



US Army Corps  
of Engineers  
St. Paul District

# Crosscurrents

Vol. 7

No. 7

September 1984

## The Corps' Role in North Dakota

Approximately one-half of North Dakota is in the St. Paul District. It has two major river basins, the Souris River and the Red River of the North. These two basins are very unique, as they both flow to the north, unlike the Mississippi and Missouri rivers.

With these rivers flowing from one country to another, the district must be both a federal engineer and an international engineer. In doing so, the Corps assures that proper attention is given to involve the international interests and to resolve identified concerns.

The district engineer is a member of two boards formed by the U.S. and Canada to study and monitor waste related issues that concern the two countries. The International Souris Board of Control, monitors the allocation of water resources on the Souris River between Saskatchewan, Manitoba and North Dakota. The International Souris-Red Rivers Engineering Board investigates the engineering aspects that are related to international water resources, on the Souris, Red and the Rainy rivers. These two boards report their findings to the U.S.-Canada International Joint Commission for decision making.

Flooding is a significant problem in North Dakota, especially in the Rainy River basin. Spring snow melt, often aggravated by rains, can spread for miles across the flat landscape. In this basin, over two million acres of highly productive farmland and over 50 communities are subject to flooding.

Flooding is also a problem in the Souris River basin, where the 1969 flood required the evacuation of about 12,000 people and flooded 3,000 homes.

The past history of floods demonstrates that the Corps' role in flood control is vital to the people of North



**Flooding on the Red River of the North**

Photo by: Lyle Nicklay

Dakota. Some of the studies and projects designed to help these problems include the Sheyenne and Souris rivers, Lake Darling and Park River projects and the Red and Souris river studies.

Ensuring adequate water supplies is another problem for the people living in the Souris and Red River basins. Water availability is influenced by climatic conditions. Since 1900, both dry and wet periods have occurred, emphasizing the need for adequate water supplies and flood protection. If the present wet cycle continues, flood damage reduction measures will continue to be the focus of water managers. In addition to seasonal flooding along rivers, rising lake levels are another significant water resource problem for basin residents. (See Devils Lake article.)

If in the future, the popular "Greenhouse Effect," with its warmer, drier

weather would occur, the focus of this region will shift to water supply and drought control measures. During the past droughts, primary emphasis was on water conservation. Water storage projects include Lake Traverse on the Bois de Sioux River, Baldhill Dam on the Sheyenne River and Homme Dam on Park River. Little emphasis was put on recreation flood control, and fish and wildlife values during the drought periods.

With flooding occurring so frequently in North Dakota, the Corps must continually prepare itself to respond to any flooding needs. These preparations include stockpiling flood fight supplies and equipment, emergency levee reviews, district training and regional exercises. (See Flood Fight article.)

*(continued on page 4)*



# Commander's View

by Col. Ed Rapp  
District Engineer

This issue of Crosscurrents takes a look at some of the district's key activities in the Souris and Red River valleys. This part of the St. Paul District offers a number of challenges to all of us.

First of all, the geography of that region is sufficiently different from that of the lake and riverine regions of Minnesota and Wisconsin. Because of this difference, we have to shift gears a little when we move from a Minnesota or Wisconsin project to one in North Dakota. Another feature of that region which adds to the challenge is the direction the water flows. All of the rivers in the St. Paul District's portion of North Dakota eventually drain to the north, rather than to the south.

With the Souris and Red rivers flowing north into Canada, the district has a significant international role. The quantity and quality of water flowing in

these rivers is vital to the eastern prairie provinces of Canada.

The real challenge for us in the St. Paul District is rooted in the state's need for water resource development projects. Some of the worst floods in the district have occurred over the years along the Red and Souris rivers. Some of the richest farmland and farmsteads in the nation and a number of urban areas in North Dakota do not have an adequate level of flood protection.

While state officials recognize their vulnerability to the ravages of floods, they also recognize their dependence on water and the likelihood that Mother Nature could abruptly change sometime in the future, thrusting the area into another deep and persistent drought. North Dakota's goal, and thus our goal, is to prepare for every eventuality. While state and local interests

work with us on flood control projects along the Souris, Sheyenne and Red rivers, state officials also continue to move the Garrison Diversion project forward. The diversion project would help drought-proof the northeast part of the state. Many of our projects can also help drought-proof this region. The Sheyenne River project, Baldhill Dam, is a prime example.

The challenge for us, then, is to be "complete" federal water engineers, ready to assist with the immediate problems of flooding while considering the possibility of a drought in the longer term. North Dakota and northwestern Minnesota can be ravaged by either extreme of Mother Nature's cycles. The valleys of this region provide unique engineering challenges. As you read the articles in this issue, I hope that you will understand how we intend to meet them.

## Toastmasters

by John Blackstone

Diversity is one of the things which makes the Olympics interesting. This is also one of the secrets of Toastmasters. A diverse group of people gathering together to learn from each other. Come join Toastmasters every Thursday noon in the sixth floor PEDC rooms, and be a part of this diverse group. If you have any questions, please contact Joel Face at extension 5940.

## Letter of Appreciation

We came through Lock & Dam #3 on August 4, and it was so helpful to have someone above to hand the ropes to pleasure craft. There are so many pleasure boats on the weekends going through the lock and dams that it can be difficult to grab on to the ropes. Thanks again for having people to help us lock through. Many times there is no one to help because they are "short"-handed.

Gene & Tena Richardson  
Waterloo, Iowa



The District's mobile exhibit  
Photo by: Lyle Nicklay

## Who's Who



Do you recognize these individuals who worked in the district's Emergency Operations Center during the 1969 flood? Answers on page 8.

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 expressed are not necessarily those of the Corps of Engineers or the Department of the Army. Deadline for submitting articles is the 10th of the month preceding publication.

Address: Editor, Crosscurrents, U.S. Army Corps of Engineers, 1135 U.S. Post Office & Custom House, St. Paul, MN 55101.

District Engineer . . . . Col. Edward Rapp  
Chief, Public Affairs . . . Kennon Gardner  
Editor . . . . . Pamela McFaden



## Centennial Celebrated



**47 Years of Dam Tending**

*Photo by: Lyle Nicklay*

Three dam tenders with a total of 47 years of experience at Pokegama Dam had a chance to reminisce during the Headwaters Centennial celebration in July. Carl Anderson (left) worked at Poke-

gama from 1937 until 1958 when he was replaced by Henry Sharp (center). The current "dam tender" at Pokegama is Park Manager Clarence Bernardson, who took over from Henry in 1973.

Sunny weather greeted campers, local residents, members of the Leech Lake Indian Reservation, retirees and staff from the U.S. Army Corps of Engineers, to celebrate the Headwaters Centennials. The 100-year birthday of Winnibigoshish, Leech and Pokegama dams was celebrated on July 21-22.



**Wes and Josephine Walters tour the District's mobile exhibit**

*Photo by: Rosemarie Braatz*

A celebration program with speakers was held at each site. The speakers were Jim Ruyak, Gen Hilmes, Col. Rapp, Hartley White, Chairperson of the Leech Lake Indian Reservation, and John Craig, Mayor of Grand Rapids. The speeches recalled the history of each dam and the importance of maintaining them for future use.

Hartley White, spoke about the problems the Indians had with the Corps during the early years. Mr. White then went on to say, "many of these problems have been resolved and the Ojibway Indians look forward to working with the Corps for another 100-years."

There were many local activities that took place, for instance a powwow was held in celebration of the dams, Bill Bobolink, from the Leech Lake Indian Reservation, officiated a pipe ceremony, and a pig roast was held.

Permanent exhibits were placed at each site, displaying historical photos and the history of the dam. Also, a mobile exhibit, from the St. Paul District, traveled to each site. The mobile exhibit depicts the development of the headwaters, and displays the major functions of the Corps of Engineers.

The celebrations gave retirees a chance to reminisce about the past when they were dam tenders. Many local people remembered the Headwaters area in earlier days. Wes Walters, a retiree, stated, "In my 36 years with the Corps, I carried out many duties, which are no longer included in the Corps' mission today, such as inspection of bridges and supervision of bridge toll charges."

## Flood Fighting in North Dakota

Training is an essential element in keeping district personnel ready to respond during a flood emergency. To provide this training, emergency management has scheduled courses in flood fight techniques, organization, contracting and communications. Approximately 200 employees will be trained at the sessions in North Dakota.

A flood fight exercise is scheduled for the Red River basin, and area engineers and sub-area engineers for the Souris and Red River basins will be invited to attend and participate. Various "hands on" demonstrations will be conducted to give a feel for flood fighting. These exercises bring state, county, and local officials together with district flood fighters to learn flood fight techniques and "to get to know one another."

Jim Ruyak and William Spychalla, area engineers for the Souris and Red rivers, conduct biennial inspections of emergency levees that were constructed by the Corps during past emergency operations. Consequently, the inspections are important to help local communities assess the strengths and weaknesses of the temporary levees. The district is proposing to conduct a Risk Analysis Program for temporary levees and other levees. If funded, the program will give a better idea of the risks associated with each levee, i.e., breaching, sloughing.



**Excess Is the First Source of Supply  
Call Paul French, 7611**



## North Dakota

(continued from page 1)

Flood control projects also provide for outdoor recreation and other water resources. The Corps has made available acres of land and waters for the preservation and enhancement of fish and wildlife resources, and public recreation. For example, Lake Ashtabula created by Baldhill Dam has eight Corps recreation areas. In addition, the U.S. Fish and Wildlife Service uses the land below the dam for fish hatchery ponds.

The Corps also is involved in urban studies along the river. An urban study is being conducted by the St. Paul District for Grand Forks and Fargo, North Dakota. These studies will address long term solutions to the problems of floodplain management, wastewater treatment and water supply.



Tom Raster became the four-millionth blood donor, on August 9, in St. Paul.

Photo by: Pamela McFaden

## The U.S. Meets With Netherlands

River Resource Coordinator, Dan Krumholz, will be representing the St. Paul District on September 12, 1984, at the Third U.S.-Netherlands Meeting on Dredging and Related Technology, in Charleston, South Carolina. Dan will be presenting a paper entitled "Solving Channel Maintenance Problems at Reads Landing, Minn."

The United States and Norwegian delegates meet yearly to exchange technical information, and the different approaches and concepts used in dredging.

Dan also will be attending the Dredging '84 Specialty Conference on Dredging and Dredge Material Disposal, that will be held in Florida during the month of November.

## Hispanic American Heritage Week

by Phil Campbell, EEO Assistant

Through a presidential order, the week of September 10-16 has been designated as Hispanic Heritage Week for observance by all branches of the government.

The teamwork among EEO, personnel, and affirmative action-sensitive supervisors, has resulted in the St. Paul District being proud of its achievements through the effective use of the Hispanic Employment Program (H.E.P.).

In order to increase the number of Hispanics in the workforce, the H.E.P. manager, EEO, and personnel recruitment and placement branch have expanded recruitment efforts. Students from a predominantly Hispanic high school, were invited to spend a day at the district office and tour Lock and Dam No. 1. As a result of this effort, several Hispanic students were enrolled in the Stay-In-School (SIS) program. The recruitment efforts, of the St. Paul District, have developed contacts at local colleges, which have provided applicants for SIS, Co-op and Jr. Fellowship positions.

Over the years, the H.E.P. used a number of methods to publicize the program: speakers have mounted the podium; movies have been shown; displays have been set up; dancers, singers and instrumentalists have performed; and news articles have been published. All of these, in various combinations, have been effective and meaningful observances.

This year Corps employees, with Hispanic heritage, were invited to help plan an appropriate program. A DF outlining events and displays will be circulated in advance of the functions.

The H.E.P. sponsored events, have emphasized the contribution and impact of the Hispanic-American on the cultural, economic and physical growth of America. Not only have the past and present accomplishments of this culture group been recognized, but also, the potential energies this group has for the district to draw and build upon. The continuing increase in the district Hispanic-American employees is testament of its commitment to the Hispanic Employment Program.

## Nutrition Week Informative

"Eat Well, Stay Well" was one of several seminars, sponsored by the Feds for Fitness during Nutrition Week, July 16-20. Mary Peick, a registered nutritionist with the St. Paul Ramsey Country Nutrition Program, explained the following dietary guidelines, recommended by the U.S. Department of Agriculture and the U.S. Department of Human Services.

- Eat a variety of food. In order to stay healthy, an average person should consume 40 different nutrients a day. By doing so, the majority of people will not need to take vitamin or mineral supplements.

- Maintain ideal weight. The weight of most people, should be the same as it was when they were 20 or 25 years

(continued on page 8)

## Devils Lake, North Dakota

From 1940 to the present, the water level of Devils Lake has risen from an elevation of 1401 feet to 1428. In response to the rising water, the St. Paul District has designed a flood control project to protect the city.

The project plan consists of levee and dam structures across the head of Creel Bay and interior drainage facilities. The project would protect the city of Devils Lake up to a surface level of 1440 feet. However, property around the lake outside of the city, including residences, highways, recreational fa-

cilities, and agricultural lands would receive no protection and would still be subject to flooding, if the lake level continues to rise.

The Corps is now working on a new study of the entire Devils Lake basin to develop long-term solutions to the problem. This study is anticipated to last about three years. Data collection, alternative evaluation, impact assessment, and public and agency coordination will all be accomplished during this period.



## Technical Resource Assistance

Information is a key element in all decision-making. Decisions concerning the Red River of the North are no exception. That is why the district is working to create a Technical Resource Assistance program for the Red River.

According to Chuck Crist, chief of floodplain management and small projects branch, establishment of a Technical Resource program is a way for the Corps to provide technical service and planning assistance to local, state, and federal agencies and groups concerned with managing water resources along the Red River. "If this concept is adopted, we hope that it will contribute to solving flooding and related problems in the Red River valley by making planning and engineering information more readily available to those local interests making water resource decisions. We also see the assistance program as a way of streamlining the decision-making process by eliminating time-consuming and costly duplications of efforts by

the various groups working in that region," Chuck said.

The Technical Resource Assistance program concept was originally proposed by local interests in 1980. The idea was to make all of the Corps' planning and engineering experience and information on the Red River valley available to local governments and other interests developing water projects throughout the basin. "We would basically create a data base from information we already have on the Red River valley. This information would include hydrology data, floodplain information, economic studies and hydraulic/hydrologic models.

When operational, local agencies would be able to access the Corps' files and expertise for information on projects they are considering. Hopefully, this should improve local planning efforts along the valley," Chuck said.

The Technical Resource Assistance program has been approved as a concept by NCD and OCE, but, funding has not yet been approved.

## Security Notice

Policy for Monitoring and Recording Conversations

### You Cannot:

—Listen to or record a telephone conversation by means of extensions or speaker phones without the prior consent of all parties to the conversation.

—Listen to and record either telephone or face-to-face conversations without the prior consent of all parties to the conversation.

### You Must:

—Prior to the conversation, inform the caller that the conversation is being recorded, if you receive the call.

—Prior to the conversation, inform the person you call that the conversation is being monitored by another person on an extension phone and/or that the conversation is being overheard on an extension speaker, and/or that the conversation is being recorded in any manner whatsoever, if you make the call.

### Violations Procedures:

—Persons suspecting violations of the above will report circumstances to the Security Office (Ext. 7606 or 7608).

—Confirmed violations must be reported to DA as a serious incident report.

## North Dakota Projects/Studies

Studies	Project Cost*
Red River of the North, Minn. & North Dakota (Farmstead Ring Levees included)	\$8,770,000
Souris River	1,190,000
Devils Lake	295,000
Projects Under Construction	Project Cost*
Enderlin - Maple River (Sec. 205)	\$4,000,000
Grafton - Park River	16,300,000
Lake Darling - Souris River	65,300,000
Sheyenne River	26,200,000
Devils Lake (Sec. 205)	1,900,000
Completed Projects	Project Cost*
Lake Astabula - Baldhill Dam - Sheyenne River	\$3,325,638
Homme Dam - Park River	1,396,097
Minot - Souris River	21,479,500

\*These are Federal costs, as of Oct. 1984.  
They do not include local costs.

## Hazardous Wastes: A Challenge for All

"Hazardous Wastes" The term brings images of Love Canal, Three Mile Island and New Brighton. These locations are clearly associated with the dilemma of hazardous waste disposal.

But the problem may be closer than you think, your home may even contain hazardous wastes. The simple act of draining a can of paint thinner on your lawn pollutes your environment.

The Minnesota Wastes Management Board recently formed a task force of environmental and public health agencies, county and city governments and citizen groups to look at household hazardous wastes. The task force focuses on education and identification of household hazardous wastes.

Task force members will look at ways to develop product disposal recommendations, collection systems and to increase public awareness of potential damage to the environment.

(continued on page 8)



# Cost Sharing Means Partnership Financing

by Chuck Workman, Chief, Social Economics-Recreation Branch

**Editor's Note:** For many years, the cost sharing formula used for water resource development projects, had the great majority of the costs being paid by the federal government. Local sponsors were only required to provide about 10 percent of the cost of the project. And the local share was often in the form of land, easements and right of ways rather than actual funding.

One of the current administration's policies is that people or groups who benefit from federal programs should pay a larger share in the cost of those programs. For the Corps, this policy resulted in a proposal to increase the local sponsor's share of water resource development projects to approximately 30 percent of the total cost of the project. To date, Congress and the administration have not come to an agreement on any proposal to change the cost sharing formula.

This article examines cost sharing and the need for the district to change its approach under the proposed cost sharing program.

The method of financing Corps projects remains uncertain pending completion of action by Congress and the President. However, we know that traditional cost sharing *will* be replaced by a new policy still evolving in Washington. This was made clear recently when both House and Senate committees acted on bills which included increases in cost sharing requirements for non-federal interests. These Congressional actions recognize that federal dollars are not now available and will not likely be available in the future in quantities necessary to rebuild the nation's infrastructures and support water project needs. As this federal-versus-user financing question nears resolution, we must be prepared for water resource project development in a new financial environment.

Increased cost sharing by non-federal sponsors brings proportionately greater sponsor involvement in study and project development. Sharing study and project costs virtually assures a new partnership relationship between the district and project sponsors. As partners, sponsors will of necessity "share" control in project for-

mulation, plan selection, and investment programming. How their dollar share is spent is a decision few can be expected to dutifully turn over to the Corps. Above all, we must be sure that we are an efficient engineer organization providing good value for their dollar as well as quality services. Therefore, we must remain flexible in our negotiations at all phases of involvement and clearly address all of the partnership sponsor's concerns. Veils of bureaucracy and technical intricacy must be replaced by clear explanation of our process and understanding on the part of the non-federal sponsor.

In this new partnership, sponsors have even greater need for the Corps to understand their local problems and realities. If they are to act as strong project advocates and provide financial support to studies and project designs, we should know and provide what they need to make the best supporting case. Recovery of their project costs and financing a significantly increased share of a water project will put greater legal and political burdens on a sponsor than in the past. Considering this, we need to provide timely and relevant information to help local sponsors understand and explain the

project and its alternatives, benefits and impacts to their local people. In this manner, local support for projects can be developed, financial sources nurtured, and federal investment dollars maximized.

Maj. Gen. John F. Wall, director of civil works at OCE, said recently to a Corps seminar on project financing, "we all see cost sharing," and he asked that we in the districts find ways to incorporate innovative financing into our process. "We must be leaders, not followers," he said. It was made clear that, while we would not do the financial analysis for local sponsors, we must address the affordability issue from their perspective.

During the coming months, managers and others in the district working on water resource projects will be provided information on the new cost sharing formulas and policies as they are developed.

Financing water projects is no longer the exclusive problem of Programming Development and the sponsor. Project financing must become an integral consideration of everyone involved in the civil works process from initial studies through the construction and project operation phases.

The chart shown below, illustrates the gains within the district yearly.

## Hispanic Employment Report

21 June 1984

Fiscal Year	% of Hispanics on Board - COE	% of Hispanics in COE Workforce
1975	2	.3
1976	8	1.2
1977	6	.7
1978	8	.8
1979	5	.5
1980	7	.8
1981	15	1.8
1982	16	1.9
1983	18	2.0

Based on the 1970 census, the number of Hispanics as a percentage of the Twin Cities area was .8 percent; the 1980 estimate was .2 percent.



# The People Behind the Corps People

"I have always been interested in purchasing, I love the type of work I do and my job. I have always had good people to work with." This statement was made by Richard Lindberg, chief of the purchasing branch.

Dick started with the Corps in 1960, as a purchasing agent, and in 1969 became chief of the purchasing branch. "After I joined the Navy in 1942, I became a purchasing agent for the forest service and then transferred to GSA in Denver, also as a purchasing agent."

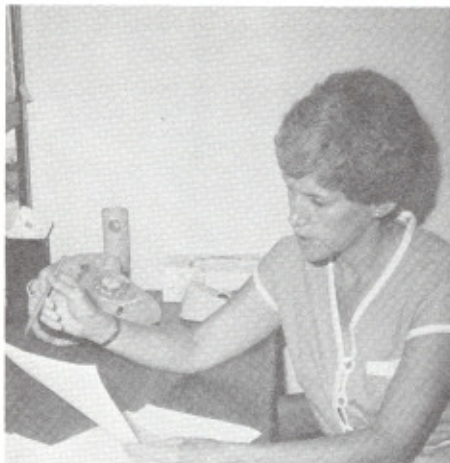
"One of the real challenges I have faced, was the flood of 1965 and 1969. The state and local agencies didn't have equipment to fight the flood, so that left the Corps responsible for gathering all of the equipment. With the floods being of such magnitude, we had to fill quite a few emergency orders. Now all federal and local agencies are better prepared to handle floods."

In 1982, Dick was selected as the EEO Supervisor of the Year.

When asked if he had any advice to the younger employees of the government, Dick replied, "In order to climb, you have to be mobile. You have to be

willing to travel, and try for jobs, even if you have to move."

After a hard day on the job, Dick enjoys going home to work in his garden, or going out on the lake to catch some fish.



**Suzanne Gaines**

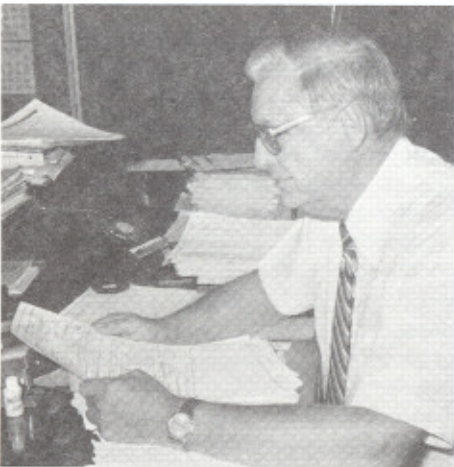
*Photo by: Pam McFaden*

"Being a sociologist, I must be involved with the public at all times. If there are negative reactions to a project, I find a more positive solution to it." This statement is from Suzanne Gaines, a sociologist for the Corps. Suzanne has been employed by the St. Paul District for six years.

Suzanne analyzes each project and how it relates to the public. To do this surveys must be conducted and data collected. When all this is completed, Suzanne is then able to evaluate the project to see if it best suits the needs of the public.

"When my research is completed and it has made a difference in a project, it is very rewarding," says Suzanne.

Suzanne's energies are not only noticed at work, but she is tutoring English to an Iranian refugee family. And when not tutoring, she is busy working in her garden.



**Dick Lindberg**

*Photo by: Pam McFaden*

**Newcomers:** The St. Paul District welcomes the following permanent employees: Jill Olson, secretary (PD-ES); Betty Krueger, clerk-typist (ED-M); Richard Gorr, computer programmer analyst (DO-P); and Jennie Gorr, personnel clerk-typist (EP-R).

**Conversions:** Congratulations to the temporary employees who were converted to career conditional appointments: Steve Sing, surveying technician (CO).

**Departures:** Farewell and good luck to the following employees who left the St. Paul District: John Elliott, laborer (L/D #9); Sherry Gudgeon, clerk-typist (L/D #8); Don Moore, accounting technician (DC-FR); Jeannie Wagner, wildlife biologist (PD-ER); and Larry Larrivy, industrial property management officer (DC-FP).

**Promotions/position changes:** Congratulations to the following employees who have either received a promotion or position change or both: June 1984: Ann Allen, system accountant (DC-F); LeRoy Campbell, sewage disposal plant operator (CO/Leech); Terrance Jorgenson, geologist (ED-GHH); Marc Krumholz, dredging coordinator/environmentalist (CO-M); Terry Ladd, sewage disposal plant operator helper (CO/Sandy); Clinton Skoog, sewage disposal plant operator (CO/Gull); Jean Turcotte, computer operator (DO-P); Kenneth Wessin, cook (Dredge Thompson); and Louise Zawlocki, economist (PD-ES).

**Memoriam:** Albert J. Jahnke passed away August 12, 1984 at the age of 75. Albert was employed by the St. Paul District from 1938 to 1969 in drafting.

## Silver Medalist

Susan Rapp, daughter of Col. Rapp, came from behind to finish second place in the women's 200-meter breast-stroke competition at the 1984 Olympics in Los Angeles. In winning the silver medal, Susan also set a new American record for the 200-meter breast-stroke with a time of 2 minutes, and 31.15 seconds. The old record of 2:31.54 was also set by Susan during the Olympics trials in June. Later in the week, Susan finished seventh in the 100-meter breast-stroke.

# SCHOOL'S OPEN...

Drive carefully!!





## Miter Gate Work Completed

by Rosemarie Braatz

The Derrickbarge HERCULES completed the reinstallation of the miter gates, that were removed in June, from Locks No. 9 and 10. Both sets of gates were pulled to allow the HERCULES crew to do the necessary repair work and moving in the same operation.

A poiree dam, which is a temporary dam, was installed in the auxiliary chamber at Lock No. 9, and spare gates were used in the main chamber of Lock No. 10.

The gates were moved back to Lock and Dam No. 7, where new steel was welded to replace eroded and pitted parts. The gates were then moved to Lock and Dam No. 8 where they were sand blasted and painted.

The refurbished upper main miter gates were reinstalled by mid-August, and the auxiliary gates were installed at the end of August.



A gudgeon pin removed from the miter gate of Lock and Dam No. 10, shows excessive scouring.

Photo by: Ken Tschida

## Hazardous Waste

(continued from page 5)

The St. Paul District is also very concerned with the proper management of hazardous materials. As a federal agency, the district is required to accomplish its work in an environmentally sound manner. Therefore, the district is responsible for the clean up of any waste spills on or near Corps lands. As part of the responsibility, the Hazardous Materials and Toxic Substances Management Plan was developed by the emergency management division. The plan tells how to respond to pollution spills and provides a guide to proper management of hazardous materials.

Though the plan can identify ways to clean up materials, it is the responsibility of the employee to recognize when these hazardous materials have been spilled. Only by being aware of the damages can harm be prevented.

The Minnesota Waste Management Board, in their July 1984 publication of FORESITE, provided examples and suggestions on controlling hazardous wastes. Use of alternatives to a partic-

ular hazardous substance, i.e. substituting baking soda and ammonia for commercial oven cleaners or spraying soapy water on bug-infested plants instead of insecticides were two recommendations. Handling disposal waste was also discussed. For example, used motor oil can be recycled. Any gas station or auto-supply store can accept used oil or tell you where recycling is available.

Further information on the district plan and activities of the Minnesota Waste Management Board is available in emergency management division, extension 7511.

---

### Who's Who Answers . . .

From left to right: Al Rosenberg, Jerry O'Neill, Roman Greene, George Darling, Jan (Thompson) Ferring, Robert Fletcher, Jim Kursu, and Diane Shanley.

---

## NOTICE

The Public Affairs Office needs your help to locate a few copies of the March Crosscurrents, by September 30. If you have a copy of this issue, please contact Pam at 725-7505. Your help is appreciated in this matter.

## Nutrition

(continued from page 4)

old. When dieting, do so gradually — one to two pounds a week to avoid serious health problems.

- Avoid too much saturated fats and cholesterol. Individuals who follow diets high in saturated fats and cholesterol, such as eggs, organ meats, butter, cream shortening and coconut oil, tend to have a greater chance of a heart attack. Foods that are low in saturated fats and cholesterol are lean meats, fish, and poultry, should be baked, broiled or boiled.

- Eat foods with adequate starch and fiber. The majority of human energy comes from carbohydrates and fats that are consumed. If fat intake is limited, increase the amount of calories from carbohydrates, to supply the body with needed energy.

- Avoid too much sugar. The major health hazard from eating too much sugar is tooth decay. Estimates indicate that Americans use on the average of more than 130 pounds of sugar and sweeteners a year.

- Avoid too much sodium. Sodium and chloride are both essential elements and both are contained in table salt. However, people with high blood pressure should reduce salt intake. The average recommended daily allowance for salt intake is one teaspoon a day.

- If you drink alcohol, do so in moderation. Alcohol, generally speaking, is high in calories and low in nutrition.