



Vessels and personnel from the U.S. Army Corps of Engineers played important roles in recovery operations after the I-40 bridge collapse of near Webbers Falls, Okla. (Photo courtesy of Tulsa District)

Corps people, boats help at I-40 bridge collapse

By Alicia Embry
Tulsa District

The Memorial Day weekend turned disastrous on May 26 when the towboat *Robert Y. Love* guiding two empty barges up the Arkansas River veered 300 feet from the navigation channel. One of the 490-foot barges slammed into two support piers on the west side of the Interstate 40 bridge near Webbers Falls, Okla.

Within seconds, 580 feet of the highway bridge collapsed, sending tons of concrete 60 feet into the churning waters below. Ten vehicles plunged into the river, killing 14 people and injuring five. The accident was the third deadliest of its kind in the nation's history.

Tulsa District employees rushed to the scene and assisted rescue and recovery efforts that lasted four days.

The bridge will take six months to rebuild and cost more than \$10 million, according to the Public Affairs Office of the Oklahoma Department of Transportation.

Day-by-day account...

By Capt. Robert Corrales
Tulsa District

(Editor's note: This is a day-by-day account of the events following the collapse of the I-40 highway bridge in Oklahoma. The Tulsa District employees mentioned in this article are just a few of those who worked heroically at and behind the scene.)

May 26

Sallisaw, Okla.

It was a typical Sunday morning on a Memorial Day weekend. Anglers along the Arkansas River enjoyed a fishing tournament, while the forecasted rain was just a hint on the horizon. Two empty barges lashed side-by-side guided by the towboat *Robert Y. Love* were making their way up the Arkansas River.

Then marine radio traffic at Tulsa District's McClellan-Kerr Navigational Office suddenly became frantic. Fishermen upstream of the I-40 Bridge heard a

loud bang followed by crashes, and saw a huge puff of smoke and dust. Witnesses could not believe their eyes as the Interstate 40 highway bridge collapsed and cars careened into the water. Fishermen raced their boats to the scene, yelling to people on the banks, "Call 911!"

Lock operator Chris Drew looked at the clock — 7:48 a.m.

Tulsa District teams assemble

At Tulsa District Headquarters, John Roberts, Deputy District Engineer for Project Management, notified the District Engineer, Col. Robert L. Suthard Jr., of the bridge collapse. Ralph Hight, Chief of Operations Division, was dispatched to Webbers Falls, Okla., to assist Dennis Johnson, the project manager of this disaster.

Johnson was in his pool when he got the call. Still wet, he grabbed a shirt and raced to the office to notify his crew and get radios. He planned to get a survey boat,

New moves will streamline gov't

Article by Bernard Tate
and George Halford
Headquarters
Artwork by Jan Fitzgerald
HECSA

President George W. Bush is serious about making the federal government more streamlined and efficient.

To do this, the president established an agenda for the federal government. Two of the agenda items deal with strategic management of employees and competitive sourcing. Working in concert with the Federal Activities Inventory Reform (FAIR) Act of 1998, he plans to increase government efficiency and effectiveness while reducing the cost and the distance between citizens and decision-makers.

A key part of this initiative is a five-year program to conduct competitions of commercial activities performed by the government. The objective is to produce efficiencies and savings whether the functions are ultimately performed in-house or by the private sector.

To meet the president's agenda, the Office of Management and Budget (OMB) directed that by the end of fiscal year 2003 all agencies of the federal government must...

- Complete public-private competitions, and/or
- Direct conversion of some tasks to contract performance, and/or
- Implement other privatization initiatives, ...for at least 15 percent of the reviewable positions in their FAIR Act inventory.

"All federal agencies are required to take on these initiatives, in accordance with the directives from OMB," said Ray Navidi, the U.S. Army Corps of Engineers' program manager for the initiative. "In previous years, some agencies haven't been doing as much as required, so OMB and this administration tied compliance into the budget of the agencies. And that got people's attention."

"The USACE Strategic Workforce Initiative is the Corps' response to the President's management initiative and the requirements of the FAIR Act," Navidi said. "The FAIR Act requires an inventory of all the commercial-in-nature positions in federal agencies. A function is considered commercial-in-nature if it is or can be performed by the private sector and if the agency head (in our case the Army) determines it is not inherently governmental. A list of these activities is compiled and submitted, in our case, through the Department of the Army to DoD and then to OMB."

The administration's goal during the next five years is to review 50 percent of all positions identified in the inventory that are not inherently governmental for competitive sourcing.

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Insights

People make 'America, the Beautiful'

By Col. Lowell Moore
Chaplain, U. S. Army Corps of Engineers



America the beautiful. Now there's an understatement! Since we're blessed to live in such a beautiful country, it might be appropriate to pause during the month of our nation's 226th birthday to reflect on that statement, "America the Beautiful."

I've been in all 50 states, and I've seen the beauty of America everywhere I've been. I've seen a sunset in Sarasota, Florida, so beautiful that everyone broke into applause when the sun finally dipped into the Gulf of Mexico. I've lost track of the number of times I've been humbled by the majesty of the Rocky Mountains. I've felt the presence of God while trying to fathom all the color of an Ozark autumn. I've been inspired by the indescribable displays of the aurora borealis in Alaska.

I could go on and on, but I'll stop trying to describe the beauty of America because I don't have the words to do justice to America's beauty, and because I don't need to make a case for the beauty of America. Every American has experienced a time when they have been overwhelmed by the beauty of our land, and could build their own case for the beauty of this country.

As members of the U. S. Army Corps of Engineers, we have a special right to take pride in the beauty of our nation, because the Corps is actively involved in keeping

America beautiful.

Did you know that the Corps organizes an annual volunteer clean-up day for the Blue Marsh Reservoir in Pennsylvania? Thanks to the Corps, you can now catch and eat the stripers that have returned to the New York Harbor because the harbor is the cleanest it has been in 100 years. The Corps has restored the once-decimated Tybee Island Beach in Savannah, Ga., and now it's a beautiful beach enjoyed by several thousand Americans each year. Due to the Corps' stream renovation effort, one of the streams in Washington State that hadn't seen a salmon for almost 50 years had a salmon run this year.

And those are just a few of the several hundred Corps projects that are aimed at keeping America beautiful.

However, as beautiful as America is, the greatest beauty of America is not seen in its geography. The *real* beauty of America is

in its people. I'm not talking about the beauty that can be displayed in a beauty pageant. I'm talking about the beauty that's seen in the way that Americans respond with their time, talent, and money when there's a need. This beauty is seen in the way Americans responded to the crisis caused by the events of 9/11. It's seen in the way the flags, ribbons, and bumper stickers have drawn us together. It's seen in the generous way that Corps members give to the Combined Federal Campaign.

Throughout our history, caring Americans give millions to hurting people inside and outside of our borders, and they continue to do so. A list of all the things Americans do to help others would literally be endless, but it would show the real beauty of our country.

There are a lot of beautiful people in America and, again, the Corps has reason to be proud because the Corps has more

than its share. As I travel around the Corps of Engineers, I see the beauty of caring people everywhere.

Every time I see a Corps member donate leave to help a fellow Corps member, I'm more inspired than I am by the beauty of the aurora borealis. Every time a member of my Corps family sends me an e-mail to tell me that he or she is praying for me, I'm far more humbled than I am by the majesty of the Rocky Mountains.

While I was in Philadelphia, I learned about a member of our Corps family who was expecting twins. When she lost the twins, there was an outpouring of love and concern that was so beautiful it made a Sarasota sunset seem pale.

Yes, America is beautiful and the U. S. Army Corps of Engineers is doing its share to keep it that way. In doing so, the Corps is also insuring that future generations will be able to look at our country, and say, "America the beautiful".

I encourage the wonderful people in the Corps to stay concerned about the beauty of our country and continue to take care of each other.

You are beautiful! (But, I don't recommend you get on a catwalk.)

(The views expressed in this article are those of the writer and do not reflect the official policy or position of the U.S. Army Corps of Engineers, the Department of the Army, the Department of Defense, or the U.S. government.)

Commentary

Corps helps make tower cranes safer

By Gary Andrew
USACE Professional Development Support Center

One never knows the impact his or her job has on the world at large.

During a recent visit to Headquarters in Washington, D.C., I stayed at the Red Roof Inn on the next block up from the General Accounting Office Building. After working budget issues all day, it was very enjoyable to dine at a local Chinatown eatery.

As I walked back to the hotel, I heard a noise from a construction site at 6th and H Streets. Looking up, I saw a huge tower crane rising from the ground. I was instantly curious about this mechanical wonder; I had first seen them while living in Germany with the U.S. Army.

I walked to the site entrance and watched with amazement as the crew used a large hydraulic crane to carefully swing the sections of the tower crane into place. The equipment looked new and was well maintained. The crewmembers were all wearing safety gear, and moved their vehicles and equipment with precision.

My curiosity attracted the attention of the foreman directing the assembly operation. We introduced ourselves; he was Gary Hileman of United Crane Rental out of Baltimore, and he was proud to tell me about the tower crane.



Commercial crane companies use the Corps' *Crane Safety Manual* as a standard reference. (Photo courtesy of Gary Andrew)

I told him that I had first seen these cranes in Germany, where they are known as the "National Yellow Bird of Germany" since they dominate every German city skyline, and Gary assured me that this particular yellow bird was also from Germany!

As we talked, Gary learned that I work for the U.S. Army Corps of Engineers as Chief of the USACE Professional Development Support Center, and that we of-

fer a popular course in crane safety. Gary said that he knew about the crane safety course, and about the *Crane Safety Manual* which is part of it. United Crane Rental uses the manual as the standard reference for their operations.

Gary said he had great respect for the manual's accuracy and completeness, and added that the *Crane Safety Manual* and the Corps' safety standards were widely used by building contractors in both the private and public sectors.

This chance meeting at a private construction site in downtown Washington, D.C., reminded me of the importance of the work we all do every day in support of the Army and our nation. It made me proud to be a Corps employee, and to be responsible for the training program that disseminates crane safety, and multitudes of other technical and operational information to USACE employees, who in turn share their knowledge with the private sector and make the construction industry safer for all.

(Gary Andrew is the Chief of the USACE Professional Development Support Center.)

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Letters to the Editor



Hatch Act violation?

I enjoy reading the *Engineer Update* very much. I must, however, ask a question concerning a recent article regarding public service. Alicia Gregory's article about Mark Phillips from Charleston District in the May issue indicates that he is an elected city councilperson for the city of Goose Creek, S.C.

I very much applaud Mr. Phillips' public service. I am concerned, though, that his status as a federal employee (Hatch Act) restricts his ability to hold any elected public office.

I actually hope I am *wrong*, as I have an interest in politics myself. But, if I am correct, I think it is important we don't promote a violation of this law, however well intended.

Ray Coughenour
Deputy District Engineer
Chicago District

I referred your question to Ken Powers in the Office of Counsel here in Headquarters.

Ken called the legal office in Charleston District and learned that the elections for city council in Goose Creek are non-partisan. Therefore, the Hatch Act does not prohibit Mark Phillips from holding office as a member of that city council.

The Hatch Act only prohibits federal employees from taking part in partisan politics, that is, any activities that benefit a political party (Democrat, Republican, Libertarian, etc.) So you, as a private citizen, can run for and serve on, say, a local school board or town council, as long as it is a non-partisan election.

Always consult with your local Corps Office of Counsel before becoming involved with any political activities, to make sure that you do not run afoul of the Hatch Act.

Success story

I work in HQ in the Environmental Division of Military Programs. I want to thank you for publishing Mike Tharp's article in the May *Engineer Update* addressing the work that Los Angeles District is performing in the Navajo Nation. This project is a success story weaving the Chief's strategic goals of People, Process, and Communication.

It's a glowing tribute to a project manager using our corporate resources to serve a community, even when those resources exist outside his division boundary!

Under the project manager's leadership, the team is successfully working with other federal agencies, as well as various components within the Navajo Nation. This is project management at its finest.

And most important...the team's quest to seek first to understand the Native American nation they are serving and the culture and customs they need to respect.

I hope to see more articles of this caliber in the *Engineer Update*.

Nancy Porter
Headquarters

Ten good years

I just read the June 2002 issue of *Engineer Update* and your interview with Mike Grunwald of the *Washington Post*. I absolutely loved it. If an article shows up in the *Post* on what the Corps is doing wrong, Grunwald's name can't be far behind.

In your last question, "Now that you are a Corps expert...", his response sounds like he didn't miss a beat.

I agree with Grunwald on what is the best thing about the Corps — the people. I will be honest and say that at times we get potential projects to evaluate that leave us scratching/shaking our heads, but as professionals we have the responsibility and are empowered to evaluate issues/solutions and make an unbiased determination. Anything less is unacceptable.

I am a design team leader here in Baltimore District, and on a day-to-day basis I work with smart, knowledgeable, and professional staff who know that Job One is doing quality work, finding the best solution, taking care of human health and the natural environment, using taxpayer dollars wisely, and working to make a difference.

Yes, there are things that the Corps can improve on or change, but there are also so many things that we do right day after day, and projects that make a difference, even if it's in a small corner of the world.

On Aug. 3 I complete 10 years with the Corps. I can honestly say that I still love the work I do, and love being a representative of the Corps. I look forward to many more.

Maria de la Torre
Baltimore District

Commentary

Do the right thing for the right reason

Article by Sunday Pearson
Sacramento District
Artwork by Jan Fitzgerald
HECSA

In 1990, Steven Spielberg directed the movie "Schindler's List." See it if you haven't already; it's the compelling true story of a wealthy businessman who, at great personal risk, saved hundreds of Jews from the Holocaust during World War II.

At the end of the movie, Oskar Schindler says farewell to the Jews he saved from certain death. Schindler looks at his shiny, luxurious automobile for a moment and says, "I could have done more. I should have sold this car. It would have been 10 more if I sold this car. This pen, it would have been five more... This ring, the gold in this ring, I could have gotten two..." As the scene ends, we see this confident businessman reduced to tears of remorse.

I confess that I've had "Schindler moments," missed windows of opportunity when I could have made a positive difference in someone's life but chose not to, or perhaps did but only for personal gain. It's disconcerting how those seemingly insignificant moments invade my conscience and haunt my memory. There's nothing worse than regret...

Several years ago, Real Estate Division was located at the corner of 5th and J Streets here in Sacramento. The K Street Mall was close by, so I used to window shop during my lunch break. On one of my walks, I vividly recall a young man asking me for money. He stood just outside the front door of Macy's, and he said he was hungry. The memory is so vivid, I still recall the sound of his voice.

For whatever reason, I kept walking even though a voice in my head screamed for me to stop and give him some money for food. For several months, I looked for him, hoping for an opportunity to do the right thing. I never found him, but I *did* pray that I would get another chance.

Many months later, I did.

There used to be a sandwich shop on the mall called Tomatoes. I was there one day buying lunch when I noticed a disheveled man roaming from table to table, eating



food left by others. Consumed with guilt for not doing something in the earlier situation, I was determined to redeem myself. So I asked him if he wanted a sandwich. He said that he did, and I asked him to wait at a table while I ordered it for him.

But I picked the cheapest sandwich they had — no cheese, no chips, no drink. After all, no need to invest too much money just so I could sleep at night! I walked over to his table and ceremoniously gifted him with my lunch. Secretly, I hoped everyone around him saw my good deed!

With great anticipation, I returned to my own table and waited anxiously to "feel good about myself." Truth was, I felt *worse*. I knew, deep within my heart, that I had just blown my second chance to prove my humanity! I had done the right thing, but for the wrong reason.

I grieved for months. Again, I wanted yet another opportunity to somehow redeem myself.

One winter evening, my husband and I stopped at the Lucky's Store on La Riveria Drive in East Sacramento. As I approached the entrance, from the shadows, a woman's voice whispered to me. Truthfully, it was a *whisper* because I barely heard her. Three silhouettes stood huddled

together for warmth. One was a woman holding an infant and the other a man. The woman softly said that the baby needed food and would I please help? I almost fell to my knees from sheer thankfulness for another opportunity.

My heart wept as this precious young woman followed me into the store while her husband stayed outside and held the baby. She needed diapers; she got diapers, and not the generic, either. She needed formula; she got the brand of formula I used for my own daughters. Oh, she *tried* to pick the less expensive variety of everything, but I wouldn't have it; no sir. She got the best the store had.

I didn't care *who* knew what I was doing; I didn't care *what* it cost because I finally "got it." That evening, for the first time *ever*, I gave unselfishly. No publicity, no hidden agenda, no strings attached. Straight from the heart.

After my purchases, I sat in the car with my husband and watched the three of them slowly walk away, still huddled together, into the night toward an apartment complex a short distance from the store. Perhaps it was the aura of the streetlight that made me feel as if I had just been visited by an angel. Who knows?

I wanted to explain to my husband what happened, but I was too emotional and I needed time to sort it out.

I was never the same person after that evening.

I'm grateful that I had more than one chance to learn the real meaning of charity. No one is perfect at it — not me, not even Oskar Schindler. A quick read through a couple of websites shows that Schindler was a black-marketer, a war-profiteer, and an alcoholic playboy.

And no one knows exactly why Schindler did what he did; he was not one for baring his soul. But Schindler still did the right thing during World War II, and saved about 1,200 lives from the Nazi death camps.

Sadly, I experience more failure than victory when it comes to living out the ideals I set for myself. I blow it all the time! But hear me on this — momentary failures aren't nearly as important as the fact that we keep trying.

(The views in this article are those of the author and do not reflect the official policy or position of the U.S. Army Corps of Engineers, the Department of the Army, the Department of Defense, or the U.S. government.)

Sing Out!

Corps Reservists sing at stock exchange, Yankees vs. Mets game

By David Lipsky
North Atlantic Division

June 14, Flag Day and the 227th birthday of the U.S. Army, will always be a special day for three Army Reservists in North Atlantic Division (NAD). On that day, Lt. Col. (ret.) Jim Reece, Master Sgt. Rick Albanese, and Master Sgt. Petronilo De La Garza sang at both the opening bell ceremony for the American Stock Exchange, and at the Mets vs. Yankees baseball game. The Armed Forces Network broadcast their performance.

Reece, Albanese, and De La Garza first met in the NAD Operations Center on the World Trade response team, but did not realize at first that they are all three singers, and have voices that blend well.

Reece's career began in 1968 at a military school in Alabama, and he served on active duty as a commissioned officer during the Vietnam era. He also served in Germany and in Korea for 12 years before leaving the Army to attend graduate school. He now works as the recycling coordinator for Okaloosa County, Fla.

"On Sept. 11, as I saw the news, I turned to my family and said, 'We're at war,' then went to the telephone and called Baltimore District, where I'm an IMA (Individual Mobilization Augmentee) and said 'I'm ready.'" He was assigned to NAD, where he filled the position of Operations Officer.

In 1981, Reece started singing in a small Tennessee church, and has sung ever since. When asked about performing on June 14, Reece said, "This felt wonderful. It was a special event for me as I retired from the Army, and one I'll remember for the rest of my life. I've served with outstanding civilians and soldiers as an Army engineer, and it was a terrific career choice.

"In a country that's looking for heroes, the American people need look no further than its first responders — the police, the firefighters, the servicemen and women serving today as we conduct this global war on terrorism," Reece added.

Master Sgt. Petronilo De La Garza works as a civilian supply systems analyst for the U.S. Army Tank Automotive Command in Warren, Mich., and is one of many Reservists called to active duty following the 9-11 attacks. De La Garza said that he reported for duty in New York and found that his assignment was to assist civilians in establishing the foundation for NAD's Emergency Operation Center.

"When we first got here there were a lot of misunderstandings between the civilians and our soldiers about what our position here would be," De La Garza said. "I tried to reassure them we were here to share our experiences as a supplement the Emergency Operation Center staff."

From 1971 to 1974, De La Garza was on active duty in the Army as a communication specialist working with radio, code, and teletype operations. After returning home, he joined the Army Reserves and has been a Reservist for 28 years. During this time, De La Garza held many jobs, from operations sergeant to first sergeant and trainer for an infantry training brigade.

De La Garza tells how three Corps soldiers came to sing "God Bless America" at Shea Stadium for the Army's 227th birthday.

"I was singing with the Fort Hamilton Chapel choir when a garrison public affairs specialist heard me one Sunday," De La Garza said. "The next day, my senior officer pretended to give me a tasker — sing 'God Bless America' during the seventh inning stretch on June 14. And I said 'Yes, sir!' In the beginning, no one else was involved; it was just me. But one day we were singing doo-wop songs in the office and I asked the other two to join me at the game. We each got a copy of 'God Bless America' and took the various parts. It came together the way I heard it in my head."

De La Garza said that one reason for singing at the ballgame was to have a positive impact on our nation's



Master Sgt. Rick Albanese (left), Master Sgt. Petronilo De La Garza, and Lt. Col. (ret.) James Reece sing at Shea Stadium. (Photo by Debi Albanese)

youth. "I wanted to show them examples of what you can be and how you can serve the nation," he said. "Patriotism is *not* dead. It was more important to show my family and friends we are not here for just the World Trade Center, but for much more. We had an opportunity to show that we are all contributing in our own ways."

Master Sgt. Rick Albanese comes from Ithaca, N.Y., where he works in the Plan, Design and Construction Division pipe shop at Cornell University. He enlisted in the Marine Corps in 1966 and was on active duty until 1968, serving the last year in Vietnam.

He started singing in the Ithaca High School Concert Choir where "I started out as a tenor and ended up as a bass." As an Army Reservist since 1976, he has held various positions — drill sergeant, first sergeant, a physical security NCO, and operations sergeant.

"The Army's 227th birthday celebration was an opportunity to represent the Army," Albanese said. "To say it was an honor and a privilege to sing and represent the Army on its birthday doesn't begin to come close to understanding the pride and respect I feel to have been asked to participate in this significant event."

On Sept. 14, Albanese got a warning order that he would report to NAD Headquarters to support the World Trade Disaster response. On Sept. 16, the orders were issued and on Sept. 18 he was in New York City.

While Albanese has spent more than 27 years serving with the military, he noted that his family also made significant sacrifices. "In my book, my heroes are my family who waited for Dad to return from drills and annual trainings, and never complained, but *always* had lots of hugs when I got home," he said. "It's simple — without their support, there's no way I could have given the effort that I did."

The World Trade Center response "was an opportunity to give back to my country all that it has given me, this mission working with the Corps of Engineers," Albanese said.

"The most overwhelming feeling that I felt at the American Stock Exchange and at Shea Stadium was pride because so many people thanked me for serving our country," he continued. "I could hear the thanks in their voices, see the sincerity in their eyes, and feel the appreciation in their handshakes and pats on the back. I've



Master Sgt. Petronilo De La Garza (left), Master Sgt. Rick Albanese, and Lt. Col. (ret.) James Reece sing at the American Stock Exchange. (Photo by Alan Rosenberg, American Stock Exchange)

never felt that what I've done in serving my country was something that others could not do. Nor do I believe that it was above and beyond the call of duty. It was just what had to be done, and I willingly did my best. All of my emotions culminated in the realization that I live in the greatest country in the world, serve in the finest Army on earth, and am part of a country that truly appreciates my contributions to peace and freedom."

All three Reservists agreed that the Army offers many ways to serve the country. Each said, "Be aware of the opportunities and challenges, and don't be afraid to step forward."

New Army hotel underway in Garmisch

Article and Photo
By Brian Temple
Europe District

The 330-room facility is pretty much an artist's rendering and a concrete foundation at this point, but come fall of 2004 it will be a \$50 million resort hotel at the base of Germany's Bavarian Alps. Europe District has embarked on a two-year project to build a premiere resort for the Armed Forces Recreation Center (AFRC) Europe in Garmisch-Partenkirchen for servicemembers and their families.

Peter Isaacs, Chief Operating Officer for the Community and Family Support Center in Alexandria, Va., said the new hotel would replace the antiquated, small, and inefficient existing hotels with a modern structure. It will have larger rooms, a fitness center, spa, wellness center, swimming pool, two restaurants, and a lounge.

"The Corps has been involved to some degree with AFRC projects in Europe, the Hale Koa Hotel in Hawaii, Shades of Green at Walt Disney World, and the Dragon Hill Lodge in Yongsan, Korea," Isaacs said. "We have a long history of successful partnership with the Corps of Engineers."

Partnering with AFRC engineers and leadership, the Corps is building the hotel in construction phases. Phase one, completed before the groundbreaking in May, was for a \$246,000 berm and perimeter fence.

"Phasing the work allowed us to do excavation and start construction in the spring in order to make our completion date of April 2004," said Europe District project manager Heidi Meissner.

Phasing work is a fairly common German practice, Meissner explained, and is similar to American design-build. It speeds up the start of construction concurrent with detailed final design planning.

"By completing the major structure and getting the roof on during the summer, workers will be able to continue construction inside during the winter months," Meissner said.

The completion date in April 2004 will give AFRC staff



The new facility under construction in the Bavarian Alps (right) will be a 330-room room hotel for the Armed Forces Recreation Center in Garmisch-Partenkirchen (above). (Artwork courtesy of Europe District)

about six months to equip and prepare the hotel for its fall opening. The existing hotels, two in Cheimsee and two in Garmisch, were built by the Germans during World War II. The U.S. forces took them over as recreation centers after the war.

Thousands of present and former U.S. servicemembers and their families have fond memories of those old hotels, but the Corps is building the consolidated facility to bring the level of comfort and service up to AFRC's current standards.

"We're extremely excited about giving guests so many options for relaxation and recreation in one facility," said Richard LeBrun, general manager of AFRC, Europe.

The older hotels at Lake Chiemsee and Garmisch-Partenkirchen will remain fully operational during construction. Reservations can be made on-line at www.armymwr.com/portal/travel/recreationcenters.



Brownfield clean-up boosts Calif. town

By Cindy Fergus
San Francisco District

East Palo Alto, Calif. is a small city of 33,000 people living on 2.5 square miles not far from San Francisco. Although people have lived in East Palo Alto since before the 1700s, East Palo Alto did not incorporate as a city until 1983, and has struggled since then with organizing its city government.

The long habitation of East Palo Alto has left scattered high concentrations of a variety of contaminants within the city boundaries, and left a lingering perception that the city is more contaminated than it actually is. Additionally, East Palo Alto has struggled hard to significantly reduce its crime rate, one of the highest in the nation in the early 1990s.

Not surprisingly, East Palo Alto residents have not fully enjoyed the economic prosperity of its neighboring communities in Silicon Valley. East Palo Alto has the highest levels of unemployment and poverty in San Mateo County, and the lowest median income.

However, the city is moving forward to revitalize the community by cleaning up and redeveloping its brownfield areas. A brownfield is an abandoned, idled, or underused industrial or commercial facility where expansion or redevelopment is

complicated by real or perceived environmental contamination.

The focus of East Palo Alto's effort is the Ravenswood Business District and the adjacent Four Corners redevelopment area, totaling about 135 acres. The city has developed a strategic plan and design for this area, which will be a mixed-use development and employment center with up to two million square feet of commercial and high technology offices and light manufacturing. New, medium-density housing is also planned nearby. The city will seek to promote the location of environmentally sensitive businesses, the use of green building practices, and development that enhances and protects the beauty of adjacent resources such as San Francisco Bay, wetlands, and open space areas.

The city expects that redeveloping the entire Ravenswood Business District will create 4,000 new jobs and generate more than \$1 million per year in new tax revenues.

The U.S. Army Corps of Engineers can provide engineering, environmental, construction management, and related services to federal and non-federal agencies through its Interagency and Intergovernmental Support Program. Under this program, San Francisco District has temporarily assigned Debra O'Leary to East

Palo Alto to assist with its brownfields redevelopment. The Environmental Protection Agency (EPA) has designated East Palo Alto as one of its Brownsfields Showcase Communities. This designation enables East Palo Alto to leverage federal assistance.

The Corps can help East Palo Alto's Ravenswood redevelopment efforts succeed in several ways. East Palo Alto seeks continued assistance from the Corps in assessing and cleaning up environmental contamination. In addition, East Palo Alto needs assistance in building drainage, sewage, reliable water systems, and other infrastructure improvements. The efforts of O'Leary and Lily Lee, who is employed by the EPA and also works in East Palo Alto, have been crucial in identifying appropriate federal programs to address these issues, and in working with the staff of other federal agencies.

"Debra is a fantastic asset to East Palo Alto," said Lee, Environmental and Economic Development Coordinator for East Palo Alto. "Her knowledge of the biology of the region and potential ways to improve the infrastructure, as well as her creativity and understanding of how the Corps works, are a great benefit to the economic development of our brownfields."

The city is also working to prevent the dangers of flooding. Large portions of

East Palo Alto, including portions of the Ravenswood Business District, have experienced severe flooding from the adjacent San Francisquito Creek and San Francisco Bay, making flood damage prevention a top priority.

Flooding along San Francisquito Creek is difficult to address because the creek flows through several cities and forms the border between San Mateo and Santa Clara counties. To address flooding issues, the two counties and the cities of Palo Alto, Menlo Park, and East Palo Alto have formed the San Francisquito Creek Joint Powers Authority (JPA). O'Leary, on behalf of East Palo Alto, is supporting the JPA in developing a long-term watershed plan that addresses the flooding in East Palo Alto and other municipalities while protecting native populations of fish and wildlife.

"I'm getting a really good sense of what local sponsors go through when developing a civil works project," said O'Leary, who is on loan from San Francisco District's Regulatory Branch where she is a project manager. "I'm really excited about that. By learning more about the civil works process, I can be the voice of East Palo Alto and San Mateo County to the JPA."

(Debra O'Leary contributed to this article.)

S. Dakota land transfer called 'monu- mental'

By Sheri Hronek
Omaha District

"Monumental" and "unprecedented" describe many Omaha District projects, but perhaps none quite as much as the Title VI land transfer in South Dakota.

The Title VI land transfer, mandated by Water Resources Development Act 106-53 in 1999, will transfer about 91,178 acres of recreation areas and wildlife lands from federal ownership to South Dakota. Included are sites at Lake Oahe, Lake Sharpe (Big Bend), Lewis & Clark Lake (Gavins Point) and Lake Francis Case (Fort Randall).

Of the 123 recreation areas at the reservoirs, 63 transferred to the state last February. Nine were leased in perpetuity to the state this year. The remaining 51 are on reservation lands, or outside South Dakota. Reservation land will transfer to the Department of the Interior and Bureau of Indian Affairs and held in trust for the tribes in perpetuity.

Congress required the transfer be made by last Jan. 1, so the environmental impact statement (EIS) and a record of decision (ROD) had to be completed by last Dec. 31. The Corps' tasks included conducting an EIS, preparing data and documents, and the actual transfer to the South Dakota Department of Game, Fish & Parks.

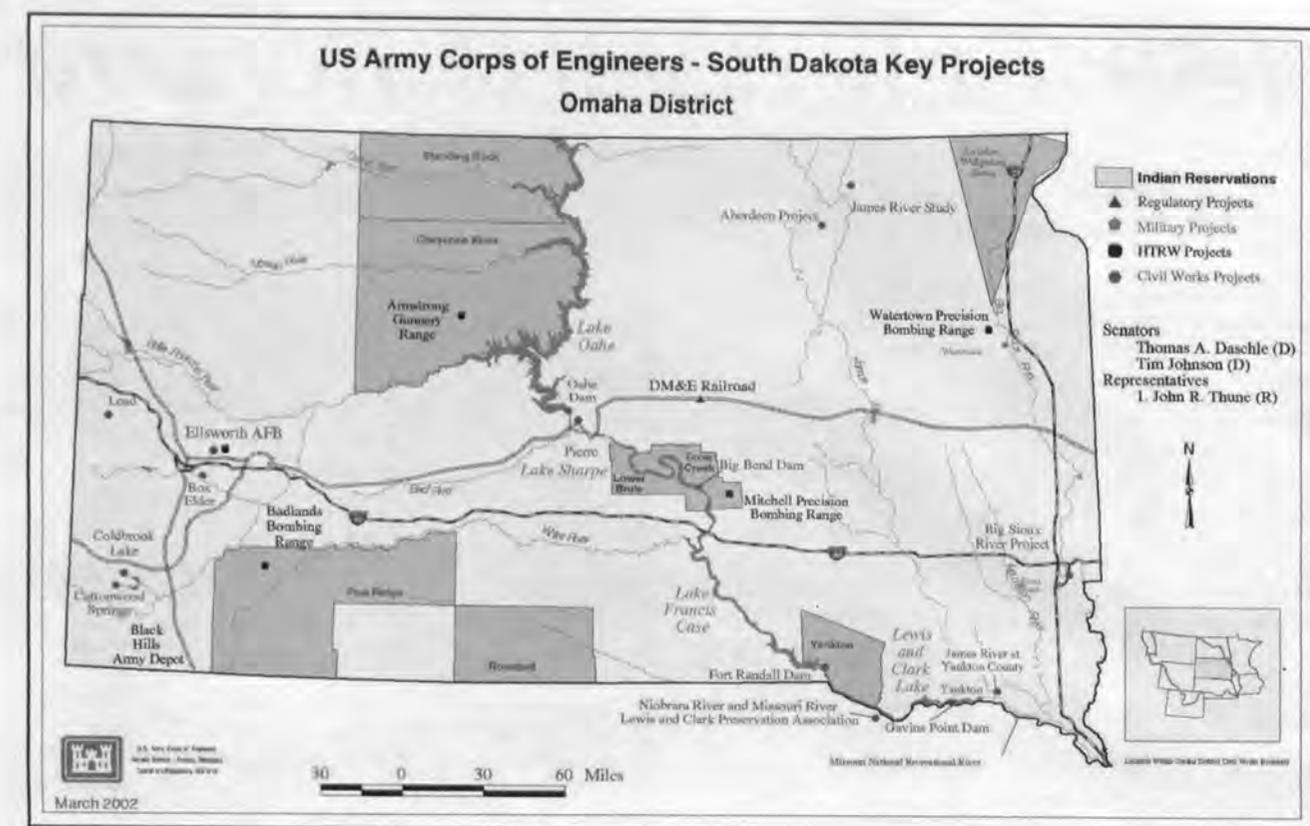
Environmental impact statement

The complexities of the land transfer were intensified by the schedule. "We had a preliminary draft of the EIS in three months, which is unheard-of for a project of this complexity," said Candace Gorton, Chief of Environmental, Economics & Cultural Resources. "Usually it takes nine months to a year to have a draft."

Endangered species were one of several issues addressed in the EIS. Transferring land to a state normally means the lands would lose the protection of the Endangered Species Act, Gorton said. "That was resolved through a memorandum of agreement between the Corps and the Fish and Wildlife Service, which identified what activities the state would undertake to avoid affecting endangered species."

Another issue was possible impact to cultural resources or archeological sites. "The tribes felt those lands would lose the protection of federal cultural resources laws once they transferred to the state," Gorton said. "But the legislation had a provision that the three main cultural resources laws would continue to apply to the land after it transferred, so the Corps was to maintain responsibilities for compliance for those laws."

Early in the process, several tribes opposed the legislation and sought an analysis of existing treaties to determine whether the land transfer violated any treaties with the federal government. The Corps commander



signed the ROD last Dec. 21.

Land transfer

Martin Timmerwilke, a recreation planner who coordinated operations for the transfer, feels that South Dakota will do a good job. "According to the legislation, they have to manage the land in perpetuity for recreation and wildlife management. It doesn't change the purpose of the land."

The Corps' involvement with the lands does not, however, end when the transfer is complete because of specifications in Congress's mandate. For one, some areas by the dams will not transfer. "The federal government needs to own them for dam safety, protection, and instrumentation," Timmerwilke said. "We'll retain the land, but lease the recreation land to the state in perpetuity."

"We had to identify the recreation boundaries, the recreation areas, all leases, the boundaries for areas transferring, and boundaries for areas being leased," Timmerwilke added. "The lands in the boundaries of the Cheyenne River Sioux Tribe, and lands in the boundaries of the Lower Brule Sioux Tribe, transfer to the Department of the Interior to be held in trust for those tribes."

The tribes take over the lands and management. Federal funds were set up for the state and tribe to use for the land. The land transfer to Interior for the Lower Brule Sioux Tribe was completed last summer; for the Cheyenne River Sioux Tribe before Jan. 1.

Court actions

In July 1999, the state requested that the Corps lease many of the recreation areas that would eventually transfer to it in fee title. An environmental assessment (EA) determined that this action would have no significant environmental impacts.

The recreation areas leased were reduced from the 54 to 22 and, in January 2001, three leases were executed with the state. On the day the leases were signed, the Crow Creek Sioux Tribe filed suit in district court to stop the leases and the eventual fee transfer of recreation areas and lands, arguing that the EA was not adequate.

As the arguments unfolded, the tribe's complaint turned from the EA to the EIS. They claimed that the Title VI statute set up an impossible situation. On one hand, the statute directed the Corps to transfer the recreation areas to the state last Jan. 1 but, on the other, it asserted that three cultural resource federal laws would apply to the state-owned lands.

To the tribe, this provision made the statute unconstitutional. The three federal laws are the National Historic Preservation Act, Archaeological Resource Pro-

tection Act, and Native American Graves Protection and Repatriation Act.

"A hearing was held in December 2001 on several pending motions," said Gary Henningsen, district counsel and the legal counsel to the project team. "But the judge focused everyone on the fact that the case was not so much on the lease actions, but on the transfer of the recreation areas."

The land transfer was completed Feb. 8 by handing over to the state 13 quit claim deeds covering 12,289 acres of land. In the Title VI provision, Congress said those three federal laws would be implemented after the land transfer.

"But the law didn't say how that was to occur or who was to do it," Henningsen said. "We decided it would be necessary to enter into a memorandum of agreement with the state to set out how we'll accomplish this requirement. That became a major issue because the tribe said, 'You can't do that. The Corps implements the laws, but the state owns the land. Since these laws apply to only federal lands, and these lands are no longer federal, it's an impossibility.'"

"Congress said these laws will apply after the land is transferred to the state," he added. "I'm not aware this has been done before."

Wildlife land

Wildlife land will not transfer until a trust fund is fully capitalized in 2007, according to John Cooper with the South Dakota Department of Game, Fish & Parks. "Once it's fully capitalized at its \$108 million level, the interest will be available from that trust fund to manage and operate those lands. Then those lands will transfer to the state, much like the recreational lands were just transferred."

The process that led to Title VI was started "to put together a plan to return the lands, raise the priority for recreation and wildlife management, settle the jurisdictional issues [between the state and the Sioux tribes] and provide money to do that, and that's what Title VI is," Cooper said. "I give a lot of credit to the staff in Omaha. In general, the Corps wasn't in favor of Title VI, but after the commitment was made, after Title VI passed, the relationship we developed with Omaha was excellent."

Impossible mission

As Ralph Roza, Chief of Planning Branch, noted, "the technical staff at Omaha District deserve recognition for this task that all felt was near impossible. They not only completed the project within ambitious time-frames and kept to the initial project management plans' original schedule but, most important, they did so with respect to all the tribes, the state, and other federal agencies."

(Sheri Hronek is a contract writer for Omaha District.)

N.C. locks help improve shad run

Article by Penny Schmitt
Photos by Scott Maners
Wilmington District

Thanks to long-term efforts by lockmaster Robin Hall, marine life experts, and changing fisheries law, shad are back in greater numbers than the Cape Fear River has seen in many years.

Hall, lockmaster of Lock and Dam #1, has spent most of his life on the Cape Fear. He believes that locks and dams (often seen as an obstacle to fish) are now part of a management pattern that makes for healthy conditions.

The original locks and dams were built on the river starting in 1915 to deepen the channel for navigation, and they have also helped improve steady flows and water quality in the river. However, like other dams, they eventually became an obstacle to shad. Shad are anadromous fish, meaning that they live in the ocean, and return to fresh water to spawn.

"During the 1960s the original dam was raised another three feet, and electric motors and gear boxes were installed to open and close the lock gates," said Hall. "Lockmasters at all three Corps lock and dam projects started locking to allow American white shad and other members of the shad family, herring, striped bass, alewife, sturgeon, and other species access to the upper pools."

Study. In the late 1990s, Hall assisted with a University of North Carolina, Wilmington sea grant study that tagged and tracked shad upriver as far as 10 miles above Fayetteville, N.C., and monitored the movement of shad through the locks.

As the study progressed, Hall and lockmasters Buddy Ray and Phil Edge, plus George Graham, a local fisherman and long-time friend of the Cape Fear River, worked with marine biologists Mary Moser and Anne Marie Darazdi to monitor fish and improve lockage methods, greatly increasing the fish going upstream.

"We could attract fish into the lock chambers by opening the lower gates and opening valves in the closed upstream gates," Hall said. "But within minutes the fish went back out of the lock. We needed a way to attract the fish into the chambers and keep them there."

"After a lot of trial and error I got the idea to open only the inside, downstream gate, leaving the outside gate closed," Hall continued. "That made the attraction flow of water go against the inside wall of the lock chamber with little reversed flow on the outside wall. Instead of leaving the chamber with the reverse flow, the fish circled inside the chamber and gave us a chance to release them upstream."

Improvement. "I called Mary and Ann Marie to see if what I was doing was actually working," Hall continued. "It was! Our tracking equipment helped us to tweak this improved lockage and we measured proof of 60 percent improvement."

"We can't take all the credit," Hall added. "The State Fish and Wildlife Service have made the American shad a game fish, with a creel limit on the number of fish kept. Marine Fisheries have now made it illegal to net



The 2002 shad run on the Cape Fear River in North Carolina was one of the best in years, thanks to careful management by Corps lockmasters.



Robin Hall, lockmaster of Lock and Dam #1, fine-tuned locking methods to improve the shad run on the Cape Fear River.

shad after April 14. These two new laws have helped greatly as well. State Fisheries biologist Keith Ashley recently did a study at each of the three locks and dams. He told me that he had never seen this many shad in the river this early in the season."

It's just what Hall would have expected. "Shad fry (newly hatched fish) begin to return to salt water around the end of August," he explained. "I normally see them



More than 1,000 people enjoyed the annual "Blue Monday" (Monday after Easter) shad fry and family reunion at the Lock and Dam #1 recreation area.

coming downstream until October, but this year I watched them into the middle of December. Huge numbers came to the surface every day before dark above the dams, all the way across the river and as far upstream as the eye could see. It seemed so unbelievable that I recorded it on video!

"Words cannot express what it feels like to know that I had something to do with the future of the Cape Fear Rivers fishery," Hall said. "It has been the most important accomplishment of my life. I hope someday that my grandchildren's children will fish the Cape Fear River and say, 'Hey, my great-grandpa helped to make this possible!'"

Blue Monday. But Hall doesn't have to wait that long to enjoy the results of his work. This year's "Blue Monday" festival at the Lock and Dam #1 recreation area featured a local family reunion and fish fry that has marked the Monday after Easter for close to 50 years. More than 1,000 people attended this year's event, which was plentifully supplied with shad and shad roe. Some people came from as far as New Jersey, and local fishermen were proud to share their catch with friends and relatives.

(Robin Hall also contributed to this article.)



Lock gates are opened to assist shad and other fish in migrating upstream.



Local fishermen in North Carolina prepare their nets for catching shad.

Eagles find home at Corps projects

By Michael Watkins
Kansas City District

Lake projects in Kansas City District (KCD) have played a critical role in the resurgence of the bald eagle in the Midwest. For more than 30 years, our lake projects have provided critical habitat for hundreds of wintering birds in portions of Iowa, Kansas, Missouri, and Nebraska. Last winter 138 bald eagles were counted during an aerial survey of the Smithville Lake Missouri Wildlife Area, and it wasn't uncommon to view 70 to 80 eagles from the Wakefield Causeway at Milford Lake, Kan., during a typical December or January afternoon.

More recently, KCD lakes have begun providing critical nesting habitat for significant numbers of bald eagles. During the past 13 years, some 215 juvenile eagles have hatched and fledged from more than 30 nesting territories at six district lakes.

Eagle history

It is relatively certain that the bald eagle nested along the major rivers in Kansas before the state's settlement. Several explorers, including naturalist John Audubon, documented the existence of eagles and their nests while traveling along the Kansas River Valley in the mid-1800s. The town of LeCompton in northeast Kansas was originally named Bald Eagle, reinforcing the notion that bald eagles frequented the Kaw Valley in the 1850s. But documentation is sketchy and none of the records indicate whether any young eagles successfully fledged from those early nest sites.

That all changed in 1989 when a pair of bald eagles built a nest at Clinton Lake, Kan. Clinton Lake is a 7,000-acre U.S. Army Corps of Engineers water resources development project in the northeast corner of the state. The nesting attempt drew national attention and surprised state and federal biologists. It was the first documentation of eaglets successfully fledging in Kansas. This was also the first successful bald eagle nest in the district.

In 1989, two juveniles fledged from the nest site at Clinton Lake. The U.S. Fish and Wildlife Service (USF&WS), in cooperation with the Corps, trapped the young eagles and fitted them with purple visual identification bands inscribed with silver letters "A" and "B." By taking beak, talon, and weight measurements, the USF&WS determined that both juveniles were males.

Return

The sex of the birds was critical to establishing a new population of nesting eagles in the Midwest, because males generally return within 100 miles of where they fledge to establish nesting territories.

Bald eagles commonly return to the same nesting territory year after year, and many birds refurbish and use the same nests. In 1991 the adult male at Clinton Lake was trapped and banded with visual identifica-

tion band "E." Two adults including Eagle E have returned to the Clinton Lake nest site each year and have fledged 33 juveniles in the past 13 years. The eagles have been one of the most productive pair in the nation, producing 2.5 young annually, where the national average is only 1.6 young per nest.

In 1993 Eagle B, a male, returned to KCD and established a nesting territory at Hillsdale Lake, Kan., about 28 miles southeast of Clinton Lake. In addition to the standard USF&WS aluminum leg band, his mate wore a white band etched in black with "E-27." The band color was traced through the USF&WS's Bird Banding Laboratory in Laurel, Md. The trail led to Alan Jenkins, Assistant Director of the Sutton Avian Research Center in Bartlesville, Okla. Jenkins said E-27 was part of their bald eagle reintroduction program, and had hatched from an egg that was collected from a nest in Osceola County, Fla., in 1990.

1994 was another significant year in the nesting history of bald eagles in KCD. In early spring Eagle A returned to the district and established a nest at Perry Lake, Kan., about 15 miles northwest of where it was hatched and raised at Clinton. Considering that the mortality rate among first-year eagles is 60 to 70 percent, it was remarkable that both Eagle A and Eagle B survived and returned to nest in the district. Eagle A and his mate successfully fledged one juvenile in 1994. During the years they have built five different nests in the same nesting territory at Perry Lake, and fledged 12 young.

Record numbers

In 2001, Clinton and Hillsdale Lakes each had two productive bald eagle nest sites, but the champion of successful bald eagle nesting territories in the district is Harry S. Truman Reservoir in Missouri. The reservoir has more than 50,000 surface acres of water and more than 100,000 acres of wildlife land surrounding the impoundment.

During the 2001 nesting season, Truman had a record 21 productive bald eagle nesting territories that hatched and fledged 38 eagles. Since 1991, nest sites at Truman Reservoir have fledged 129 juvenile eagles. Rathbun Lake in Iowa and Pomme De Terre Lake in Missouri are the other two lakes in KCD with productive bald eagle nesting territories.

Each bald eagle nesting territory can present a unique set of management challenges. When a new nest site is discovered, representatives from the Corps, USF&WS, and the appropriate state wildlife management agency meet to develop a management plan to protect the nest site.

Management activities can vary greatly depending on the nest location and the density of people enjoying recreation. At Truman Reservoir, for example, many of the nests are located in relatively remote areas and require nothing more than routine monitoring.

At Clinton Lake, however, restricted



Craig Burrell, a volunteer with the U.S. Fish & Wildlife Service, climbs a tree to a bald eagle nest. (Photo courtesy of Kansas City District)

zones are established around the nest trees to keep the public from disturbing the nesting birds.

The number of bald eagles has increased significantly since they were placed on the original federal endangered species list on March 11, 1967. In the early 1970s, experts believed there were less than 2,000 eagles and less than 420 nesting pairs in the lower 48 states. Today eagle numbers have grown to more than 20,000 with about 5,800 active nest sites.

In response to this increase, the bald eagle was down-listed from endangered to threatened in July 1995.

Secure?

In 1999 the USF&WS made a formal proposal to remove the bald eagle from the federal list of threatened and endangered species. The action was put on hold by the Clinton administration in 2000 because wildlife authorities are not certain how to protect the majestic bird from its latest and most persistent threat, the loss of habitat.

"We expect the bald eagle population in Kansas and throughout the Midwest to continue to expand," said Dan Mulhern, a USF&WS biologist. "The increase in bald eagle numbers nationwide has resulted in the birds returning to regions of the country they apparently abandoned more than



An eagle's talon with band in place. (Photo courtesy of Kansas City District)

100 years ago. They seem to be taking advantage of new habitat provided by the construction of large water impoundments. As a result, the new nesting populations are likely to concentrate around lakes and reservoirs, rather than the traditional river and stream corridors."

This has certainly been the case in KCD. For the past 13 years the pioneering bald eagle population has been a tremendous success story for the district and the nation. It is proof that integrating flood control, municipal water supply, and high-quality recreation for large numbers of people, while at the same time providing critical habitat for an endangered species, is an achievable goal.

(Michael Watkins is a wildlife biologist with Kansas City District.)

Trapped birds rescued from mud

By Joan Mier
Albuquerque District

When Jemez Reservoir was drained Nov. 1 to repair a bulkhead gate on the dam, no one could have foreseen the effect it would have on sand hill cranes, which were about to begin their migration to the Bosque del Apache. Using Jemez, about 30 miles from Albuquerque, N.M., as a stopover point on their journey was common. What was *not* common was the particular area they chose to land in when they began their migration Nov. 6.

"These birds land between 3 p.m. and 6 p.m. The sheen on the mud left behind after the reservoir drained looked like water to these birds, and some of them chose to land there," said Susan Shampine, Chief of Operations Division. About 58 birds became mired in the 30-foot deep mud of the drained reservoir.

Rescue efforts posed a couple of big challenges. First, getting to the birds was problematic and risky. Second, the five-foot-tall birds with long and very strong beaks can be dangerous, according to biologist William DeRagon. "The beaks of sand hill cranes have been known to crack the skull of a cow," he said.

District personnel located a hovercraft operator, but the craft could not operate on the reservoir because of the pudding-like consistency of the mud.

"We also contacted the Army National Guard because we were thinking maybe we could use one its helicopters, but they said the prop wash from the rotors would do more harm than good," Shampine said.

Meanwhile, as these efforts were underway, the district immediately initiated deterrent activities to prevent any more cranes from landing in the mud. Spotlights, horns, and firecrackers were largely successful in preventing more cranes from landing in the area. However, a few more became trapped there, according to Ron Kneebone, project manager.

"We think what happened was that cranes that landed elsewhere at the reservoir would begin foraging for food



Using a special outboard engine that can operate in mud, volunteers rescued the trapped birds, then cleaned them up. (Photos courtesy of Albuquerque District)

at dawn and wander over to the mud flats and become stuck," he said. After that, deterrent methods were also initiated at dawn.

Although one bird was captured on Nov. 8 and treated and released at the Bosque a couple of days later, personnel were not having much luck reaching the other cranes. As news of the trapped birds hit the media, carloads of concerned citizens began showing up at Jemez interested in saving the cranes.

"Conditions at the reservoir were extremely dangerous," Kneebone said. "We certainly appreciated that people were concerned, but we couldn't risk endangering human life." Therefore, the road leading to the area was closed to the public.

A break came when personnel contacted New Orleans District and learned about an engine that could enable a regular motorboat to operate in mud. The 20-horsepower engine was flown in overnight from Go-Devil Outboard Motors in Baton Rouge, La.

"We got it on Nov. 14 and began testing it the next day," Kneebone said. "That afternoon, we began re-



covery efforts using trained volunteers and Corps personnel, and we were successful in capturing nine cranes."

Rescue operations continued through the migration season, and 15 cranes were rescued. Of those, three died and 12 were successfully treated and released.

Most of the rescued cranes were cleaned up and rehabilitated at the Rio Grande Zoo in Albuquerque, N.M. Each bird took 45 minutes just to clean because each feather had to be cleaned separately, according to Melissa Stock, editor of *Zooscape Magazine*.

"It was a three-person job," Stock said. "One person had to hold its feet, another its legs, and then another cleaned the bird."

"We received a lot of help and cooperation from other agencies and organizations," said Kneebone. He credited the Santa Ana Pueblo, which owns the land at the reservoir, U.S. Fish and Wildlife Service, Rio Grande Zoo, Department of Agriculture's Animal Services Division, the U.S. Air Force, and Hawks Aloft for assisting in efforts to both rescue the cranes and prevent more from landing in the area.

Ecologist creates personal wetland

By Shannon Bauer
St. Paul District

U.S. Army Corps of Engineers wetland ecologist Jerry Smith, a wetland ecologist with St. Paul District, brings his work home with him. Ten years ago, he purchased a farm in Lena, Wis., then worked with the U.S. Fish and Wildlife Service (USF&WS) to turn several acres of it into wetlands. Once covered with corn stubble, these lands today attract many species of waterfowl.

"Wetlands are being lost at an alarming rate," said Smith. "This was just a small contribution towards the no net-loss of wetlands policy. Basically, as a wildlife biologist and wetland ecologist, I deal with this most days at work, and I wanted to do it as an extension of my job. But also, when I'm not doing wetlands, I have an interest in birds and this was a means to diversify my property and attract a wider variety of species."

During Smith's first spring in his new home, he watched pools of water from his window, and then watched to see where the water left his property. He then calculated a number of elevations and figured out where suitable locations for restoration or creation of wetlands might occur.

Because of his work connections with the USF&WS, Smith knew they offered programs where citizens could obtain grants to build wetlands on private prop-

erty. He called them, and the agency offered to build him some wetlands, providing he agreed to not remove the work for 10 years.

On the south 40 acres of his property, the USF&WS built three shallow scrapes (depressions) and two ditch plugs to retain water. On the north 40 acres, they built a long dike to impound water. And on the east they built a dike to keep the water off the neighbor's property.

"It was completely amazing," said Smith. "In the fall, it was bone dry. By spring, it was full of water. It's now about 2.5 acres in size, mostly shallow in depth."

Since the wetlands were built, a variety of waterfowl have nested there. In the spring and fall, during migration time, hundreds of birds stop to visit. Since 1991, he's seen 187 different species within a half-mile of his home, including sandhill cranes, blue-wing teal, hooded mergansers, sora, and Virginia rails. Canadian geese, mallards, and wood ducks have nested.

Smith keeps track of the different varieties because he is a birder by hobby. (Birdwatchers just watch birds. Birders study them and work to preserve them.) He and his wife often travel to other areas of the country, viewing the scenery and observing birds.

Smith is one of four Wisconsin residents that bands breeding songbirds in a program that monitors songbird populations. Since



A field that was just dry corn stubble...



...is now a thriving wetland. (Photos courtesy of Jerry Smith)

1993, he has also banded northern saw-whet owls on his north property from late September to early November to monitor seasonal movements and reproduction status. He attracts the birds during fall migration with a courtship tape recording, then nets them and bands the birds at his house. This involves checking the nets three times a

night throughout the banding season. He said he bands several hundred each year.

Living in the woods and next to wetlands feeds Smith's hobby. "In the state of Wisconsin, there are 410 different kinds of birds that occur, some only occasionally," he said. "Last year, we saw more than 300 in the state, for the first time."

Phil. District bridge shelters falcons

By Mervin Brokke
Philadelphia District

The peregrine falcon is one of the swiftest and most beautiful birds of prey. Its name comes from the Latin word *peregrinus*, meaning "foreigner" or "traveler." This impressive bird has long been noted for its speed, grace, and aerial skills. Now, it is also a symbol of America's recovering threatened and endangered species.

Actions taken at Reedy Point Bridge in Philadelphia District have helped give a family of peregrine falcons a better chance of survival.

During the biennial inspection of the bridge on the Chesapeake and Delaware Canal, the inspectors noticed that two large falcons were flying in and around the bridge, said Jennifer Laning, the district's bridge program manager.

As the team performing the inspections crew came closer to a certain area, the falcons began to dive bomb the team. Diving to kill their prey at more than 100 miles per hour, peregrine falcons are said to be the fastest birds on earth, and vigorously defend their nests from intruders.

Not to be deterred, the men and women of the bridge maintenance team and a team from DMJM+Harris (contract inspectors from Philadelphia) were back on the bridge the next day despite the threat.

"Initially, I wanted to get the birds off the bridge because I was concerned about regularly scheduled maintenance, and my crew was being attacked by the birds," said Dave Hawley of the C and D Canal office.

Laning was coordinating the efforts of district employees and contractors when she received a phone call about the birds from the DMJM+Harris inspectors, and contacted Steve Allen of Environmental Resources Branch to seek guidance.

"I received a call from Jennifer concerning what apparently was a nesting pair of peregrine falcons on the Reedy Point Bridge," Allen said. "Jennifer stated that the birds were 'dive bombing' the inspectors and she was concerned about the birds' and the workers' safety."

Allen made several calls to the Delaware Department of Natural Resources and Environmental Control and U.S. Fish and Wildlife Service for guidance.

"Steve Allen and Beth Brandreth, Environmental Resources Branch, have also had a large role in getting everything coordinated on short notice," said Laning.

Almost as quickly as a peregrine falcon can strike, Allen received a return call.

"I received a call from Craig Koppie, Mid-Atlantic Falcon Coordinator for the U.S. Fish and Wildlife Service, and he was interested in locating and surveying the nest on the bridge," said Allen.

Identifying and protecting

When Koppie arrived at the bridge, he confirmed that the birds were a young pair of peregrine falcons. It took a team effort to safeguard, band, and protect the three new nestlings — one female and two males.

"Mr. Koppie banded the birds and is going to continue to work with us to ensure the safety of the current babies, as well as ensure the safe treatment of the birds in the future," Laning said. "The inspectors from DMJM+Harris and our canal bridge maintenance team worked with Mr. Koppie to help him safely access the bird nest."

Though peregrine falcons are no longer an endangered species, the Reedy Point Bridge falcon family still does not have many neighbors in Delaware.

"According to Mr. Koppie, there are only four known pairs of these protected birds in the state of Delaware, one of which is ours," said Laning.

To provide the nestlings with a better home until they can fly, the team moved the birds to a place on the bridge immediately next to the original nest, but one with more protection from falls.

"Koppie also built a plywood structure to protect the birds," said Brett Canimore, project manager. "They



Brett Canimore with DMJM+Harris holds a peregrine nestling while it is banded by Craig Koppie, Mid-Atlantic Falcon Coordinator for the U.S. Fish & Wildlife Service. (Photo by Craig Koppie)

moved the birds to a gusset plate connection to provide better protection. There was no problem moving the birds because the parents will not abandon them."

The nestlings will make this nest their home for the next few weeks.

"Male chicks take from 40 to 45 days to fly, while females take 48," Canimore said. "The birds were about 17 days old when I took the photos."

In the end, the Reedy Point Bridge provided all that the falcons needed for their nestlings, with some additions by some caring humans.

"They don't build nests," Canimore said. "They look for gritty material like sand, gravel, and paint chips that the bridge provided for them."

Win-win

Having a family of falcons on the bridge will become a win-win situation for the district. The relationship is almost symbiotic and could last for many years — protect the falcon and the falcon will protect the bridge.

"We have a problem with pigeons and their droppings," said Hawley. "You can slip or possibly inhale the droppings and that can cause injury and disease."

"Pigeon droppings are not good for the bridge," said Canimore. "The falcons keep the pigeons off the bridge."

Although the falcon family is a first line of defense for the bridge, at first Hawley didn't welcome them. But during the several days that the nest was moved and the nestlings were banded, he has grown to appreciate them.

"The falcons eat and chase away the pigeons," he said. "I'll take a falcon family on every bridge."

The Reedy Point Bridge is not the only bridge in the region that falcons call home. Falcons also live on the Commodore Barry and Benjamin Franklins bridges. The falcon family and district employees have learned to live and work together.

"The birds get used to you after a while and they will watch you work," Hawley said. "You can hold out your arms and the birds will think you are a much bigger bird so they won't bother you."

While the nestlings were banded and moved to a safer location, the bridge inspection continued.



One female and two male peregrine falcons are safely repositioned in their new home on the Reedy Point Bridge in Philadelphia District. (Photo by Brett Canimore)

"The inspection continues but has moved to another area," Laning said. "Once the birds can fly, then the inspection will be completed in the nesting area sometime in July."

Despite being dive-bombed by the fastest birds on earth, the inspection team is confident they will complete their mission with only a slight delay.

"The inspection will probably go several weeks longer than the required days to complete the inspection," Canimore said. "We need to wait until the birds are flying and the threat of them falling off the bridge has passed."

"Everyone worked together to make this happen. I am really proud of everyone involved in this effort," Laning said. "Everyone was flexible and professional in reacting to this opportunity."



April Cheuvront holds a Global Positioning System that helped the team map each collection site. She accompanied the team as part of the Teachers Experiencing the Arctic and Antarctic Program. (Photo courtesy of Cold Regions Research and Engineering Laboratory)



The group posed for a photo before leaving Nome, Alaska. Pictured are April Cheuvront (left), Tom Douglas, Dr. Glen Liston, and Eric Pyne. Not pictured are Dr. Matthew Sturm and Jon Holmgren. (Photo courtesy of Cold Regions Research and Engineering Laboratory)

Teacher joins Alaskan science journey

By Marie Darling
CRREL

"The air is crisp and cold, the night dark, but alive with the aurora borealis. I'll be involved in a remarkable experience as I travel with Matthew Sturm and four other scientists on a northern Alaska traverse. The traverse will begin in Nome and go to Barrow, the most northern point in the U.S. Snowmobiles will take us over the snow-covered tundra of northern Alaska for the 1000-mile journey."

"We'll begin our travels on March 20 and end on April 24. The remoteness and wildness of the far North will clearly be remembered, as our nights will be spent in pitched tents upon the snow."

April Cheuvront,
on-line journal

On March 20, Dr. Matthew Sturm, a geophysicist with the Fairbanks Office of the Cold Regions Research and Engineering Laboratory (CRREL) and a small team of scientists left civilization to embark on a 35-day science traverse, SnowSTAR2002, across northern Alaska on snowmobiles.

The SnowSTAR 2002 included April Cheuvront, an eighth-grade science teacher from Table Rock School in Morganton, N.C. Cheuvront was part of the National Science Foundation's (NSF) Teachers Experiencing the Arctic and Antarctic (TEA) Program. TEA provides teachers the opportunity to participate in scientific research to enhance their research skills and engage students in polar-related topics.

Cheuvront helped measure and sample snow at the numerous collection sites along the traverse route, and interacted with school children in villages they passed through. She also kept a daily on-line journal of their progress so that her students could follow the team's progression throughout the traverse.

The team traveled mostly through uninhabited country, but passed through five remote Alaskan villages. According to Cheuvront, each was different, though they had similarities. All rely on hunting and fishing for much of their food; all are situated on rivers. Each village teaches their own native language and traditions, but have television and computers. The small, snow-covered, rural villages appear isolated, but they keep in contact with the rest of the world.

The traverse is part of an ongoing larger project to understand climate change in the arctic called ATLAS (Arctic Transitions in Land Atmosphere System), sponsored by the Arctic System Science program within NSF's Office of Polar Programs.

During the traverse, the team stopped about every 10 miles to collect snow samples, measure snow depth den-



sity, and make detailed measurements of snow layering. These measurements will eventually be used to determine regional trends in snow properties.

"I love digging snow pits; it's a warming job," said Cheuvront. "Standing around is the worst because you think of being cold. I've learned a lot about measuring snow. Yes, it's repetitive [digging snow pits], but not redundant. Each site is a new site, with new snow to measure."

"We were successful in carrying out the site experiments along the route," said Sturm. "Most of our gear worked fine, and what failed we were able to fix. We're now tallying the sites, and we measured snow at about 80 stations along the route."

But this made for slow going. "I've never done any recreational snowmobiling, except one short trip, but have spent more than 20 years using them for expeditions," said Sturm. "I like them as tools to explore the arctic and Antarctic. We were on the machines about four hours a day, covering on average 30 miles."

The arctic is a good place to study climate changes because they are detectable there much sooner than other parts of the world. Climate studies suggest that continued warming will be greater in the Arctic than the lower latitudes. The arctic is often called the "canary in the cage" because it may serve as an early indicator of climate changes that will affect the entire world.

Meteorological data indicates that air temperatures in the Alaska arctic have increased two to four degrees Celsius in the past 30 years, and evidence suggests changes are already occurring in terrestrial ecosystems. Snow covers the arctic for seven to 10 months of the year and is thought to play a key role in this process of change.

The researchers on the traverse looked at two processes — the role of key weather events in developing the snow pack, and the interaction of the snow and vegetation. Pre-

vious studies have shown that the arctic snow pack consists of between five and eight layers of snow deposited by a like number of storms, and that its interactions with vegetation are critical.

Samples of the snow were also collected during the traverse to determine if there is a difference between the source of winter precipitation for the region north of the Brooks Range versus south of it. By analyzing the chemistry of these snow samples, the team hopes to pinpoint where the snow originated and its atmospheric history. The concentration of calcium, magnesium, and various isotopes will be determined. The data gathered during the traverse should help to show how key meteorological events determine the characteristics of the snow.

The studies related to snow and vegetation are motivated by previous findings that the presence of shrubs may promote further shrub growth by increasing the amount of snow on the ground. Climate warming also promotes increased plant production, so the two processes may feed back in complex ways.

"It takes months of analysis before we really know what the data will tell us, but we had hoped that we could track individual snow layers across the whole route, and this appears to be so," said Sturm. "It means that the same storms deposit snow layers across a vast area, even though the snow and storm tracks are different north and south of the Brooks Range."

Snow measurements were taken along the tundra-forest boundary between Council and Ambler, a small village on the Kobuk River. North of the Brooks Range, measurements were taken on the tundra and on the lakes that cover about 30 percent of the region. The tundra north of the Brooks Range is much less shrubby than the tundra of the south range.

The team had planned to pull into Barrow by the end of April, and was right on schedule.

"It's exciting to complete this trip, but exhausting," said Cheuvront. "I've used muscles that I didn't know I had!"

A tired Sturm says that it was a privilege to get to do this type of research. "I think all the expedition participants recognize it as a once-in-a-lifetime experience."

It's unlikely there will be a repeat trip. "We'll put this information together with other studies," said Sturm. "SnowSTAR 2002 is a one-of-a-kind event and we'll probably not repeat the trip. We will now concentrate on putting the data together. A report will be produced, then the data will be assimilated, and we'll then look at regional patterns. This takes a lot of time. We will then figure out what we learned. This data will be worked with for many years, and eventually, we'll look creatively at the data and use it for other purposes."

(The National Science Foundation provided some information for this article.)

Field of dreams

Land exchange to give Calif. town new sports complex

By Mike Tharp
Los Angeles District

Flash forward to the fall of 2003. A sunny Saturday afternoon in Fullerton, Calif. Hundreds of kids and dozens of parents dot 23 acres of landscaped fields. The kids kick soccer balls, hit baseballs, throw softballs, and catch footballs. The grownups cheer wildly on nearly every play. At halftimes, lines jam concession stands and restrooms. As dusk approaches, battalions of state-of-the-art tower lights wink on, and the games proceed well into the night.

Now rewind four years. The manicured infields and sculpted sidewalks of the Fullerton Sports Complex are still only lines etched on architects' blueprints. The acreage is a brush-filled flood control basin behind the Brea Dam. Girls and boys on sports teams must wait hours for the few "recreation amenities" in the city to open up for their games. The fields of dreams for Fullerton city planners are just dreams.

Enter Los Angeles District and Unocal, the one-time energy resources giant that has successfully diversified into property development and real estate. Thanks to a complex land swap between the U.S. Army Corps of Engineers and the company (a deal which involved scores of district team members and months of work) the Fullerton Sports Complex moved off the drawing board and into reality.

"The city required Unocal to build a sports complex, a community park, as a result of Unocal's housing," said Phil Serpa, an outdoor recreation planner in Operations Branch. "There was a land exchange between the Corps of Engineers and Unocal that provided for this footprint."

For years, Unocal and its Standard Pacific joint venture partner had been busy developing plans for the East Coyote Hills residential housing project. Ultimately, they will build 212 homes flanking the sports complex (82 west of the park and 130 east of it), plus a golf course.

Before they could get final approval, however, the joint venture partners needed to come up with a plan to meet the legal requirements to furnish "recreational amenities" when creating a housing development.

The entire area encompassing the proposed project is contained in the Brea Dam Basin, which means it is subject to periodic floods. The Corps owned the land. Unocal needed some of it to satisfy the law. "They had some very steep land," said Carvel Bass, an ecologist in L.A. District's Operations Branch. "We had some that was flatter. So we traded."

Sounds simple enough, but the fine print required thousands of man-hours to iron out the details. "Once the plans came to us in Operations, we submitted them to Engineering Division to make sure they didn't have any problem with their structures and ball fields, which they didn't," Serpa said. "There was no expense to the government, it didn't interfere with operations of the dam, and it provided the community with a local place to go. It's a



By late next year, this project will be a multi-use sport complex for Fullerton, Calif. (Photo courtesy of Los Angeles District)

great thing."

Jim Martinez, Unocal's project manager for the East Coyote Hills development since 1989, agrees. "The Corps is to be commended and complimented on its efforts, from Los Angeles to Washington, D.C., because it was an extremely complex transaction," he said. "A lot of people in the Corps spent an awful lot of time on this. We think it is a premier park with all the bells and whistles."

During the complicated discussions, the actual acreage envisioned for the sports park grew from 17 acres to 23 acres. Moreover, since all the dirt was being moved for the housing development, the capacity of Brea Dam also increased. By the time the sports complex is finished, the total cost will be \$5.5 million. Moving the dirt was the biggest-ticket item in construction, followed by the high-tech Musco lighting structures, which cost

\$600,000. Among other features, the lights can be turned on and off and dimmed telephonically.

For Fullerton, with some 56,000 residents, the sports complex has been a decade-long goal. When finished, there will be two softball/baseball fields, one soccer/football field, and one combination field. The complex will also host a series of summer concerts, which are now held at the base of the dam. Concession stands, restrooms, and a large parking lot will make up the infrastructure of the complex, plus a trail system for walkers, joggers, and bicyclists.

"There's been a need for a long time," says Alice Loya, a senior administrative analyst in the city's Community Services Department. "We didn't have enough room to rent out or issue permits to teams. Now we're figuring out the schedule for the various leagues."

Bordered on the west by Harbor Blvd. and on the north by Bastanchury Road, the sports complex is expected to be fully open by October or November this year. "Now we're at the stage of meeting with residents and are trying to implement a 'Good Neighbor Policy' with them and the leagues," Loya added.

The residential development features two zones — "Aspen" with houses 2,500 to 3,000 square feet ranging in price from \$400,000 to 500,000, and "Cedars" with houses 2,000 to 2,200 square feet and prices in the \$400,000s. "We're going to have people moving in the late third quarter of this year, and most of the units will be sold, though not necessarily built, by the first quarter of next year," said Martinez. "It should be completely built and closed by next year's third quarter."

As it turns out, synergy may play a role here. Unocal and Pacific Standard are discovering that the sports complex, which they were required by law to build, has become a magnet for families with young children or those expecting young children. "We sold out 75 percent of the first part of the housing, and we're sure the rest will go very quickly," said Martinez. "It has a lot to do with the park. You don't have to drive anywhere. That's a big plus."

Serpa is a father of one daughter and two sons who play baseball. He plays softball on weekends in Whittier, Calif. "We're going to have Unocal put up a monument in the park indicating that you're within the Brea Dam Basin with a description and purpose of the dam as flood protection for the whole community," he said. "This whole project tells people that the Corps is providing the open-space land to show that we're interested in the community and their recreational opportunities."

Test program will boost technical expertise in division

By Suzanne Fournier
Great Lakes and Ohio River
Division

Great Lakes and Ohio River Division (LRD) is testing a new program to bolster technical expertise across the division. The entire U.S. Army Corps of Engineers is watching this experiment for possible Corps-wide use.

It is called the GS-13 Regional Technical Specialist program. A regional technical specialist is an expert with experience and specialized capabilities that can be used throughout the division. He or she is recognized for experience and expertise in technical fields that are considered core competencies of the Corps.

He or she can be a geologist or a hydraulic, structural, mechanical, electrical, cost, or geotechnical engineer. Individuals for these positions are selected for their professional credentials, education, exper-

ience with diverse complex Corps projects and leadership within their technical field of specialization.

In April, 19 professionals from around LRD started their day with amended job descriptions as GS-13 regional technical specialists and began serving as experts in their fields across LRD. They include a coastal hydraulics specialist, cost engineering experts, coastal and rock geologist, three geotechnical engineering experts, and electrical engineer, a mechanical engineer, two flood protection hydraulic specialists, two navigation hydraulic specialists, and five structural engineers.

These regional specialists are LRD assets and will serve on district engineering teams for quality control, independent technical review, and quality assurance. The LRD regional goal is to have at least one regional specialist from outside the home district serving on each team for major projects as defined by risk, cost, and

complexity of the work.

More than 25 percent of their duties must be regional in nature, but a goal of 50 percent for regional duties is achievable. Regional technical specialists will also serve as designers and design consultants on district projects and be called upon to assist the regional engineers in the division in caretaking their discipline and developing technical policy. This will include serving on regional technical discipline teams to promote technical expertise and technology transfer.

Regional technical specialists will remain in their home districts and will be managed by their current supervisors or others appointed by their chief of engineering. These positions complete the technical side of the dual career ladder, and now enable technical employees to rise from an entry level position to GS-13

Continued on next page

Engineers mentor science competitors

Article by Nancy Sticht
Photo by Mark Scalabrino
Buffalo District

Would you like to see student interest in science increase? Do you wish we could capture the interest, enthusiasm, and commitment for science that we see for sports?

With these two questions, the Science Olympiad solicited participants in its 2002 tournament, which focused on bringing science to life, understanding science concepts, and emphasizing the problem-solving aspects of science.

The Science Olympiad is an international nonprofit organization devoted to improving the quality of science education, increasing student interest in science, and recognizing achievement in science education. These goals are accomplished through classroom activities, research, training workshops, and tournaments. These challenging competitions follow the format of popular board games, TV shows, and athletic games, and are balanced between biology, earth science, chemistry, physics, computers, and technology. Last year more than 13,500 schools participated in Science Olympiad tournaments.

Science Olympiad tournaments develop teamwork and cooperative learning among students, and make science exciting so more students will enroll in science courses to promote achievement and excellence. They also attract more students, particularly girls and minorities, to professional and technical careers in science, technology, and science teaching. Students can compete in 36 different events, distributed among three broad areas — concepts and knowledge, processes and thinking skills, and application and technology.

Last year, Paul Leuchner, Chief of Regulatory Branch, identified the Science Olympiad as a community outreach for district team members. "Using our experts as mentors or coaches may stimulate student interest in science and engineering, and in years ahead these same students could come back to us as the next generation of the Corps team," said Leuchner.

Through his wife, Linda, who teaches biology at Kenmore West Senior High School, Leuchner arranged for Corps biologist Michael Montone to coach a student participating in "Feathered Frenzy." The event required students to demonstrate their knowledge of the habitats, life history, and geographic distribution of birds. Montone's student, Greg Kaufman, received his school's only gold medal in last year's competition, which sparked interest for more Buffalo District team members to join this year's Science Olympiad.

Kaufman competed again this year in "Feathered Frenzy," coached by Montone and Gary Dye, lockmaster



Rich Scaduto and Matt Eisenhauer work on their "Scrambler" entry.

of the Black Rock Lock.

"Greg saw how the natural sciences fit into Mike's day-to-day work, and how environmental awareness fits into mine," said Dye. "He saw us as coaches, not experts or teachers. We learned together. He saw why we knew some things, and why we didn't know others. He knew right there that learning is a life-long process, and hopefully a cooperative one."

Two more students, Rich Scaduto and Matt Eisenhauer, each competed in two events, "Booilever" and "Scrambler." In "Booilever" teams design, build, and test the lightest booilever to carry a maximum load; in "Scrambler" students design and build a device to transport an egg 8-12 meters (about 26 to 39 feet) as fast as possible and stop closest to the finish line without breaking the egg.

The "Booilever" coaches were Jonathan Kolber of the Coastal and Geotechnical Section, Robert Remmers and Richard Egan of Construction Branch, and Christopher Jasinski of the Engineering Management Team. Jay Miller of the Environmental Analysis Section and Mark Scalabrino of the Regulatory Branch coached the "Scrambler" students.

The three students came to district headquarters after school, and their coaches volunteered their time after hours, to develop their projects.

Eisenhauer enjoyed building bridges in the seventh grade and became interested in the Olympiad when Scaduto invited him to help build a bridge for "Booilever" and a car for "Scrambler."

"The car wound up being pretty fun," said Eisenhauer.

The Science Olympiad Tournament was held Feb. 9 at Clarence Middle School, and Kaufman earned his second gold medal. Eisenhauer and Scaduto placed fifth in "Booilever" and eighth in "Scrambler" out of seventeen entries in those categories.

The students started with lawn mower wheels on their "Scrambler," but after they snapped the brakes they switched to compact discs. Their car went only one-quarter inch too far, and their egg broke.

Their "Booilever" held the required weight (33 lbs., extended out about 15 inches, but the device itself was too heavy. "Even though we overdid our bridge design, I still learned many lessons on trusses, tension, compression and buckling," said Eisenhauer. "I'd rather go over our bridge than the little dinky bridge that won."

"You showed unbelievable dedication," Kaufman wrote to Dye and Montone after the competition. "I know the reason I won was because of all the hard work we put into our study sessions. How you prepared those PowerPoint presentations was just unbelievable!"

The students also learned more about the Corps. "I didn't know exactly what the Corps did," said Kaufman. "Now I know they use the principles of science and engineering to harness our natural environment."

"For me, it was an eye-opener to go to the Science Olympiad and see all the ingenuity and resourcefulness," said Remmers. "I also learned a little about model building from Rich Scaduto, who had some good tips concerning building techniques and obtaining supplies and materials."

All three students plan to compete in the Olympiad again next year and to pursue higher education in the future.

"The heart of the matter is not creating an interest in science, nature, engineering, etc.," said Dye. "Someone once said that knowledge by itself is useless. The Science Olympiad fills in the important piece — application. These students learned how to put their knowledge to use, and got caught up in the continued learning, teamwork, and fun."

"I've always been lucky to have people who willing to take the time to mentor me," said Montone. "It's meant a lot to me, and I appreciated the energy and time people gave me. The Olympiad is one way to reflect back a tiny bit of this effort. Greg was great to work with; he's a bright kid and asked some pretty insightful questions. We had a blast the last two years. I think he'll someday do an excellent job in coaching another student to a medal."

"These mentors were very supportive and provided a great deal of encouragement to our students," said Linda Leuchner. "We were so happy with the Corps' volunteers. The students felt comfortable with them and were pleased to have them as mentors."

Test program

Continued from previous page

in the district, GS-14 at division, to GS-15 at Headquarters without leaving their technical area of interest.

To evaluate and improve the effectiveness of the program, a customer survey form will be completed by each regional technical specialist's district. This feedback will be used for rating the specialist and for quality assurance of the program.

The 19 selectees competed for their new positions from a field of 114 applicants. Ten panels were held between mid-February and mid-March to determine the most qualified candidates for each discipline. Panels consisted of a chairman from the division office supplemented by technical experts from Headquarters, the labs, and other Corps divisions.

"We had hoped to get geographic diversity, but we had no way to predict nor did we want to manage this geographically," said Larry Seals, Chief of the LRD Technical Engineering and Construction Division. "Our goal through the entire process was to pick the best of the best without regard to location. As it turned out, we ended up with at least one RTS per district."

The Program will be managed in accordance with the Program Management Business Process. A program

management plan is currently under development. District members will serve either one- or two-year terms, then membership will change with current members skipping at least one rotation before serving again.

To understand the reasons for creating these positions, go back to the mid-1990s when districts were delegated the responsibility for quality control (independent technical review) of their own engineering products. Division offices that previously performed technical review and quality control were assigned quality assurance responsibilities.

Before this time, divisions were two and three deep in each discipline, and these engineers were proponents for their respective technical disciplines, fostered technology transfer, and mentored others to develop technical expertise.

Since then, the number of technical specialists at division has reduced significantly. This program not only helps fill the void left by the reductions, but it also allows us to gain that "whole-division" perspective as the specialists work on a variety of projects across the entire region. The real value from this program will come from the technology transfer that occurs naturally.

This program was not developed overnight. For sev-

eral years, numerous starts and stops were encountered as the concept for such a program were discussed and debated. Finally, at a meeting last November, the LRD chiefs of engineering reviewed a new proposal to establish a regional specialist GS-13 program developed by Tom Waters, then with Nashville District. The chiefs of engineering assigned a committee to pursue development. The results of their efforts, plus many others who felt the loss of technical talent and saw the need for maintaining technical expertise in every level of the Corps, produced the current GS-13 Regional Technical Specialist program.

Expectations are high and results are already apparent enough to expand the program to five more GS-13 technical specialists, one in computer assisted design and drafting, and four in construction. Planning has picked up the program initiative by hiring up to 10 GS-13 regional technical planning specialists in the environment, flood control formulation, and navigation arenas.

The Great Lakes and Ohio River Division is first with this innovative formal Regional Specialist Program. Headquarters and other divisions are watching closely to see if this model is the answer for maintaining and nurturing the Corps' future technical competence.

USACE Virtual Campus gets a lot of use

By James Mitchell

Professional Development Support Center

Philadelphia District led the way in using the USACE Virtual Campus to complete its annual Prevention of Sexual Harassment (POSH) Training. Savannah and Rock Island districts and Huntsville Center followed close behind. Since last September, more than 15,000 U.S. Army Corps of Engineers employees have completed their POSH training in cyberspace. This is a revolution in the Corps' training process.

However, this is not the first success of the USACE Virtual Campus. In December 1998, the Headquarters Logistics Management Directorate began using the Virtual Campus to train the new Inventory Management System to all of the Corps logistics personnel. More than 500 students used this distance learning method to learn the warehousing process taught in the Inventory Man-

agement course.

The Virtual Campus is an important training delivery method. It provides everything that the traditional classroom training does *except* the classroom. Like any university, there is a registration system to obtain demographic information on each student. Once students have registered on campus, they can then select and enroll in one or more courses.

The similarity does not end here. When students take a course, they are required to take a pre-course examination, course quizzes, and an end-of-course examination. When the students have completed the course with a passing grade, they are required to complete a course evaluation before they can print their completion certificate.

But unlike a university or traditional classroom, a course can be taken anywhere and any time that the student has an Internet connection.

The Universal Resource Locator (URL) for the USACE

Virtual Campus is <http://pdsc.usace.army.mil>. Students connect to this URL, then click on Distance Learning to access the Virtual Campus.

The Distance Learning Division at the Professional Development Support Center in Huntsville, Ala., designs and develops training opportunities through distance learning. The Virtual Campus is a work in progress. It is continually evolving to meet the needs of our students, as well as the needs of management to keep track of completed training.

The USACE Virtual Campus could become the method-of-choice to deliver certain mandatory and job-related training. The return on investment, number of personnel reached, and flexible training time makes this training method ideal for meeting Corps-wide training requirements.

(James Mitchell is Acting Chief of Distance Learning in the Professional Development Support Center.)

Streamlining

Continued from page one

"It is important to remember that this initiative doesn't mean we have to shed these positions," Navidi said. "All it means is that we must review and compete (public/private competition) these positions. At the end of the process we will determine whether the government or private industry can perform the functions most effectively."

Navidi added that the USACE Strategic Workforce Initiative is looking at the whole organization. In the past, "commercial activities" basically meant "blue collar." Not this time. Once you get out of the planning and policy arena, which are determined to be inherently governmental activities, you are looking at pretty much every job in the Corps - technical, labor, administrative, etc.

In developing the initiative, Lt. Gen. Robert Flowers, the Chief of Engineers, has set several principles "in concrete" that will *not* change:

- We will follow the Corps' Vision - "The world's premier public engineering organization, responding to our nation's needs in peace and war."

- The Corps will *not* become a hollow contracting agency, or a grant agency.

- Except for what it takes to accomplish our mission, we are willing to outsource everything.

- The existing organization structure of USACE will remain as-is. No restructuring of the division or district structure.

"Where is the Corps in respect to these directives?", Navidi said. "We're preparing a USACE Strategic Workforce Planning Document that is due to OMB at the end of August. It will discuss our workforce for the next five years. It will discuss the make-up of our workforce, examine the workload, and see whether we're positioned to accomplish our mission. At the same time, it will take a look at competitive sourcing and work that into the plan.

"Regardless of what happens, the resulting organization will not look like it does today," he said. "When you go through the competitive sourcing process, you have to develop a plan for your most efficient organization. This organization forms the basis for comparison against private sector offers/bids. Government-wide experience has shown that your most efficient organization will probably be smaller than what you started with."

To develop the Strategic Workforce Planning Document, the Corps built a multi-disciplined team with people from throughout the organization. Led by Maj. Gen. Robert Griffin, Director of Civil Works, it includes representatives from divisions, centers, laboratories, and Headquarters. According to Navidi, the team is considering a large number of factors.

"There are certain core competencies in the Corps that we will *not* give up," said Navidi. "If you strip us of these, we're not the Corps of Engineers any more. There are many other functions that are not core com-



petencies, but it would be difficult to live without them. Legal? The Public Affairs Office? Are those reasons that we're called the Corps of Engineers? *No*. Are we willing to give them up? *No*.

"Another distinction we need to make is that the com-

petitive sourcing we're talking about applies *only* to the civil works functions at this point," Navidi said. "The military-funded functions are not exempt; they're just under the Department of the Army. Army's plan is due to OMB at the same time as ours, so we haven't received any guidance from Army yet.

"The Corps is not starting this process from zero," he added. "Currently the Corps contracts out 100 percent of civil works and military programs construction. About 75 percent of the design on the military side is done by contractors, and about 50 percent of the planning and engineering on the civil side is done by contractor. So we're already leveraging the private sector to the fullest extent possible.

"And we've just been through a decade of restructuring and downsizing," Navidi said. "So those are more factors that our Strategic Workforce team is considering."

He added that the Corps is working closely with Army, DoD and OMB to determine the exact number of positions to look at.

"We have to stress that this is *not* a drill. This is something we *have to do*," Navidi said. "This is something that could have more impact on the Corps of Engineers than anything we've done in the past. The process is very demanding and complicated. We have to do this, and we have to do it right."

HR Corner

Management course led to federal writing award

Congratulations to Richard Dean II of Baltimore District's Construction Division in the Capital Area Office at Fort Belvoir, V. He was the first place winner of the Federal Managers Association Writing contest for his article, *Amphibious Float Bridge Systems*. Dean entered the writing contest while attending the Sustaining Base Leadership and Management Course at the Army Management Staff College.

The Sustaining Base and Leadership Management Course (SBLM) is a 12-week resident program at the Army Management Staff College (AMSC) at Fort Belvoir. The program provides graduate level advanced professional development across functional areas in the sustaining base. These areas include leadership, management, decision-making, national security, resource management, acquisition and logistics, personnel, and information management. The program is presented in an integrated manner, and is designed to stress the linkages, relationships, and dependencies between areas.

SBLM also has a nonresident offering once a year for those having a compelling personal or professional reason that prevents attendance at the resident program. The non-resident course transcends traditional classroom-style professional development education by offering top-quality curriculum in a distance-learning format through AMSC's e-campus. In essence, the content is the same as the resident program, but distance learning is the delivery method. Both programs (resident and non-resident) are centrally funded. If you are interested in learning more about SBLM you can go to the Army Management Staff College web site at www.amsc.belvoir.army.mil.

Dean's award makes him a contestant for the Federal Managers' Association Writer of the Year Award. Until that competition is complete, we cannot publish Dean's article, but we hope to do so in the future.

Again, congratulations to Dean who has passed this first big hurdle on his quest for the Federal Managers' Association Writer of the Year Award.

Around the Corps

General officer news

Three Corps brigadier generals have been selected for promotion to major general. They are:

- Brig. Gen. Ronald Johnson, Pacific Ocean Division Commander.
- Brig. Gen. David Melcher, former Southwestern Division Commander.
- Brig. Gen. Carl Strock, Director of Military Programs.

Two Corps colonels have been selected for promotion to brigadier general. They are:

- Col. Robert Crear, former Chief of Staff of Headquarters.
- Col. Merdith (Bo) Temple, Commander of Transatlantic Programs Center.

Emergency support conference

New management doctrine highlighted the Emergency Support Function #3 (ESF#3) Workshop in April.

The new doctrine affects the command and support relationship for the ESF #3 management team. During an emergency, the team leader (TL) coordinates the receipt of missions from Federal Emergency Management Agency (FEMA) and transmits them to the Emergency Response Recovery Office for execution. In this capacity, the TL is similar to a district Deputy Engineer for Programs and Project Management.

Under the new doctrine, the team will be assigned to the Disaster Field Office (or Regional Operations Center) as the HQUSACE representative working directly for FEMA, but under the overwatch of the Director of Civil Works.

With this authority comes the responsibility for the team to fully coordinate these missions with the major subordinate command (MSC) and district, and/or individual response and recovery project delivery teams, to ensure the MSC and district understand and can perform the mission.

In addition, the planning and response teams (PRT) for ice, power, water, debris, housing, roofing, structural safety assessment, and emergency access will now be known as project delivery teams (PDT). Within these teams, the action officer serves in a similar fashion to a senior project manager, and the mission manager serves as a project manager.

Ducks Unlimited

New Orleans District biologists Jay Gamble and Chris Brantley briefed a Ducks Unlimited (DU) convention in Memphis, Tenn., about restoring waterfowl habitat in coastal Louisiana.

"Ducks Unlimited has been very supportive of Corps projects in the past, and this was a good chance to explain to their members the Corps' interest in conservation," said Gamble.

DU is a private wildlife conservation and hunting group that worked with the Corps, the Louisiana Department of Wildlife and Fisheries, Exxon, and the North American Wetlands Conservation Council in 1994 to develop and manage 2,400 acres of land in the Bayou Des Ourses area of the Atchafalaya Basin Floodway.

Preservation, restoration, and enhancement of waterfowl habitat in this part of the basin involves reforestation and building low levees and water-control structures. The project will continue until 2019, when the area will be re-analyzed.

A "moist soil management" strategy currently assures optimum waterfowl habitat during the fall and winter, and ideal habitat for wading and shore birds during the breeding and migratory seasons. The Louisiana Department of Wildlife and Fisheries manages the project.

Since work began, more than 60 species of migratory birds have nested each year in the region. "Management of these areas allows us to track bird migration patterns and know whether the marsh is healthy," said

Brantley. "If Ducks Unlimited hadn't come forward when they did, the property would probably have converted to a young, thick forest."

To help pay the initial \$986,000 cost, DU used the North American Wetlands Conservation Act of 1989, which requires that every dollar of federal money allotted for a wetlands conservation project be matched by one dollar or more from non-federal sources like DU.

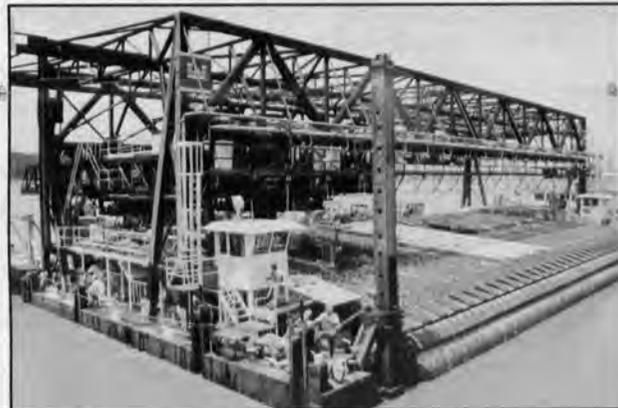
NOVA award

A team led by the Construction Engineering Research Laboratory (CERL) received the NOVA Award sponsored by the International Construction Innovation Forum. The award recognizes technology innovations that improve construction quality and reduce cost.

The CERL team was cited for electro-osmotic pulse (EOP) technology, which prevents water seepage into underground structures at about half the cost of trenching and tiling.

EOP technology prevents or reverses groundwater intrusion into below-grade structures. It is based on the concept that an electrically charged liquid moves under the influence of an external electrical field. A pulsing direct current voltage is applied between opposing electrodes in a concrete wall/floor slab and the surrounding earth to produce an electric field that moves water from the dry side toward the wet side.

CERL investigated the EOP process as a maintenance and repair option at DoD facilities with water intrusion problems. It has been demonstrated successfully in numerous facilities, and under evaluation for civil works structures.



The Mat Sinking Unit in Vicksburg District is the only one of its kind in the world. (Photo by Alfred Dulaney, from the Digital Visual Library)

Scour protection

Vicksburg District received high praise for its scour protection work on the new Mississippi River bridge near Greenville, Miss.

Last December, the district developed a unique partnership with the Mississippi Department of Transportation (MDOT) and Massman Construction Company to build the new Highway 82 bridge across the Mississippi River at Greenville.

The district has the world's only concrete mat sinking unit, used to stabilize the banks of the Mississippi River from erosion. But this project required the unit to place concrete mats on the river bottom in 60 to 80 feet of water about 800 feet from the banks to protect the river bottom from scouring while the new bridge piers was under construction.

"The project was unique," said Kel Shurden, Chief of the Revetment Section. "It was the first bridge pier construction job on the Mississippi River where concrete mattresses were used for scour protection. It took us three to four days to complete the work, compared to at least two months using other methods, and time is money."

MDOT saved \$400,000 to \$500,000, and reduced worker exposure to river hazards.

During a recent award ceremony at the district, Harry

Lee James, bridge engineer for the MDOT, presented a framed artist's sketch of the bridge to Col. Frederick Clapp, Vicksburg District Engineer. "When you have a federal agency, a state agency, and a private contractor working out a unique project in a very short time, it is quite an accomplishment," said James.



A demonstration of Civil War artillery highlighted the school children's visit to the Bulltown Interpretive Center. (Photo courtesy of Huntington District)

West Virginia heritage

Rock Cave Elementary School in Rock Cave, West Va., came to Bulltown Interpretive Center and Historical Area in May to learn more about their West Virginia heritage. Not only did more than 120 children in grades K-5 see the Cunningham House and the Civil War battlefield, they saw live demonstrations of soap making, spinning, bluegrass music, Civil War artillery, storytelling, and Appalachian toys.

Park rangers Joe Kolodziej and Jeff Toler also taught water safety. They taught the "Reach, Throw, Don't Go" technique to rescue a person from the water. They also taught the children how to throw simple rescue devices like rope bags and disks, and why they should not keep their life-jackets under the seat, but wear it at all times, and make sure it fits properly.

The children got a fresh outlook on life in the 1800s, water safety lessons, and a better sense of their heritage.

Value engineering

Lt. Gen. Robert Flowers, Chief of Engineers, was named an Honorary Vice President of SAVE International for his personal attention to cost-effective management of federal resources. The award was presented on May 6 following his keynote address to value engineering (VE) professionals from more than 40 countries at the SAVE International conference in Denver.

The Corps has documented \$125 million to \$150 million in VE savings in each of the past five years, and these figures are included in a total of \$3.5 billion saved since program inception. The Corps is featured in "Stretching Dollars" in the May issue of *PMnetwork*, the professional magazine of the Project Management Institute.

Flowers stated in his keynote address that value methodology will be used throughout the process management business process (PMBP), and that there will be VE participation on Corps project delivery teams to help determine how to use VE to enhance the PMBP process.

Flowers cited the example of New Orleans District using VM to lead three National Technical Advisory Committee reviews during planning of a \$14 billion Louisiana Coastal Restoration Project. VM function analysis methods are used to ensure an open, credible process, and to identify best-value solutions to reduce planning time.

Bridge collapse

Continued from page one

work barge, towboat, and rescue workers to the scene.

Powerplant superintendent Charles Wycoff was just leaving his house to see his mother in Oologah, Okla., when he got Johnson's call. Detouring through Vian, Okla., Charles got on the survey boat at Gore Landing with rangers Dan Baumann and Larry Prestien and headed to the scene. Navigation manager Gregory Barnes began calling dam operators upstream to shut down water flow to the accident site.

The survey boat equipped with multi-beam sonar would be instrumental in locating targets in the water. It gives divers a two-dimensional image to locate items in the water. In the days to follow, they would do an exhaustive search upstream and down for any glimmer of hope. The survey boat would operate from sun-up to sundown, stopping only for fuel and maintenance.

Tenkiller Lake rangers Bill Mobly and Cathy Hendrix were working dayshift with the holiday crowd on Tenkiller. Carlton Bailey, another Tenkiller park ranger, was at home when he heard about the accident. His regular swing shift would not start until the middle of the afternoon, but Bailey did not wait. He reported to the Tenkiller Lake Office and began to prepare the work barge, while Mobly and Hendrix grabbed personal flotation devices, throw rings, and ropes to take to the accident site.

The trio, with the work barge in tow, departed for a ramp at Gore Landing to launch their vessel. Once the barge was launched the team headed to the bridge, as a boater yelled at them "Stay to the right!"

Tulsa District towboat captain Kelly Youngblood; mechanic Kenneth Wright; Joe Johnson, the primary crane operator and his alternate Colin Clark; mobile crane operator Doug Hart; river and harbor maintenance workers Bobby Perryman, David Key, Steve Graham, and Jeff Lacquement showed up, some in their Sunday clothes, coupled the towboat *Mister Pat* to the crane barge, and sped upriver toward the bridge.

Russell Holeman, Chief of Hydrology and Hydraulics Branch, was already at the district office monitoring the lake pools in Keystone, Oologah, and Fort Gibson lakes. He and fellow engineers of the water control and regulatory sections had the task of juggling the flood pools of Tenkiller, Webbers Falls, Fort Gibson, Grand, Keystone, Eufaula, and Oologah which feed the Arkansas River.

A storm was coming and the Corps had to hold back water from the bridge site. Southwestern Power Administration also reduced their outflow at the Eufaula Dam. At 7 a.m. releases at Webbers Falls just above the accident site were around 58,000 cubic feet per second (cfs), by 5 p.m. it was down to 38,000 cfs, and by midnight it was 21,000 cfs.

9 a.m. Carnage

As the rangers' work barge rounded the bend about 9 a.m., they were stunned by what they saw. The radio traffic hadn't said that both east- and westbound lanes of the I-40 bridge had collapsed.

It was obvious there would be no more survivors. The murmur of boat engines and human voices just seemed to add to an eerie quiet. There was no smoke, no fire, no sirens. A green sheen of spilled fuel coated the river. Firefighters, rescuers, and divers waded in the water while crowds gathered on the riverbank and abutments.

A mangled vehicle stuck out of the water. A horse trailer lodged between the broken piers. The contents of a tractor-trailer floated in the water. A gray pickup truck with a smashed front end sat in the middle of the eastbound lane; the deck under it had dropped 10 or 15 feet when its support failed.

Ten feet in front of the pick-up, the east- and westbound lanes had folded and snapped, forming a ramp that disappeared into the water. One pier support still stood over the shards of concrete and steel resting on the barges; its partner impaled the hull of the barge closest to the shore. The towboat *Robert Y. Love* steadied one barge, the other lay pinned by the fallen spans.



A section of the collapsed bridge landed on the barge that struck it. (Photo courtesy of Tulsa District)

11 a.m. Towboat and barge arrive

Mister Pat and the barge-mounted crane arrived at the scene. A second Corps boat, a Boston Whaler manned by seasoned rangers Robert Burnett and Larry Fears maintained order in the navigational lane. They kept other boaters away and ferried personnel to the barges, assisting the U.S. Coast Guard and Oklahoma Lake Patrol. The Coast Guard restricted river traffic for three miles up- and downstream of the bridge. The Oklahoma Department of Transportation requested the assistance of the ranger work barge to inspect the remaining bridge structures.

On shore, the crowd numbered about 100. Volunteers, firefighters, Oklahoma Highway Patrol, sheriff's deputies, divers, fishermen-turned-rescuers, and local businesses bringing food and water had gathered.

Crews were anchoring the barges. The Corps survey boat had started to work; the first task was to locate the gas line running along the river bottom before the *Mister Pat* could be secured.

By nightfall, the Corps' crane had pulled out three victims, one indistinguishable sport utility vehicle or minivan, and a pickup truck with trailer. The marine fleet crew, the survey boat, and crane continued working well into the night. The crew slept on the towboat and barge wherever they could find a place to rest.

May 27

Recovery operations continue

More personnel joined the district effort. The survey boat continued sighting targets for divers, and the Boston Whaler continued ferrying people, materials, and supplies to the tug and crane barge.

By midday, the weather took control. Lightning and rain prevent divers and operators from entering the water. At the direction of the National Transportation Safety Bureau, the Corps' crane was fitted with a clamshell scoop for recovery, eliminating the need for divers in the murky water.

By night's end, four more fatalities were recovered. During the official press conference, two more bodies were found.

May 28

Fatality toll officially released

By 11 a.m. the fatality toll was officially released. Nine victims were recovered—five females, four males, plus eight vehicles. A couple hours later, four more victims (two couples) were found, bringing the total to 13 victims.



A crane barge from Tulsa District played an important role in removing debris and wrecked vehicles from the river. (Photo courtesy of Tulsa District)

One vehicle had an empty child car seat, but the child was still missing.

Flows downstream were down to 9,000 cfs.

May 29

Members of the Critical Incident Stress Management (CISM) arrived. The disaster was a baptism by fire for Southwestern Division's new CISM team, which sent peer supporters to help their fellow workers handle the continuous stress of the operation.

11 a.m. Final victim found

A somber mood came over the entire recovery site, from boat-to-boat, barge-to-barge, and person-to-person. A solemn quiet prevailed. Some looked away, some continued quietly doing their tasks as the boat carried the final victim, the missing occupant of the empty child safety seat, to the recovery site.