

## Before the Flood of 2001

After the Flood of 1993, the District developed a model program for how the Corps interacts with levee districts.

Because of the program, the flood area organization is now more structured and in-tune with the area levee districts. This program has made the flood area engineers the central point of contact for levee districts along the Mississippi, creating one door to the Corps.

Flood area engineers are now involved with communities through the entire process from levee inspections to assistance during times of high water. Corps support during high water has been improved considerably, because the same flood area engineers also inspect levees during non-flood events.

Having flood area engineers specifically assigned to each levee district and working with the communities all year long, has allowed communities to develop a relationship with their flood area engineers.

This system has received an exemplary rating from its customers, the levee districts, and has become a model for other emergency management offices throughout the Corps.

The District's Chief of Emergency Management, Terry Stieger, has been the major proponent of changing this way of doing business.



Chief of Engineers, Lt. Gen. Robert Flowers, receives a briefing from District Engineer, Col. William Bayles, shortly before being interviewed by area media at the Bettendorf, Iowa, flood wall.

"Coordination and teamwork really define my guys," said Stieger. "There comes a time when a supervisor hits a level of trust with his crew, and because of the continued teamwork and dedication, I hit that level of trust long before the flood hit this area."

## Behind the scenes

On April 15 headlines began to read, 'River hits flood stage,' while District personnel were already well into crisis mode.

By April 18, flood crest projections by

the National Weather Service had been raised to a crest of 21.5-22.5 feet in the Quad Cities, putting the area within a sliver of the 1993 record.

Scenes from the 1993 flood raced across the television sets of America, while District employees officially put the Emergency Operations Center into 24-hour operation.

District surveyors marked buildings along River Drive at 20 and 23-foot flood levels to guide the workers who placed an initial 55,000 sandbags in an effort to keep water out of downtown buildings.

Corps' Lock and Dam personnel up and down the Mississippi River had already begun pulling motors and limit switches in gate pits, as well as sandbagging like the hundreds of other communities along the river. In the end, personnel from each of the District's 12 locks and dams put forth a tremendous effort.

Davenport business owners speak with Flood Area Engineers, Michael Barndollar and Tom Kirkeeng, Engineering Division, to make sure their flood fighting efforts met the Corps' recommendations for proper levee building techniques.



The April 18th Dubuque Telegraph Herald documented Lockmaster Leonard Ernst, Lock and Dam 13, as saying, "We hope the predictions are off by six inches or so, but they're talking more rain, and it all matters when the levels are this close."

And went on to quote Bill Gretten, Operations Division, as saying, "1993 is still pretty fresh in our minds - we learned a lot from that flood. Now we know what to do at each stage, what measures to take to flood-proof our buildings. We are sharing new ideas up and down the river, too."

Those ideas took the form of numerous District flood area engineers scouring the banks of the Mississippi and coordinating proper flood-fighting techniques with people who live in the communities threatened by the swelling river.

"The Corps of Engineers is working with us," said Lisa McCluskey, Moline, Ill. community-relations coordinator.

"They've been out inspecting sandbags, dikes and residences of River Drive." - Rock Island Argus/Moline Dispatch, April 20.

### **Logistics anything but a nightmare**

Preparation and coordination are two words to use when summing up the efforts at LeClaire Base, LeClaire, Iowa, and Quincy, Ill.

Through the hard work of personnel at both sites 1,523,600 sandbags, 574 rolls of plastic sheeting, and 61 pumps were dispersed to cities and towns along the river to fight the flood.

### **Chief of Engineers Surveys Flood**

The Chief of Engineers, Lt. Gen. Robert Flowers, came to the Quad-Cities April 22 to assess area flood damages and to discuss flood-fighting procedures with city officials.

Flowers walked the Bettendorf levee and spoke to the media about the federal, state and city flood-fighting successes to date, upcoming challenges the flood was expected to bring, and the Corps' stance on Davenport's decision to not have a floodwall.

The April 23rd Quad-City Times

printed: "As 1.8 million gallons of water passed by him every second, he said the decision to build a levee is a local one. Davenport is the only major city on the Upper Mississippi River without a flood protection system. He called the efforts in Davenport and other communities without a permanent floodwall 'heroic.'"

"It is an affirmation of the spirit of the community," he said.

Flowers also addressed the District's flood efforts.

"It's excellent, obviously ... very well done," said Flowers. "The public works directors and everybody else associated with this has praise for the Corps and what the District has been able to do here. It's been really, really good. It's a model, and a great example of how things should be done."

Brig. Gen. Edwin J. Arnold, Jr., commander, Mississippi Valley Division, accompanied Flowers during his visit.

### **Innovative Flood Fighting**

The Burlington Hawk Eye reported May 1, that Mike Pieper, Wever, Iowa, has a big stake in the stability of the Green Bay levee system as a Lee County landowner and a levee-district board member.

To fight the high water this spring, Pieper designed a tile system, similar to those used by farmers for decades, to drain water away from the levee in hopes of avoiding another disaster.

He installed the unprecedented

system as a test in two locations April 24.

"We started doing this at the part of the levee where we were having the worst seepage problems, and it dried it up within a few days," Pieper said. "If you would have come here last week, you would have sunk up to your knees. Now you can walk on top of it."

In addition, Flood Area Engineer Mark Clark's expertise was called into action near Niota, Ill., April 27, to a levee after it was discovered that a softball-size boil spotted in the levee a week prior had grown to the size of a basketball in only 48 hours. Clark said taking preventative measures and creating a sand and gravel base seemed to be working and the boil activity was slowing down.

"That's what we want to see," Clark said. "Continued growth of the boil could cause an undermining of the levee system, but we feel we've got the situation pretty well remedied." - Burlington Hawk Eye, April 29

### **Collective Sigh of Relief**

Today, the Mississippi River is below flood level at almost every site within the Rock Island District. In the end, the flood will cost the District more than \$12.9 million in repair and cleanup costs, but like almost anyone that lives in a river community, District employees are relieved the flood is over. 🙌

