



**US Army Corps
of Engineers®**
St. Paul District

Crosscurrents

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RIA repairs dredge



Photo by Marc Krumholz

The above file photo shows the Dredge Thompson clearing a sediment trap on the Mississippi River at the Chippewa Delta near Reads Landing, Minn.

Smoke chokes Thompson engine room

This following article is based on "RIA repairs dredge for Corps" from the August 1999 issue of "The Target," the Rock Island Arsenal (RIA) installation newspaper.

By Peter Verstegen
Public Affairs Office

"The engine room on the dredge had filled with smoke," said Dave Peck, master of the Dredge Thompson. "It was July

22, which was a Tuesday. We were dredging at a customary site on the Mississippi River - Lone Tree Light, mile 331.5." The area is between Quincy, Ill., and La Grange, Mo.

The Thompson was dead in the water. When the smoke had cleared, the crew discovered that a 1,500-pound thrust bearing on the drive shaft was the culprit.

The thrust bearing is one of three bearings that surrounds the drive shaft of the Dredge Thompson. "It was a logistical nightmare," said Peck. The crew had to disassemble the works. They meticulously disassembled

the housing that held the shaft, which was more than a foot in diameter and more than nine-feet long. The bearing, with cap and base plate over it, weighed more than 2,500 pounds.

The Thompson was working on the river when its shaft broke. An attempt to perform an on-the-spot repair failed, largely because of the tremendous pressure required to remove the shaft's bearings.

The Corps called on the Rock Island Arsenal (RIA) to repair the shaft because of the fast response and good service received from RIA during the past several years. The arsenal has produced numerous parts of all shapes and size for the Corps that have been used in the renovation and repair of the lock and dam system.

Because of the fast turnaround requested by the Corps, the RIA team divided into two shifts, each working 12 hours per day. Team members worked off drawings dated 1936 that were provided by the Corps.

A mechanical puller was used to separate the old, broken bearings from the shaft. It's little wonder that Corps workers couldn't do this with the tools they had on hand, since the bearings wouldn't yield until 75 tons of force was applied.

"The whole crew helped to take

See "Dredge," on page 11



Program Execution Tops List of FY 1999 Highlights

By Col. Kenneth Kasprisin
St. Paul District Commander

Program execution continues to be a major point of emphasis at all levels of the Corps. Our achievement in this area is something in which we can all take pride.

A famous coach, when once asked after a particularly disappointing loss, "What do you think about your team's execution?" replied "I'm in favor of it."

Luckily, we in the St. Paul District need not worry about facing the executioner. Once again, our ability to execute our program was one of the district's highlights for FY 1999.

Program execution continues to be a major point of emphasis at all levels of the Corps. Our achievement in this area is something in which we can all take pride. I emphasize the word "all" because program execution is truly a team effort. Thanks to the diligent efforts of many amidst a hectic year-end flurry of activity, we were able to exceed our fiscal execution goals in Construction General, the Continuing Authorities Program, and Operations and Maintenance; in all of these areas we expended at rates exceeding 100 percent of the basic schedule.

I know what you're thinking...how can we possibly spend more than we have? (I ask myself that same question every month after receiving my bank and credit card statements). The answer is simple. Every year we establish a month by month plan for obligating and expending available funds on each of our studies and projects. This plan, commonly referred to as a 2101 schedule, reflects our anticipated use of new funds as well as funds carried over from the previous year. The 2101 schedules are locked by HQUSACE early in the fiscal year; the locked schedules (Basic Level 2101) become the reference point from which our execution is measured.

In FY 1999, the St. Paul District was able to pick up the slack from districts that couldn't perform as expected. We requested and received additional funds to accelerate some of our projects – this made our customers happy and helped HQUSACE improve the overall Corps execution rates.

Since the additional funds were not part of our Basic 2101 schedules, we were able to expend more than we scheduled (see...I told you it was simple).

Other highlights include project authorizations for the Grand Forks, ND - East Grand Forks, MN; Crookston, MN; and Grafton, ND projects. In addition, the Upper Mississippi River Environmental Management Program (EMP) was extended and annual appropriation limits increased.

These projects form the cornerstone of our mission for the next several years. We have also made remarkable progress in fostering partnerships with local, state and federal agencies; this bodes well for the district's future in that we are gaining a reputation as an agency that delivers a quality product. The quality of our work is best exemplified by the numerous awards we have earned in recent years. In FY 1999, the St. Paul District received the Seven Wonders of Engineering in Minnesota award for our Mississippi River Basin Modeling System and the Outstanding Planning Achievement award for the Grand Forks - East Grand Forks flood control project.

Implementing change was a major theme in our district this past year. I would list as a major achievement the great strides we made in implementing the Project Management Business Process (PMBP), the METL process for training our most valuable asset (you), and numerous organizational changes which will position us to meet tomorrow's challenges.

All things considered, FY 1999 was a very successful year. Way to go team!

Barge smashes into guidewall at L&D No. 10



Photo by Mark Paschke

"On Oct. 25, 1999, a down-bound empty barge damaged the upstream 20 feet of the upper guide wall" at Lock and Dam No. 10 on the Mississippi River at Guttenberg, Iowa, said Ken Buck, chief of Construction-Operations Division. "All down-bound tows approaching the upper guide wall at Lock and Dam No. 10 were instructed to exercise extreme caution," he said. Both the concrete guide wall and

metal railing were severely damaged when the barges attached to the towboat Samuel B. Richmond hit the structure. No injuries were reported at the time of the incident. Inspecting the damage at left is Head Lock Operator Ken Schroeder. On his right is Lock Operator Fred Kann. The incident also destroyed a lock operator shelter. Lock operations resumed three hours after the mishap.

By Peter Verstegen
Public Affairs Office

"We started locking through about three hours after the mishap and been locking as usual since then," said Darrel Oldenburg, lockmaster at Lock and Dam No. 10 in Guttenberg, Iowa. A barge hit the guidewall during fair weather about 12:30 p.m. on Oct.

25. "I have not been told of any damage estimates, but the Rivers and Harbors Unit in Fountain City will be doing the repairs, hopefully starting in the next two weeks," he said.

With the support of the Resident Office in La Crosse, Wis., and Lock and Dam No. 10, Public Affairs distributed a news release and photos to the media,

the district and the U.S. Coast Guard in a record four hours. A digital camera that Mark Paschke of the Resident Office had taken with him on a routine inspection expedited reporting the mishap. The lock is located in a remote community on the Mississippi River in northeast Iowa and is about 244 miles from the head of navigation in Minneapolis.

Strategic Vision: Reshape Culture**'Kids in Boats' program at Lake Ashtabula teaches safe boating and water safety**

Photos by Sarah Gish

In the photo at left, Park Rangers Scott Tichy, left, and Chris Botz, with his hands on the boat, instruct two of more than 240 children who attended a water safety program at Lake Ashtabula and Baldhill Dam in North Dakota this summer. In the top photo, children practice techniques for throwing life rings to persons who have fallen overboard and are in distress. The program also taught children how to tie knots and the dangers of hypothermia.

By Peter Verstegen
Public Affairs Office

"We make sure their life jacket fits properly and teach them how to operate a boat safely," said Chris Botz, a park ranger at Lake Ashtabula and Baldhill Dam in Valley City, N.D.

The proper fit of a personal flotation device (PFD), tying knots, hypothermia, and selected rescue techniques were among the topics in a water safety program operated this summer by rangers at the Mel Reiman Recreation Area at Lake Ashtabula in cooperation with North Dakota Safety Council. "This summer we had kids from Valley City, Mayville and Griggs County," said Scott Tichy, park ranger.

To teach about hypothermia, "we fill a bucket of water with ice

and drop 10 to 20 pennies into the ice water," said Tichy. "They can pick up about five pennies before their hands lose coordination in the cold water."

"The small electric-powered boats were purchased with excess funds made available at the end of the last fiscal year," said Tim Bertschi, operations manager in the Western Flood Control Project Office in Fargo. "We take this program on the road to various locations in support of the North Dakota Game and Fish Department and the North Dakota Safety Council. This has become a very popular. We are unable to fill all the requests we now get to put this program on."

The district offered three safety sessions this summer with 80 or more children attending each

session. The program offers presentations to students about safe boating practices, basic legal requirements, rules of the road, hypothermia, rescue techniques, and the most important piece of safety equipment on all boats – PFDs. The session ends with children actually operating small two-person electric motor-powered boats.

Various civic organizations are eligible to sponsor the Kids in Boats program. Instructors are from the Corps, the North Dakota Safety Council and other state and federal agencies. Prior to last year's purchase of boats at Lake Ashtabula, the program shared resources with the Omaha District's Pipestem and Missouri River projects.



Strategic Vision: *Satisfy the Customer*

Corps, Wisconsin DNR restore bottomland forest, improve wetlands

Photo by Steve Tapp

From the left are: Steve Tapp, Waterways Section in Fountain City, Wis.; Dan Oles, Natural Resources (NR) Section in La Crescent, Minn.; Carole Taylor, NR; Kelly Miller, Blackhawk Park; Mark Beseler, the

lockmaster at Lock and Dam 5A in Fountain City, Wis.; Gerry Lee, NR; Jeff Janvrin, Wisconsin DNR; and Randy Urich, NR.

By Randy Urich, forester

As a late spring thunderstorm approached, staff from the Mississippi River Project and the Wisconsin Department of Natural Resources (DNR) hastily retreated from an island in Pool 5A where they had just finished planting nearly 700 tree seedlings.

While the workers hurried to load equipment on their boats before the downpour, the raindrops began to soak seedlings to help them sprout and grow into a bottomland hardwood forest.

These were the final touches on an environmental mitigation project that brought together personnel in the Mississippi River Project this

summer.

This effort started with plans to construct new facilities at Lock and Dam No. 5A in Fountain City, Wis., and Lock and Dam No. 6 in Trempealeau, Wis. Several acres of wetland would be impacted at the construction sites. To offset this habitat loss, a mitigation project was designed for Island 58.

Although the State of Wisconsin owns the island, it had been used in the past by the Corps to dispose of dredged material from channel maintenance operations.

Steve Tapp of the Waterways Section coordinated with the interagency on-site inspection team and other Corps staff to develop the mitigation plan. It included

placement of fine silt over the sandy dredge material to improve soil conditions and prepare the site for tree planting. Arne Wodarz, Lanny Krause and other members from Rivers and Harbors Unit at the Fountain City Service Base provided the equipment and operators needed to transport soil from an adjacent location and spread it out over the disposal area. The outcome resulted in two wetland ponds that provided good open water habitat for wildlife.

With the wetlands in place, the Natural Resource Section stepped in to organize the tree planting. The diverse group of workers who gathered brought the cooperative spirit to plant the tree seedlings.

Strategic Vision: Build Team

District holds Holiday Awards Ceremony at Prom Center in Oakdale



Photo by Bryan Armbrust

District employees convened at the Prom Center for the Holiday Awards Ceremony on Dec. 15. The event offered door prizes, an 11:30 a.m. social hour and a noon buffet with an awards presentation at 1 p.m.

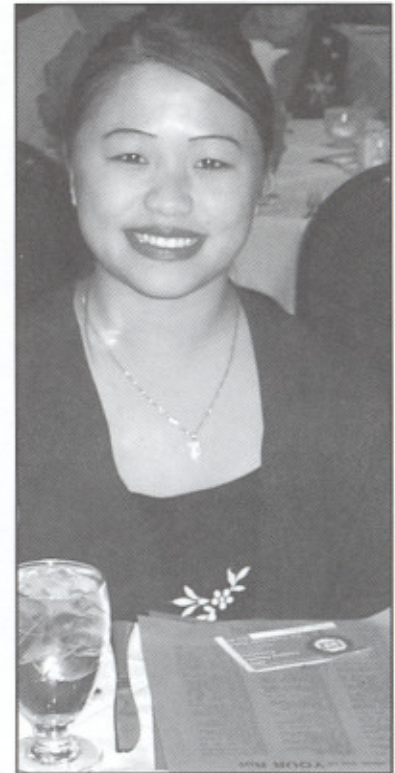


Photo by Jon Lyman

Shua Xi Jones (p. 10) waits for the buffet at the Prom Center. She is in the Construction-Operations Division registration area.



Photo by Peter Versteegen

Lisa Stanonik (back to camera) and Theresa Thury (not shown) staffed the registration table in the lobby of the Prom Center. From left are Al Koniar, Dan Ford, Neil Helming, Jean Turcotte and Girard Schuster.



The awards ceremony provided a chance to recognize contributions to the District. The Suggester of the Year was James Jones, Construction-Operations Division. The Champion of the Year was John E. Devendorf, ED. One of three to receive recognition for Suggester of the Year was John E. Devendorf (above). Handing him the award was District Commander Col. Kenneth...



Photo by Jon Lyman

From left are: Col. Kenneth Kasprisin with retirees Betty Krueger, Jean Turcotte, Bill Spychalla, Al Kraft, Dave Haumersen, Bill Goetz, Jim Muegge, Bud Johnson, Bob Post, Jim Kursu, LaVane Dempsey and M.T. Erickson.

...ing (photo at left)
 ...patiently for her turn at
 ...ffet. She works in the
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 ... (photo at right) from
 ...uction-Operations
 ...n, checks in at the
 ...ation table.

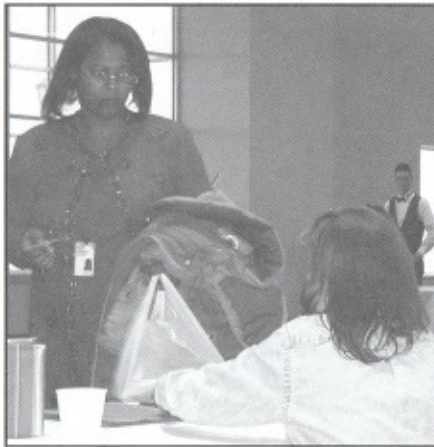


Photo by Peter Verstegen



Photo by Jon Lyman

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 ...th Kasprisin.



Photo by Anna Wetterling

St. Paul District Commander Col. Kenneth Kasprisin presented Jon Lyman the Consideration of Others Award.



Photo by Peter Verstegen

The countryside buffet offered a choice of beef, chicken, pasta, salads, vegetables, rolls, a beverage, and dessert. Terry Williams of Engineering Division and Dennis Cin of Construction-Operations Division were among those in the buffet line.

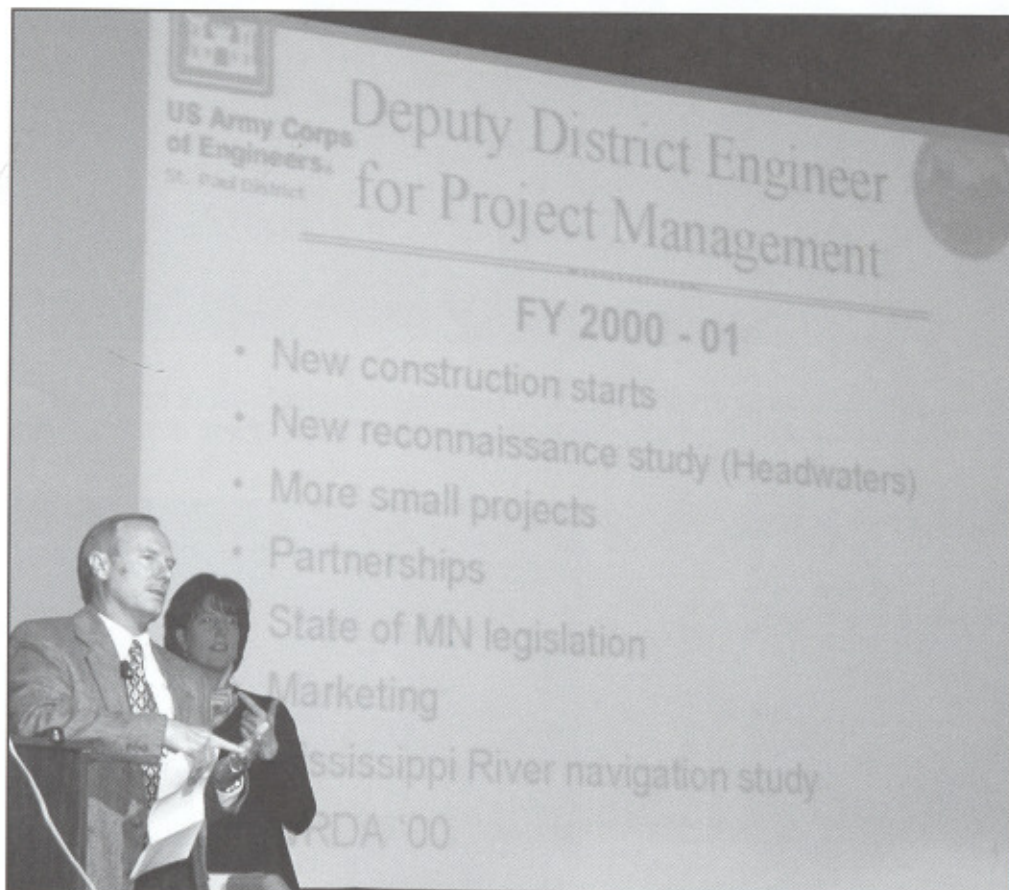
Strategic Vision: Align for Success**Town Hall meeting updates district activities**

Photo by Bryan Armbrust

At left, Deputy District Engineer for Project Management Chuck Crist updates the audience of about 250 district employees who attended the Town Hall meeting on Nov. 10 in St. Paul. He discussed the status of current projects and studies authorized under the Water Resources Development Act (WRDA). Other topics included: the Employee Benefit Fund (EBF); the Holiday Awards Ceremony; the Emerging Leaders Conference; Army Performance Improvement Criteria (APIC); preparations for Y2K (Year 2000); the recognition of many individuals who contributed to a successful fiscal close out; and an expression of appreciation to individuals who are retiring or leaving. Patricia McCutcheon (right), is a sign language interpreter.

Celebrating diversity

Diversity Appreciation Week (DAW) was held from Nov. 30 to Dec. 3, 1999. Bob Terry returned as the keynote speaker. Many workshops provided credit for Consideration of Others training. The Illusion Theater returned to perform a play titled "Celebrating Diversity." Hmong comedian, Tou Ger Xiong, also performed and conducted workshops. The Disability Subcommittee sponsored a display of assistive devices on the skyway level. The DAW ethnic food taste was incorporated into the workshops.

Discovery Channel highlights flood fight at Grand Forks

By Bryan Armbrust
Public Affairs Office

The Discovery Channel and its web site from Oct. 18-24 featured St. Paul District efforts in the 1997 flood fight at Grand Forks, N.D. and East Grand Forks, Minn. The web site set up an on-line chat with Lisa Hedin, the project manager who also was the flood response subarea engineer during the flood fight. She coordinated emergency levee construction.

Souris River interests discuss flood control

The Corps, the North Dakota State Water Commission, the U.S. Fish and Wildlife Service, and North Dakota state and local officials met in Towner, N.D. on Oct 21, 1999, to discuss the Souris River Basin Project and flood control issues. The \$117 million project provides flood protection to urban and rural residents along the Souris River in North Dakota. The river basin encompasses about 24,000 square miles in southeastern Saskatchewan, Canada and northwestern North Dakota.

Strategic Vision: *Reshape Culture***CFC exceeds \$28,000, surpasses last year**

Photos by Peter Versteegen



More than 115 individuals contributed in excess of \$28,400 for this year's Combined Federal Campaign (CFC) to surpass last year's total by about \$1,200. The 1999 pledge drive began Oct. 15 and ended Nov. 5. "We in the Corps, especially in the district, have a legacy of investment in our community, our nation and our world, said District Commander Col. Kenneth Kasprisin. "I continue to be impressed with our open and giving nature."

In the top left photo, Donna Zappa, Construction-Operations Division, opened the CFC Bake Sale Nov. 3 with a table of pastries. In the top right photo, Jim Peak, assistant chief of Engineering Division (ED), contributes to the success of the bake sale. With Peak are Vicky Johnson, center, and Jan Graham, right. In the bottom photo, District Deputy Commander Lonnie Mansell makes a selection in the final minutes of the bake sale. Jenny Yager assisted him. The bake sale contributed \$90 to CFC.

**Strategic Vision:
Revolutionize Effectiveness
APIC: 'It is now time'**

**Army Performance
Improvement Criteria is the
Army's strategic framework
for leading change**

By Russell Williams
Project Management Branch

"It is now time," said District Commander Col. Kenneth Kasprisin. In a Sept. 8, 1999 message Kasprisin said "It is time we jump into APIC with both feet ... APIC should really be the umbrella under which all else falls – QMP, TQM."

APIC stands for Army Performance Improvement Criteria. It is the Army's strategic framework for leading change. The goal is to improve the overall effectiveness and efficiency of Army organizations in delivering continuous value to customers. The result is mission success.

"APIC is an integral system where checks and balances provide effective and improved communications and working relationships among various divisions, branches, and sections," said Randy Sitton, an APIC team advisor from Construction-Operations Division (CO). "These improvements can be transferred to our customers and translated into greater customer satisfaction."

The criteria are based on the Malcolm Baldrige National Quality Award Criteria for Performance Excellence (MBNQA) – the basis for total quality management (TQM).

The district has six individuals who are trained to serve as APIC advisors. They work with the commander's team of division and major office chiefs to implement APIC.

The advisors are James Peak and James Mosner from Engineering Division (ED); Tim Fell and Randy Sitton from CO; Gary Nelson, Resource Management (RM); and Russell Williams, Project Management.

"The key focus of APIC is on 'continuous improvement,' said Peak. "Just as we each seek to improve ourselves in our personal and professional lives, a healthy organization will seek improvement. That improvement process is a journey and the seven criteria found in APIC can provide the district an excellent road map to achieve future success. It's a proven tool that has been effective in commercial and government applications."

The seven criteria that Peak referred to are:

1. Leadership;
2. Strategic planning;
3. Customer and market focus;
4. Information and analysis;
5. Human resource focus;
6. Process management;
7. Business results.

The criteria provide a framework for making sense of the theories, tools and approaches that are part of running an excellent organization.

"APIC should be viewed as a program or initiative that will incorporate and round-out all of the various corporate improvement programs that we've experienced over the years," said Mosner.

The Baldrige effort began in 1988 to promote TQM and make American companies more competitive in global markets. The Baldrige criteria focus on self-assessment. They identify strengths and weaknesses in planning and execution with emphasis on customer satisfaction.

The Office of the Chief of Staff of the Army reworded the criteria to fit the unique nature of the Army's work and called it APIC.

Core APIC values and concepts are:

- Customer-driven quality;
- Leadership;
- Continuous improvement and learning;
- Valuing employees;
- Fast response;
- Design quality and error prevention;
- Long-range view;
- Management by fact (Results)
- Partnership Development
- Organizational Responsibility and Citizenship
- Results focus.

The district has completed 10 TAQ (Total Army Quality) studies since 1994. In 1996, it began a strategic plan and completed an operations plan and TAQ handbook in 1997. A Quality Management Plan is underway to guide and improve business processes within the district.

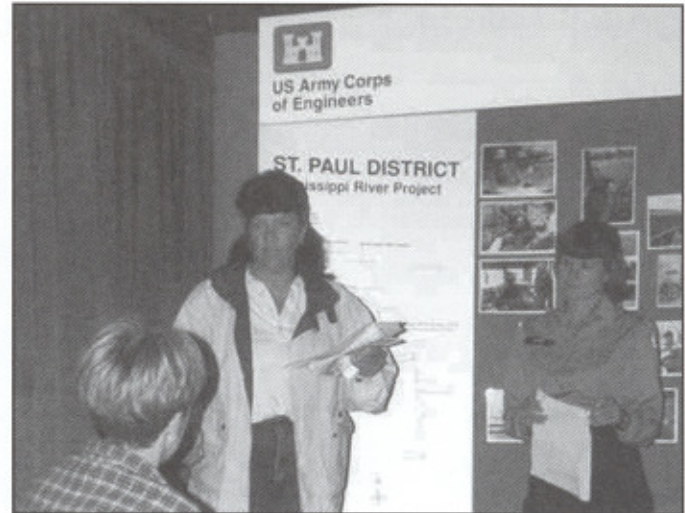
The next step is to identify key products, services, customers and stakeholders and then focus goals, resources and processes on meeting and exceeding requirements.

SEP in field tells Corps missions



Photos by Dan Oles

Denise Lepke, a lock and dam operator at Lock and Dam No 8, described missions and career opportunities with the Corps during the "School to Work Expo" at the La Crosse Center in La Crosse, Wis., on Oct. 7. Students from 25 school districts attended the expo. The Special Emphasis Program (SEP) field subcommittee, under the guidance of Upper Area Lockmaster Joe Dvorak, coordinated the district's participation in the event.



At left is Rojean (Ashley) Ustby, now head lock and dam operator at Lock and Dam No. 7. She began her career with the Corps as a clerk. Contributors who also did presentations were: Dan Oles, a forestry technician; Scott Baker, a resident engineer; Lisa Lund, project engineer; Lon Meixner, the lockmaster at Lock and Dam No. 4; Shirley Gosney, a clerk at Mississippi River Project Office; and Jane Groth, a lock and dam operator from Lock and Dam No. 6.

Smoke chokes Thompson engine room



Photo by Marc Krumholz

The Dredge Thompson was working on the river between Quincy, Ill., and La Grange, Mo., when its shaft broke, leaving the dredge dead in the water.

Dredge, continued from page 1
it out. We had to call in crane barges," said Peck. "Although the crew was originally scheduled to take off that weekend, we had a

team of 10 stay to work straight through."

Before the new bearings were put on, the shaft was placed in a freezer and chilled to a temperature of

minus 40 degrees, in the midst of a heat wave that saw outside temperatures approach 100 degrees. Meanwhile, the new bearings were heated in a furnace to a temperature of 275 degrees.

The extreme cold caused the metal shaft to contract, while the heat caused the metal bearings to expand. This assured a tight fit after the bearings and shaft returned to room temperature.

In addition to replacing the bearings, RIA made and installed new oil seals for the shaft.

The Corps picked up the shaft on a Saturday and immediately shipped it back to be installed on the Thompson.

A little over a week after the dredge had broken down, it was back in service scooping up Mississippi mud.

Orwell tailwater project improves dam safety

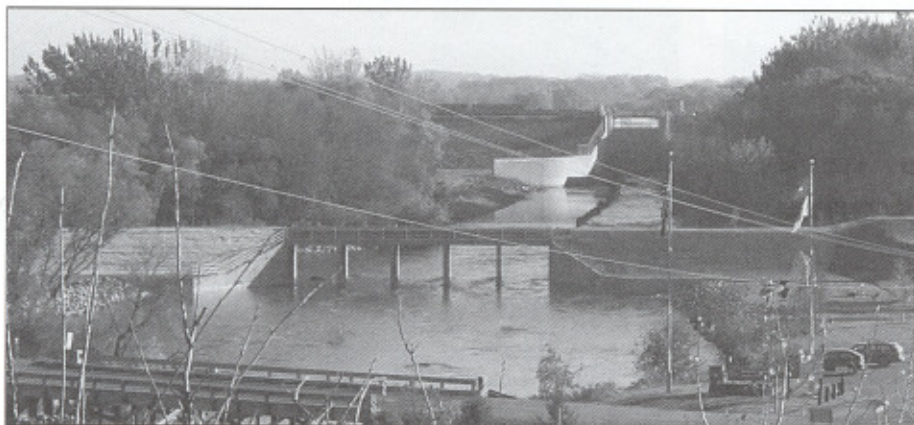


Photo by Paul Hegre

The photo, taken Oct. 8, 1999, shows the Orwell tailwater control structure in the center of the photo, with the dam and spillway in the background and County Road 15 with bridge in the foreground.

By Peter Verstegen
Public Affairs Office

The recently completed tailwater control structure at Orwell Dam is designed to solve the potential for scour downstream of the existing dam spillway. "The five box culverts in the new tailwater control structure will pass normal flows but will restrict large flood events by increasing the depth of the water in the discharge channel,"

said Jeff Hansen, project manager. The design ensures adequate water depths in the discharge channel between the culverts and the dam at the top of the above photo. The outlet structure will safely dissipate energy for all flows up to and including the probable maximum flood (PMF) of 24,400 cfs.

"It has been a challenge for the contractor because of all the rain and high flows of the Ottertail River," said Hansen. "The contract

will have to be extended another year to allow completion of the remaining erosion protection work in the discharge channel immediately downstream of the dam spillway."

The dam safety improvements at Orwell Dam cost about \$4.7 million, including the gate machinery modifications done during Stage 1. The project is located on the Ottertail River, about six miles southwest of Fergus Falls, Minn. The dam forms an 800-acre reservoir. The dam is 1,355 feet long, 47 feet high, has one tainter gate 33 feet wide by 27.5 feet high and two low-flow conduits two feet in diameter. The Orwell dam and reservoir are designed for flood control, water supply and pollution abatement. The Ottertail River flows into the Red River of the North near Breckenridge, N.D.

Safety officer has Corps roots



Jeff Pfannes, who became the Safety and Occupational Health manager for the district in October, has worked for the Corps in the past at both Vicksburg

District, as a safety specialist, and Detroit District, as the Safety and Occupational Health Manager. His most recent job was the Safety and Occupational Health Manager at the Defense Reutilization and Marketing Service where he has worked for more than 10 years.

Pfannes is originally from St. Croix Falls, Wis.



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