



US Army Corps
of Engineers®
St. Paul District

Crosscurrents

Vol. 27, No. 5

May 2004

2004 photo contest winner highlights flood control mission

*Identify verifiable safety violations,
receive recognition, Page 4*



District makes excellence the norm

By Col. Robert Ball
District Engineer

This is it for me – can’t believe three years have gone by so quickly. I want to share three things with you.

First of all, it has been a great privilege to lead you and to serve with you. I have never ceased to be amazed at the talent that resides in the district and the genuine concern you exhibit for others. Whether it was responding to natural disasters in West Virginia or deploying personnel to Iraq, you have answered the call when it came and have always acquitted yourself with distinction. When it comes to our more routine missions, you have again distinguished yourselves. The successful conclusion of the Crandon Mine permit, the great

progress on the flood reduction project at Grand Forks, N.D., and East Grand Forks, Minn., and the continued outstanding support of navigation along the mighty Mississippi River are just examples of how you make excellence the norm in your business. I could not be prouder of how you have performed and the contributions you have made to the nation.

Secondly, I do not know what the future holds. We are embarked on a voyage with USACE 2012 that will end up making us more responsive and cost effective, but I cannot tell you what we will look like when that is achieved. I can postulate that we will be much more regional in our outlook and be doing a lot more sharing of work with our sister districts, but I do not know how that will eventually be done. But I do know the district will need skilled team members who know their field and how they fit into project management business process.

Lastly, a month ago, I thought I would be going to Fort Bragg for my last assignment. That is not to be. My wife and I will leave you to go to Fort Wainwright, Alaska, for that last tour.

We are disappointed to be so far from family (and the two cutest grandchildren you ever saw) but are excited about the possibility for service with soldiers on America’s frontier. If you are ever in the Fairbanks area in the next three years, make sure you look us up. We’ll be glad to spend some time with you and talk about the good old days. Thanks so much for a great three years and best of luck in the future.

Grand prize photo Flood control



Dave Rydeen, design branch, took this grand-prize photo of Terry Jorgenson, design branch, downstream of perimeter dikes 13 and 14 near the Corps’ Pine River Dam at Crosslake, Minn., several years ago. “This was a location of concern due to the existence of large quantities of seepage and boils in this wetland near the toe of the dikes,” said Dave Rydeen. Neil Schwanz, Nan Bischoff, Josh Cress, all design branch, and Ray Nelson, Crosslake manager, accompanied them. “With all of us watching, Terry [Jorgenson] was probing the wetland and had pushed a survey rod about five feet into the sand boil to show its location. He put his hat on the survey rod for perspective.” The recently completed project eliminated seepage by adding a pervious berm to increase the safety factor of the dikes. See pages 4-5 for honorable mentions.



US Army Corps
of Engineers®
St. Paul District

Crosscurrents

Crosscurrents is an unofficial publication, authorized under the provisions of AR 360-1. It is published monthly by offset for the St. Paul District, U.S. Army Corps of Engineers.

Editorial views and opinions are not necessarily those of the Corps of Engineers, nor of the Department of the Army.

Address all inquiries to:

Editor, *Crosscurrents*
U.S. Army Corps of Engineers
190 Fifth Street East
St. Paul, MN 55101-1638

Phone: 651-290-5202

| | |
|----------------------|-------------------------|
| District Engineer | Col. Robert L. Ball |
| Public Affairs Chief | Mark Davidson |
| Media Specialist | Shannon Bauer |
| Editor | Peter Versteegen |
| E-mail: | cemvp-pa@usace.army.mil |

Falcons nest on cliff at Lock and Dam 1

Fewer pigeon droppings

Mike DeRusha, head lock and dam operator at Lock and Dam 1, Minneapolis, began a journey when he saw a falcon dive on a flock of geese over the lock about four years ago. The moment prompted a series of inquiries, starting with Lockmaster Jim Ryan and leading to the University of Minnesota Raptor Center and back to the lock. Here's his story.

By Mike DeRusha

Operators at Lock and Dam 1 first spotted the peregrine falcons about four years ago. One evening, a screeching noise came from the direction of the Ford Parkway Bridge. A female peregrine falcon had attacked a formation of geese. She succeeded in breaking up the "V" formation.

At that time, pigeons had been leaving their "calling cards" all over the lock site. The lock staff witnessed the falcons chase pigeons around the control tower of the lock. The pigeon problem soon disappeared, but so did the falcons – for nearly a year. But they returned and it was a daily occurrence to see them soaring above, calling out with their high-pitched screech or resting on the lower bluff near the water

Falcons, continued on Page 8

"Scotty" is the name the University of Minnesota Raptor Center gave this peregrine falcon at Lock and Dam 1 in Minneapolis. It is one of a pair of falcons that has established a nest at the lock and dam. The center is in St. Paul, Minn.

Photo by Harrison B. (Bud) Tordoff

Missions in progress

2004 photo contest honorable mentions

The environment

Kurt Brownell from the natural resources office in LaCrescent, Minn., took the photo of Jon Sobiech, natural resources, covered with wild celery, as he emerged from nearly three feet of water in Lake Onalaska in Pool 7 on the Mississippi River last summer. Wild celery tubers are an important food source for migrating canvas back ducks. The Corps joined the U.S. Fish and Wildlife Service, U.S. Geological Survey and other agencies in a plant survey. The empty detergent bottle on Sobiech's shoulder serves as a marker for a metal frame on the lake bottom to mark an area for sampling. Sobiech is wearing a diving mask.



Photo by Kurt Brownell

Identify verifiable safety violations, receive recognition from Safety Office

Jeff Pfannes, the St. Paul District's safety officer, has challenged district employees to spot verifiable safety violations in the cover photo and honorable mentions. The suspense date to inform him is June 18. E-mail jeffrey.e.pfannes@mvp02.usace.army.mil or leave him a message at 651-290-5501.

Flood damage reduction

The photo by Ryan Otto, Western Area Office in Grand Forks, N.D., shows Grant Riddick, a geologist from the district office in St. Paul, preparing a soil sample in 20-degree below zero weather at East Grand Forks, Minn., January 2004. In the background are contractors on the East Grand Forks flood reduction project.



Photo by Ryan Otto

Flood damage reduction

This photo by Darren Bergsgaard, Western Area Office in Grand Forks, N.D., shows Francis Schanilec, Western Area Office, standing on two-foot-thick ice at the bottom of a 30-foot deep discharge chamber at a pump station in East Grand Forks, N.D. He is inspecting ice buildup, which can prevent closing of sluice gates in the chamber. Schanilec works as a quality assurance representative.



Photo by Darren Bergsgaard

Pump station pushups **English Coulee station pumps 112,000 gallons per minute over levee**

By Michael Nelson, civil engineer

Pushups are legend in the Army. The Army Corps' St. Paul District enlisted a recruit that does pushups in record time.

The English Coulee pump station, on the banks of the Red River of the North at Grand Forks, N.D., fights floods by pushing up water over a levee at a rate of 112,000 gallons per minute. At that rate, the pump station could drain an Olympic-sized swimming pool in about six minutes.

The pump station is just one unit in the battle to protect

Grand Forks from flooding. The station is located about one mile north of Grand Forks and complements the English Coulee Diversion project (December 2002 *Crosscurrents*).

The station houses four pumps and guards what is called the protected area on the land-side of a levee.

Simply put, a flood-reduction project has two primary components along a river. The first is a series of levees or floodwalls along the river, creating a wet side (river-side) and a dry-side (protected area). The second provides interior drainage on the protected side or land-side.

The challenge is to drain snowmelt or rainfall from the protected area – no problem when the river is low, but a challenge when water in the river is high. The solution is a pump station.

Under normal or low-flow conditions, precipitation (either snow or rain) that falls in an area protected with levees is eventually collected in gravity flow storm sewers, which are simply pipes that drain into a river.

However, under flood conditions, these gravity discharges must be sealed up to prevent high water from back flowing and flooding the area that

Pump station, continued on Page 7



Photos above and Page 6 by Michael Nelson

In the above photo, Craig Johnson and Lanny Cyr (lower left corner) from the Western Area Office in Grand Forks, N.D., discuss project construction. The photo was taken almost a year ago. The photo at left shows the completed English Coulee pump station in Grand Forks.

is being protected. This creates the need to pump runoff up and over the levees. In the case of the Grand Forks, N.D.-East Grand Forks, Minn., flood reduction

project, this is accomplished through the use of pump stations spread out along the length of the project.

Upon completion of the entire flood reduction project, the two

cities will have built 24 new pump stations, the largest being the English Coulee station.

Prior to the flood control project, runoff from agricultural fields and other sources from as far away as 30 miles to the west of the Grand Forks found its way into the English Coulee, which meanders through the west side of the city before discharging into the Red River just north of Grand Forks. The water flows north, eventually to Hudson's Bay, Canada.

Under normal conditions, the coulee is used as a landscape or recreation feature in several stretches along its length. However, under severe conditions, the coulee can be nearly as troublesome as the Red River itself.

A diversion channel manages the surge of water to the coulee under extreme flooding by intercepting a majority of the runoff from the west and channeling it around the city through the use of a gated control structure at the southern end of the diversion.

The pump station manages storm water flows in the coulee between the diversion and the Red River by piping it over the levee and pouring it into the river.

The project is 99 percent complete with landscaping to be completed May 2004.

Construction team members from the Western Area Office in Grand Forks include Craig Johnson, Lanny Cyr, Darren Bergsgaard and Michael Nelson. Tom Barickman and Tom Eidson also contributed. Marilyn Noss and Linda Steele provided administrative support.

The prime contractor is Swanberg Construction of Valley City, N.D.

Unique features: English Coulee pump station

- Construction of the gateway, containing two normally open 12-foot by 10-foot sluice gates. This required excavation of more than 50,000 cubic yards of material due to its location 40 feet below the existing ground elevation. The sluice gates allow for the coulee to gravity flow under most conditions. Under flood conditions, the gates are closed, allowing water to pool at the pump station inlet;
- Construction of nearly 500-foot-long gateway inlet and outlet box culverts, 12 feet wide by 10 feet high;
- Construction of 75.5 foot by 48.5-foot pump-house, with walls four-feet thick and with 25-foot high reinforced cast-in-place concrete walls and four-foot thick reinforced base;
- Extensive earthwork and grading including approximately 3,500 lineal feet of levee construction, 10,300 cubic yards of select impervious fill and 83,000 cubic yards of impervious fill;
- Installation of four runs of 36-inch discharge piping about 90 feet long;
- Construction of approximately 150 lineal feet of pump station inlet box culvert, 10-feet-wide by eight-feet high with a two-foot six-inch thick floor slab, two-foot thick top deck and one-foot six-inch-thick walls.

Falcons, continued from Page 3

that leaked from the rocks. The falcons were nesting under the Ford Parkway Bridge.

When construction began on the bridge, lock personnel became concerned about what would happen to the falcons when their nesting area was destroyed. Lockmaster Jim Ryan authorized inquiries which led to Dr. Harrison B. (Bud) Tordoff at the University of Minnesota Raptor Center-St. Paul, Minn. Tordoff explained the center was aware of the nest. The male and female were both 2 years old. The male had come from the power plant in Alma, Wis., and the female was from the power plant at Monticello, Minn. They were tracked by banding numbers on their legs. The pair had produced a brood of three chicks, all female. The first pair of falcons had been killed in a territorial dispute with another pair of falcons.

“I was happy with the interest at the lock in seeing that the falcons stayed in the area,” said Tordoff. He e-mailed the plans for making nesting box to Lock and Dam 1. With the nesting box and metal frame done, Tordoff and Mark Martell, also from the Raptor Center, returned to discuss placement of the nesting box. After discussing different sites and their safety factors, personnel positioned it halfway down the lower crib wall, about 150 feet above the lower area.

John McQuiston, head operator; Nate Johnson, equipment mechanic; and DeRusha worked three hours to hang the nesting box.

“Since we hung the box, we have seen the female falcon feasting on a pigeon right below it,” said McQuiston.



Photo by Harrison B. (Bud) Tordoff

Amelia (above), a peregrine falcon, relocated from a nest under the Ford Parkway Bridge to establish a home at Lock and Dam 1, Minneapolis. Bridge construction disturbed the falcon and its mate.

Falcons learn to think ‘inside the box’

By Nate Johnson, Lock and Dam 1

In 2004, the Lock and Dam 1 peregrine falcons returned from their winter residence and established the installed nesting box as their new home. They had investigated the box in 2003, but chose to continue dwelling under the Ford Parkway Bridge. Unfortunately, the construction prevented the pair from producing offspring.

But, 2004 is different. A flurry of activity took place around the area, and Dr. Harrison B. (Bud) Tordoff, from the University of Minnesota Raptor Center, verified the birds began incubating eggs in April. Three or four eyasses (baby falcons) were born in early May and will begin venturing into the world around the middle of June.

According to Tordoff, the American peregrine falcon population was largely decimated in the 1960s due to the pesticide DDT. Captive breeding programs allowed the birds to be removed from the endangered species list in 1999. There are an estimated 163 pair in the Midwest (12 pair in the Twin Cities, 36 in Minnesota and at least 20 in Wisconsin).

Peregrines are fast. They reach speeds exceeding 220 miles per hour. Males are the smaller of the two genders, weighing 1 to 1.5 pounds. Females range in size from 1.6 - 2.1 pounds. Wingspans vary from 37 to 46 inches with body lengths between 14 and 18 inches. They predominantly feed on pigeons and other mid-sized birds.

News and Notes

Quality Council recognizes district commitment

The Minnesota Council for Quality awarded the U.S. Army Corps of Engineers, St. Paul District, its 2003 Minnesota Quality Award May 20 in Minneapolis.

The district received the recognition from the council at the “Commitment Level.” Three other organizations received recognition at the advancement level.

Officially, the award was presented to the district during its 2003 Holiday Awards Ceremony.

Founded in 1991, the primary objective of the Minnesota Quality Award is to help organizations improve their performance results. The award also serves to recognize performance excellence throughout the state. The Minnesota Quality Award is given at four levels - Excellence (the top award), Achievement, Advancement and Commitment — and is the culmination of a rigorous assessment process that uses the Criteria for Performance Excellence of the Malcolm Baldrige National Quality Award. Since 1991, 63 organizations have received recognition at various levels.



Photo by Russell Williams

Judy Des Harnais, district deputy for programs and project management, participated in representing the district at the awards event.

Organizations that participate in the process receive comprehensive feedback that outlines their strengths and improvement opportunities along several dimensions: leadership; strategic planning; customer and market focus; measurement, information, and knowledge management; human resource focus; process management; and results. This feedback is used for organizational learning, planning and improvement. The district completed this process in the fall of last year.

Russ Williams, project manager, served as the district’s point of contact with the Minnesota Council for Quality. “The district sustains its quest for continuous improvement, using the Baldrige Criteria,” he said.

“The commitment of our leaders, Col. [Robert] Ball, district engineer, and Ken Buck, chief of construction operations, for example, has been and will continue to be the key.”



Photo by Shannon Bauer

Lt. Col. Tom O’Hara, district deputy engineer, left, and Maj. Will Greene.

Greene honored with service medal

Maj. Will Greene (right) departed the St. Paul District May 21 for Ft. Lee, Va., to serve as an acquisition officer. He arrived at the district from Ft. Hood, Texas, Nov 30, 2000, and served in the contracting office throughout his tour. In recognition of his performance while being stationed here, Greene received the Meritorious Service Medal May 20 from Lt. Col. Thomas O’Hara, Jr., deputy district engineer.

Wanted: Your news!

PAO seeks information about special events in you life (e.g., births, deaths, marriages, engagements). If you would like to share these items, please contact public affairs at 651-290-5202, -5108 or 5201 or send an e-mail to: cemvp-pa@mvp02.usace.army.mil.

Newcomers

Heather Cheney was recently hired as an administrative clerk for Lock and Dam 2 in Hastings, Minn. She attended the Illinois Institute of Arts in Chicago, majoring in fashion design. She is currently enrolled part time at the University of Minnesota - Twin Cities, studying retail merchandising. She is a proud mother of her two year-old son Jaden Paul. Her hobbies include hiking and scrap booking.

Kelly Elliot was recently hired as an administrative clerk for Lock and Dam 1 in Minneapolis. She will be updating records, files and procedures to a computer base format. She began working for the Corps in 2001 as a student temporary employee. She graduated from Blaine High School in 2003. She will be attending Anoka Ramsey Community College in Coon Rapids, Minn., this fall, studying business administration.

Retirements

Mary Kay Linder, 32 years of federal service, 26 with the Corps of Engineers retired June 1.

Announcements

A retirement luncheon will be held for Ken Buck at the Holiday Inn



East, Southwest quadrant of I-94 and McKnight Rd., St. Paul, June 22 at 11:30 a.m. Meal prices range from \$15.50 to \$20. RSVP and payment to Stephanie Dupey, 651-290-5755, no later than June 16.



St. Paul District photo

The St. Paul District leadership development program members and others from the district joined federal agencies in building a house for Habitat for Humanity in St. Paul May 10-11. Darrell Morey (left) and Bryan Peterson (right) along with Tom Crump, Kristen Fairbanks, Sue Lenski, Paul Machajewski, Tim Grundhoffer, Corrine Hodapp, Susan Robinson, William Vennemann and Terry Zien participated.



Photo by Jeff Kleinert

Robyn McKercher, far left, with students from the Minnesota Virtual Academy, gathered around an ash tree they planted in the Pokegama Day Use Area. See "Pokegama becomes Earth Day classroom," Page 11.

Pokegama becomes Earth Day classroom

By Jeff Kleinert, park manager

Students, volunteers, civic groups, and government agencies joined forces to celebrate nature's gifts by doing something special on Earth Day, April 22 at Pokegama Dam and Recreation area, Grand Rapids, Minn.

In previous years, Jeff Kleinert, park manager, contacted local Cub Scout and Girl Scout troops to

arrange for help on Earth Day. This year a students from the Minnesota Virtual Academy (<http://www.mnva.org/>) contacted the park first.

The academy is an alternative home-based school system using the Internet as a source of instruction. The students follow a course curriculum and parents monitor their progress and report back to the MVA. The teachers also look for areas across the state where students can volunteer their time and learn something about the

outdoors. Robyn McKercher, a certified teacher and the group's leader for this region, initiated the request for volunteer opportunities at the recreation area and dam.

The students and adult leaders planted shrubs and trees in Pokegama Recreation Area and collected litter along the Mississippi River below Pokegama Dam to celebrate Earth Day. Rangers instructed the students on planting methods and environmental stewardship.

March 2004 Employee of the Month

Otto makes personal investment for Corps

Virginia Regorrah, resident engineer on the flood reduction project at East Grand Forks, Minn., nominated Ryan Otto, for March Employee of the Month. He was a student at the time of her nomination.

When Friends of the Greenway asked Ryan Otto, at the time a student engineer on the Corps of Engineers' flood control project at East Grand Forks, Minn., to highlight the recreational features on the project, he developed an informational display at his own expense for public presentation.

"The Friends of the Greenway" the website says, "is a volunteer community grass-roots effort to support the development of the Red River and Red Lake River corridors that exist between the Army Corps of Engineers flood protection project within the cities of Grand Forks, N.D., and East Grand Forks, Minn...."



St. Paul District photo

Ryan Otto receives Employee of the month honors from Tom Eidson, Western Area Office.

Grand Forks and East Grand Forks jointly agreed to develop a plan for the design and development of a greenway in December 1998.

Otto developed three professional display boards to highlight the recreational benefits the project brings to the greenway.

When the quality produced by the office printer lacked polish, Otto had display photos printed at his own expense.

He also attended an evening event as the Corps' representative, describing the project, its recreational features and construction schedule to the interested public and city officials.

The display boards, his attendance at the event and his professional demeanor enhanced the reputation of the Corps as an organization concerned with and involved in activities which are designed to enhance the public safety, aesthetics, recreational benefits and health of a community.

He has produced informational brochures and instructional pamphlets about the flood-control levees for tours to multiple groups, including high school teachers, university groups, interested state and local agencies.

This exceptional work, just like his display boards and attendance at the Friends of the Greenway event, were completed in addition to his ongoing duties as a project engineer for the East Grand Forks Resident Office.