



US Army Corps
of Engineers®
St. Paul District

Crosscurrents

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**Sampling sub-soils in
sub-zero temperatures**



Budget cuts generate cost-savings ideas

By Col. Robert Ball
District Engineer

We have most of this year's budget numbers in and, like many of you, budget issues are taking up a lot of my waking hours.

We have found ourselves with a budget shortfall and have to come up with cost-cutting measures to be able to stay within the budget. Let me relate a few things in this arena.

First, we knew going into fiscal 2004 that we were going to be anywhere from \$4-16 million short in the operations and maintenance account. That caused us to look at all work done and rank-order all work packages. In many instances, only the work that was considered mission essential was funded and led to 114 of our seasonal and temporary team members not being

recalled to work as early as they normally are. That was a huge and painful decision to make and it has a tremendously negative impact on 114 families. Other cost cuts in operations and maintenance all pale in comparison.

Second, we did not know until last month what our budget would be in the other accounts. We found ourselves facing a shortage of several million dollars in the other accounts. Everyone took a large cut.

That is when I sent you the message asking for your ideas on how to cut costs. You responded with more than 300 ideas, and I have been very impressed with the serious and thoughtful nature of the ideas. Those that can be done now are being compiled by the team working this and added to the list of actions to be taken. Cost-savings ideas that take more time or permission to enact are being put on a list for use later. Some were good ideas but just not possible for one reason or another – but, they were given due consideration. Thank you for your help.

Finally, these actions are just to get us through this year. We are forming a team to look at the structure we need to be able to operate efficiently and effectively in the next five years. Once that work is done, we hope to be able to begin realigning and reshaping our workforce through attrition and the voluntary separation incentive program and voluntary early retirement authority.

As always, we will ask for your involvement when appropriate and try to keep you informed on our progress.

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Photo by Ryan Otto

Grant Riddick, geologist, takes a soil sample in 20 degree below zero weather at East Grand Forks, Minn., the week of Jan. 26-30. He worked with contractors on the East Grand Forks project. The Corps drilled soil samples at various sites to determine soil types. See "Soils work establishes ground truth," Page 6.



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St. Paul District

Crosscurrents

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*Calendar year unless otherwise noted

- Dollars expended on projects (FY 2003): \$155,000,000
- Dollars for contracts awarded (FY 2003): \$86,969,600
- Dollars for contracts awarded to small business (FY 2003): \$63,400,000
- Visitor-hours at district recreation sites: 52,000,000
- Square feet dredged: 10,560,550
- Visitors to district recreation sites: 8,700,000
- Cubic yards of material dredged: 740,000
- Cubic yards of material dredged used for beneficial use: 740,000
- Recreation-related revenue (FY 2003): \$650,000
- Visitors to public web site: 177,270
- Visitors to district locks and dams: 122,511
- Recreational vessel lockages: 104,838
- Labor costs saved by recreational volunteers: \$99,279
- Lockages: 55,961
- Work orders for the Computer Help Desk: 26,529
- Acres covered by hydrographic surveys: 17,000
- Hours worked by 209 district recreational volunteers: 13,411
- Jurisdictional determinations made (regulatory): 8,353
- Higgins' eye pearly mussels hand-propagated: 7,480
- General permits issued: 3,956
- Travel vouchers filed: 2,684
- Pages of comments, Navigation Study public meetings: 2,033
- Library books checked out on long- or short-term loan: 1,836
- Public queries made to the public affairs office: 869
- Letters of Permission (regulatory) issued: 603
- Tours given through locks and dams: 533
- Nationwide permits issued: 498
- Actions executed by contracting office: 483
- Number of Wetland Plant books sold: 470
- Reported permit violations: 308
- Resolved permit violations: 308
- Miles of river surveyed: 280
- Number of navigation charts sold: 160
- Individuals hired: 128
- Reassignments: 99
- Individual permits issued: 69
- Promotions: 67
- District personnel deployed for contingencies or natural disasters: 47
- Dredging jobs: 28
- Retirements: 28
- District personnel who deployed to the Middle East: 25
- Resignations: 21
- Permit denials (without prejudice): 18
- Citations issued at district recreation sites: 13
- Contract appeals filed: 2
- Office of Counsel regulatory-enforcement cases: 2
- Office of Counsel regulatory case: 1

By the numbers

By Shannon Bauer

Engineers love numbers. The Army loves metrics. Here are some of the more interesting numbers compiled from 2003.

Photo of Lock and Dam 3 by Jodi Dutta



Photo by Francis Schanilec

Ryan Otto, East Grand Forks Resident Office, and Ed Morgan of Ed's Construction, discuss installation of the storm sewer connection between the golf course lakes. Sam Thomsen, excavator operator for R.J. Zavoral, is in the cab. Morgan and Thomsen are subcontractors on the project.

Flood control par for the course at East Grand Forks

By Ryan J. Otto
East Grand Forks Resident Office

Golfers often view water hazards on golf courses as a means of adding strokes to their game. Engineers, on the other hand, see water hazards as potential storm-water retention ponds.

The St. Paul District hit a hole in one by transforming borrow pits into water storage and water hazards near its flood reduction project in East Grand Forks, Minn. Four water hazards at the Valley Golf Course are a product of close cooperation among the district, local sponsors and contractors. The stroke saved money for the local sponsor by advance stockpiling of material

marked for levees, by connecting the ponds before the golf course is completed and by reducing the amount of underground pipe anticipated for the phase four project.

The project will split the city's existing golf course by placing nine holes on the wet side of the levee — leaving them unplayable. Officials from the city of East Grand Forks added nine new holes to the northeast of the remaining course and planned future housing subdivisions around it.

A district project team, lead by project manager Tim Paulus, saw the nine-hole addition had been marked as a borrow area for levee material. This meant the district had

to excavate and stockpile the material prior to course construction.

Construction of the course expansion began in September, after the Corps began excavation and stockpiling of the borrow material. The material removed from the borrow pits was stockpiled on a peninsula-shaped area on the course and will be used as impervious fill for the phase-four levees. East Grand Forks has planned a new housing subdivision there when the levees are finished and the stockpile is cleared.

An Oklahoma-based contractor, specializing in golf course construction, molded the ponds out of the two excavations left behind by the Corps' contractor. The city achieved an additional benefit when the project team recognized the potential to use the new ponds for storm-water retention during floods on the Red River of the North.

But the teams had to beat the coming winter. Pipes ranging from 36 to 60-inches in diameter, connecting the ponds under the course, had to be ordered and installed before the bitter northwestern Minnesota weather turned the soil rock hard.

The district's project team quickly devised a plan to incorporate the ponds as flood control features that could be interconnected with the north end of the city's storm water system. Engineers in the district office completed the alignment and elevations for the interior drainage, and the East Grand Forks Resident Office coordinated the planned work to accommodate the schedules of both the city's contractor and the Corps' contractor to accomplish the work.

"This change occurred on an

accelerated schedule,” said Virginia Regorrah, resident engineer. “We literally had just days to get the designs, negotiate with the contractor, execute the modification and have the contractor order the pipe. This will ultimately save the Corps and the city money by sharing the cost of the project and preventing the finished golf course from having to be re-excavated for interior drainage.”

The contractor laid the last set of pipes Nov. 18-21, just before the ground froze for the winter.

Construction of planned interior drainage in the course was advanced from phase four to the stockpile contract. The Corps and the city will save money in the long run by sharing the cost of the project and preventing the re-excavation of the finished golf course for interior drainage.

“We are actually going to save money in phase four because the gated outlet at the golf course is greatly reduced in size from four 72-inch pipes down to one pipe. We are going to save money on sluice gates and associated piping, thanks to the retention ponds,” said Paulus, project manager.

Large concrete pipes now connect the ponds. The city’s storm water system will be connected to the ponds in phase four. The storm water will travel through the ponds and the water level will remain constant, courtesy of a downstream weir, a barrier that holds water back. During floods on the Red River, a control structure will prevent the floodwaters from backing up into the newly protected area. Simultaneously, the storm water from the city will accumulate in the ponds allowing the storm water to be retained until the flood waters on the Red River recede to normal.

Soils work establishes ground truth

By Virginia Regorrah

It’s more than just dirt. Levee size, project design and anticipating challenges that arise during construction require an accurate examination of sub-soil composition.

To establish how large a levee the ground can support, engineers take soil borings in the foundation soils to define its type and obtain samples for laboratory testing. Soils testing identifies the strength and compressibility of the soils beneath a levee. Engineering calculations determine whether the existing ground can adequately support the weight of a levee.

Differing soil types, such as sand, clay, silt or organic material, and other factors, such as the saturation of the material, depth and whether the earth has been previously disturbed, determine the soil’s load-bearing capacity and magnitude of soil settlement.

While a compacted clay levee provides an excellent barrier against water, the weight of the levee can present problems. Compacted clay weighs approximately 1.5 tons per cubic yard; so a 100-foot length of levee, built 10-feet high, contains approximately 1,500 cubic yards of material and weighs more than 2,200 tons. With the majority of levees at least 10-feet high and others approaching 30-feet in height, the resulting stress in the underlying soils can lead to detrimental settlement, bearing or slope-stability problems.

Orwell Dam project wins engineering award

By Shannon Bauer

The St. Paul District received the Seven Wonders of Engineering award from the Minnesota Society of Professional Engineers Feb. 27 for its Orwell Dam rehabilitation and renovation project near Fergus Falls, Minn.

“The St. Paul District is honored to have the Orwell Dam project recognized by the MSPE as one of the state’s Seven Wonders of Engineering,” said Jeff Hansen, Corps’ project manager. “We are proud of this project, and we are proud of the expertise, hard work, cooperation and support of all the many team members and agencies who made this project a success.”

This MSPE competition is conducted annually to recognize outstanding achievements in the field of engineering. Fourteen projects were submitted for the 2004 competition, seven of which were selected, including the Orwell Dam project completed by the district in the fall of 2002. This is the sixth year in a row the St. Paul District has earned one of these awards.

Orwell Dam and Reservoir is located at the outlet of Orwell Lake, 33 miles upstream from where the Otter Tail and Boix de Sioux rivers combine to form the Red River of the North. A safety inspection of the dam in 1985 identified deficiencies in the dam’s ability to safely discharge flows associated with a major flood. This 50-year-old, 47-foot high, 20-foot wide dam could only handle flows up to 20,400 cubic feet per second, and it needed to be able to handle 24,400 cfs. The project took five years to complete and cost more than \$4.7 million.

District grapples with budget cuts

This will be the first of five stories in 2004 on the district fiscal situation. More current information for employees will be available by e-mail messages from the district's senior leaders or on the district intranet site on the link titled "FY04 cost savings study."

By Mark Davidson

Saving money this fiscal year, because of an income shortfall in amount of \$10-14 million, is the most critical issue currently being worked by the district senior management team. And the district senior leaders want to hear the suggestions from all district employees on ways to save money or get more money for the district.

The budget situation for the district is due to the fiscal year 2004 budget figures from the president and Congress being less than expected. "There were a few continuing resolutions from Congress to keep the government funded, while Congress was working out all of the final budget details," said Col. Robert Ball, district commander. "While the appropriations bill was passed at the end of November, the funds were not in the district until late January, after going through the Department of Defense to the Department of the Army and down to Mississippi Valley Division and then to the St. Paul District. In addition, the district's share of the regional operations and maintenance budget wasn't set until the end of

December, and was \$3-4 million less than we had been expecting."

Once the budget arrived at the district, four months after the fiscal year started, the senior district management team determined there would be a shortfall in income through the end of the fiscal year. Judy DesHarnais, district chief of project management, said, "We put together a budget task force to proactively look at saving money this year instead of hoping that Congress would fund us later in the fiscal year."

Lt. Col. Thomas O'Hara, Jr., deputy district commander, said once the task force started looking at cost-saving measures, the district senior management team wanted to make sure the employees knew what was going on and what ideas the employees had for saving money and making money.

"We set up a link on the district intranet site where employees could

find out the latest initiatives on saving money and also generating income for the district," he said. "We have also communicated different district initiatives to all of the employees using e-mail so they would have the latest information in a timely manner."

Mike Dubovich, the IM contractor at the computer help desk, set up a template on the district intranet site, so employees could anonymously send in suggestions on saving money or generating income. "We had more than 300 separate ideas by the end of February," said O'Hara, "and the budget task force will take a serious look at each one."

There was a district off-site meeting in mid-February to additionally review the district budget money shortfall. Attendees looked at the already proposed ideas on saving money to validate them and discuss their merits, as well as

Cuts and cost-savings to date

Save \$4.5 million on:

- Cancel certain community relation's events
- Cut overtime
- Cut travel
- Early release and delayed callback of seasonal employees
- Encourage employees to support Iraq mission
- Freeze external hiring
- Freeze information technology purchases
- Freeze the purchase of non-critical supplies
- Minimize size of certain construction contract awards
- Modify summer awards ceremony
- Offer Voluntary Separation Incentive Pay or VSIP – four now authorized
- Offer Voluntary Early Retirement Authority or VERA
- Redirect private sector design/planning contract work to in-house
- Reduce enterprise geographic information system commitments
- Reduce library subscriptions
- Reduce number of cell phones, Blackberries, etc.
- Reduce number of government fleet vehicles
- Reduce number of participants and length of leadership off-site
- Reduce participation in MV Mississippi activities
- Reduce On-The-Spot (OTS) awards
- Reduce training budget
- Voluntary reduction in hours and leave without pay

generate some new money saving ideas for this fiscal year.

A number of suggestions generated by the task force and employees included revising the district's organizational structure. Based on guidance from the district commander, a separate task force will be started to look at these suggestions in more detail. "These could allow the district to realize cost savings in fiscal year 2005 and beyond," said Lisa Hedin, the project management chief, branch A, and leader of the budget task force.

"Our task force looked at initiatives that could realize an immediate savings this fiscal year," said Hedin. "The next task force will

be seriously looking at all of the positions in the district in regards to coming up with the right structure of the district, also known as the MEO or most efficient organization."

The union is also involved in this budget issue. "We are working together with management to try to solve this issue," said Bob Stone, the union secretary-treasurer who has been representing the union at the budget task force meetings for its president, Dean Otterson. "The union is concerned about the employees who have been laid off," said Stone.

There will be a mid-year operating budget update, looking at both income and expenditures, in March. O'Hara said, "This will give the

senior management team a clearer picture of how the cost cuts we have made so far affect the budget and what cost cuts we have to implement for the rest of fiscal year 2004."

Budget task force

- Lisa Hedin, leader
- Kevin Baumgard
- Tom Crump
- Liz Dvorak
- Dave Himmerich
- Mike Knoff
- Mike McGarvey
- Gary Nelson
- Jim Peak
- Cathy Vanatta
- Dean Otterson
- Bob Stone

District keeps sewage out of Mississippi River

By Shannon Bauer

The St. Paul District awarded Holte Contracting, of Little Canada, Minn., a \$516,681 contract last November to protect an 18-inch sanitary sewer pipe along the Mississippi River in Brooklyn Center, Minn.

The project includes placing riprap along the shore of the Mississippi River near River Mile 861 to prevent 750 feet of Brooklyn Center's 18-inch sanitary sewer pipe from breaking.

If such an erosion control project was not built, the sewer pipe would be at risk during spring runoff. If the bank were to erode, the pipe could break, causing sewage to enter the river and causing the loss of sewer service to many Brooklyn Center residents.

The city of Brooklyn Center is the non-federal sponsor for the project and will contribute 35 percent to the total cost of the project.

Construction began in December and will be completed during the winter season. Final site grading and the planting of vegetation will occur next spring.

The recipient of the Corps' Brooklyn Center contract, Holte Contracting, is a woman-owned, small business.



Photos by Robert LeMonds

Jeff Pfannes (left), St. Paul District safety officer, consults on safety with the contractor's safety manager, Dec. 5. There were no safety incidents on the project that protected a sanitary sewer pipe along the Mississippi River at Brooklyn Center, Minn. Construction is on-hold until spring 2004.

Bits and Pieces

Welcome

By Dan Yang

Warren LaPlante was recently hired as a district security and law enforcement officer for the St. Paul District. He retired last November from the Air Force after 20 years in the security and law enforcement field. His past assignments include North Dakota, South Dakota, Ohio, Korea, and two tours to Germany. In his last position, he worked at Ramstein Air Base, Germany, where he oversaw the installation's Antiterrorism and Resource Protection programs and all the Security Forces support functions. He also has experience in the Middle Eastern countries of Saudi Arabia and Qatar. He has a bachelors degree in criminal justice from Park University, Parkville, Mo.

Mike McGarvey was recently hired as chief of logistics management at the St. Paul District Office. He will be overseeing the district's transportation, maintenance and supplies. He received an bachelor's degree in communication arts from the University of Wisconsin-Madison and a graduate degree in human resource management from Chapman University, Orange, Calif.

Tom Mattis was recently hired as resource manager at the Lake Traverse field office, Wheaton,

Minn. He will be responsible for operations, maintenance and programs at the site and administrative and supervisory duties related to management of the site. He received a bachelor's degree in resource management from Mankato State University, Mankato, Minn. In 1992, he started working with the Corps as a co-op

student at Lake Winnibigoshish and Leech Lake in northern Minnesota. He has worked in the New England District at Hop Brook Lake and the Cape Cod Canal since 1994.

December 2003 Employee of the Month

Liggett demonstrates versatility

Perry Tobin, construction representative, nominated Tricia Liggett as December's Employee of the Month to recognize her conscientious approach to work and her dedication and commitment to the people and missions of the Corps of Engineers.

She is the project engineer for Crookston stage two. She has built such an excellent partnering relationship with the city of Crookston, Minn., that when the landslide occurred in Crookston below Highway 2 last August, the Corps was among the first outside agencies the city called. (See "Corps responds swiftly to Crookston landslide," *Crosscurrents*, Sept. 2003.)

In addition to helping map this unstable ground, Liggett conducted numerous media interviews, promoting an excellent perception of the

Corps. She also wrote several articles for *Crosscurrents* and volunteered to be the public affairs office representative in the northern Red River Valley for the St. Paul District.



Photo by Jon Lyman

Tricia Liggett accepts the December Employee of the Month honors from Lt. Col. Tom O'Hara, deputy district commander.

She staffed the St. Paul district public affairs office for a week while they attended training.

In addition to volunteering for public affairs, she also supported the Federal Emergency Management Agency

in Illinois last May on the Corps' project response team that provided temporary housing for victims of wide-spread tornado damage.

She also helps others in the Western Area Office, Grand Forks, N.D., resolve computer problems or with managing their administration burden.

Finally, she has expressed caring about the impact of significant personal events in the lives of her co-workers through gifts of flowers.

February is African-American Black history month