



US Army Corps  
of Engineers®  
St. Paul District

# Crosscurrents

Vol. 21, No. 10

October 1998

Strategic Vision: *Revolutionize Effectiveness*

## Partnership for flood control grows from flood-of-record on Red River of the North

By Peter Verstegen  
Public Affairs specialist

The flood-of-record that overwhelmed neighboring communities along the Red River of the North in 1997 has grown into a partnership with the St. Paul District for a \$343 million multi-year flood control project. During the flood, the district worked hand-in-hand with threatened communities to fight the rising water. The relationships built during the flood fight grew "into a wonderful working relationship for flood control," said Christi Stonecipher, special projects coordinator for the City of Grand Forks.

Meeting by meeting, page by page, and dollar by dollar, the district continues to build its ties with residents and with local and state officials. The district, the cities of Grand Forks, N.D., East Grand Forks, Minn., and the states of North Dakota and Minnesota, are contributing funds. The shared goal is to provide permanent flood control for the communities devastated by the flood that submerged an estimated 2,200 square miles of



Photo by Ken Gardner

**Lisa Hedin, St. Paul District project manager, updated local, state and federal officials in August on the status of the Grand Forks flood control project. Left to right are Hal Gershman, homeowner and Grand Forks businessman; Senator Kent Conrad; Assistant Secretary of the Army for Civil Works Dr. Joseph Westphal; U.S. Representative Earl Pomeroy; and Hedin. The group was in Gershman's back yard talking about the location of a proposed levee. As proposed, the levee goes through his garage and about 10 feet from the back corner of his house.**

the pancake-like river basin. Flooding inundated 75 percent of Grand Forks and 95 percent of East Grand Forks. Damage estimates range from \$1 to \$2

billion. "The recovery time for the cities will be years," said Stonecipher.

The two cities sit across from

*Partnership, cont. on page 4*

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

## Taggatz inducted to district's Hall of Fame

St. Paul District Commander Col. Kenneth Kasprisin recognized nearly 36 years of outstanding federal service by honoring Harold Taggatz at the 23rd annual retirees' reunion on Sept. 10 in St. Paul. Kasprisin handed Taggatz a plaque which is now posted in the district's Hall of Fame. Taggatz retired as assistant chief of Construction-Operations Division in April 1998.

Taggatz made major



Photo by Ken Gardner

contributions to the maintenance and improvement of commercial navigation on the Upper Mississippi River and in the enhancement of recreational opportunities for the public on the river. His engineering

expertise, outstanding leadership ability, sincere concern for the well-being of other members of the Corps and his exceptional integrity are consistent with the best traditions of the district, the Corps and federal civil service.

The chief of engineers awarded Taggatz the Superior Civilian Service Award in June 1994 for leading the Corps-wide Performance Measurement and Data Management task group, which was part of the operations and maintenance (O&M) program improvements. In 1995-96, he chaired the National Task Force for the O&M Plan of Improvement, for which the task force received the prestigious Hammer Award.

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

## A 'heads up' on hidden road hazards

by Ron Scott  
Safety Office

Autumn leaves drift by the window and right into the street. Driving in the fall may be colorful, but the season introduces new driving hazards. Decreasing daylight and wet leaves can create hazards for unsuspecting drivers.

- Patches of fallen leaves can be just as treacherous as patches of ice. Fallen leaves retain large amounts of water and can create a slippery surface. Drive slowly and carefully through them and avoid hard or panic braking, just as you would on ice.

- Fall brings with it the first frost. At freezing or near freezing

temperatures, the moisture on bridges and overpasses will become ice much more quickly than the approach roadway. The roadway will hold heat and the bridges do not. You can go from wet roadway to ice in just a fraction of a second – the time it takes to drive out onto the bridge or overpass.

- Fall weather can present new challenges to drivers. Rain, fog, sleet and wet snow require full driver attention. Remember the two-second rule when following other drivers and in severe weather, increase your following distance accordingly. The two second rule is simply a means of establishing a safe following distance. When the vehicle ahead of you passes some fixed object, such as a telephone pole, start counting "one thousand and one, one thousand and two," and if you are then passing the same fixed object at the count of two, then you are maintaining an adequate

following distance under NORMAL conditions.

Don't be afraid to increase this distance to compensate for weather conditions.

- The sun will rise earlier and set later as fall approaches. Your commute to and from work may find you driving directly into the sun. Fall driving can be beautiful, but glare can make it dangerous. Be sure your windows are clean inside and out. Have sunglasses handy. Remember, if you are driving away from the sun, and other drivers approaching you will be driving into the sun, they may not see you. It may help to use your low-beam headlights, allowing you to be seen more readily.

- Make sure your headlights, tail lights, and turn signals are all working properly. Check the aim of your headlights. Badly aimed headlights can reduce your sight distance and possibly blind other drivers.

Strategic Vision: *Revolutionize Effectiveness***Chaska Project succeeds at more than flood control**

By Peter Verstegen  
Public Affairs specialist

It wasn't just the Partnership Minnesota Special Achievement Award from the Governor of Minnesota. Although that helped. What pleased David Raasch the most was "the personal satisfaction how the Chaska project prevented damages from the flood in 1993. And it succeeded 100 percent during the spring flooding in 1997," he said. Raasch is a project manager for the Corps' St. Paul District. He managed the flood control project at Chaska, Minn., from 1991 to its recent dedication in July.

Severe floods had hit Chaska in 1952, 1965, 1969 and again in the summer of 1993. Chaska, a community of about 12,000 on the Minnesota River, lies in the southwest metropolitan area outside Minneapolis. The project was authorized in 1976 and the district awarded the first construction contract in September 1988 after Congress appropriated new start-up construction funds.

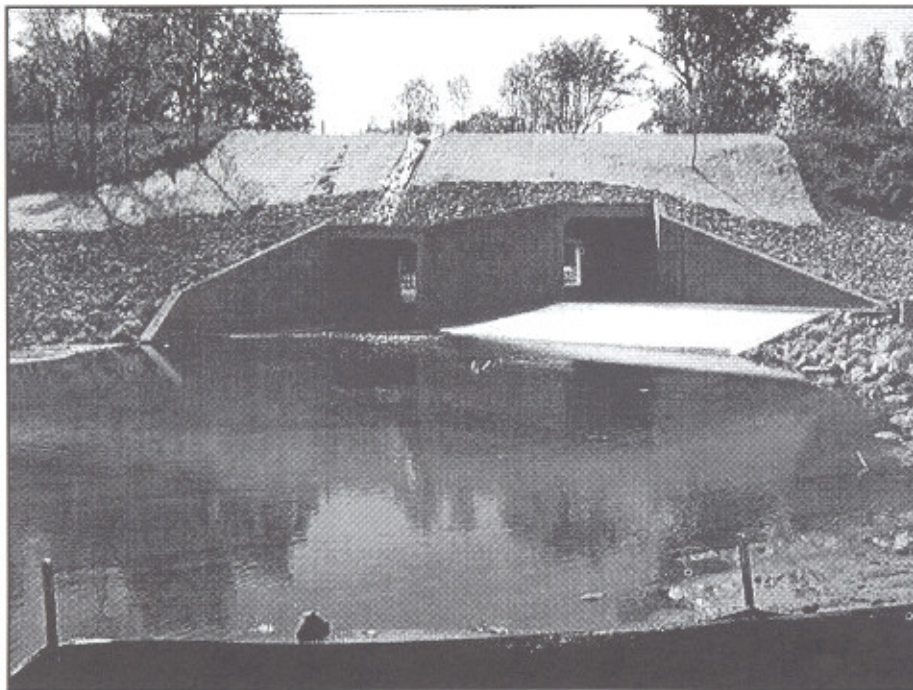
The Corps and the city together established three goals for the flood control project. One was to prevent the potential for catastrophic flooding from the Minnesota River. Previous floods

had damaged property and public facilities in excess of \$12.3 million.

Goal number two was removing the lower portion of the community from the federal and state floodplain. According to a city fact sheet, floods had increased the deterioration of housing and limited the opportunities for rehabilitation. Expensive flood insurance premiums had become an economic burden.

The city had a third goal – to increase the standard of living for low-to-moderate income families. Fifty five percent of the households in the floodplain qualified as low-to-moderate income. The city targeted the floodplain, known locally as "Block 54," for re-development. The block was a highly visible entrance to the community. In 1995, when the Corps was designing a 2.6-mile levee along the Minnesota River, the city proposed to re-develop the block to showcase the south side of the city near the river.

"This is a project that the City of Chaska had been working on for a very long time," said David Pokorney, who has been city administrator for 14 years. "There are two significant benefits," he said. "The first is to protect the city from flooding by the Minnesota River. But this was more than just flood protection. Second, the project allowed the older part of the community to thrive once it was taken out of the floodplain."



St. Paul District file photo

**The Corps and its prime contractor jacked two 12-foot by 12-foot concrete culverts (above) under Minnesota State Highway 41 without interrupting traffic. Jacking involves heavy machinery pushing the culverts through the earth under the highway. The culverts serve a dual purpose of flood control and recreation.**

*Chaska, cont. on page 6*

*Partnership, cont. from page 1*

each other at the intersection of two rivers, the Red River of the North and the Red Lake River. They are about 90 miles south of the Canadian border and have a combined population of 60,000. When spring snow melts, the water from the southern part of the basin flows north and pools where the river is still frozen. "The area has been susceptible to chronic flooding for years," said Stonecipher. "In fact, the Corps had been studying flood protection for the cities more than 10 years prior to the flood of 1997."

The flood damaged civic infrastructure and public services in both Grand Forks and East Grand Forks. Nearly 55,000 residents were forced to evacuate their homes. To fight the flood, the Corps had awarded more than \$1.8 million in contracts for emergency operations in the two cities. Operations included levee construction, pumps, sandbags and related construction. Volunteers fought the flood with 3.5 million sandbags weighing 17,500 tons. Heavy equipment pushed in 170,000 cubic yards of clay and gravel.

By the time the flood water receded to the banks of the Red River, nearly 8,600 or 75 percent of homes in Grand Forks and more than 5,500 or 99 percent of homes in East Grand Forks were damaged. The Corps spent nearly \$14.4 million on debris removal, water, sewer and housing through Federal Emergency Management Agency recovery missions. The city estimated 60,000 tons of trash was disposed of.

The partnership huddled to expedite both short- and long-

term flood protection. A shared priority was to repair the current levee system. The City, the Corps and consulting engineers repaired and reinforced the levees by adding extra clay and extra height.

The flood, and the mass evacuation that resulted from it, made permanent flood control a top priority. This has meant "high customer expectations," said Lisa Hedin, project manager for the Corps in St. Paul. District officials have been in contact with city, state and other federal officials on a daily basis since the flood.

Meanwhile, the Corps allocated \$2.5 million in fiscal year 1998 for pre-construction engineering and design (PED) for long-term flood control. The district and its local partners resuscitated planning, engineering and design under the authority of an East Grand Forks project that had been suspended in 1987. The previously authorized East Grand Forks project was reformulated to include flood protection for the City of Grand Forks along the North Dakota side of the river. The flood protection measures on both sides of the river became one project. A General Re-Evaluation Report (GRR) is functioning as a basis for a post-authorization change and officially expands the scope to include Grand Forks. The report establishes the revised level of flood protection. The common objective is to provide a 210-year level of protection – equivalent to the flood of 1997.

In February 1998 the district delivered to the cities a report that compared alternative flood control plans and the selection of the locally preferred plan. To meet their objective, the Grand Forks and East Grand Forks city councils

met separately late in February. The report outlined three choices: do nothing; a split flow; and levees only. The councils voted to allow the Corps to proceed with more in-depth studies and plans for a levees-only project. This choice proposed a ring levee and floodwall that provided protection against the 1997 flood. It was more economical and offered a better cost/benefit ratio than a split-flow combination levee/diversion. A city newsletter reported that "the do nothing option was, in one council person's words 'grounds for impeachment.'"

The result of the partnership has positioned the feasibility report in the express lane. The local sponsors established the ambitious objective to achieve project authorization in a Water Resources Development Act of 1998. Two thick reports have been released in 1997. "The Draft EIS (Environmental Impact Statement) and the Draft General Re-Evaluation Report (GRR) are out and are on time," said Hedin. "Basically, these reports define the scope of the flood control project – the type of protection and the scope and level of protection."

The final GRR, a technical report to Congress, and the EIS, are scheduled for completion in December 1998. The GRR identifies an economically feasible plan which provides sufficient protection from flooding while minimizing adverse environmental impacts. The EIS is mandated by the National Environmental Policy Act of 1978 (NEPA) and addresses significant issues relating to the natural and human

**Strategic Vision:  
Revolutionize Effectiveness**

**Construction bid  
information goes  
digital**

by Bryan Armbrust,  
Public Affairs specialist

The St. Paul District changed the way it conducts its contracting business this August when it first issued construction plans and specifications with an electronic process called Electronic Bid Sets (EBS). The Mississippi River Bank Stabilization Project (Stage No. 3) in Winona County, Minn. holds the distinction of being the district's first EBS solicitation.

Since printed versions will no longer be available, contractors may find that they have to alter their bidding process to bid on Corps projects. A personal computer and an internet browser are required in order to access EBS data.

"This is a whole new way of doing business," said Randy Fisher, chief of Contracting. "For many organizations it will be a simple transition, but for some it will be a bit of a revolution. We're geared up and ready to make the transition as smooth as

possible."

The district was part of a Corps pilot project which saved about \$175,000 in printing costs. "The \$175,000 that the pilot project saved equates to a stack of printer paper that weighs more than nine-tons and, if stacked, would be almost 50-feet taller than the Washington Monument," said Delores Aldinger, contracting specialist. "EBS allows contractors to view and download project solicitation documents directly from the internet," she said. "A compact disk can be requested at no charge. The

compact disk will contain all of the contract documents and royalty-free software that allows complete utilization of the documents."

Scheduled for complete implementation by January 2000, EBS is part of the nation's Tri-Service Solicitation Network (TSN). EBS streamlines the procurement process for customers. The objectives of the EBS initiative are to help bidders locate solicitations offered by the Corps, the Navy and the Air Force and to reduce the amount of paper associated with construction contract solicitations.



Photo by Peter Verstegen

**Left to right are Deborah Lawrence, Delores Aldinger and Debra Peterson of Contracting Division. They gathered to show the contrast between the amount of paper in a bid solicitation and the paper-saving compact disk (in Aldinger's hand).**

*Partnership, cont. from page 4*  
environment.

Federal, state and local agencies have budgeted for the project. The evaluation estimates a total project cost of about \$343 million. The federal share is almost \$172 million; the local and state share is about \$171 million.

"Based on the construction within each community, the cost

distribution between East Grand Forks and Grand Forks is \$54.7 million and \$116.1 million respectively," said Hedin. "To date, the State of Minnesota has committed \$32.2 million towards the East Grand Forks share. Grand Forks will be seeking a 50 percent cost share with the State of North Dakota."

"While there is much work

ahead before the project will be finished," said Mayor Pat Owens, "we are hopeful that things will go smoothly. As mayor, I really appreciate the expertise that the Corps has provided. This project is critical to the future of our community and we just simply could not have done it without Lisa and the rest of the team."

*Chaska, cont. from page 3*

But re-development of the block presented engineering challenges and required the Corps, the city and the contractor to work very closely on project details. Design and construction of project features on or near flood control levees required special attention to maintain the integrity of the levee. Detailed discussions involved proper fill placement, the design of building footings, utilities, walkways, interior drainage, levee relief wells and real estate easements.

One special challenge for the Corps and its prime contractor, Park Construction, was jacking two 12-foot by 12-foot concrete culverts under Minnesota State Highway 41 – a major Chaska thoroughfare. Jacking involves heavy machinery pushing the culverts through the earth under the highway. “It’s similar to a mining operation,” said Mark Koenig who was the district’s resident engineer on the project. “The contractor did this in the summer of ’97,” said Koenig. “Nothing of that size and shape had ever been done before. We had to do it without interrupting traffic.”

A traffic interruption meant closing down the highway, a major detour and upgrading alternate routes. What helped was that the same contractor was doing other related work for the city. The city, the Corps, the contractor and the Minnesota Department of Transportation worked closely to provide uninterrupted access on Highway 41. “The partnering worked exceptionally well,” said Koenig.

The partnership between the



St. Paul District file photo

**The district designed the above diversion to channel up to 6,000 cubic feet per second during a flood. The diversion was completed in Sept. 1991 as part of \$8.8 million Stage 2 Chaska Project.**

city and the Corps paid big dividends for Chaska and the public. The levee system became the base for a portal park – a grand welcome to the city over the Minnesota River. Sidewalks and stairs tied the development into Chaska’s extensive recreational trail system. “The last stage of construction incorporated the double-box culvert that provides flood protection, and a non-grade pedestrian crossing for safe highway crossing and a bike trail,” said Raasch. “The upper culvert box is part of the bike trail. We designed about 2.9 miles of paved recreation trails on top of the levee and around Courthouse Lake.” The contractor completed construction of the Minnesota River levees in June 1996 – just in time to avert flood damage.

Today, River Bend Park, a hotel, and portal pillars extend Chaska’s welcome and stand as a

testament to a successful partnership. Flood control features include 1.1 miles of upgraded levee and 1.5 miles of new levee with appropriate landward drainage facilities and a storm-water pumping station. Two mile-long creek bypass channels form the borders of Chaska Creek and East Creek. The project replaced nine bridges to accommodate flood control objectives.

“Flood control was the major objective, but also important was recreation and overall project aesthetics,” said Raasch. The official dedication for the project took place in River Bend Park on a hot day in late July 1998. It was the first project dedication for the newly installed St. Paul District Commander Col. Kenneth Kasprisin, who spoke to an estimated 75 civic officials and community leaders who attended the event.

Strategic Vision: *Serve the Army*

## Exhibit trailer visits Victorian Fair in Winona

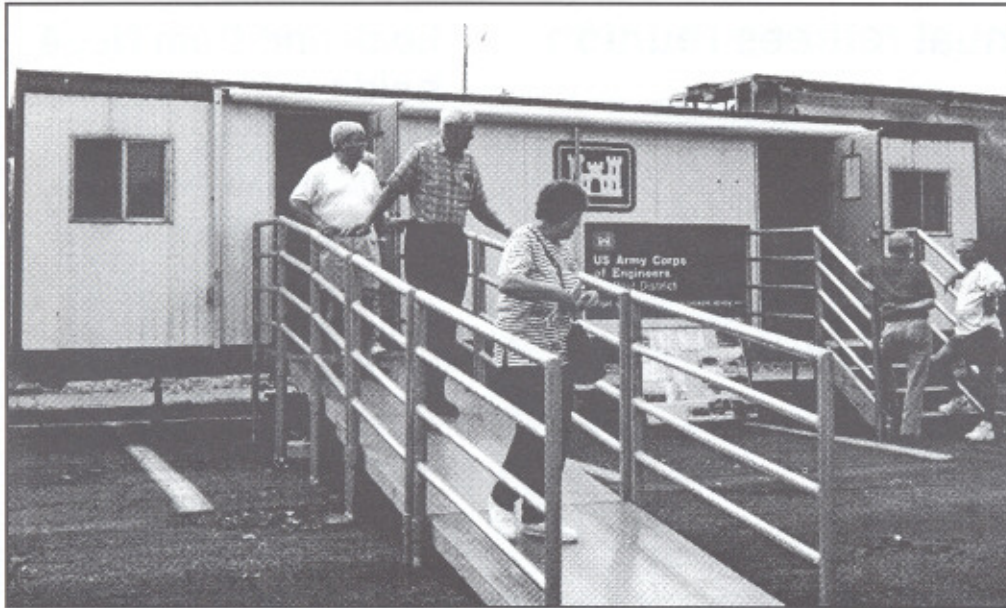


Photo by Colleen Callahan

The St. Paul District traveling exhibit visited the 23rd Annual Victorian Fair in Winona Sept. 26-27. More than 250 visitors viewed the displays inside. The exhibit and fair were at Levee Park which offered music, crafts, food, antique boats and other activities. The park is part of a flood control project the district completed and handed over to the city in 1985. The overall project cost was \$30.6 million. Through 1994, the entire project has prevented \$47.7 million in damages.

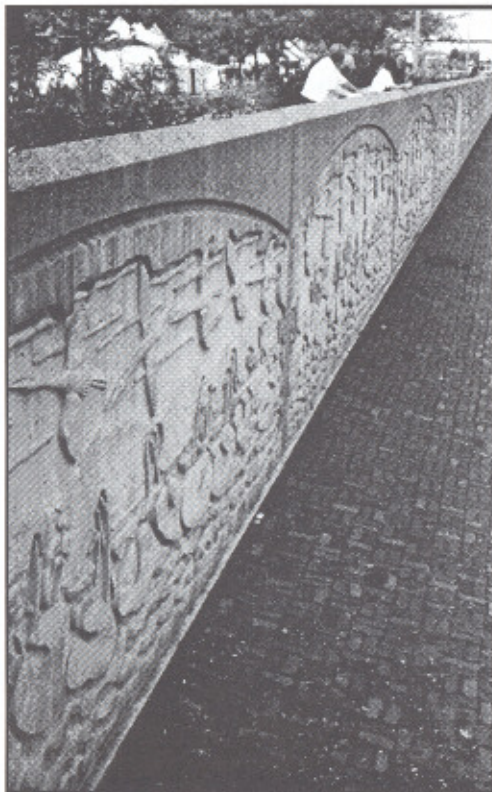


Photo by Colleen Callahan

The flood wall (above) is part of the Winona Flood Control Project.



Photo by Peter Verstegen

Among the visitors to the district's exhibit were (left to right), James Branch III, Krista Davis, Ebony Googins and Sabrina Norwood.

## Bits and Pieces

### 73 attend 23rd annual retirees reunion



Photo by Peter Verstegen

More than 70 people with a connection to St. Paul District attended the 23rd annual retirees' reunion in St. Paul on Sept. 10. Standing at the table to the left is Peter Fischer, retired chief of Engineering Division. Standing at right is Dave Haumersen, chief of Construction-Operations Division. Fisher is talking to Joan Quitter, seated at left. Haumersen is talking to Constance McGinley at center right. Ann Allen is seated to the right. At the reunion Harold Tagatz, retired assistant chief of Construction-Operations Division, was named to the district's Hall of Fame. (See page 2.)

### Lock and Dam No. 4 holds open house

Lock and Dam No. 4 in Alma, Wis., held an open house Oct. 3. The newly renovated control station, which received a Merit Award in March 1996 in the nationwide Chief of Engineers Design Competition, opened to the public with displays showing the original construction in the 1930s and subsequent renovations to the site. The most recent renovation consolidated lock and dam operations, maintenance, supply and administration into one building.

The open house offered original newspaper articles from the 1930s and photographs documenting the site's history. The district's exhibit trailer was there with historic displays, including reproductions of photos of the Mississippi River in late 1800s by the Corps' Henry P. Bosse. A district survey launch from Fountain City was also present.

The lock and dam was authorized by Congress in 1930, and completed in 1935. More than 16,000 commercial and recreational vessels lock through each year. More than 11 million tons of commodities lock through the site, while its dam helps to create the largest "pool" of water in the Upper Mississippi.



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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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