



US Army Corps
of Engineers
St. Paul District

Crosscurrents

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Issue of Lake Superior barrels resurfaces



Photo by Ken Gardner

Bob Dempsey, Defense Environmental Restoration coordinator (right), participated in a delegation that went to Duluth, Minn., in March at the request of Congressmen Obey and Oberstar to review the results of the search for hundreds of defense-related barrels that the Army dumped on the bottom of Lake Superior in the late 1950s and early 60s. District

Commander Col. James Scott, Dempsey, and Ken Gardner, chief of Public Affairs, and officials from the Minnesota Pollution Control Agency (PCA) met with members of the city councils, the media and public from Duluth and Superior, Wis. City officials have requested a follow-up meeting with the PCA and district officials for April 13.

The Awards Picnic: Coming soon to a park near you

by Al Koniar, hydraulic engineer

This year's Engineers' Awards Ceremony and Picnic will be at the Lake Elmo Park Reserve on Thursday, June 22, 1995. The preserve has improved since the Corps had its last picnic there several years ago.

Lake Elmo Park Reserve is approximately 13 miles east of the St. Paul District office.

The park offers 80 modern drive-in campsites, also group camping and primitive camping. Facilities

include electricity at the modern campsite, toilets, drinking water, firewood, a playground, and a trailer/recreational vehicle dump station. A two-acre swimming facility with sand beach and water-filtration system offers a unique swimming experience.

There is a building with food, changing rooms and bathroom near the beach.

Lake Elmo has a boat launch and a 104-foot fishing pier. The lake has a depth of 130 feet, and supports large-mouth bass, bluegill, crappies,

northern pike, and walleye. The other lake, Eagle Point Lake, is shallow and does not support any fish.

There is a play area which includes a 24-foot tube slide. A paved bikeway trail three-miles long provides access to the entire developed portion of the park. There are 20 miles of hiking trails throughout the park in case one would like to take a short stroll.

There will be no winter sports unless.....

Chaska Project baffles us

by Tom Heyerman, value engineering officer

At first glance, the Chaska Stage 3 diversion channel seems like a simple straight trapezoidal channel. Upon closer review, you discover baffling problems, like:

- What to do with 100,000 cubic yards of lime (and no BIG coconut);
- Boring holes gushing water 14 feet into the air (certainly not the fountain of youth);
- Alkaline fen (that's no fun);
- Lake Grace Dam (anything but graceful).

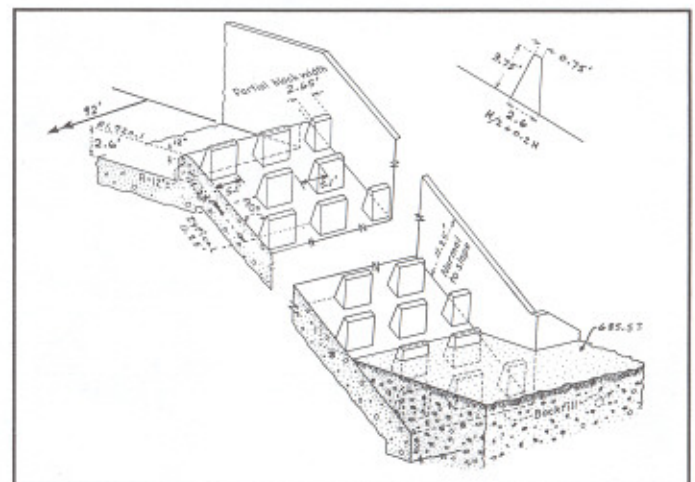
The project designers routinely solve these problems one-by-one to prepare the project for construction. Along the way, some projects (those that are high cost, complex, etc.) are selected for a special study, a value engineering (VE) study. And when the study is exceptional, as was Chaska Stage 3, it is submitted for inclusion in a national VE success booklet.

VE is an organized effort, using functional analysis, to reduce costs and increase quality while maintaining the basic function of the project. VE study teams normally consist of five members from different disciplines.

Chaska State 3 design memorandum was selected for such a study.

The VE recommendations reduced the project cost by about 20 percent, or \$1.5 million.

The study recommended changing a 1 vertical on 10 horizontal articulated concrete channel slope to a baffled



St. Paul District value engineering graphic

The diagram shows the dimensions of a baffled chute and how baffles function to dissipate the energy of water as it flows down the chute.

chute spillway. Baffled chute spillways are used to lower water from one level to another and are used when a conventional stilling basin is not desirable. Baffle blocks partially obstruct the flow, dissipating energy as the water flows down the chute. This reduces flow velocities entering downstream.

For their achievement, the VE team received On-the-Spot Awards. Members from Engineering and Planning Division include Craig Evans, Phil Sauser, Doug Crum, Mike Leshner, and from Construction-Operations, Joel Rogers. Those who provided special input include Vicky Fetterly, Sandy Helseth and Pat Foley.

Civil Servants of the Year strive for the positive



Lupe Santos

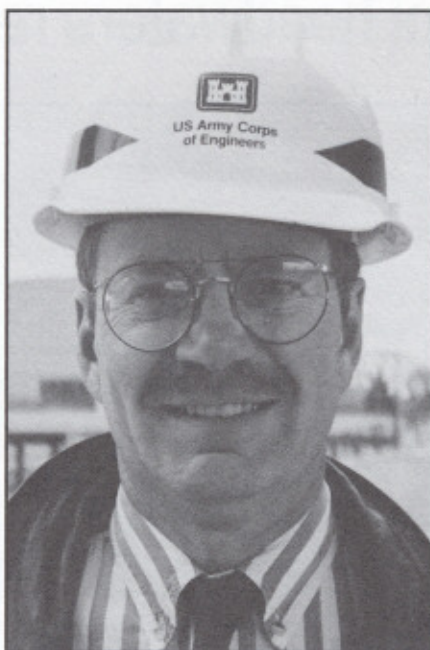
Lupe Santos has gone from the Stay-in-School Program to Civil Servant of the Year. Santos, a personnel assistant in Human Resources, started with the district in 1981 in the Stay-in-School Program. At the time, she had graduated from Humboldt High School in St. Paul and was attending the College of St. Catherine.

Santos earned recognition for her support in both administrative and human needs.

"Lupe is always ready to help when there is a need of any type," said Linda Krueger, chief of Employee Relations and Training.

"She had worked in the Training Section of Human Resources for over 14 years," said Mary Street, personnel assistant. "Lupe is always very helpful and knowledgeable about classes that are available to employees."

Santos, cont. on page 7



Leon Mucha

A Corps of Engineers hard hat rests within easy reach on Leon Mucha's desk in the Rochester office. While some imagine putting themselves in another's shoes, Mucha puts himself in another's hat.

For Mucha, the resident engineer on the Rochester Project, and Civil Servant of the Year, it is as much his "thinking hat" as a symbol for safety.

Mucha grew up on a farm in North Dakota, served in Vietnam, graduated with an engineering degree from North Dakota State University, and earned a graduate degree in construction management from Stanford University.

Between 1987 and 1995, nine prime contractors worked through the middle of a congested urban area on ten construction contracts costing roughly \$55 million. As resident engineer, Mucha worked with five

Mucha, cont. on page 6



Lisa Hedin

For Lisa Hedin, it was a bottle of sludge.

"In seventh or eighth grade, a science teacher gave us each a bottle of sludge," said Hedin, a civil engineer in Management and Evaluation Branch. "Our assignment was to determine what was in there. The night before the assignment was due, some friends and I were in the kitchen. We had some fun trying to determine the sludge's boiling point."

The assignment hinted at qualities that would make her a Civil Servant of the Year—devotion to the environment, sense of humor, initiative, and team leadership.

"I have always wanted to be in the environmental field," she said. "I interviewed with the Corps because I was interested in water resources. I loved being outside. I had heard that the Corps was a good place to work."

Hedin, cont. on page 6

Dams and Damages: The Ojibway, the United States and the Mississippi headwaters reservoirs

The following is condensed from an original article by Jane Carroll that appeared in the Spring 1990 issue of Minnesota History. Dave Berwick, Management and Evaluation Branch, also contributed to this article.

Ten years ago this September, the United States government reached a \$3.4 million out-of-court settlement with three Ojibway bands for tribal land taken from them a century earlier. The land had been confiscated or overflowed as part of a federal project to construct and maintain a system of dams and reservoirs at the major lakes that comprised the headwaters of the Mississippi River.

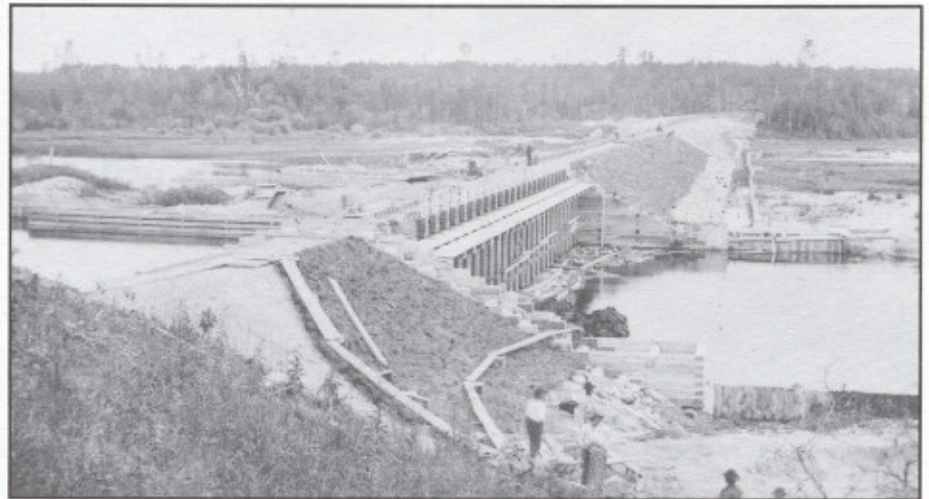
Lost land and damages

The 1985 settlement pertained to land lost and damages sustained by the three Ojibway bands living in the vicinity of Lake Winnibigoshish, Leech Lake and Lake Pokegama.

Although Congress had appropriated \$150,000 in 1890 as compensation for damages resulting from the project, the Ojibway had long contended that the award was grossly inadequate and unjust.

The Indians' persistent demand for fair compensation led them to challenge the government in court, which prompted the 1985 settlement.

This controversy between the Ojibway of the Mississippi headwaters region and the federal government began in 1880, when Congress approved a plan to construct an experimental dam and reservoir at Lake Winnibigoshish.



St. Paul District file photo

The original Winnibigoshish Dam was made from timber. This photo shows construction of the dam in 1884. Congress authorized construction in 1880.

Since 1850, the Army Corps of Engineers, as well as private commercial interests, had been investigating the feasibility of damming the headwaters in order to regulate the flow of the Mississippi River downstream. The millers and other users of water power in Minneapolis wanted a constant flow over St. Anthony Falls during low-water periods.

Municipal officials and business interests wanted higher water levels for reliable steamboat navigation and to restore competition in the region's transportation industry, which was monopolized by the railroads.

So, Congress instructed the Corps of Engineers to investigate whether the public would benefit from the project that would improve navigation below St. Paul.

The case for navigation

Because few boats plied the Mississippi above St. Anthony Falls, the Corps had to make the case that navigation below St. Paul could be improved by the release of water from reservoirs in northern Minnesota.

For this reason, the engineers recommended and Congress authorized the construction of an experimental dam at the outlet of Lake Winnibigoshish in 1880. Construction began the following year and was completed in 1884. Subsequent Congressional action in the late 1800s authorized the Corps to build dams at Leech Lake, Lake Pokegama, Pine River (Cross Lake) and Sandy and Gull lakes.

The Ojibways' livelihood and culture were intimately bound to the area. The reservoirs had the impact

of permanently altering the landscape around the headwaters and destroying a significant portion of the bands' means of subsistence.

Ojibway bands had settlements dating back to the early 18th century at the headwaters lakes. In addition, a series of treaties beginning in 1855 provided for Native American settlements in the headwaters lakes at Winnibigoshish, Leech, Pokegama, Sandy and Gull lakes.

From the start, the Pillager band at Leech Lake was most critical of federal actions. They argued that the government did not understand the cultural significance of the headwaters lakes to the Ojibway, and that Congress provided inadequate compensation to the Ojibway.

The issues of inadequate compensation and resettlement continued to test the patience of the tribes and the government from that point forward.

Beginning in 1881, the first of four commissions tried to resolve the issue of financial compensation. But after three commissions in five years, the damages controversy remained unsettled. A fourth commission, appointed in 1889, estimated that the Ojibway had lost over 46,000 acres to water. At Winnibigoshish, the Ojibway reported that cemeteries had been overflowed and graves washed away. The water had also ruined gardens and destroyed villages. Although Congress appropriated \$150,000, the measure failed to address the question of lost land. Federal actions continued to irritate the bands.

Bitterness explodes

The bands' long-smoldering resentment and bitterness finally exploded in the Sugar Point uprising in 1898.

Although a seemingly trivial series of events precipitated the battle, this brief but violent action of the Pillager band represented the degree to which the headwaters Ojibway had been tormented by federal policy. The underlying causes of the battle were many, but they resulted from unjust and inept administrative policies and practices.

However, the Ojibway should not be viewed as helpless victims of government actions. The reservoirs controversy demonstrates that the headwaters bands used the issue to their own advantage. They controlled the agenda of their relations with the United States by forcing the authorities to address the issue of fair compensation for damages, and they used it to block negotiations for consolidation. The Ojibway continued to improve their position by being assertive and persistent.

Tribal persistence led to the out-of-court settlement of 1985, which included compensation for 178,000

acres of reservation land taken by the reservoirs and loss of rice marshes, plus five percent interest paid since 1884.

The headwaters today

Since World War II, the Corps has become increasingly attentive to the effects of reservoir levels on Ojibway lands and resources. But, the headwaters reservoirs are of value to a diverse group of users. This became increasingly apparent during the drought years of the late 1980s when competing interests around and downstream of the reservoirs were in conflict for scarce resources.

Today, the Corps attempts to balance these interests and manage the headwaters reservoirs for the benefit of a broad range of users. These users include the Ojibway, the adjacent property owners, the recreation and tourist industry, and those downstream who rely on its waters—waters that enhance wild rice production, foster quality fish and game habitat, and promote year-round recreation opportunities.



St. Paul District file photo

Leech Lake Dam was under re-construction in 1901 when the above picture was taken. From the start, the Pillager band at Leech Lake criticized federal actions. They argued that the government did not understand the cultural significance of the headwaters lakes to the Ojibway, and that Congress provided inadequate compensation.

Hedin, cont. from page 3

Also," she paused and grinned, "they built dams."

After graduating with a degree in engineering from the University of Minnesota, she started in the Corps' training program. That was July 1986. She earned her M.S. in engineering in 1993.

In 1994 she worked as the technical manager for the Major Maintenance, Major Rehabilitation Program, consisting of 34 separate projects ranging from \$250,000 to \$7.2 million.

"Her empathy, intelligence, and ability to keep a team focused on achieving their objective make her an excellent employee," said Fred Beauvais, chief of Major Maintenance, Major Rehabilitation in Management and Evaluation Branch. "Her sense of humor keeps people from shouting at each other. They

enjoy working for her."

Hedin uses her Franklin Planner like a compass, using it to navigate from project to project and meeting to meeting. "It's indispensable," she said, holding it at eye-level between two hands.

"I think Lisa is an expert at working through the maze of project requirements in order to get the work done on time," said Chuck Crist, chief of Management and Evaluation Branch. "Her appreciation for the concerns of others and her sense of humor helped her to maintain good working relationships while managing a heavy workload."

Hedin has served as an EEO counselor, a volunteer for the Combined Federal Campaign, and on the task force that studied responsibilities of lead engineers and technical managers. "As a Fitness Committee member, she took the

lead in establishing a relationship between the district and the YMCA, and she supported the initiation of a walking club," said Crist.

In the spring and summer, she volunteers for Habitat for Humanity. During the fall and winter, she volunteers as a facilitator in a grief support group for young widows.

To burn off the mental sludge from a heavy workload, Hedin and two other women from the district shared a "Winter Sauna" for women at Camp Widjiwagan near Ely, Minn. In a hot sauna on the night of Feb. 25, Nan Bischoff of Management and Evaluation Branch and Denise McCarthy of Contracting reached their own boiling points, ran to the icy shore, and jumped into Lake Burntside. They all received the "Winter Sauna Award of Excellence."

Mucha, cont. from page 3

contractors on six of those projects.

"Leon is an extremely capable contract administrator and a very competent personnel manager," said Dean Peterson, eastern area engineer.

"Leon worked hard to keep the Rochester project on schedule," said Deb Foley, project manager. "He coordinated six of the contracts. Work-wise and dollar-wise, he worked on over half of the contracts and roughly three fourths of the money."

Through all the contracts, contractors and personnel, Mucha stressed safety. "A top priority was a safe job with no lost time accidents," said Mucha. "Part of my job was to convince the contractors that a safe job was a profitable job."

Mucha's reach extends to a handshake between engineers and

contractors. "I went into construction management at Stanford to learn to bridge a traditionally adversarial relationship between engineers and contractors," said Mucha.

In negotiations, Mucha focuses on the mutual benefits contractors and engineers can gain through the Corps' formal partnering program and "by convincing contractors they come out ahead by emphasizing quality and safety."

And it worked, culminating in the 1993 NCD Safety Award for the best resident office in North Central Division and the Corps of Engineers.

"This project is nearing completion," said Peterson, "and the customer, the City of Rochester, is ecstatic about both the quality of the work, and the minimal impacts that the construction has imposed on the

day-to-day function of the city."

Mucha credits others for the overall success of the Rochester Project. "This recognition would not have been possible without the cooperation and teamwork contributed by individuals in the Rochester Resident Office, Engineering, Contracting, Project Management, Construction and the Eastern Area Office," said Mucha.

"Recognition of this sort would not have been possible without the cooperation and teamwork from Sharonne Baylor, Aaron Buesing, Sara Crowson, Sheldon Edd, the late Bud Foster, Ann Midje, Don Miller, Angie Paffel and Natalie Siok," said Mucha. "They all share in the successes that resulted from Rochester Project."

Mucha, cont. on page 7

Mucha, cont. from page 6

Mucha puts himself in another's hard hat when it comes to human relations. The American Cancer Society honored the resident office as Employer of the Year in 1993 for their support of co-worker Bud Foster during his fight with cancer.

"If there's a way to help his people, he'll find it," said Peterson.

Santos, cont. from page 3

Santos has applied her strong people skills to provide continuity through three training officers in the Training Section. Throughout the changes, she volunteered in the Combined Federal Campaign, helped organize the holiday boutique for the Employee Benefit Fund, and coordinated one of the district's holiday giving programs for needy families in St. Paul. She renews district support for human needs programs annually.

Santos has configured her office cube for efficient processing of time-sensitive information. "I enjoy working with people," said Santos. "I enjoy the employees from the locks and dams. They're so friendly."

Santos has been "close by" for her family as well. She has a 14-year-old daughter and a four-year-old son. As a community volunteer, she periodically uses vacation time to chaperone school events. After work, she has coached volley ball and mentored a group of Girl Scouts as a co-leader.

The district flex-time policies have helped Santos balance family and work. "My co-workers know I have two children. The flex-time gives me the flexibility to be there for my family and for my job."

"She is intelligent, conscientious, honest and trustworthy," said Mary Clarkson, Resource Management.

Brochures present archeology and history of Upper Mississippi River

by Dave Berwick, archeologist

The district has prepared eight brochures about the archeology and history of the Upper Mississippi River. Here are their titles and a brief description of each. Call extension 5261 for more information.

Native American History in the Mississippi Headwaters Region

Describes the past cultures of the headwaters area of the Mississippi River from the end of the Ice Age to present. Identifies a number of significant archeological and historic sites in the area. Prepared with Leech Lake Heritage Sites Program.

Past Cultures of the Upper Mississippi River

Describes the past cultures of the Upper Mississippi River from 12,000 years ago to present. Identifies significant archeological sites along the Upper Mississippi River. Prepared with the Regional Archeological Program of the Office of Wisconsin State Archeologist.

The Gull Lake Mounds

Describes 12 Native American burial mounds at the Gull Lake damsite and provides archeological and Native American interpretations. Prepared with the Leech Lake Heritage Sites Program of the Leech Lake Indian Reservation. Printing is scheduled for this spring.

Maritime History of the Upper Mississippi

When completed, this brochure will describe the maritime history of the Upper Mississippi River, focusing on the types of vessels using the river from earliest times. Prepared with the Wisconsin State Underwater Archeology program.

Engineering the Falls: Corps of Engineers' Role at St. Anthony Falls

Describes the early history of St. Anthony Falls, its importance to the milling industry of Minneapolis, and the Corps' role in saving the falls. Includes a history of the Upper Harbor project.

The Boatyard: History of the Fountain City Service base, 1894-1994

Describes the early history of river navigation projects on the Upper Mississippi River and the development and history of the boatyard at Fountain City, Wis., since 1894.

Upper Mississippi River Headwaters Reservoirs Damsites

Historic overview of the development of the six headwaters reservoirs built between 1881 and 1912.

Commerce and Conservation on the Upper Mississippi

Describes the intertwined histories of the navigation and conservation movement, leading up to the nine-foot channel project's construction during the 1930s and the early conservation movement along the Upper Mississippi River. Contains photographs by Henry P. Bosse.

Bits and Pieces

Regulatory meets for annual conference



Photo by Daniel Seemon

Regulatory Branch personnel from the field and the district office gathered for their annual conference in St. Paul from Feb. 27 to March 3. "The purpose of this meeting was to bring together the entire staff to discuss current issues and future changes, to provide guidance, and to discuss problems in implementing the program," said Char Hauger, supervisory environmental protection specialist. Pictured left to right are Steve Eggers, district office; Howard Ecklund, Green Bay, Wis.; Gary Knapton, (behind Ecklund), Green Bay; Gary Elftmann, district office; Denise Blackwell-Kraft, district office; Bruce Norton, La Crosse, Wis.; and Judi Kolb, district office. During the conference, this workgroup developed a standard operating procedure regarding permit evaluation procedures.



Hello

Construction-Operations Division
Regina B. McKonly, office automation clerk

Information Management Office
Tameko C. Mitchell, office automation clerk

Logistics Management Office
Neil W. Pearson, office automation clerk

Real Estate Division
Curtis B. Hall, appraiser

Resource Management Office
Wanda D. Brown, office automation clerk

Good-bye

Construction-Operations Division
Christine W. Hall, student trainee
Mason P. LaFavor, laborer

Information Management Office
Ronney M. Im, computer clerk

Lucille M. Marx, Mary Marx's mother, died on March 15, 1995. Mary works in the in LaCrosse, Wis., office.



US Army Corps of Engineers

St. Paul District

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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