Michelle Schneider, engineering, demonstrates how a lock and dam operates.

All photos taken by Tammy Wick.

News & Notes

30 years later, Red River of the North is still in the news

The U.S. Army Corps of Engineers is trying to hold reservoir discharges to a minimum as a result of lower than normal stream flows in area rivers and lakes.

While officials say the low stream flows aren't critical yet, they worry about signs of a dry winter and spring.

"We've cut back all of our reservoir outflows to the bare minimum," said Fremont Jewell, chief of water resources control for the Corps in St. Paul.

"We are authorized to draw down to certain levels, and we've arrived at those levels prematurely this year. What we've done is to hold the reservoirs to the legal drawdown level."

The 30-day weather outlook for January calls for below-normal precipitation, Jewell added. "It's been the same story for the past several months," he said.

The Corps is also cutting back discharges from reservoirs at the headwaters of the Mississippi, he said.

The cities of Wahpeton, Breckenridge, Fargo and Grand Forks, N.D., use the Red River of the North for their water supplies. In 1976, the city of Fargo was forced to divert water from the Sheyenne River because of the low flow in the Red.

The cities of St. Paul and Minneapolis, Minn., have a drought action plan that lists steps to be taken in the event of a critical water shortage. Officials are hoping it won't be needed.

"We're just hoping for a heavy snowfall in March," Jewell said.

This story was orginally published in *Crosscurrents* in February 1981.

Newcomers

Dennis Anderson, biologist, district office (retired annuitant)
Ralph Augustin, biologist, district office (retired annuitant)
Larry Blackwell, equal employment office, district office
Mickey Cupkie, program analyst, district office

Retirements

Bob Dempsey, 33 1/3 years federal service, engineering, district office
Lowell Hanson, 35 years federal service, inspector, Devils Lake, N.D.

Editor's Note

Do you have news that you want to share with the district? Send your annoucements of births, weddings, graduations, etc. to Crosscurrents. cemvp-pa@usace.army.mil.

Congratulations

Tim Meers was selected as the Upper Area lockmaster Jan. 21.

Taps

Patrick Duval, passed away Jan. 31. He worked at Lock and Dam 7 and retired in 1999. Services were held at the Church of Crucifixion in La Crescent, Minn.

Thinking safety during the winter

Lock and Dam 3 employees embraced the winter season recently by creating a snowman wearing the appropriate safety attire. The snowman is located near the entrance to the lock and dam's gate, which is near Red Wing, Minn.

Courtesy photo