



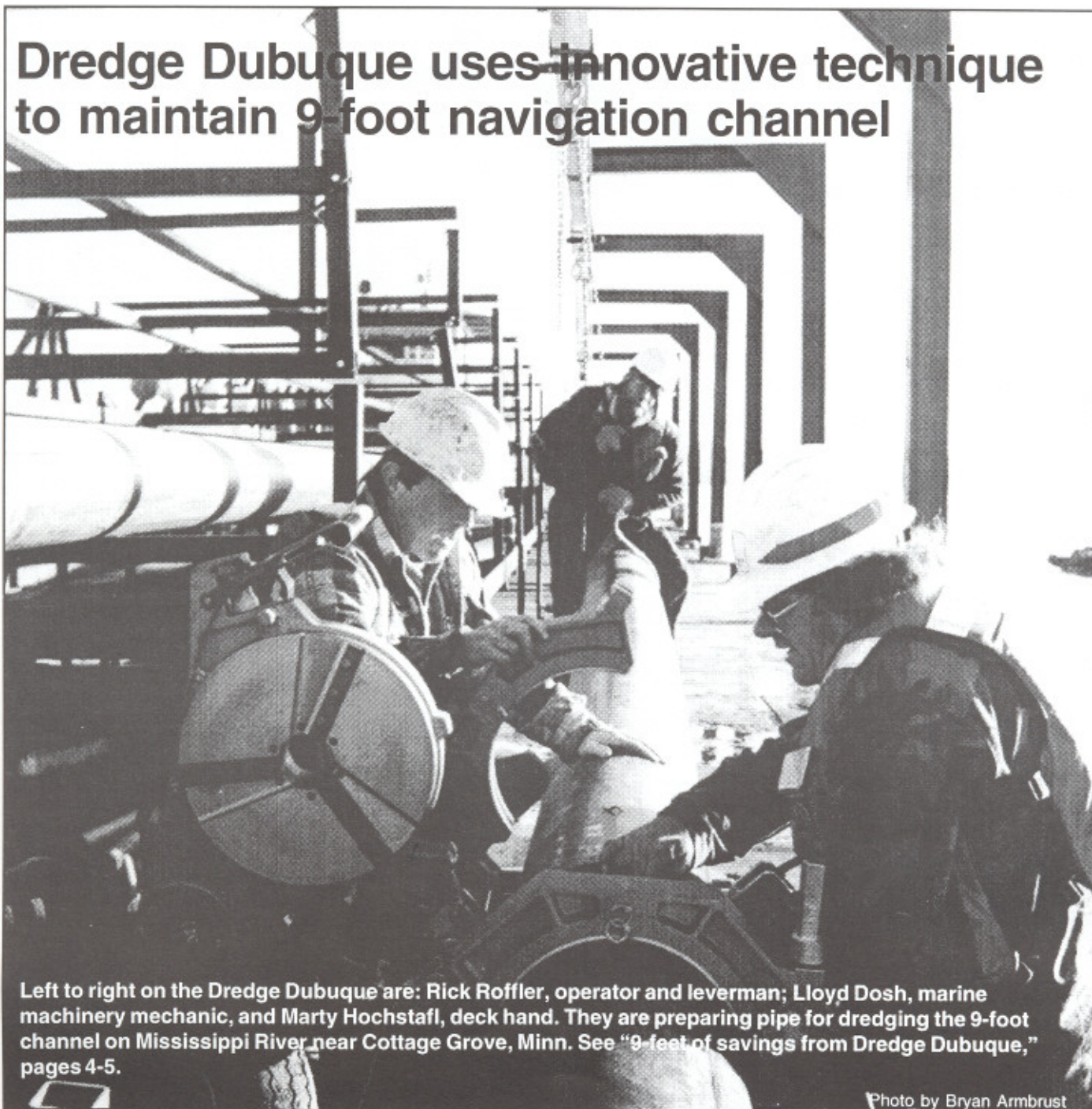
US Army Corps  
of Engineers®  
St. Paul District

# Crosscurrents

Vol. 21, No. 11

November 1998

## Dredge Dubuque uses innovative technique to maintain 9-foot navigation channel



Left to right on the Dredge Dubuque are: Rick Roffler, operator and leverman; Lloyd Dosh, marine machinery mechanic, and Marty Hochstafl, deck hand. They are preparing pipe for dredging the 9-foot channel on Mississippi River near Cottage Grove, Minn. See "9-feet of savings from Dredge Dubuque," pages 4-5.

Photo by Bryan Armbrust

**Strategic Vision:**  
*Serve the Army*

## CFC pledges exceed \$23,000

"Everyone was generous with their donations," said Bryan Armbrust, this year's coordinator for the Combined Federal Campaign in the St. Paul District. Pledges and cash contributions exceeded \$23,000. Electronic greetings, the bake sale and the book sale raised \$210.

Dawn Linder, Debra Peterson and Lois Pream from Contracting; Ken Gardner from Public Affairs; Mary Clarkson in Resource Management; and Julie Ritter in Real Estate supported this year's CFC success. The 1998 CFC began Oct. 5 and ended Oct. 23.



Photo by Peter Versteegen

**Left to right at the CFC book sale on Oct. 15 are: Jean Schmidt, Jan Pream, Marilyn Kruchten, and Maj. Charles Horwitz. Unsold books were donated to the public library in Alma, Wis.**

**Strategic Vision:**  
*Invest in People*

## Think safety, act safety

By Ron Scott, Safety Office

Many accidents can be avoided by disciplining ourselves to think carefully about the consequences of our deeds before acting on them.

If you were asked to come up with a one-word definition for safety, or a one-word key to achieving it, what would your reply be? Would you suggest "alertness," meaning always being ready for the unexpected? Would your vote be for "skill," being especially good at what you do? Would you say "experience,"

suggesting that the older employee never gets hurt or makes a mistake?

Perhaps you would settle on "cooperation" as the key to safety, meaning that it requires a team effort in many instances to achieve a safe workplace. I submit, after due deliberation, that we can define safety by using a single word: "THINK."

Alertness, skill, experience, and cooperation are all associated with safety and contribute to it, but, since they in turn require thought, they must be regarded as secondary characteristics.

This word alone can lead us to success in reducing accidents and injuries for us all. It has been said that about 90 percent of all accidents can be attributed to unsafe acts on the part of the employee, and failure to think

before acting is the cause of practically all accidents in this category.

Let me explain. I am not saying that everyone who gets hurt didn't think about what they were doing or blatantly disregarded all safety procedures. Most people want to follow all safety rules because they know that it affects their safety and health. But how many times have we rushed to complete a project or thought a task will "only take a minute," and then not taken that extra step to protect ourselves or those around us? We all get distracted or have occasional daydreams. We all tend to think that "it can't happen to us."

Let's all take the extra time to "THINK" before we act. Remember, when we "THINK" safety, we act safely.

Strategic Vision: *Revolutionize Effectiveness*

# St. Paul District and North Dakota SWC stress teamwork to solve flooding at Devils Lake

By Peter Verstegen  
Public Affairs specialist

A "Road Closed" sign stops highway traffic from waves that pound over the eroding asphalt. Roadside telephone poles and skeletal trees sink inch-by-inch beside a road that disappears into the depths of the lake. Water, once miles away from farms and residences, now surrounds abandoned mailboxes and many foundations that once supported homes and farm buildings. The water level at Devils Lake in North Dakota has not been this high since the mid-1800s – about 150 years ago.

The high water has reinforced a strong partnership between the North Dakota State Water Commission (SWC) and the U.S. Army Corps of Engineers' St. Paul District. "Both the Corps and the state water commission are water management agencies," said Dave Sprynczynatyk, chief engineer of the North Dakota SWC. "Number one, it's important we address projects such as Devils Lake as a partnership. No single agency can do it alone. I believe it is critical that we work together to attain successful resolution to this devastating problem."

"Five years ago Devils Lake covered less than 50,000 acres," said Bill Spychalla, project manager for the district's flood control project at Devils Lake. "Now, it covers about 105,000 acres." Due to a dry summer the



St. Paul District file photo

## Property owners burned out flooded buildings as one step in the debris removal process.

lake level in late October '98 was at 1443.7 feet above mean sea level – down about one foot from the record level reached three months earlier. "With a normal evaporation process, it will take years to get this lake back down to a non-threatening level," said Spychalla.

Devils Lake is a closed basin where the only way for water to escape, up to a point, is evaporation. The natural point of overflow to the Sheyenne River is elevation 1459 feet – about 15 feet higher than the present level. At 1459, Devils Lake flows naturally into the Sheyenne River, which then joins the Red River of the North. "This is not your typical flood," said Spychalla. "Unlike a river flood that comes and goes in days or weeks, Devils Lake continues to expand and it will not recede quickly."

The SWC and the Corps are working closely on a "three-pronged solution to flooding at Devils Lake," said the SWC's Todd Sando. "The outlet is one

prong," he said. "Maintaining infrastructure around Devils Lake, such as the developed areas in the cities, rural water and sewer and raising critical roads around the lake, is the second." "And the third," added the SWC's Lee Klapprodt, "is improving water management in the basin. This includes providing additional water storage in the upper basin."

Motivating the state and federal action is a lake level that has jumped 22 feet since 1993. The last 10 feet have been the most costly. Flooding in the last five years has damaged private and public property, rural water and sewer systems, roads and highways, and has created severe economic and social impacts. While the impacts are difficult to quantify, agency officials estimate that more than \$200 million in damages and federal expenditures have occurred. "Damages are expected to grow with next spring's runoff," said Klapprodt.

In addition to the Corps and the SWC, other federal, state and local agencies have been working to address the many water-related problems in the basin. For instance, other agencies have paid flood insurance benefits for more than 300 home owners and business owners, including the relocation of nearly 100 homes for the Spirit Lake Tribe. "We coordinate with a Federal Emergency Management Agency (FEMA) task force, which includes federal, state and local

*Devils Lake, cont. page 6*

Strategic Vision: *Satisfy the Customer*

## 9-feet of savings from the Dredge Dubuque

By Bryan Armbrust  
Public Affairs Specialist

"We're maintaining the same nine-foot navigation channel for the Mississippi River traffic with the same old dredges, but we're combining a couple of new techniques in order to get the job done more efficiently," said Dredge Operator and Leverman Rick Roffler on the U.S. Army Corps of Engineers'

Dredge Dubuque. The Dubuque is pictured above right on the Mississippi River this October west of Cottage Grove where it worked to maintain the channel depth.

"Normally, we float our dredging lines on the surface, which means we have to cease operations each time a vessel passes. It's a common practice to assemble pipe on shore and then transport it to the dredging site," said Arnie Wodarz, Rivers and Harbors Unit foreman.

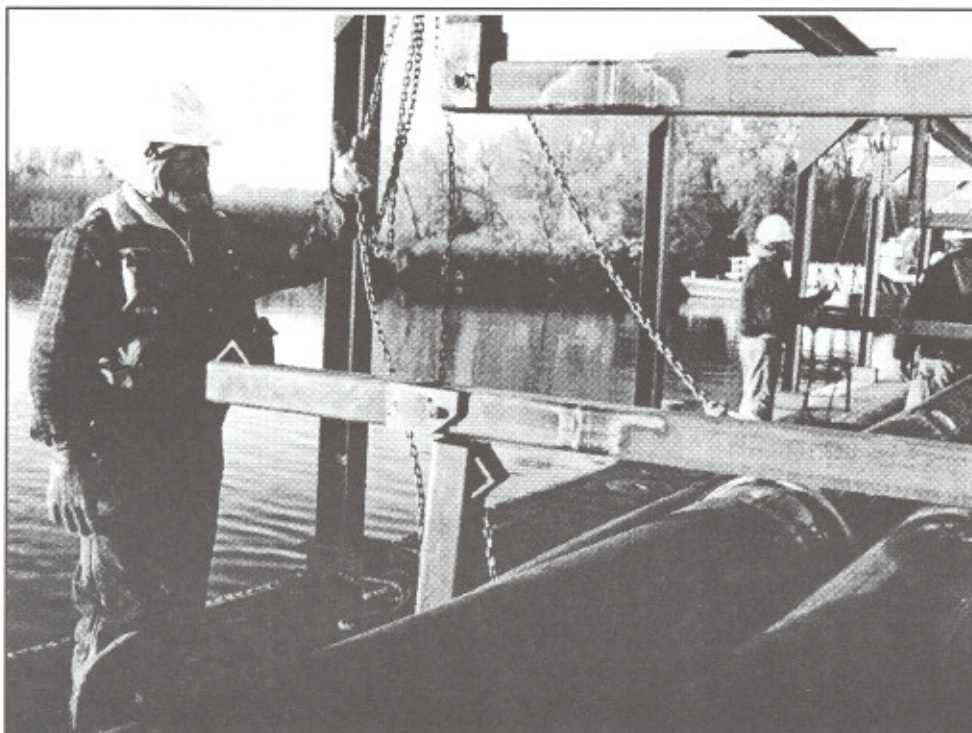
"Our team wasn't satisfied with the status quo," said Wodarz. "Mike Scheel, our lead welder, and Rick Roffler designed and built a superstructure for our work barge so that we can assemble the dredge piping right on the river. We're laying it on the bottom and keeping the channel clear for traffic."

This bottom line saves on labor, materials and keeps open the 9-foot navigation channel.



Photos by Bryan Armbrust

**Marty Hochstafel, right, works as a deck hand on the Dredge Dubuque.**



Lloyd Dosh, at left, is a marine mechanic on the Dredge Dubuque.



Jarod Skrede, at left, works as a deck hand on the Dredge Dubuque.

### The cutterhead pipeline dredge

The Dubuque is the smaller of the two dredges owned by the St. Paul District. The cutterhead is a mechanical tool on the front of the intake pipe. It has rotating blades to breakup or loosen the material on the bottom of the channel so that it can be sucked through the pipeline. The cutterhead pipeline sucks dredged material through one end, the intake pipe into a pump, which pulverizes the material, and then pushes it out the discharge pipeline to a disposal site.

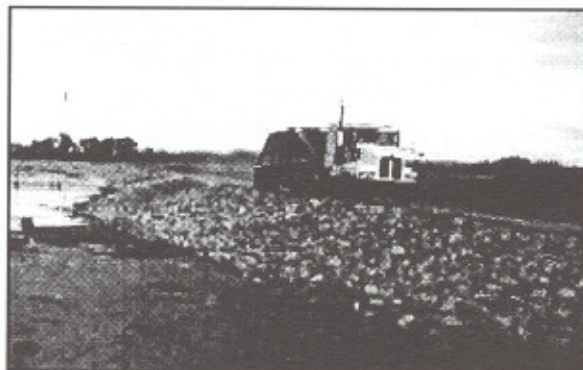
*Devils Lake, cont. from page 3*

agencies," said Spychalla. "The cities and the counties play key roles in making the partnership work to benefit the public."

The Corps' flood control missions have focused heavily on two of the three prongs: the levees and an emergency outlet. As the lake gets higher, so do the levees that protect the City of Devils Lake – averaging 10 to 12 feet high and now up to 30 feet high. "The most critical of the items is the levee for the City of Devils Lake due to the imminent threat of very significant urban flooding posed by the rising level of the lake," said Spychalla. The Corps designed the levee as a permanent dam to hold back the water. "Our goal is to keep the city dry," Spychalla said. Initially, the Corps raised the city's levee system to the elevation of 1445 feet at a cost of \$25 million. The continual rise means spending another \$16 million in 1999.

The Corps is now working to raise the levee for the city to 1,457 feet, which will provide protection for a lake level at 1,450 feet. Construction to raise the levee from 1450 to 1457 began in July 1998. The levee is designed to provide seven feet of freeboard to protect against the pounding surf whipped up by the relentless prairie winds. The commitment to invest substantially in levee protection is designed to prevent \$150-200 million in damages.

The Corps' St. Paul District awarded two construction contracts in June 1998 for work on existing levees. One was a contract for work on the east side of the city. Park Construction of Minneapolis bid \$5.3 million on



St. Paul District file photo

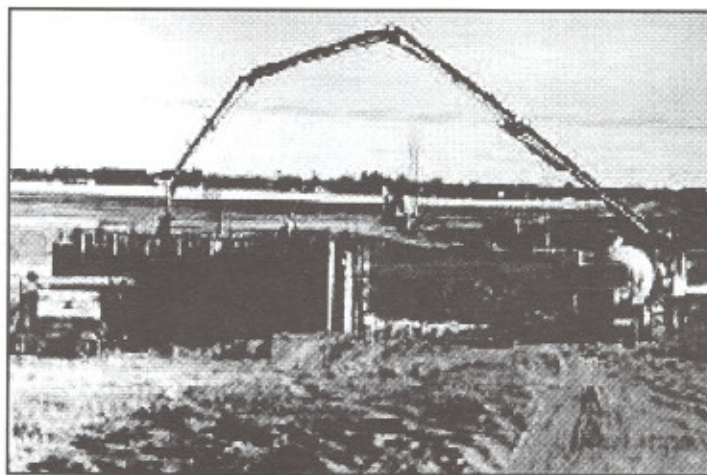
**A contractor works on the construction of the levee at Creel Bay at Devils Lake, N.D.**

that contract. Park Construction also received a contract for work on the west side of the city with a low bid of \$7.7 million. The work on both of the stages is continuing around-the-clock. Park Construction was also low bidder on a related East Ditch pump station contract for \$4.1 million. The pump station lifts water from the East Ditch into the lake. "The lake is higher than the water in the ditch," said Blake Sander, a civil engineer for the Corps at the Devils Lake project.

The second prong is the emergency outlet. In June 1997, Congress directed the Corps to design and to develop an environmental impact statement (EIS) for an emergency outlet to channel water from Devils Lake

to the Sheyenne River. The Devils Lake outlet would drain into the Sheyenne River and eventually into Canada – one reason that the record high water at Devils Lake has attracted the attention of officials in Manitoba, Canada. The EIS examines the impacts on the river and the capacity of the river to handle the quantity and quality of water channeled from Devils Lake. The report will evaluate the impact of an emergency outlet from the lake, and address technical considerations, the economic viability, and environmental impacts.

The shared priority between the SWC and the Corps is to complete a report to Congress on the outlet from Devils Lake. "The design



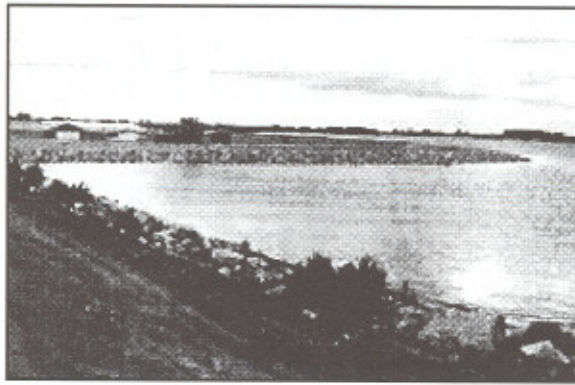
St. Paul District file photo

**The photo at left shows a concrete pour at a gateway structure for the East Ditch pump station at Devils Lake, N.D.**

and the EIS are proceeding on schedule on the outlet component," said Spychalla.

If the Devils Lake emergency outlet were to become a reality, its operation would result in stage increases on the Sheyenne River and could possibly affect groundwater levels. In October 1998, the Corps initiated a program to monitor groundwater on the Sheyenne River as part of the outlet study. To evaluate the potential effects on groundwater levels along the Sheyenne River, the Corps is planning to release additional flows from its Baldhill Dam flood control reservoir for two weeks in early November. (Baldhill Dam forms the Lake Ashtabula reservoir.) "Although the flows are designed to fall within the existing operating plan parameters for Baldhill Dam, the release of additional water during the test period will simulate what you might expect if you had the Devils Lake outlet in operation," said Spychalla. Added Tom Raster, a project manager with Spychalla, "The Corps normally starts drawing down Lake Ashtabula in October to provide flood control storage for the following spring's snowmelt runoff." But this time, the Corps will measure groundwater changes with monitoring wells in the vicinity of Kathryn and Kindred, North Dakota.

Close coordination and public education are contributing to the success of the three-pronged solution. "We spend a lot of time with Corps' Project Managers Bill Spychalla and Tom Raster on the project," said Sando. SWC officials communicate with the Corps each business day by fax, e-mail, and telephone conference



St. Paul District file photo

The levee (left) on the south side of the Devils Lake at the Highway 20 crossing is being raised.

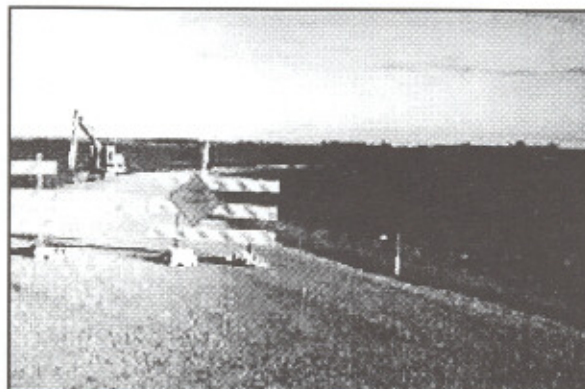
calls. State and Corps officials also regularly meet face-to-face to further coordinate project activities.

Spychalla briefed the North Dakota congressional delegation, state and officials from Corps Headquarters during a visit to the project in August 1998. "I presented the magnitude of the flooding problems caused around the lake, the location of the proposed outlet from Devils Lake to the Sheyenne River and the location of the natural outlet and connection to the Stump Lakes," he said.

"Bill Spychalla and I have been in several forums discussing downstream issues, including a panel discussion in Manitoba," said Sprynczynatyk. "We have participated in public relations efforts to inform and educate the

many stakeholders about the outlet and upper basin storage."

The outlet, levees and other measures to protect rural water, sewers and roads, and upper basin water management are all part of the three-pronged approach that North Dakota interests and the Corps are using to protect the public from water that has reached an historic high. "The problems being caused by the high water at Devils Lake are creating tremendous challenges, not only for the residents in the basin, but for all federal, state and local agencies that are working to address the situation," said Spychalla. "The flooding has stretched policies to the limit. Our combined and coordinated response is working to bring out the best effort to benefit the state and region."



St. Paul District file photo

High water closed the Woods - Rutten Road on the East Bay of Devils Lake in spring 1998.

## Bits and Pieces

### Holiday Awards on December 17

The annual Holiday Awards Ceremony is scheduled for Thursday, Dec. 17 at the Fort Snelling Club. The club, Building 89 at Fort Snelling, is the same location that the ceremony was held last year. Social hour begins at 11; lunch is served at noon; awards begin at 1 p.m.

Three meal choices are available: steak for \$10; teryaki chicken for \$9; and chefs salad for \$8. The meal includes potato, vegetable and roll. The meal price includes dessert and beverage. Non-meal tickets are \$3. Tickets are on sale from Nov. 12 to Dec. 4. Field personnel may call Jan Pream at 651-290-5312 and retirees may call Jan Graham at 651-290-5305. Tickets are available from Mary Clarkson and Brenda Keiser on fourth floor; Stephanie Dupey or Jenny Yager on the fifth floor; and Joyce Johanek or Vicki Strickland on the sixth floor.

### District sponsors DAW Nov. 17-20

The St. Paul District is sponsoring Diversity Appreciation Week (DAW) November 17-20, now in its ninth year. This year's theme is "Passport to our Changing Word."

"This yearly adventure provides the opportunity for district employees to educate themselves on diversity issues from a community-oriented perspective," said Lt. Col. William Breyfogle, deputy commander.

DAW activities include workshops, theater presentations, contests, films and food tasting.

"There are several workshops and events from which to choose," said Marianne Price, EEO officer. "The program is varied and encompasses the goal of 'something for everyone,'" she said.

Participation in selected DAW activities and events will fulfill parts of Consideration of Others training requirements.

"As we enter the 21st century, it

becomes even more important for each of us to understand what diversity means and to recognize our personal responsibility for achieving a work force that is inclusive versus exclusive and that embraces the uniqueness of all," said Price.

### 2 plans drop out for FEHB open season

Two major health plans have dropped out of the Federal Employees' Health Benefit (FEHB) for open season. Medica and MaxiCare will no longer be available through the FEHB. The FEHB open season began Nov. 9 and lasts through Dec. 14, 1998. This is the time when employees may change their health benefit coverage.

Employees currently covered by one of these plans must make a new selection. Fees for some of the other plans have gone up quite substantially. All employees should take a close look at the specifics for available plans to make an informed choice for their 1999 coverage.

Plan comparison guides were distributed to all district offices in early November. Changes made will be effective in January for employees who make new insurance elections during this open season.

A recent improvement to the Open Season process is the availability of information over the internet. Check out the web site <http://www.opm.gov/insure> for more information.



**US Army Corps  
of Engineers**

St. Paul District

*Crosscurrents* is an unofficial publication, authorized under the provisions of AR 360-81. 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.

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