US Army Corps of Engineers
St. Paul District

Crosscurrents

Vol. 18, No. 2 February 1995

A day in the life of the St. Paul District

WISE women discuss communications techniques

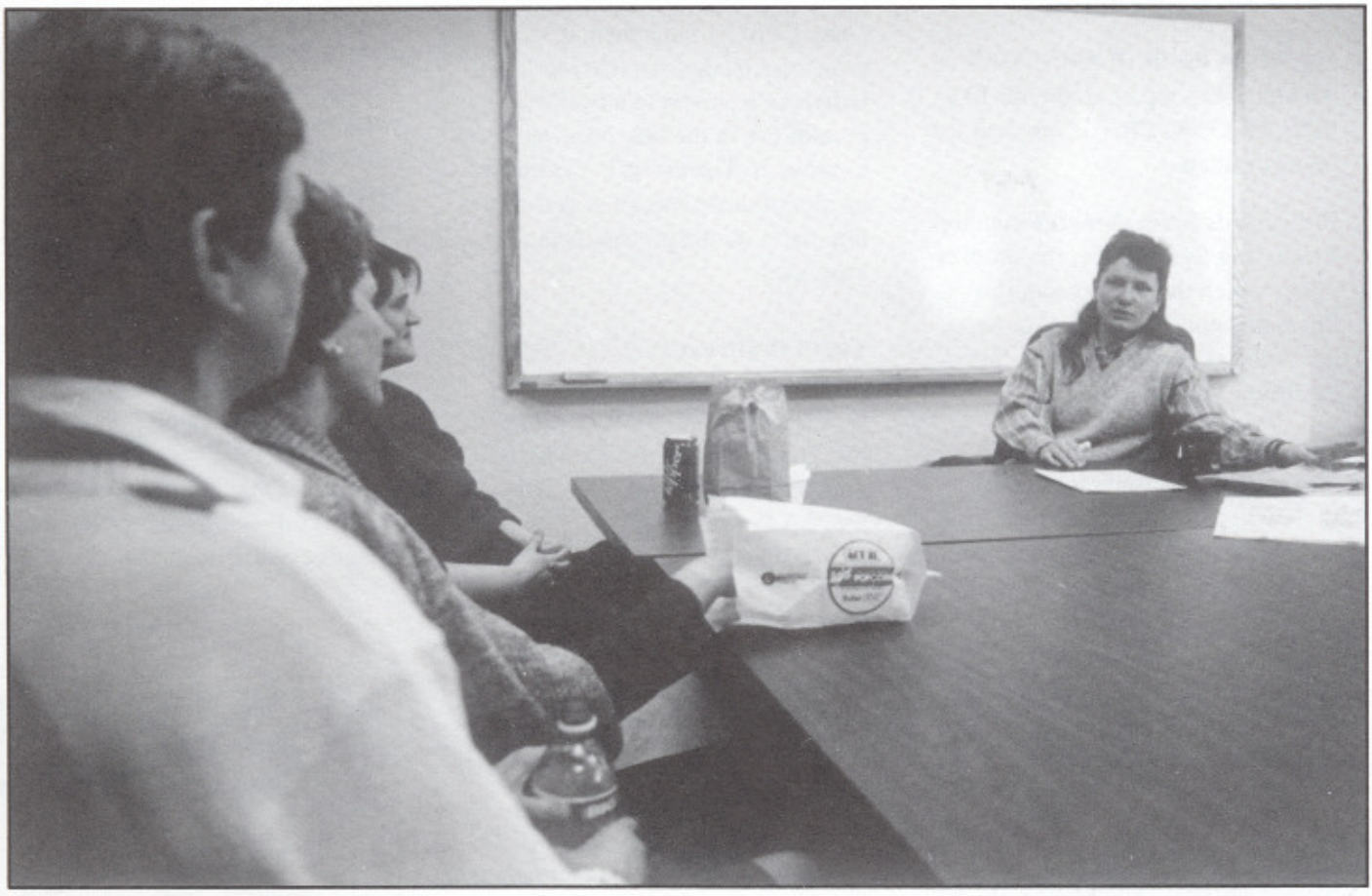

Photo by Peter Verstegen

On January 26, Lisa Hedin (right), Engineering and Planning (PE) Division, presented highlights from last spring's Women in Science and Engineering (WISE) conference. She also discussed careers and interpersonal communications techniques. The meeting was just one of many routine events occurring throughout the district on any day during the month. Eleven attended the lunch-time meeting, including (from left) Char Hauger and Denise Blackwell-Kraft from Construction-Operations and Judy DesHarnais from PE. The Federal Women's Program Committee sponsored the presentation.

Process Action Teams to examine six processes

by Peter Verstegen
Public Affairs specialist

Process Action Teams (PATs) will review six processes under the district's recent Total Army Quality (TAQ) initiative. Objectives include cutting process time, eliminating non-productive steps, improving standard operating procedures, and increasing the overall efficiency of each process.

Alphabet soup of acronyms

An alphabet soup of acronyms like FIPS, BCO and PRIP is targeted for improvements.

FIPS stands for Federal Information Processing System. It is the process under which the district acquires items that collect, store, or process data such as computers and other electronic equipment.

BCO means Biddability, Constructibility, and Operability review. It is the process where stakeholders in a project comment on and review the proposed plans and specifications. They assess whether a contractor can bid on and construct a project and whether the project can be operated and maintained in a practical way.

PRIP is the Plant Replacement and Improvement Program—how the district acquires major assets for use on more than one project.

Cross-functional teams will examine FIPS, travel orders, BCO reviews, the PRIP process, blanket purchase agreements and DA 3953 purchase orders to make them more user friendly, practical, efficient and cost effective.

Embracing TAQ concepts and providing customers quality and affordable work will improve the district's chances of obtaining new work and support the district's survival. Other benefits include improved teamwork, increased morale, improved job satisfaction, and increased customer satisfaction.

One of TAQ's fundamental principles recognizes that the individuals closest to a business process are in the best position to improve it. Therefore, PATs consist mostly of those closest to and most familiar with the process being examined.

Team members

Six close to the FIPS process are Nan Bischoff, PE-M; Rick Gorr, IM; Byron Nelson, PE-D, Marilyn Aird, CT; Frank Starr, CO; and Steve Adamski, OC.

Five will review the process that generates travel orders. They are Brian Johnson, PE-D; George McAlister, RM-FE; Mary Kay Linder, DE; Jan Pream, CO; Theresa Thury, LM.

Examining the BCO process are Bruce Boldon, CO-C, Judy DesHarnais, PE-M; Joanne Dufeck, CT; Craig Evans, PE-D; Bill Spychalla, PP-PM; and Ed Williamson, PE-M.

The PRIP process is under review by Nick Carter, IM; Lisa Hedin, PE-M; Al Rosenberg, CO; and Amy Rothstein, RM.

A team from four offices will look at blanket purchase agreements. They are Dave Berwick, PE-M; Don Peterson, PE-D; Ann Marie Scheie, RM; Bruce Stephenson, CT; and Marita Roherty, CO-R.

Reviewing requisitions and purchase requests are Dave Garrison, CT; John Miller, LM; Tom Oksness, CO; Bob Penniman, PE-M; and Diana Tschida, RM.

Empowered to make changes

February is a training month for PAT members and their first-line supervisor. The teams are empowered both to recommend and to implement process changes. All items implemented must be in accordance with current laws and regulations.

"You can't choose your past, but you can choose your future," said Tom Heyerman, TAQ coordinator. "The district has taken the hardest step—the first one—toward an even more effective and efficient organization."

February is Black History Month. This year's theme of the 70th celebration of the Afro-American history is "Reflections on 1895: Douglas, Dubois, Washington."

"Civil genius" translates ideas into reality

by Judy DesHarnais, PE-M

The French word for civil engineer is génie civil. This translates to "civil genius," which is appropriate for people who turn ideas into reality.

Cassell's Concise French-English Dictionary translates génie as "genius; spirit, nature, bent, talent; (Mil.) corps of engineers."

During National Engineers Week, Feb. 20-26, the Corps' St. Paul District will hold a recognition event, educational presentations, and join other engineers to honor the engineering genius of turning ideas into reality.

The week offers an opportunity to get the word out about our value to society and remember what we are contributing to the nation. Specifically, we have made contributions to the locations where our projects are built or maintained.

At the district office, District Commander Col. James Scott and Robert Post, chief of Engineering and Planning Division, will kick off National Engineers Week at 1 p.m. on Feb. 21 in the skyway lobby with the Order of Engineer Ceremony and Performance Awards Ceremony.

Presentations for Engineers Week

Three lunch-time presentations are in the works for Engineers Week, Feb. 20-26. They include:

- The Engineering Mission of the Corps. A panel discussion with Chuck Crist, PE-M; Ed Eaton, PE-H; Dennis Cin, CO-NV; and Joel Rogers, CO-W;
- Mentoring and Being Mentored, presented by Marianne Price, EEO manager;
- Floodplain Management, presented by Dave Loss, PE-M.

Watch the bulletin boards and cc:Mail for exact time and locations.

Also, three lunch-time presentations are scheduled. (See"Presentations.")

In the field, Resident Engineer Leon Mucha and Office Engineer Sharonne Baylor of the Rochester Office will make presentations to students.

Two separate ceremonies will recognize engineering achievements in Minnesota.

The Minnesota Society of Professional Engineers and the Minnesota Federation of Engineers Societies are sponsoring an Engineering Awards Banquet, Feb. 25, at the Minnesota Zoo. Doug Crum, of the district's Geotechnical Section, is the Minnesota Geotechnical Engineers Society nominee for Young Engineer of the Year. The society will also recognize the Seven Wonders of Engineering in Minnesota. For more banquet information or reservations, call Joan at 612-292-8860 by Feb. 17. The dinner costs $35, or $65 for two.

The Minnesota Consulting Engineers Council is sponsoring the 28th Annual Engineering Excellence Awards Competition with a banquet on Feb. 17 at the Northland Inn in Brooklyn Park. For information and reservations, call Mary Detloff at 612-922-9696.

Zirschky outlines year ahead

Acting Assistant Secretary of the Army (Civil Works) John Zirschky, (far left) visited the Dredge Thompson last August as part of a review of the national minimum fleet. With him are Con-Ops Chief Dave Haumersen and Master of the Dredge, Dave Peck. Zirschky outlined the year ahead for the Corps in a January 20 letter to employees. He underlined six goals for the coming year: 1. No civil works subsidy for other programs; 2. Improve our civil works process; 3. Restructuring; 4. Performance measurement and accountability; 5. Support the Administration goals; 6. Increase public awareness of the Corps' contributions to America.

Corps begins removal of snags in small projects processes

As Minnesota State Highway 32 threads its way north just outside Thief River Falls, Minnesota, it is caught in a pinch between a bend in the Red Lake River and the tracks of the Soo Line Railroad.

This bottleneck was a problem for Lowell Enerson, the administrator for the Red Lake Watershed District. The riverbank was eroding onto the right-of-way for the highway.

Enerson also had a problem at St. Hilaire, a small village on Highway 32 south of Thief River Falls. Enerson saw the eroding banks of the Thief River encroaching on the community cemetery and Highway 32.

Clearly, the banks had to be stabilized while they were only a minor nuisance. Enerson called the Corps' St. Paul District for help. Feasibility studies on the projects confirmed the threat of erosion to public property and the cemetery.

In each case, the watershed district qualified for a Section 14 emergency streambank protection project under the Continuing Authorities Program (CAP), popularly called "small projects."

"Section 14 comes under the CAP," said Tom Crump, one of the project managers who worked with the watershed district on the bank stabilization projects. "It can be used to protect any public facility that's in danger of erosion. For example, roads, bridges, water supply intakes, waste water treatment plants, public buildings, historical Indian mounds, and cemeteries."

Under Section 14, the watershed district became the local sponsor on both projects—Highway 32 and St. Hilaire. Section 14 authorized emergency bank stabilization to halt the erosion of the river onto Highway 32. FY 93 funds assisted with Highway 32. FY 94 money contributed to the St. Hilaire project.

"We found it to be an excellent working relationship with the Corps," said Enerson. "Highway 32 and St. Hilaire really hummed along. The environmental studies worked out for us. From the date we first started to talk to the date of completion, the projects took the Corps about the same amount of time it would have taken us."

In addition, the watershed district received state grants to cover part of the required local sponsor contribution under cost sharing.

The feasibility study on Highway 32 began in June 1990. The contractor completed construction nearly three years later—July 1993. St. Hilaire took four years. The feasibility study began in August 1990. The contractor finished in August 1994.

St. Paul District file photo

The raw vertical face and leaning trees were the signs that this streambank along the Thief River at St. Hilaire was a candidate for stabilization. The community cemetery is 20 feet away.

Clearing process snags

Nationwide, the Corps is beginning to clear some snags from the small projects process. The goal for FY 1995, said Acting Assistant Secretary of the Army (Civil Works) John Zirschky, "is to reinvent our Continuing Authorities Program."

"Effective implementation of the new Section 14 process has cut over two years off these projects," said Zirschky. "A new Section 1135 process will be completed soon. I hope we can cut the current average of 33 months at least in half. The Section 205 program will likely be next."

A succession of Flood Control Acts throughout the years has given the Corps authority to implement these programs without the specific Congressional action that is required for larger projects. Congress provides funds on an annual basis to the program, leaving it to the Corps to manage, within established

guidelines, the implementation of individual projects.

The programs are commonly referred to by the paragraph number of the law that authorized them: Section 14 for bank protection; Section 205 for flood control; Section 208 for clearing and snagging; and Section 1135 for environmental restoration.

Sections 14, 208 and 1135 generally range in cost from $100,000-$300,000, while Section 205s are usually larger—from $1 to $5 million.

The district's annual budget for small projects has averaged between $2-3 million in recent years and is expected to hold fairly steady for the next several years. The district's commitment to CAP has resulted in having one of the largest programs nationwide.

Crump sees process changes cutting both time and cost. "The Section 14 process was overhauled in July 1994," said Crump. "Our mandate is it will be 12 months from initiation of the study to the award of the construction contract."

Favorable results

"The results have been very favorable," said Crump. "There is a nationwide limit of $12 million for Section 14 projects, which was enough to satisfy project demand in previous years. This year, we broke the bank and had to prioritize projects. But the biggest indicator of success is that construction is being done sooner."

"Process changes have eliminated the formal feasibility report," Crump said. "The district performs the feasibility analysis and notifies North Central Division (NCD). Headquarters delegated the approval authority to division and provided for seamless funding from planning to design," said Crump. "No breaks in funding mean that work teams stay together between project phases while we wait for approvals."

St. Paul has one Section 14 project under construction and four more going to construction this year—protecting a township road at Sogn and highways at Sterling Center, Mankato Township and on the Big Fork River; and protecting a waste treatment plant at Crookston.

The projects are expected to benefit from recent process changes. "It took the whole package of process improvements to make a difference with Section 14," said Crump.

"The Corps has been willing to work with us," concluded Enerson. Although high cost and long project times have pinched local sponsors, Enerson hopes that Corps process changes improve program responsiveness and that the Corps will assist the watershed district in other needed erosion control projects in the very near future.

Student likes to "hide out" in cubicle

by Pamela Spann
Stay-in-School Program

March 3 will mark Leticia Cordova's first year with the St. Paul District.

Illustration by Pamela Spann

Leticia Cordova works in the Civil works section of RM.

Cordova came to work for the district through the On-the-Job training program at Humboldt High School, where she is currently in her senior year.

Cordova works as an automation clerk in the Civil Works Section of Resource Management (RM).

She says she likes working in RM because of the variety of things to do, the people are nice, and so is having her own cubicle to hide out in.

After graduating, Cordova would like to attend Inver Hills Jr. College, then transfer to the University of Minnesota to get a four-year degree in elementary education. Her desire to teach came from her experience with baby sitting children. She enjoys watching children grow and the stages they go through.

Cordova wants to stay with the Corps as long as working is compatible with her school schedule.

Congress authorizes the Corps to save waterfall

Holes in the sandstone and scouring challenge the Corps

Third in a series of the Corps of Engineers efforts to save St. Anthony Falls. Previously, the Corps had hired an engineer, Franklin Cook, to survey the damage and recommend actions to save the falls. The Corps became involved after the collapse of the Eastman Tunnel under the Mississippi threatened the integrity of the falls.

by Jane Carroll, historian

Cook argued that the Corps should seek authorization from Congress to save the waterfall on the basis that navigation above Minneapolis would be lost if St. Anthony Falls were destroyed. Congress reluctantly accepted this argument and provided $50,000 for the Corps of Engineers to save the falls.

In August, 1870, the Corps hired Cook as supervising engineer and started to work by taking over the tunnel repair project from the St. Anthony Company. The engineers also built a dam between the St. Anthony and Minneapolis millponds that extended from the upper limit of the limestone ledge to the falls. The dam was constructed of timber cribs loaded with stone and was intended to be a permanent wall around the upper breach in the Eastman tunnel.

While the Corps made significant progress, in July 1871, the engineers discovered that the tunnel was once again filling with water. After a considerable search, they found that the leak originated between Nicollet Island and the east shore of the river. Water had travelled under the new dam and had scoured a cavity 16 feet wide by 8 feet deep under the limestone. To fix this new problem, the Corps built another dam from Boom Island to Nicollet Island, cutting off water to the St. Anthony millpond.

In August, 1871, another new tunnel scoured out by the river threatened the existence of the Minneapolis millpond and led the citizens of Minneapolis to raise money to repair the tunnel and build an apron to protect the foot of the falls. When this new failure occurred, the Corps of Engineers surveyed the sandstone above the limit of the limestone ledge and found it was filled with holes.

The condition of the underlying sandstone led Cook to conclude that only a wall under the limestone, extending across the entire width of the river, would save St. Anthony Falls. However, Congress had not authorized funds for such a project.

Next month: Special federal board of engineers meets in Minneapolis

Zebra mussels multiply rapidly

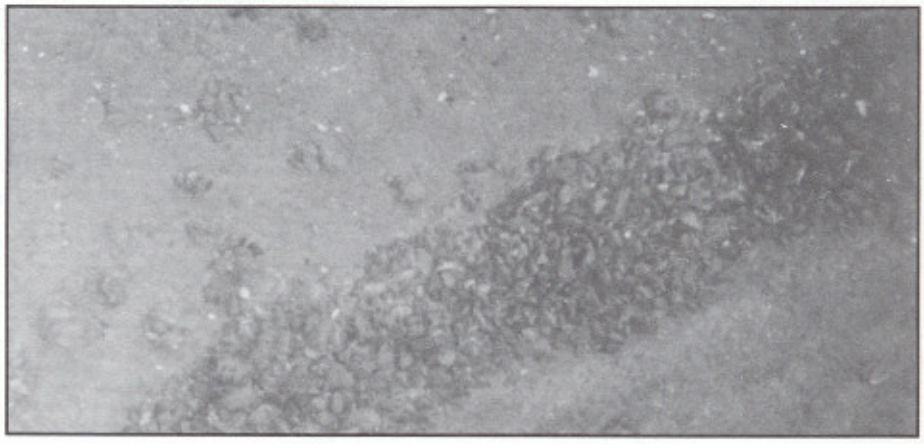

Photo by Tim Yeager

by Tim Yeager, fisheries biologist

The above photo, taken December 15, 1994 at Lock & Dam No. 7 near La Crescent, Minn., shows a seam in the lock chamber floor heavily encrusted with zebra mussels. The encrustation was discovered when the lock was dewatered. Densities averaging 2,200 mussels/m^2 were estimated from samples collected on the lock chamber floor. Reported densities of zebra mussels at Lock & No. Dam No. 7 are the highest reported to date at any lock and dam on the Upper Mississippi River. No problems in terms of lock operation have been experienced to date.

Zebra mussels (*Dreissena polymorpha*) were first observed in the Upper Mississippi River in September 1991 near La Crosse. The zebra mussel is a small, freshwater bivalve mollusk (clam).

Bits and Pieces

Hello: November

Office of Counsel
Brandi L. Seman, office automation clerk

Good-bye: November

Construction-Operations Division
Alonzo G. Johnson, construction & maintenance

Engineering and Planning Division
Gerald R. Blomker (retired), civil engineer
Douglas R. Hoy, mechanical engineer
Aaron D. Johnson, student trainee
Gregory A. Johnson, landscape architect
Stanley W. Kummer (retired), civil engineer
Konstantin Morhun (retired), civil engineering technician
Dale K. Paulson, drill rig operator
Kelsey W. Willis (retired), hydrologic technician

Human Resources Division
Janice A. Wallace, personnel staffing & classification specialist

Real Estate Division
Carol S. Vierck (retired), realty specialist

Hello: December

Construction-Operations Division
Marc F. Krumholz, administrative specialist

Maureen M. Welch, office automation clerk

EEO Office
Phillip E. Hart, office automation clerk

Office of Counsel
Ivette D. Garrett, general attorney

Good-bye: December

Real Estate Division
Bonnie J. Tieso, realty clerk

Obituary

Evelyn L. Schwartz died on October 24, 1994 at age 81. She retired from the St. Paul District in 1978 where she had worked in the Cost Accounting Section, the forerunner of the Revolving Fund Section. She also briefly worked in Construction-Operations.

—Compiled from information provided this January by retiree Kathrine Gillespie, Ann Allen of Resource Management, and West Funeral Home

Wellness with Feds for Fitness

Feds for Fitness is sponsoring Rob Sweetgall, author, walker, and motivational speaker for wellness programs at 11 a.m. and noon on Feb. 24 at the IRS Training Center.

District holds public meetings on Crandon Mine impact

The St. Paul District is looking at the environmental impact of a proposed Forest County, Wisconsin, mining operation on nearby wetlands.

To help assess the impact, the district held public meetings in Madison, Wis., on Jan. 31 and Crandon, Wis., on Feb. 7.

Crandon Mining Company had applied to discharge fill material in several wetlands. The filling would be the result of the development and operation of a new zinc and copper mine located five miles south of Crandon.

"The first step is to determine what significant resources and issues are involved in this permit application," said Dave Ballman, an ecologist in the Regulatory Section. "In accordance with the National Environmental Policy Act (NEPA), we will also be determining the extent or scope of the impact statement." The district is preparing an environmental impact statement (EIS) to thoroughly evaluate the permit application and impacts of mining on important resources.

One year later
Floodplain team "sees end of tunnel"

"We are seeing the end of the tunnel at this point," said Dave Loss, manager of the Floodplain Management Assessment (FPMA) for the Corps.

The FPMA team includes members for five districts: St. Paul, Rock Island, St. Louis, Kansas City, and Omaha. The team consists of four work groups: Engineering (Hydraulics & Hydrology), Governmental, Economics, and Public Involvement.

Milestones at 52 weeks

After 52 weeks, the assessment team has completed:

- Economic data collection;
- An environmental inventory;
- Hydraulic modeling;
- Three milestone packages;
- Two sets of 12 public meetings in five districts;
- A framework to evaluate a wide array of alternatives;
- Meetings with stakeholders to gain different perspectives.

The assessment continues on its schedule for completion by June 1995.

With Public Law 103-126, Congress authorized the U.S. Army Corps of Engineers to assess the floodplain areas along the Lower Mississippi and Upper Mississippi River affected by the Flood of 1993. Congress provided $4 million and established an 18-month deadline. The Corps' St. Paul District was selected to provide the overall coordination and management of the effort.

The mandate

The mandate is to assess the current uses of the floodplains and identify and assess floodplain management options.

To provide for public input, the FPMA team will hold the final set of public meetings in 11 cities this April in five Corps of Engineers districts. Cities in the St. Paul District are St. Paul on April 18 and La Crosse, Wis., on April 19.

Corps, MPCA halt barrel search

The Minnesota Pollution Control Agency and the St. Paul District has suspended the barrel search. After reviewing a lab analysis of the barrels that were recovered last summer, state officials decided the barrels do not pose an immediate threat to public health.

In June, a team of private contractors, the MPCA, Navy divers and two Corps districts recovered seven of an estimated 1,400 barrels dumped in Lake Superior in the late 1950s and early 1960s. Lab tests on the contents showed that some of the barrels contained hazardous wastes. Samples form several barrels contained barium, lead, cadmium, benzene, and polychlorinated biphenyls (PCBs) at levels above the state health department's drinking water guidelines.

The determination was based on the contents of the barrel being encased in concrete and buried in sediment on the lake bottom, the distance from the city's water intake, and the huge volume of water in Lake Superior.

State officials also indicated that cost/benefit concerns and other environmental priorities weighed heavily in the decision not to require the Corps to recover more barrels. More than $400,000 has been spent to date on several attempts to recover the barrels.

Officials at the MPCA did not rule out the possibility for future recovery efforts, saying the MPCA wants to monitor the barrels periodically for potential long-term impacts on the lake.

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Address all inquiries to:

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

District Engineer	COL James T. Scott
Public Affairs Officer	Kennon Gardner
Editor	Peter Verstegen
Assistant	Pamela Spann