



Hurricane Georges left more than 60,000 damaged structures and 5 million cubic yards of debris in its wake after passing Puerto Rico. (Photo courtesy of FEMA).

## Corps responds to Hurricane Georges

Even as Hurricane Georges was growing and sweeping through the Caribbean, teams from throughout the U.S. Army Corps of Engineers were pre-positioning supplies and equipment to speed relief and recovery efforts in the stricken areas.

In all, more than 800 military and civilian members of the Corps provided vital services in Puerto Rico and the Southeastern U.S., performing more than \$840 million in pre-declaration and response and recovery missions from the Federal Emergency Management Agency (FEMA). Planning and response teams from around the Corps contracted for ice and water; coordinated shipping, receiving, and distribution of materials and supplies; provided emergency roofing; and planned, coordinated, and executed emergency power restoration. USACE members also performed quality assurance inspections for every aspect of the federal recovery operations.

### Puerto Rico

The first and most severely hit by Hurricane Georges, Puerto Rico continues to recover and rebuild and Corps efforts continue, especially in debris removal and roof repair.

Hurricane Georges swept along

Puerto Rico on Sept. 21 and 22. According to FEMA reports, 78 municipalities reported damage to homes. Wooden structures were hardest hit, more than 60,000 structures were damaged. About 1 million customers lost power and 700,000 lost water. Georges left behind an estimated five million tons of debris.

As planning and response teams across South Atlantic Division and the Corps were put on alert or activated, two members of the USACE Logistic Emergency Response Team (LERT) were in Puerto Rico on Sept. 21. Their mission was to speed the distribution of generators and other pre-positioned supplies and equipment. Four more LERT members arrived the next day.

At the same time, members of the 249th Engineer Battalion (Prime Power) pre-deployed to the Territorial Logistic Center at Fort Gillem, Ga., to begin processing generators and maintenance supplies. Forty-six generators were pre-positioned in Puerto Rico for distribution as needed. By Oct. 1, the battalion had all or part of five platoons on the ground (about 70 soldiers) in Puerto Rico. By Oct. 14, the 249th had completed 415 damage and repair assessments and installed 118 generators (see story, below).

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## Power troops give Puerto Rico hope, energy

By Bernard Tate  
Headquarters

When the lights came on and the water started running again in storm-ravaged Puerto Rico, soldiers of the 249th Engineer Battalion (Prime Power) threw the switches.

The 249th, along with other elements of the U.S. Army Corps of Engineers, responded immediately when Hurricane Georges swept through the Commonwealth of Puerto Rico Sept. 20-21. The storm knocked the electric power grids out of service, which left the island without running water or sewage treatment.

"Our responsibility under the Federal Response Plan is to help restore critical electric power service," said Lt. Col. Kurt Ubbelohde, 249th commander. "We're applying a lot of the battalion's resources, and we expect to jump-start a lot of Puerto Rico's infrastructure," he said.

The 249th is the Army's only electrical power generation unit. It's mis-

sions include power generation and distribution during war-time, for disaster relief, and in stability and support

operations. It is also the only soldier unit assigned to the Corps of Engineers.

"The entire water system has a high



Staff Sgt. Darrell Jay Faulkner, 249th Engineer Battalion, and Eric Stinnie, USACE Humpreys Engineer Center Support Activity, discuss maintenance priorities for generators sent to Puerto Rico as part of the Hurricane Georges relief mission. (Photo by Tony Santana)

priority," said Ubbelohde. "That includes water pumping stations, filtration plants, and sewage treatment plants. They want to get clean water to the people as soon as possible to prevent the spread of disease," he said.

On Sept. 23, the battalion deployed two platoons (about 30 soldiers total) from Company B at Fort Bragg, N.C. By Oct. 1, the battalion had all or part of five platoons on the ground (about 70 soldiers).

Besides Company B, the soldiers came from Company A in Fort Lewis, Wash., and Schofield Barracks in Hawaii; and command and control personnel from Fort Belvoir, Va.

The 249th soldiers installed generators ranging in power from eight kilowatts to 500 kilowatts which were pre-positioned in the Commonwealth by the Federal Emergency Management Agency (FEMA). As of Oct. 7, the 249th Prime Power soldiers had installed 68 generators.

"We found that FEMA's 50-pack, the

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**Commentary**

# Leaders energized by conference

By Annabeth Lee  
Southwestern Division

Recently I had the opportunity to attend the Emerging Leaders/Senior Leaders Conference (SLC) held in Dallas. Initially, I was not particularly thrilled with the prospect of relinquishing my weekend and working from 7 a.m. to 11 p.m. each day, and I am pretty old to be emerging just now.

But, I have seen the light; I am an Energizer bunny and I have a cadre of 1998 Emerging Leaders who will help me keep charged. What was a fledgling two-day workshop a few years ago has been transformed into an eight-day journey of discovery and learning.

I could tell about everything I learned, and that is extensive. However, what I feel about the conference and the program is probably more significant.

The emerging leaders participated in numerous workshop activities including team interaction, taking the Myers-Briggs personality test, Nap's Line, fundamental interpersonal relations orientation behavior, project planning and feedback, and goal setting. We took the Herrmann Brain Dominance Instrument, which was a stretch for some of us.

These exercises were introspective and reminded us of things we might already know but may need a subtle reminder. For example, "When we, as a team, determine the rules of the game and adhere to them, we are winners. Keeping commitments is key to team and organization success." Relating to the Myers-Briggs types, "Understanding our own and others' preferences enhances our social interaction and effectiveness." On project planning/feedback, "Teams are often smarter than individuals."

We had exercises on the dynamics of leadership

and situational leadership. We learned about creating "whole-brained" teams, which simply means a team whose members have different cognitive styles. We did a lot of networking, team building, and scenario-based planning.

But I think the best exercises were those dealing with self-awareness and introspection. This is an excellent program for anyone, and I encourage all of you to get involved in this process. Many of the participants indicated that this was the best training they have received in the U.S. Army Corps of Engineers.

The theme of the Senior Leaders Conference was "Consolidating Gains and Producing More Change." The emerging leaders objectives were to build relationships with Corps senior leaders; develop an understanding of corporate strategy; and, identify future roles and options for emerging leaders.

Lt. Gen. Joe Ballard, Chief

of Engineers, focused on this theme in his opening remarks along with the Corps' three strategic goals -- revolutionize effectiveness, seek growth opportunities, and invest in people. He emphasized four primary objectives -- stay focused on the Vision; think strategically (broad-based/future-oriented, think two levels up/look two levels down); walk-the-talk (make it happen, consolidate gains and execute action plans); and, empower and engage.

When the conference ended there were lots of hugs, a few tears, but mostly we carried a feeling of camaraderie and accomplishment. When is the last time you left a conference feeling that way?

I am empowered. I am buzz-word compliant. The Chief of Engineers challenged me to "ride the ragged edge of audacity."

I am an agent of change!  
(Annabeth Lee is a computer specialist in Reservoir Control Office at Southwestern Division.)



## How to stop smoking

I was one of those people who really enjoyed smoking a cigarette; I had done it for almost all of my life. It was as much a part of me as eating or breathing. Taking a smoking break at work was as common for me as answering my cc:mail or getting into CEFMS. It was just part of my day. I had been doing it a long time, since I was 15 years old. Even back then, 43 years ago, kids took up smoking to be part of the crowd.

One day in 1996 I took a three mile walk and felt short of breath. I knew it was the cigarettes, but I didn't want to admit it. I also knew I had to quit, but when? And how?

As a start, I decided to pick a day to quit that I wouldn't forget, so I picked my wife's birthday, Oct. 11, 1996. Then I formed a plan. I'd start my vacation the following day so that for the next 10 days I wouldn't be around anyone that smokes.

Then I decided to cut back on my smoking before the actual day I would quit. And about a week before my wife's birthday I did some serious cutting back. First, a half-pack a day for a few days, then eight cigarettes a day, then six.

By Oct. 11, I was down to four cigarettes a day. At 3:30 p.m. on that day, I smoked my last cigarette.

I will never forget that time and day for the rest of my life. I did something that would make a positive impact for the rest of my life and I'm happy about that!

If you say that you enjoy smoking and don't want to quit, I understand. It's not easy to quit, especially cold turkey. But if you think that you might want to try, go for it. If I can do it, you can do it, too.

It feels so good to be free. You have my blessing, and I wish you good luck.

**Ken Weirich**  
Vicksburg District

*Congratulations on kicking the habit, and thanks for sharing your quit-smoking plan. We'd like to add that the Great American Smokeout will be Nov. 19. Editor*

*(The "Engineer Update" welcomes letters to the editor, commentaries, and editorials on any subject of interest to Corps people. All letters, editorials, and commentaries must be signed so we can call for clarifications or to check their authenticity.*

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# Corps responds

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By Oct. 8, more than 450 Corps members were on the ground in Puerto Rico working with the Jacksonville District's Georges Emergency Response Office (GERO), headed by Col. Dean Kershaw, Deputy Division Engineer at South Atlantic Division. Corps teams and individuals responded from 34 different locations in 24 states -- from Hawaii to Massachusetts, California to Florida. Their missions include ice, water, emergency power, debris removal, and emergency roofing repair.

GERO is pronounced "hero" by Kershaw "because there are so many heroes here from all over the Corps working on the relief effort," he said.

"This is a total Army effort, involving members of the active Army, Army Reserve, Army National Guard and Army civilians," said Col. Joe Miller, Jacksonville District Engineer. "They are here to help people who have suffered a huge disaster rebuild their homes and their infrastructure, and in so doing, their lives."

**Ice and water.** Within hours of Hurricane Georges' passage, teams in the U.S. were procuring critical supplies of ice and water and arranging for air transport from McGuire, Dover and Charleston Air Force Bases and by contract aircraft from various airports. Water and ice were delivered to Roosevelt Roads Naval Station in Puerto Rico for distribution by local agencies. For the first week, ice and water were shipped exclusively by air but, on Oct. 4, the first barge shipments left port.

As of Oct. 13, the ice mission totaled \$26 million, and called for delivery of 500,000 lbs. every day, up to 18 million pounds. Corps teams had delivered 12.4 million pounds of ice and had an additional 1.6 million pounds enroute to the island.

The water mission totaled \$51 million, with a daily minimum delivery requirement of 200,000 gallons at the height of the mission. As of Oct. 13, the Corps had delivered 2.9 million gallons, had 500,000 gallons enroute by barge and 2.4 million in staging areas awaiting shipment. The ice team contracted for more than 11 million gallons of water.

**Debris removal.** The ongoing debris removal mission involves an estimated five million tons of material. Puerto Rico was divided into six zones for debris removal, with a reduction site in each zone. Each zone has a hauling and a reduction contractor.

As of Oct. 13, work was underway in Zone 5, near Salinas, Puerto Rico, and the contractor, DRC Caribbean, Inc., removed more than 11,000 cubic yards of debris to the reduction site.

The debris mission includes separation, reduction, and removal of debris left behind by Hurricane



Corps workers provided heavy plastic sheeting to help Puerto Ricans temporarily replace their roofs. (Photo courtesy of Jacksonville District)

Georges in Puerto Rico. USACE contractors load debris at collection sites and from streets and haul it to designated reduction sites. Workers at the reduction sites separate the debris and remove any hazardous or toxic waste to a controlled location. An Environmental Protection Agency contractor processes this waste. All vegetative debris and wood construction materials are placed in a grinder for chipping and mulching, and all other debris is reduced and recycled.

**Roof repair.** The Corps, the Puerto Rican National Guard, and local governments continue a massive coordinated effort on emergency roofing repairs. As of Oct. 13, Corps contractors were completing more than 600 roof repairs daily, with a production goal of 1,000 repairs daily.

With more than 60,000 structures needing roof repairs, the Corps, in coordination with contractors, the Commonwealth of Puerto Rico, local governments and the Puerto Rican National Guard, developed a four-pronged approach to speed roof repairs.

First, USACE contractors have teams working across the island to install temporary plastic roofing. Second, teams from the National Guard are also making repairs. Third, local municipalities, where capable, are installing temporary roofing on government buildings. Municipalities request the material through FEMA, and the National Guard delivers it to a central location such as a town hall or National Guard Armory. Several towns used this method to repair public buildings.

Finally, residents capable of installing their own

plastic roofing can obtain the materials from their local town hall or National Guard Armory.

## Southeastern U.S.

After striking Puerto Rico, Hurricane Georges continued to the northwest, sweeping across the Florida Keys and eventually making landfall on the Gulf Coast in Mississippi. As immediate relief operations began in Puerto Rico, the Corps began preparing for the storm's landfall in the Southeastern U.S. The Corps pre-positioned generators and supplies of ice and water in Florida, Alabama, Mississippi and Louisiana. Personnel and materiel were shifted from staging areas to respond to priority requirements in coordination with FEMA.

For Alabama, Mississippi and Louisiana, the Corps stockpiled 73,000 gallons of water and 55,400 pounds of ice at Gunter Air Force Base, Ala., for distribution. An additional 40,000 gallons of water were pre-positioned at Camp Beauregard, La. State authorities distributed ice and water.

Generators were pre-positioned at Maxwell Air Force Base and Camp Beauregard for deployment in coordination with FEMA and state authorities, with primary consideration given to power restoration for hospitals, emergency services and shelters. Most of these generators were redeployed to Puerto Rico after Hurricane Georges rained itself out.

(The Headquarters Public Affairs Office staff compiled this article from news releases and wire service reports.)

# Prime Power

Continued from front page

standard package of generators FEMA provides for emergencies, doesn't have enough of the high-output generators we need for this job," Ubbelohde said. "So we're using the battalion's own equipment to set up a two-megawatt plant at one sewage plant, a 750-kilowatt plant at a second, and a 500-kilowatt plant at a third," he said.

According to Ubbelohde, "Prime Power" soldiers are also doing damage and repair assessments. "Often that means giving technical assistance, helping the local technicians isolate a problem, then giving advice to get their generator running again," he said.

Ubbelohde called the pace of operations "intense." The battalion is tasked to handle the early, critical phase of the recovery, then civilian contractors will keep running what the soldiers have set up. "A contractor who has a haul-and-install contract,

part of the Readiness 2000 plan, is assisting with the actual transport and installation of generators," said Ubbelohde. "He's in back-up mode to our people, when the number of jobs overwhelm our battalion assets," he said.

According to Ubbelohde, the soldiers are enjoying the mission. The hours are long, the work is taxing, travel conditions are difficult because the streets are littered with trees blown down by the hurricane, and most road signs are gone.

"There are a lot of challenges, but they're enjoying the opportunity to help put the Commonwealth back on its feet. This is close to our go-to-war mission, which is to generate power and repair generators in combat," Ubbelohde said.

The soldiers on the ground agree. "We go out and do a lot of assessments of sites that FEMA says needs power generation," said Staff Sgt. Nelson Justice, senior power station electrician.

"We've been to hospitals and a lot of water pumping stations.

"The biggest problem is the language barrier," Justice said. "Most of our guys don't speak Spanish, and many of the local technicians don't speak much English, so that makes it hard to communicate the exact details about the equipment and what's wrong with it. But after you get the generator hooked up and the power on, people really appreciate the work you've done," he said.

Staff Sgt. Robert Spaulding, senior power station mechanic, said that the hardest part of the job is navigation at night. "There are no road signs; they all got blown down during the hurricane. The best part of the job is the sense of satisfaction after you get people's power turned on. You hate to see people put through the damage caused by the storm, so it really makes you feel good to be able to help them," he said.

# New island benefits fish and wildlife

By Peter Verstegen  
St. Paul District

Working closely with other federal and state partners, St. Paul District is restoring valuable island habitat on the Upper Mississippi River (UMR) near La Crosse, Wis., and is improving the environment for fish and wildlife.

The Pool 8 Islands Habitat Rehabilitation and Enhancement Project is part of the Environmental Management Program (EMP) and costs \$2.3 million. The project area is south of La Crosse near Stoddard, Wis., and lies within the Upper Mississippi River National Wildlife and Fish Refuge. "The public is really interested and excited about this one," said Jim Nissen, district refuge manager for the U.S. Fish and Wildlife Service (USFWS), one of the project partners.

Since 1939, more than 80 percent of the islands in lower Pool 8 have been lost to erosion, with the loss in the Stoddard area being more than 95 percent. The USFWS, the Wisconsin Department of Natural Resources, and others have worked with St. Paul District in planning the project. "We spent a lot of time with the folks from the Corps. The product is a real good project," said Nissen.

"The public and agencies identified the original problem and had a substantial say in establishing the habitat objectives," said Gary Palesh, the Corps' technical manager. "This is the second phase of a multi-phase effort to restore islands in lower Pool 8."

Island restoration increases habitat diversity for both fish and wildlife. The islands provide habitat and reduce wind and wave action. This improves conditions for the growth of aquatic plants in the



The island is formed as fill gushes out of a dredge line and is shaped by heavy equipment. The project, located on the Mississippi River south of La Crosse, Wis., is fostering development of fish and wildlife habitat on the river. (Photo courtesy of St. Paul District)

protected areas. The islands also reduce the velocity of the currents through the area. The outcome improves habitat conditions for backwater fish species such as largemouth bass and bluegill, which are sensitive to excessive current velocities.

Island A is the largest of seven islands the project will restore. "The actual size of the seven islands is about 26 acres. The area of backwater habitat that will benefit is in the neighborhood of 500 acres," said Palesh.

The project construction and design benefited from engineering advances. Geographic Information Systems and two-dimensional hydrodynamic models have made the outcomes of some features more predictable. "We incorporated innovations into the design to meet site specific habitat needs and reduce costs," said Palesh. "The design also incorporated lessons learned from previous island restoration efforts."

"Several islands have sand humps on them," Nissen. "They will have beach grass planted on them. The goal is to provide long-term nesting habitat for turtles. There are objectives for other creatures, too,

like mud flats for shore-bird habitat."

The project also includes building six seed islands south of Stoddard. Seed islands are small rock structures designed to help form islands through natural river processes. The seed islands are less than five percent of the project, but they can pack a big benefit for a small investment. The Corps built two seed islands in 1995 and "we're starting to see the shoaling that we had hoped for in that area," said Nissen. "It's a chance to get a fishery back in the Stoddard area."

Congress established the EMP in 1986 for a 15-year period to protect and balance the resources of the UMR and to guide river management. The EMP is the only system-wide program on the UMR that targets habitat rehabilitation and resource monitoring. To date, the construction of habitat projects has restored, protected or enhanced about 28,000 acres of floodplain and aquatic habitat. Mississippi River Valley Division recently completed a report to Congress that evaluated the program and recommended continuing EMP with modifications to improve its effectiveness.



Dirt fills a geotextile bag that will be used for a soft dike. (Photo courtesy of New Orleans District)

## Experimental soft dikes save \$35 million annually

By John Hall  
New Orleans District

In a routine year, New Orleans District will dredge 40 million to 45 million cubic yards of material from the Mississippi River between Baton Rouge and the Gulf of Mexico. And when the Big Muddy is at full throttle, the material that must be moved can easily swell to 60 million yards.

It's a big job, with a big price tag. The job is maintaining a 45-foot navigation channel for a port complex that moves the largest total waterborne tonnage in the world. The cost averages about \$35 million a year, or 10 percent of the district's budget.

That's why the Engineering and Operations divisions launched an ambitious experiment five years ago to stretch the dredging dollar with the tools of technological innovation -- and big, black plastic bags shinier and rougher-woven than a 1971 polyester suit.

The results are in. The district team has proved that millions of dollars can be saved in dredging just one spot near Baton Rouge, La. The work cost \$7.1 million and is called the Red Eye Crossing Soft Dikes Demonstration Project.

The Red Eye soft dikes amount to passive dredging, that is, the Mississippi is manipulated in such a way that it's forced to dredge itself. Thus, millions fewer cubic yards must be dredged, saving the government millions of dollars and avoiding the consumption of thousands of gallons of diesel fuel.

The Red Eye project, named for a river crossing five miles below the Interstate 10 bridge, will pay for itself by the end of this year. Now the district is preparing to move on to other river crossings below Baton Rouge.

The Red Eye Crossing is the meanest dredging obstacle on the river between Baton Rouge and New Orleans. Red Eye has been tamed in part by the soft dikes, underwater dams made of polypropylene bags. Filled with coarse river sand, they were installed in 1994 by the district. The contractor was Luhr Bros. Inc., based in Columbia, Ill.

A crossing is a stretch of river in which the channel (the deeper, faster water) crosses from one bank to the other, seeking the outside of the next bend. The Red Eye Crossing is about two miles long, with the channel crossing from the east bank to the west bank.

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# Officials meet tribes in their own lands

Article and Photo  
By Maggie Oldham  
Omaha District

The best way to get a true impression of a region and its people is in person, a lesson that staff from the Assistant Secretary of the Army (Civil Works) [ASA(CW)], Army General Counsel, and U.S. Army Corps of Engineers learned when they journeyed through Missouri River Indian country.

"We at the office of the Assistant Secretary of the Army (Civil Works) believe that it's important to reach out to tribes to exchange ideas and build trust, and not simply wait for issues to be brought to our attention by letters or during annual visits," said Chip Smith, Assistant for Environment and Regulatory Affairs in the ASA (CW) office.

Besides hearing tribal views on issues, the trip provided travelers with an opportunity to establish new relationships, to reaffirm existing relationships, and to visit important resource and cultural sites. Besides Smith, Gordon Bailey, Army General Counsel; George Tabb of the Corps Natural Resources Office; and representatives from Northwestern Division, Omaha District and St. Louis District made the trip.

Their schedule was ambitious -- eight tribes in five days. That's just one-fourth of the 30 tribes within Omaha District's boundaries.

"We have an excellent, and important, working relationship with the tribes," said David Vader, Omaha District Native American Coordinator. "This trip provided an excellent opportunity for all to see and learn together. With that comes collective problem-solving. This was an opportunity for the tribes to showcase some of their



(Left to right) Omaha District Native American Coordinator David Vader, Chip Smith of the Office of the Assistant Secretary of the Army (Civil Works), Standing Rock Sioux Tribe Council Member Reva Gates, and Tribal Chairman Charles Murphy discuss the opening of the marina at Walker Bottoms Recreation Area.

successes and openly discuss priorities, problems, and opportunities to partner more in the future."

The group met with members of the Three Affiliated Tribes, Standing Rock Sioux, Cheyenne River Sioux, Lower Brule Sioux, Crow Creek, and the Yankton Sioux Tribes.

Their journey started in Minot, N.D., and ended in Yankton, S.D., covering nearly 1,000 road miles. As they traveled south, they followed the Missouri River downstream through North and South Dakota.

Meetings with leaders of the Three Affiliated Tribes (Arikara, Hidatsa, and Mandan) touched on the full scope of Corps mission areas. Specific discussion included land transfer, litigation, treaty rights, trust responsibility, noxious weed control, oil exploration, shoreline erosion, flood protection, contracting with tribes, natural resources, protection and management

of cultural resources, paleontology, hunting and fishing jurisdiction, environmental restoration, and recreation area management.

During the meetings, tribal members relayed their images of the past and their hope for the future. "I was impressed by the spiritual strength of tribes, their ability to persevere and adapt to change and adversity, and their commitment to the environment," said Smith. "I also was overwhelmed by their hospitality and generosity, despite the fact that we had many serious and occasionally heated discussions about issues."

Economic issues as well as cultural issues are of immediate concern to the tribes and the Corps. The group heard about tribal needs for infrastructure improvement, jobs, training, improved access to educational and health facilities, and environmental restoration.

"There were high points for each and

every tribal visit, those moments when a tough issue was addressed honestly and openly, and when we were able to come to agreement on how to proceed," said Smith.

Visits to Native American cultural sites also left lasting impressions. The group visited the gravesite of Sitting Bull. They also stopped near White Shield, N.D., to visit the Old Scouts Cemetery, burial site of many Native American veterans who served in the armed forces from the 1860s through Vietnam. Many markers commemorate Arikara members who were scouts for Lt. Gen. George Custer, some of who fought and died at the Battle of Little Bighorn. The Corps partnered with the Three Affiliated Tribes, the Bureau of Indian Affairs, and others in 1995 to reposition the gravesites and headstones in accordance with tribal beliefs.

One high point of the trip was a ribbon-cutting to open a marina project at the Walker Bottoms Recreation Area on the Standing Rock Reservation along Lake Oahe near Bismarck, N.D. About 80 miles of the Lake Oahe shoreline lies within Standing Rock Reservation. Omaha District signed a park and recreation lease with the Standing Rock Sioux Tribe (SRST). The ceremony marked the opening of phase one of the project. When completed, it will include a public marina, boat slips, boat ramp, courtesy dock, swimming beach, irrigation intake, parking areas, day picnic areas, and overnight camping areas. It will also feature a convenience shelter, personal facilities, fish cleaning station, nature trails, and a proposed 18-hole golf course on tribal lands west of the project.

The marina at Walker Bottoms Recreation Area is an example of how Corps districts support tribal initiatives, consistent with Corps policy principles. One key principle affirms that the Corps will seek out ways to involve tribes in projects and programs that build self-reliance, and encourage economic growth.

In the next few years, the tribes and the Corps will face significant challenges, said Tabb. "With the Corps' shrinking resources, a major challenge will be to figure out how to work with the tribes effectively," he said. "There are lots of problems to deal with, but this means there are also lots of opportunities to make positive things happen. I believe the relationship between the tribes and the Corps is improving. With the interest and direct involvement of the Assistant Secretary and his staff, I expect the relationships to continue to improve. I also believe Omaha District has made huge strides in the right direction in this regard."

Vader believes Indian country is the ideal frontier to practice the Corps' Vision. "The Corps Vision (revolutionize effectiveness, seek growth opportunities, and invest in people) is made for Indian country," said Vader. "The outcome and follow-up from this trip will demonstrate that we are serious about our commitments."

## Soft dikes

Continued from page 4

Crossings create water conditions conducive to shoaling. And the Red Eye is particularly troublesome because the channel is relatively wide at that point, about 3,700 feet. This forces the district to bring in dredges to maintain the 45-foot channel to Baton Rouge. Each year, the Corps brings in two dustpan dredges, the government dredge *Jadwin* and a private dredge, to remove sediment deposited in the high-water season. Sometimes, hopper dredges are also used.

The six soft dikes are perpendicular to the river flow, extending along the east bank for just under 1.5 miles. The dikes are progressively longer going downstream, from 680 feet to 1,750 feet. Thus, the dikes constrict the Mississippi's flow, concentrating it in a narrower channel that gives it more muscle to shove the sediments downriver.

"We took some good bends (crossings) downriver where dredging isn't re-

quired, and tried to mimic those conditions," said Keith O'Cain, leader of the district's Channel Stabilization Section. "This constricted Red Eye to about 2,000 feet, the same as the width of the non-dredging crossings we were trying to mimic."

Except that they are soft, and thus safer, the Red Eye dikes are similar to the hundreds of rock dikes that have been used successfully for many years on the river above Baton Rouge.

Though large, the soft dikes are unobtrusive. They lie lower than the nearby sandbar where the bags were filled. The fabric is a geotextile, a heavy-duty polypropylene used in civil works projects like levees, landfills, and railbeds. The project uses both smaller geobags, holding three cubic yards of sand, and mighty geocontainers, with a capacity of 200 to 300 cubic yards.

Safety has been a prime concern with the soft dikes. The first four years have apparently gone well.

"We have no information to confirm

that anybody has hit the dikes," said Coast Guard Cmdr. Daniel Whiting, chief of port operations of the Marine Safety Office in New Orleans. A barge and towboat in one incident report, received about two months ago, turned out to be more than one mile above the dikes, according to Whiting. "The Corps of Engineers, the Coast Guard, and the pilots (river navigators) are working together to insure that traffic gets around that point safely."

"Our next step is the Medora Crossing, 12 miles down river from the Red Eye crossing," said Fred Schilling, Operations Division manager for dredging the Mississippi River from Baton Rouge to the Gulf of Mexico.

The Medora dikes, whose construction is planned for fiscal year 1999, will be a lot simpler than the Red Eye. Medora will have three dikes, instead of the six at Red Eye. "If all works well, we would hope to install more soft dikes," Schilling said. "We will take it one step at a time."

**GS-14/15 selection policy**

# 'Corporate assets' given top emphasis

*"Finding the right people to carry the Corps into the future may be the most important thing I do as a senior leader."* -- Charles Hess

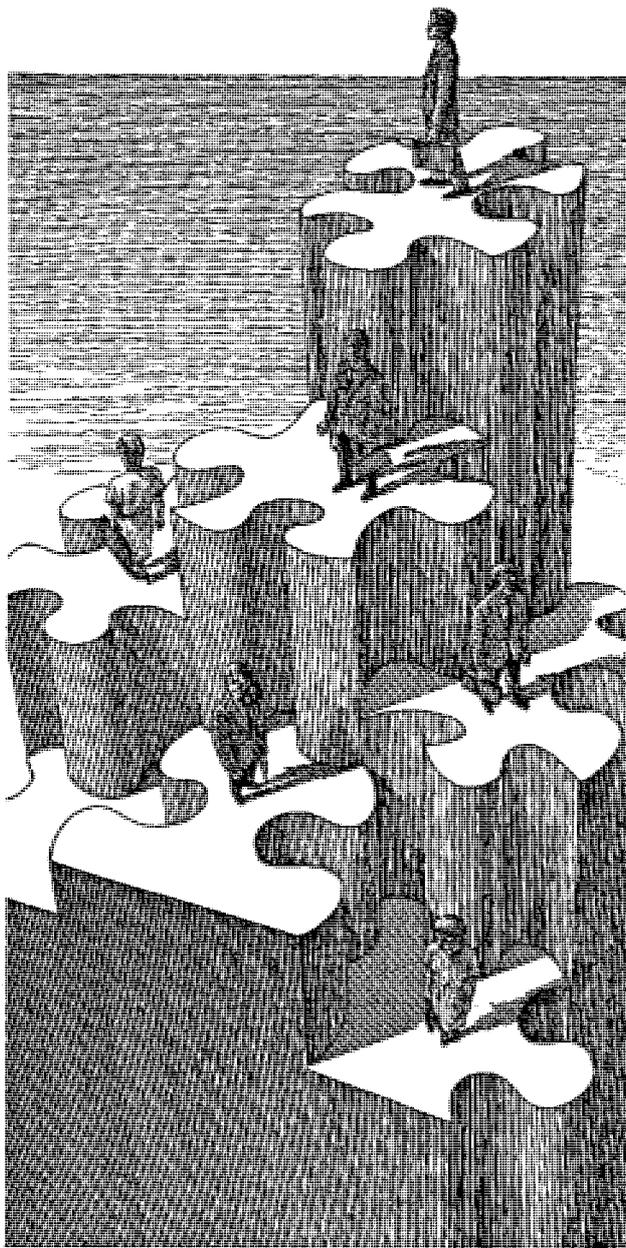
By Becki Dobyns  
Headquarters

"I was not prepared for the uproar," Chief of Engineers Lt. Gen. Joe N. Ballard said recently regarding last year's controversial selection policy decision. The new policy elevated the selection of GS-15s to the Headquarters and supervisory GS-14s to the division level.

Lt. Gen. Ballard believes higher-level leaders are corporate assets, not district or division assets. "The reason we select them at this level is because we get a broader pool of applicants, and we break the good ol' boy network. Down at the district level, it wasn't a process at all. It was a right of passage."

Louise Crowell, Chief of Career Management in Human Resources (HR), administers the new policy. She said it improved the selection process by leveling the playing field. "It's no longer *who* you know but *what* you know that counts," she said. "There is no more heir apparent." She agrees that the result is a broader pool of applicants, particularly those from other agencies who would not have applied previously because they assumed the Corps would hire from within.

The process, modeled after the selection process for members of the Senior Executive Service (SES), requires much more involvement from commanders and other senior leaders in the selection, Crowell said. For GS-15 positions at divisions and districts, division commanders must chair a selection panel. (The USACE Deputy Chiefs of Staff chair the selection panel for GS-15s at Headquarters and other field elements, including labs.) The chair must approve the selection criteria and panel composition in writing. The panel must have at least three members - the chair, the position's supervisor, and an SES from Headquarters. The panel makes its recommendation



to the Deputy Commanding General in Headquarters who makes the actual selection.

For supervisory GS-14 positions, panel chairs can be district commanders, lab directors, division chiefs, or office chiefs, depending on the vacancy's

location. Accordingly, the selection official may be the Director of Military Programs, Civil Works, Research and Development, Chief of Staff, or the division commander.

"Finding the right people to carry the Corps into the future may be the most important thing I do as a senior leader," said Charles Hess, Chief of Operations in the Directorate of Civil Works. Hess said that he has served as the Headquarters SES representative on about 10 selection panels.

One of the criteria used by the panel is feedback from a required Gallup Leadership Competency Interview (*see sidebar*). According to an HR memorandum, the tool is "designed to identify leadership competencies, and by using this tool you will be able to make selections based on leadership capability and competency, as well as experience, education and training."

All these additional requirements mean that it takes about three months longer to fill a vacancy, said Crowell. "But when you think about the investment the organization is making in such an individual for the years ahead, three months is a minor sacrifice, and the cost of the wrong selection is considerable."

Hess admits that serving on selection panels has taken its toll on his business calendar, but says it is rewarding nonetheless because he gets to see great talent and enthusiasm, and he knows he is giving the Corps of the future the focus it deserves.

So why the controversy?

"There was a considerable hew and cry that this was simply an affirmative action program, rather than an effort to systematically create a corporately-aligned candidate pool from which to draw senior executives," Crowell said. While increasing diversity is a major goal of the new policy, she said, diversity means more than affirmative action.

An October, 1997 memo from Lt. Gen. Ballard clarified the term -- "Accomplishing multi-function missions requires a workforce with diverse talents, abilities and skills. In this context, the term 'diverse' has much broader implications than race and gender; it is intended to describe broad and varied life and work experiences. It is our intent to look at senior selections from a broad, corporate perspective. Our corporate recruitment policy for GS-15 and supervisory GS-14 positions ensures that we consider, select, train, and develop a work force with diverse attributes and talents who will exemplify the competencies required to support our strategic direction."

"Significant outreach efforts have helped to ensure that our jobs are more open," Hess said. "And the result is just what you'd expect -- additional well-qualified people applying for our positions."

Since Lt. Gen. Ballard issued the new policy, the command has made 27 selections of GS/GM-15s; 18 are white males, three minority males, and six white females. Their average age is 47. All have undergraduate degrees and more than half have graduate degrees as well.

"We have made some excellent selections during the past year, and I am confident that we will continue to build a leadership team which fully reflects our corporate strategy of a talented, productive and diverse workforce," Lt. Gen. Ballard said in a recent memo to Corps leaders.

The policy's real test is found in the long haul, Crowell said. She is confident, however, that the new corporate selection policy will ultimately mean better prepared, more capable, and more corporate-minded leaders for the Corps, now and 20 years from now.

Readers may view the policy memos and other information about the corporate selection policy at <http://hqmp2.hq.usace.army.mil/cehr/corpsell1.htm>.

## Gallup profile used to weigh candidates' leadership ability

By Becki Dobyns  
Headquarters

The U.S. Army Corps of Engineers has been using the Gallup Leadership Competency Interview in executive selections since 1991. Using the process to help select all GS-15s and supervisory GS-14s became mandatory last May. The profile is used along with information on experience, education, and training, to help the selection panel make the best choice.

The interview gathers information on the person's leadership skill, which is then considered during the selection process. The interview, conducted telephonically by a Gallup executive interviewer, typically lasts more than an hour. For fairness, everyone receives the same questions, which are asked without probing. A Gallup ana-

lyst later codes the interviews and writes a developmental profile for the candidate.

Candidates' competencies are evaluated in four general areas:

- Direction (includes vision, focus and strategic thinking).
- Drive to execute competencies (includes ego drive, desire to win, internal drive to achieve, and proactivity).
- Relationship (includes helping others grow, getting people to work together, creating good feelings in others, and responsibility and ethics).
- Management (includes the ability to coordinate work efficiently, being results-oriented, and the need for structure).

Representatives from the Merit Systems and Protection Board reviewed the process in 1994 and again in 1996. The interview passed validity tests.



# The World's Premier Engineering Organization

## Corps outreach extends across Eastern Europe

By Marnah Woken  
Europe District

From environmental surveys in Poland and Hungary to quality of life assessments in the Czech Republic, Europe District is developing Support for Others (SFO) opportunities for the U.S. Army Corps of Engineers through its Regional Outreach Office.

Through the SFO program, Europe District works closely with the U.S.



European Command (EUCOM) to support the National Security Strategy of Peacetime Engagement and Enlargement in Central and Eastern Europe.

"There is a huge need for engineering expertise and support in these areas," said Dr. Judith Reid, Acting Chief of the Regional Outreach Office. "We're filling that need through Support for Others, a new and unique program that's all about sharing information, working together, and building relationships with other countries. We're planting seeds and helping other countries become part of the engineering and environmental planning process; we're helping them make smart choices."

Europe District recently joined North Atlantic Division (NAD) as part of a strategic initiative by the Chief of Engineers to align for success by further developing the EUCOM relationship. NAD Commander Maj. Gen. Jerry Sinn now oversees all Corps activities in the EUCOM area.

"This is a wonderful opportunity for the Corps to help others throughout the world," said Sinn. "We have unique engineering expertise in designing and building projects that enhance the quality of life for military personnel and American citizens. It is a logical extension to bring our skills to those in Eastern Europe who would benefit from improved infrastructure. I get a great deal of professional satisfaction hearing the words 'Thank you!' from people who benefit from the work we do to improve their living conditions."

Projects under Europe District's SFO program include construction in the Ukraine to support the Defense Special Weapons Agency (DSWA), embassy renovations in many former Soviet Republics, a South-East Balkans environmental security assessment, a Central European petroleum stock study, an assessment of a training range in the Ukraine, and assistance to Poland, Hungary and the Czech Republic under the Partnership for Peace program as they prepare to enter the North Atlantic Treaty Organization (NATO).

"Probably one of the most exciting programs we're working on is our role in Partnership for Peace," said

Reid. "We're helping Poland, Hungary, and the Czech Republic conduct infrastructure inventories on military installations in their countries to determine how well they meet NATO interoperability standards. We're also offering assistance in strengthening their overall engineering capabilities as they move into NATO."

The quality of life assessment in the Czech Republic and environmental surveys in Poland and Hungary also fall under the district's work with Partnership for Peace. The assessment involves developing a total housing management plan, and a cost of living database of housing areas near military installations in the Czech Republic.

"Poland and Hungary have expressed interest in environmental surveys to improve their living conditions and quality of life," said Reid. "With this project, we want to provide training on how to conduct environmental survey reports so they have the knowledge and expertise to conduct the surveys themselves. This is a great way to build relations and improve living conditions at the same time."

A site assessment of a training range in the Ukraine is also part of Europe District's SFO work. Mechanical engineer Ragan Glandon and project manager Paul Ramey from Europe District went to the Ukraine to determine if the area could support a joint U.S./Ukraine exercise.

"The 7th Army Training Command showed interest in using a former Soviet training range in Yavoriv," said Ramey. "We looked at force protection and life support systems, assessing the water supply, sewer and electrical systems, barracks, and dining facilities."

Under the Cooperative Threat Reduction Program, Europe District worked with the DSWA to build about 600 new apartments in Khmelnytsky, Ukraine. The project was a collaborative effort between the DSWA, the Corps, the Ukraine Ministry of Defense, and private industry. Europe District managed construction of the apartments which were designed for the families of former Soviet officers.

Also through the SFO program, Europe District helped Transatlantic Programs Center with humanitarian aid to Africa. EUCOM and the U.S. Embassy in Mauritania, Africa, recently asked the Corps to provide a public health engineering assessment of Nouakchott, Mauritania, a severely impoverished city.

Europe District environmental engineers Peter Russin and Pat Brady conducted a two-week study and site-analysis of the area, and identified three major life and safety health problems. The main problems found were a lack of clean drinking water, poor sewage handling, and the lack of a waste disposal program.

## Support for others WORLDWIDE

"The city's annual rainy season floods the El Mina Quarter of Nouakchott, causing standing water to mix with raw sewage," said Russin. "This standing water contaminates the limited drinking water in the area, resulting in cholera and malaria outbreaks."

"Following our assessment, we provided an outline in terms of an initial cleanup of the area," said Brady. "We also provided guidance on the development of a solid waste management plan."

"Europe District is aggressively serving as EUCOM's 'Door to the Corps' in the region," said District Commander Col. Mike Barry. "Both EUCOM and our Partnership for Peace partners are enthusiastic about the Corps' capabilities to support a full range of engineering and environmental services in support of the region's developing democracies. Using the strong foundation the District has built in supporting U.S. Forces in Europe, we are reaching out to support U.S. regional objectives as part of the EUCOM team."

"Prosperity, stability, politics, religion and geography vastly differ in these countries," said Reid.

"All of these things are taken into consideration when we work on these projects so it's a learning process for us, too. Europe District has a lot of energetic people who really enjoy this type of work, despite the challenges that come with it. They enjoy sharing their expertise and enjoy seeing the fruits of their labor -- that holds a lot of meaning for them."

"SFO is helping us learn how to live together," added Reid. "It's helping us share with other countries and learn about different cultures."



These apartment buildings were built in the Ukraine for retired officers of the Russian Strategic Rocket Forces. (Photo courtesy of Europe District)

## Corps assesses water system for African village

By Marnah Woken  
Europe District

The U.S. European Command (USEUCOM) and the U.S. Embassy in Mauritania, Africa, recently asked the U.S. Army Corps of Engineers to provide a public health engineering



assessment of Nouakchott, Mauritania -- a severely impoverished African city.

The area's annual August to September rainy season floods the El Mina Quarter of Nouakchott,

Continued on page 8



# The World's Premier Engineering Organization

## Corps surveys water system off African coast

By Denise Tatu  
Transatlantic Programs Center

Two team members from Transatlantic Programs Center (TAC) recently completed a water resources survey on Santiago, the largest island in the group that makes up the Africa country of Cape Verde.

Civil engineer Al Cortes and Africa project manager Doug Hopper performed the survey in response to a request from the U.S. embassy. "The embassy asked us to prepare a feasibility report to identify potential projects to improve Cape Verde's water supply and water conservation efforts," said Cortes.

Besides Cortes and Hopper, team members included Gale Ley, Security Assistance representative from the U.S.

embassy; João Lima, Cape Verde General Directorate of Agriculture, Forestry and Animal Husbandry (DGASP); and José Vera-Cruz of Agricultural Cooperative Development International (ACDI).

Lima represented the Cape Verde government, while ACDI participated as a consultant for the embassy during the study. The survey team traveled throughout Santiago, recorded existing conditions, identified potential project sites, and collected data to plan and evaluate water resources alternatives.

The Cape Verde islands are 620 kilometers (about 384 miles) off the west coast of Africa. The archipelago has 10 islands and five islets. The capital, Praia, is on Santiago, which has a population of 80,000.

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WDRT may deploy before, or with, the well-drilling team to assist with site selection and the ultimate well design. Once deployed, team members contact host-nation ground water experts, evaluate any existing water facilities, and conduct detailed hydrogeologic reconnaissance of the specific areas that were identified as having high potential.

The geophysical team element, based at WES, can conduct electrical resistivity and seismic refraction surveys to assist in the field work. Once the drillers begin their work, supporting specialists assist with logging and interpreting cuttings from the well, and with down-hole electric logging. This aids in identifying the highest producing aquifers in the well, so that intake screens are placed accurately and maximum water production is ensured.

Although the WDRT can provide this assistance directly in the field, its ultimate mission is developing water-detection skills in the military well-drilling teams. TEC's WDRT members recently developed and executed a hydrogeologic training seminar for three Air Force well-drilling units. Plans are underway to offer this training to the other services.

Since 1994, the WDRT at TEC performed hydrogeologic analysis of more than 300 sites to support military well-drilling operations worldwide. Most requests to the WDRT were for geologic and hydrogeologic information to support the planning of possible future drilling operations. There were far more sites evaluated than could be drilled or have been drilled to date. Of those drilled, 119 wells were successful, with only four failures. This is a better than 95 percent success rate for wells drilled with WDRT support.

"Geological evaluations of well-drilling sites performed by members of your command have been highly successful," stated a message from U.S. Southern Command (USSOUTHCOM) to TEC. "Since the inception of this program, USSOUTHCOM has experienced a reduction of more than 70 percent in dry well occurrences."

More difficult to measure is the value of a clean water source to a poor Haitian village or school, especially where there was none before, or the goodwill these successful humanitarian construction projects generate toward the U.S.

(Laura Dwyer is Chief of the HAB at TEC and the current WDRT manager. Bruce Markley is a hydrologist with the HAB.)

the WDRT. The team forms when needed, and draws on civilian specialists in data base evaluation, remote sensing, geophysics, and specific geographic regions. Specialists from TEC, Waterways Experiment Station (WES), and Mobile District, as well as other government agencies like the U.S. Geological Survey, have participated in WDRT deployments to support military well-drilling missions outside the U.S.

For HCA and engineering exercises, the host country often requests drilling many water wells, but generally only a few can be drilled during the short deployments. Often, requested sites have little or no potential to develop adequate water supplies. The WDRT helps determine if the sites have potential to sustain the stated requirements, and ranks the proposed sites based on their potential. In addition, if there is little potential for a successful well at a particular location, possible nearby alternate sites are suggested.

"The WDRT's assistance is extremely helpful in narrowing down the vast number of well requests we get. Because of the few well-drilling units deploying here, we want to choose sites that will have the highest chance of being successful and maximize the positive impact on the communities," Brown said.

When a request for WDRT support is received by HAB, the first step is evaluation of data and imagery available for the area. HAB performs this preliminary site analysis, often drawing from the DoD Water Resources Data Base produced and maintained by TEC. In Haiti, as in most cases, the analysis of existing data sources is sufficient to identify areas with high potential for successful water wells. But the WDRT may also determine that additional information is needed from other sources, including data from remote sensing systems, and hydrogeologic data from other organizations.

Brown notes that all of the WDRT reports "completed for us are very thorough and professional and are the deciding factor for us in determining where to drill."

In the few cases where available data are still too sparse to confidently identify high-potential areas for water wells, the WDRT can select and rank specific areas for field reconnaissance and geophysical surveys. Depending on mission requirements, the

(WDRT) of the U.S. Army Topographic Engineering Center's (TEC).

TEC's Hydrologic Analysis Branch (HAB) in Alexandria, Va., has supported the Department of Defense's (DoD) HCA water well drilling program in Haiti since 1996, and DoD well drilling in general since 1985. HAB provides hydrogeologic analyses of potential well sites as part of its WDRT mission to support military well drilling. This support led to the successful completion of at least 25 water wells in Haiti.

"Each year we drill about 10 HCA wells," wrote 1st Lt. William Brown, Special Projects Officer of the U.S. Support Group Haiti-Joint Engineers, in a report to TEC about the impact of this support. "Each well supports...up to 5,000 Haitians. These wells are drilled by Army, Air Force, and Navy units that are deployed here for training...mission success is very important for deployments. So, when we select well sites, the hydrogeologic conditions are the determining factor. The reports...from TEC provide the information necessary to decide where to drill."

The surest way to find ground water is drill a hole to it. But in unfamiliar terrain, drilling by trial-and-error can be costly and time-consuming. Failures occur when the site selection, well design, and drilling do not take hydrogeology into account. A number of techniques, from hydrogeologic analysis to air photo interpretation and geophysical prospecting, can improve the odds of drilling a successful well on the first try. The WDRT is available to assist the military planner and well drillers in locating ground water sources before drilling.

Before the WDRT, military well drillers generally relied on trial-and-error. They commonly deployed to new areas without prior knowledge of the geology and without information like the target well depth, expected well yield, or probable water quality at a site. They could not plan what well-drilling equipment to take when they deployed, or what materials they would need to complete a well. They didn't even know whether it was possible to reach water at a particular site. So there were many dry holes.

In 1985, the Corps established the WDRT to help military well-drillers locate ground water sources and improve their well-drilling success. HAB manages



Army engineer soldiers drill for water in Haiti. (Photo courtesy of TEC)

fect, the water lines themselves provide an excellent conduit for waterborne diseases. In addition, open well dispensing points are vulnerable to direct human and animal contamination and provide an excellent breeding ground for mosquitoes during both the dry and rainy seasons."

In their final assessment, Brady and Russin offered suggestions on how to solve the problems that pose an extreme health hazard to the community.

"We looked at it from a realistic point of view and said 'What can we do to improve the quality of living for this community with the dollars that we have,'" said Russin. "Basically, we provided an outline in terms of doing an initial cleanup of the area, and disinfection of the solid waste areas. Currently, there's a procurement going through the State Department for the cleanup,

and the implementation of a solid waste management plan that will control, handle and dispose of the solid waste."

Both Russin and Brady feel this assessment and the subsequent cleanup efforts may serve as a pilot program for other impoverished African cities.

"This is something that can be duplicated in other impoverished communities," said Russin. "I think once everyone begins to see the results of these efforts, it will be replicated in other areas, ultimately helping the people who live in these impoverished areas."

## Topo team finds water in Haiti

By Laura Dwyer  
And Bruce Markley  
Topographic Engineering Center

Let's say you're a military engineer planning Humanitarian Civic Assistance (HCA) projects in Haiti. You've just received a list of 10 possible water well sites for drilling during a coming military well driller deployment, but only

three or four wells can be drilled in the time allowed.

You know little about the sites except for the village names and locations.

And you know this is an important humanitarian mission because each village does not have a well, so the Haitians get their drinking water from contaminated open streams and watering holes.

How can you get the hydrogeologic information you need to make an informed decision about which sites to drill?

Contact the Water Detection Response Team



Continued from page 7 causing standing water to mix with raw sewage. This standing water contaminates the limited drinking water in the area, causing cholera and malaria outbreaks. The problems are magnified by the area's overpopulation and geographical conditions.

Europe District environmental engineers Peter Russin and Pat Brady went to Nouakchott to assess and evaluate the situation and to propose corrective measures to combat the threat to public health in the El Mina quarter. They conducted a two-week study and site-analysis -- identifying three major life and safety health problems in the area.

"Basically, EUCOM requested a team to go down there to try to come up with a solution to improve the quality of living," said Russin. "We did this as part of Europe District's Outreach Program. This is a highly populated area. People are migrating from the desert to the city, looking for work. The population is at the point where the quality of living is starting to deteriorate as they adjust to living in an urban area."

The main problems found by the assessment include a lack of clean drinking water, poor sewage handling, and the disposal of domestic and solid waste products.

"Uncontrolled solid waste refuse litters virtually the entire El Mina Quarter," said Brady. "There is a visible lack of garbage cans, dumpsters, and other means of controlling and transporting the waste to an intermediary pick-up point, so the waste piles lie in the open, year round."

The area also suffers from a total lack of natural drainage, according to Russin. This, combined with the accumulation and pooling of used water and sewage, creates a serious public health condition.

"There is a serious drainage issue in the area," said Russin. "However, the magnitude of trying to resolve the drainage issue is a big project. All you can really do at this point is try to control and handle the solid and domestic waste that mingles with the drinking water. In a sense, there's nothing that can be done about the drainage problem unless you spend millions of dollars. We concluded that if we could control the existing solid and domestic waste lying on the ground, it would help a great deal. If we can get rid of the existing waste, the heavy rainfall won't cause as many sanitation problems. Obviously, there will be some ponding, but it won't be in proximity of the solid waste."

Nouakchott's existing water supply, storage, and transmission systems are also seriously inadequate. In addition, further water production is expected to decrease in the future, meeting only 70 percent of the city's demand.

"The water lines aren't buried deeply enough and in some cases lack acceptable backfill material," said Brady. "Frequent failure of lines and joints, coupled with low operating hydrostatic pressure, has severely compromised the water quality in the lines. In ef-



Peter Russin, environmental engineer, Europe District, surveys the high groundwater at El Mina, Mauritania. (Photo courtesy of Europe District)

## Support for others WORLDWIDE



Existing concrete water storage tanks at Achada Grande, on the island of Santiago, Cape Verde, an island nation off the coast of Africa. These tanks are used by the local farming association to collect rainfall. The water is then distributed to the community. (Photo courtesy of Transatlantic Programs Center)



# The World's Premier Engineering Organization

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According to Cortes, high winds have caused erosion on all the islands, and the lack of rain (the islands receive limited rainfall during a three-month rainy season) prevents the growth of natural vegetation, which contributes to further soil erosion.

Cortes said that on Santiago, large quantities of fresh water drain into the ocean immediately after rains and ground water resources are limited. Agriculture is limited to areas next to streams. These areas are prone to flooding and must be irrigated from wells during prolonged dry periods.

"Cape Verde has had a drought for more than 20 years and most people walk a couple of miles each day for water, bringing it back from distribution points in 10 gallon jugs," Cortes said. "Only 25 percent of the homes in Praia are connected to water."

After field visits (including a desalination plant) and interviews, Cortes and Hopper recommended three projects alleviate the water shortages:

- Procure desalination plant pumps to restore the plant to full capacity. At full capacity, the plant will meet the needs of half the population of Praia.

- Procure and install 20 well pumps throughout the island, each meeting the daily water needs of 5,000 people. The wells can also provide irrigation.

- Build a small dam at Ribeira Dos Flamengos in north Santiago. The dam would capture rainfall to increase farm productivity and expansion.

Hopper said the embassy will use the team's report to determine the feasibility of funding the proposals.

TAC's work in Africa is funded through security assistance and humanitarian demining programs. These low-cost projects are aimed at promoting democracy and increasing the standard of living. TAC provides project planning, technical assistance, and procurement services, with the host nation's military forces usually doing the work. Civic action projects include water wells, low-cost housing, dental, medical, and pediatric clinics, and primary schools. Biodiversity projects are aimed at protecting plants and animals of Africa, using the host nations' military forces to patrol the game parks. Demining assistance has been provided to both Ethiopia and Eritrea to help with refurbishing training facilities.

## Huntsville helps Russia destroy chemical weapons

By Linda James  
Huntsville Program Center

Huntsville Center's support of Russia's effort to build chemical weapons disposal facilities just got larger, which put all the U.S. Army Corps of Engineers' support to this program under one organizational roof.

Through the U.S. Cooperative Threat Reduction Program, for two years the Center has provided oversight for a chemical weapons disposal facility in southern Russia. The Ralph M. Parsons Co. has the contract to design and build the facility. The Center's expanded mission now includes overseeing a separate contract to build and renovate a Central Analytical Laboratory. This state-of-the-art lab in Moscow will enable the Russians to monitor and analyze their stored chemical weapons.

Transatlantic Programs Center typically manages all overseas construction and awarded the initial lab construction contract to ConTrack of Arlington, Va. ConTrack will complete the lab renovation, except now they will do it under the guidance of Huntsville Center. Renovating an existing building and furnishings at the State Scientific Research Institute of Organic Chemicals and Technology should be complete by December of 1999.

Additionally, Huntsville Center will continue to monitor and oversee the Parsons contract for the Russian Chemical Weapons Destruction Facility (RCWDF) to be built in the rural Russian community of Shchuch'ye. The Center's oversight responsibility with the Parsons contract was scheduled to end when the design phase was complete. Corps Headquarters directed Huntsville Center to assume oversight of not only the design but also the construction of the RCWDF.

Currently, both projects are managed from the Moscow-based Chemical Weapons Destruction Support Office established in 1993 to provide logistical and administrative support. Joe Conn, Programs and Project Management Directorate of Huntsville Center, has been selected to manage Huntsville Center work on the project in the Russian office. Conn leaves in November to begin a one-year tour of duty. According to Conn, the project will eventually employ five to seven people in the Corps office in Russia.

Construction and systemization of the RCWDF is scheduled for completion in 2004.

## Huntington man helps Russians with chemical lab

By Kathy Rea  
Huntington District

McDonald's, Pizza Hut, Planet Hollywood, Kentucky Fried Chicken, and ATM machines are all reminders of home for Huntington District's Mike Maynard, even when home is half a world away. Maynard, a construction representative, is currently in Russia for his third 90-day tour. (*Editor's note: Joe Conn of Huntsville Programs Center is also there.*) He is overseeing renovation of the four-story State Scientific Research Institute of Organic Chemicals and Technology Laboratory, once used to develop chemical warfare nerve agents in Russia. Since the 1920s, it has been the Russians' premier research facility.

"The building will now be used as their main laboratory in the chemical weapons destruction field in Moscow," said Maynard. He and Transatlantic

## Support for others WORLDWIDE

Center's Art Davies, the project's resident engineer, are the only Corps personnel on site.

"The Russians are financially strapped to build facilities to destroy their weapons," said Maynard. "We are supplying them with laboratory equipment and training their lab personnel. We are destroying our chemical weapons, and the Russians are beginning to destroy theirs."

The first four floors of the building are gutted. Although the facility was tested for nerve agents, Maynard said the sub-contractor is also doing their own testing.

The project is truly an international effort, since the sub-contractor, Skanska, is from Finland. The contractor, Contrack International, has headquarters in Arlington, Va., and Cairo, Egypt.

Construction materials needed for this project must be shipped from the U.S. to St. Petersburg, Russia, and then trucked to Moscow.

According to Maynard, the language barrier hasn't been a big problem so far, even though the other workers are Russian and/or non-English speaking personnel. They seem to be able to communicate what needs to be done. An interpreter is used only when dealing with officials from the Russian government. But Maynard said he plans to take a Russian language class when he returns to Moscow. "It makes life easier."

Maynard describes Moscow as a combination of New York and Los Angeles -- a lot of vehicle and pedestrian traffic. Because everything is coal-fired, the city is very dirty. "Life is steady but expensive," said Maynard. On past tours he could always count on the ruble being from 6 to 6.3 to the American dollar. However, during the end of August, the ruble went from 8 to 15. "When I left, it was up between 20-22 to the dollar," he said.

Russia's recent shift in economy also affected American dollars. The Russian government has put a freeze on them and all transactions must now be conducted in rubles. The recent shift also affected credit cards.

"Restaurants weren't accepting credit cards because they were losing money," Maynard said. "If you wanted to do anything outside the embassy, you had to do it with rubles."

The weather during his first tour was cold with lots of snow. Maynard said a Moscow winter is not much different from one of West Virginia's bad winters. His second tour was during the summer, and it was extremely hot, especially in June.

Maynard said working on this project has given him a lot of experience. He is getting into the management side and now holds meetings with the contractor and deals with the Russian government.

He said the experience will be useful when he returns to Huntington, but it may be a long time before Maynard returns. The expected project completion date is July 1999 and Maynard hopes to see it to completion. Although he said he misses home occasionally, he is usually so busy working that he doesn't have much time to think about it.

Maynard returns to Huntington between tours, and he said it feels good to be back. "I think you have to get back over here just for a shot of reality and clean air," he said. But after a week, he is ready for the 24-hour flight back to Moscow.



# Service offers nationwide access

By Anita Horky  
Fort Worth District

The U.S. Army Corps of Engineers has teamed with the U.S. Forest Service to provide one-stop shopping for camping reservations. Beginning last month, customers can reserve Corps- and Forest Service-operated campsites, cabins, and picnic areas through the National Recreation Reservation Service (NRRS).

The NRRS is an extensive, unprecedented undertaking for the two agencies. A task force of Corps and Forest Service employees worked for three years to develop the new reservation service by surveying customers, researching other reservation programs, and consulting contracting specialists, reservation service experts, and field personnel.

"The field people are the critical part of this whole effort," said Jack Ardner, NRRS interagency program manager. "It was essential to get them involved at an early stage. We asked for their input, especially on operating procedures. We sought their input as to what works best for the customer in the field."

The NRRS was developed with the customer in mind. Instead of contacting different agencies and offices and using various procedures, customers now have an easy and accessible way to reserve campsites. Starting Oct. 15, the public can call a toll-free number for reservations and, beginning Nov. 16, reservations can be made over the Internet. Trip-planning information will also be available on the Internet.

The first reservation made through the NRRS was for a Corps site at Lake Sidney Lanier, Ga. That reservation was the first of more than 600 made when phase one of the NRRS began. More than 400 of those reservations were for Corps sites.



Reserve  
Your Place  
Under the  
Stars  
National  
Recreation  
Reservation  
Service

"Most of the reservations were for the Memorial Day weekend," said Lynne Beeson, NRRS task force member. She and two other park rangers were at the

contractor's call center during the kick-off to help reservation agents with questions about Corps facilities.

"The first day went real well," Beeson said. "We're now turning our attention to the Internet."

The NRRS gives campers time to plan their activities well in advance, as individual campsites can be reserved up to 240 days in advance, and group facilities 360 days ahead. In addition, the NRRS will offer interagency referrals to alternate campsites by phone. For example, if a desired campsite is fully booked, the customer will be told about a nearby available site (Corps or Forest Service) with similar facilities.

"We think customers will like what the new service offers," said Greg Webb, the Corps' NRRS program manager. "They'll be able to make reservations easily and well in advance, and we're hoping the new reservation service promotes the use of our facilities during non-peak times."

The NRRS is being implemented in two phases. About 30,000 camping facilities became available through the reservation service beginning Oct. 15, and include Forest Service facilities as well as selected Corps campsites in Fort Worth, Little Rock, Louisville, Mobile, Nashville, and Savannah districts.

In phase two, other districts go online March 1, 1999, when an additional 10,000 Corps sites become available for reservations.

"We wanted various phases so we wouldn't overwhelm ourselves," Webb said. "During phase one, we'll have time to identify problems and issues and



With the National Recreation Reservation Service, campers can use a toll-free phone call or Internet visit to make guaranteed reservations at participating Corps and Forest Service campsites, cabins and picnic areas. (Photo courtesy of Fort Worth District)

make corrections before we bring on additional sites."

Long-term benefits of the new service will outweigh any temporary problems, officials said. "The NRRS will help the Corps promote our facilities," said Beeson. "We've got facilities that are some of the best-kept secrets of federal recreation and are only known locally. This will give us a national spotlight and focus on us as a true recreation provider."

Webb said the NRRS will help field offices manage their sites better. "It will reduce the on-site handling of cash because use fees are collected at the time the reservations are made. That's good for security reasons, and it should also increase the use of credit card payments, which means the agency gets the money quicker," he said.

Local campgrounds will be linked with the national reservation service through a new computer program, Park Office, which has more bookkeeping and reporting capabilities than the computer program currently in use. Park Office was designed specifically for campsite reservations by Park.Net, Inc., the company that operates the NRRS contract. Park.Net operates similar reservation systems for

recreation programs in several states.

The NRRS may be expanded in the future to include additional campsites, such as those on Corps lakes operated by concessionaires, and other activities, such as Forest Service permits. There's also room for other federal recreation providers to join the Corps and the Forest Service in the program.

Corps officials said they are excited about the potential of the new reservation service.

"Here in the Corps, the NRRS allows us to put together one system on a national basis (a toll-free number, an Internet site) to serve the public in a much better and coordinated way than we have in the past," said Darrell Lewis, chief of the Corps' Natural Resource Management Branch. "Not only that, but it's going to be good business. I think we're going to generate higher income and a better occupancy rate for our facilities throughout the Corps."

"We're continually asked to become more customer-focused, business-driven, and efficient," said Beeson. "The NRRS is the vehicle that helps us accomplish all of that."

## Web site offers wealth of information

It's easy to reserve campsites at participating Corps and Forest Service facilities with the new National Recreation Reservation Service (NRRS).

Since Oct. 15 you can call toll-free (877) 444-6777 from 8 a.m. until midnight Eastern Standard Time.

Beginning Nov. 16, visit the website at <http://ReserveUSA.com> for reservations and information 24 hours a day.

Corps employees can find additional information about the new reservation service at the NRRS Team website at <http://www.usace.army.mil/nrrs>. The site contains information on the NRRS contract, training, points of contact, policies and other issues of interest.



**Julie Marcy**  
Vicksburg District

An unknown disease in the Southeast is causing the largest known die-off of bald eagles in the history of the U.S. Employees at lakes managed by the U.S. Army Corps of Engineers have joined with other federal, state, and private groups to track down the cause.

When eagles began dying in 1994, "I thought we were quickly going to find the source of a toxin and end the losses," said Jim Young, resources manager at DeGray Lake near Arkadelphia, Ark. "We had a team of Corps park rangers, U. S. Fish & Wildlife Service (USFWS) special agents, the Arkansas Game & Fish Commission (AGFC), and the Arkansas Department of Parks and Tourism (ADPT) conducting a systematic search. After a few days, it became apparent that many more eagles were probably going to die before we found the cause, and I began to realize we weren't dealing with any of the familiar reasons eagles die."

Coot and Eagle Brain Lesion Syndrome (CEBLS) is caused by an unknown neurotoxin whose origin eludes scientists and, as of this writing, has killed 58 bald eagles and 155 American coots, a common water bird that resembles a duck.

According to Dr. Kim Miller, veterinary pathologist with the U.S. Geological Survey's National Wildlife Health Center (NWHC), the eagles and coots "appear to be normal, externally and internally, when found dead, with the exception of microscopic neural lesions in the brain and spinal cord." These lesions are CEBLS's signature and have never before been found in free-ranging wildlife.

Symptoms include a reluctance to fly, erratic flying with a dipping or bobbing rear end, coots swimming in circles or upside down, and erratic walking on land similar to birds with lead poisoning.

CEBLS is as intriguing as it is deadly. Its onset and conclusion mirrors the annual migration of eagles and waterfowl in the southeast. Since 1994, the disease has displayed a cycle with severe incidents involving 25-plus eagles and 75-plus coots, alternating with minor events claiming one or two eagles and a handful of coots. Severe outbreaks may correlate with heavy fall rains and a rapid rise in lake level.

Significant numbers of sick coots have been sighted on lakes in the morning, yet cannot be found in the afternoon. This suggests that some coots may receive a less toxic exposure, or have the ability to recover. Heroic efforts to capture and treat a small number of sick eagles have been unsuccessful in stopping the progression of CEBLS.

The geographical distribution of the disease remains unknown. It was first

## Agencies join to fight mysterious bird disease



**Dr. Nancy Thomas of the National Wildlife Health Center, autopsies an eagle affected by Coot and Eagle Brain Lesion Syndrome. (Photo courtesy of NWHC)**

documented in 1994 at DeGray; but spread to another Corps project, Lake Ouachita near Hot Springs, Ark., the next year. Dead eagles were found at DeGray; Ouachita; and Lake Hamilton, a private utility lake near Hot Springs, in the winter of 1996-1997. This past winter, dead eagles were found at Ouachita, sick coots were

found at DeGray and Ouachita, and sick coots were also diagnosed at private lakes in Georgia and North Carolina.

Federal, state, and private interests have united against CEBLS. These include

AGFC, Vicksburg District, USFWS, NWHC, Ross Foundation, FTN & Associates, Inc., the Food and Drug Administration's National Center for Toxicological Research (NCTR), Arkansas Department of Parks and Tourism, and numerous other labs, universities, and private sponsors.

Besides research, these organizations have undertaken an educational effort to disseminate information about CEBLS through speaking engagements, computer websites, radio, television and newspaper media coverage,

a field diagnostics procedures video for land managers, and a video documentary by the Arkansas Educational Television Network.

Rick Stokes, resource manager at Lake Ouachita, says "visitor comments in the CEBLS situation reflects support and positive public relations for the Corps and all members of the CEBLS study team. The visiting public's reaction has been concern for the eagles' well being and a focus of attention for the protection and stewardship of all wildlife at this project."

Extensive watershed field investigations, wildlife studies, and laboratory diagnostic studies have been conducted and are continuing. Field investigations include analyses of hydrometeorological factors (lake elevation, rainfall, air temperatures) by the Corps and FTN; a shoreline vegetation survey by the Arkansas Natural Heritage Commission to look for potentially toxic plants; aquatic plant and algae sampling and analyses by Henderson State University; and water quality and post-storm sampling by the Corps and Ouachita Baptist University (OBU).

These environmental analyses have not identified any definite sources of the toxin. Brenda Meeks, chief of the Ouachita Project Management Office that oversees lakes DeGray, Ouachita, and Greason, said "the management

challenge has been learning to deal with a problem which we've been unable to find a solution or end to. In past experiences, answers may have been hard to find or hard to live with, but there were always answers, solutions, or something we could do to make the situation better. That's not the case this time."

Wildlife studies include trapping, banding, and radio-telemetry monitoring of eagles at DeGray by Arkansas State University and AGFC; trapping, banding, and tracking coots by OBU with help from AGFC and the Corps; coot food habits study by Texas A&M University; and coot epidemiology study by the University of Georgia's southeastern cooperative wildlife disease Study Unit.

The current theory for transmission of the disease is that coots eat toxic aquatic plants and are in turn consumed by eagles, but the birds may be encountering the toxin separately.

Many diseases and compounds have been analytically tested for and eliminated by NWHC. These include bacterial, viral, and parasitic diseases; heavy metals; pesticides; some algal toxins; prion disease; fumonisin; nitrates/nitrites; and vitamin A&E disorders. NCTR is conducting studies to isolate and identify the toxin in tissues of affected birds.

Data compiled thus far provides valuable baseline data and has eliminated many causes of CEBLS, but the search for answers continues. As with most modern problems, the primary limiting factors for research are manpower and funding. The massive partnering effort to date has eased this situation, but new partners are continuously sought.

Corps field personnel are both philosophical about the long effort, and planning to deal with the disease's real-world effects. CEBLS has taught Young that "some things still take time. After we find the cause, our patience may be tested again. We may still have to find the solution to managing the disease."

Doyle Manis, park ranger at DeGray lake, is planning for CEBLS days this fall and winter. This may include "a morning interagency coordination meeting; shoreline patrol; collection of sick and dead birds; shipping specimens to the appropriate diagnostic labs; transporting sick eagles to the vet; providing an extra set of hands to assist eagle trappers with banding; baiting, trapping, and banding coots; media interviews; and writing daily situation reports," he said.

Chris Snodgrass, Superintendent of DeGray lake Resort State Park, summarizes the field staffs' overall assessment, "I still drink water from the lake, as do my children."

Those interested in following CEBLS research can access the website at [www.mvk.usace.army.mil/od/odm/cebls.htm](http://www.mvk.usace.army.mil/od/odm/cebls.htm). Corps personnel can assist the CEBLS team by watching for signs of disease in populations of eagles and coots wintering in their areas, and reporting any suspicious findings.

(Julie Marcy is an environmental specialist with Vicksburg District.)

# Retiree boasts exceptional life, service

*"It's intimidating to strive to meet the standards he set."*

-- Lt. Col. Steve Hill

By Maureen Ramsey  
Japan Engineer District

Akira Sameshima's experience with the U.S. Army Corps of Engineers began in a dusty detention camp in Colorado during World War II, and ended in the Corps' Japan Engineer District (JED) after 51 years of federal service.

Sameshima is a second-generation Japanese-American. Due to their ancestry, Sameshima, his parents, and sister were among the 110,000 Japanese-Americans interned by the U.S. government when World War II began. The family lived in Los Angeles at the time.

"First we were moved to Santa Anita Race Track for four months," said Sameshima. "It was the initial evacuation center." Later they transferred to the Amache Relocation Center in Granada, Colo., one of 10 detention camps in the western U.S.

"It was right in the middle of a dust bowl where farmers grew sorghum and sugar beets," Sameshima said. "My parents and I had one room. My brother and sister had already gone on to college. I was just a kid and I thought it was an adventure. The camp had a high school and I was very active in school with extracurricular activities which kept me busy and out of trouble."

Although he didn't know it at the time, his future employer, the Corps of Engineers, had built the camp.

"Even then I was evaluating construction and design," Sameshima said. "The fiberboard construction and space heaters managed to keep the quarters warm, but the suffocating dust and the abundant centipedes and scorpions were not conducive to quality living."

Sameshima began his formal 51-year odyssey with



Once confined to a detention camp built by the Corps of Engineers, Akira Sameshima, who recently retired as chief of Japan District's Design Branch, logged 51 years of federal service. (Photo courtesy of Japan District)

the Corps in 1947 as an architectural draftsman in Gen. Douglas MacArthur's Army Forces Pacific Headquarters in Tokyo.

Sameshima's career reads like a list of the best construction projects and community facilities for servicemembers and their families throughout the Pacific -- Camp Zama, emergency hospitals in the Tokyo area, Tripler Army Medical Center, the Armed Forces Rest and Recreation Center, and Aliamanu housing.

But Sameshima will be best remembered as an innovator. He devised the Simplified Engineering Contracts process, which is now used nationally as the Simplified Design Method. He was also instrumental in formulating the Army's multi-million dollar Facilities Standardization Program.

As JED's Design Branch chief, Sameshima revo-

lutionized the district's business processes. His x-y-z formula assists program managers in developing criteria packages for the Host Nation Funded Program. He has worked with representatives of the Government of Japan (GoJ) to simplify criteria package requirements while retaining a high quality design product.

As a key person in the Technical Working Group, Sameshima has been instrumental in resolving serious issues about health, safety and construction codes, designs, and construction with the GoJ.

For U.S. funded projects, Sameshima led the team that developed a "cradle to grave" process that simplifies the development of renovation and repair projects. The process incorporates input and coordination from an entire team, from the project management, construction and design to contracting and safety. This process, known as the "Simplified Design Acquisition Methodology" is used nationally.

"All along the way, Sameshima took time to teach the things he had learned," said Lt. Col. Steve Hill of the U.S. Forces Japan at Sameshima's retirement luncheon on Sept. 22. "Improve the product, improve the team, better the atmosphere were Sameshima trademarks. It's intimidating to strive to meet the standards he set."

Those standards can be found in Sameshima's direct involvement in the design and surveillance of more than 400,000 facilities throughout the Pacific, from Japan and Hawaii to the Philippines, South Korea, Taiwan, and Micronesia.

What are Sameshima's plans for the future? His eyes twinkled as he explained.

"I may be old in body, but I am young in spirit and full of energy," he said. "I plan to organize a small firm called SI Corps (Systems Innovation Corporation) in San Francisco and eventually in Hawaii and Japan. My two sons and daughter will be consultants for my corporation. I plan to use many of the processes we use in JED. For instance, I will employ CEFMS, and the one minute rule instead of the one hour rule. I hope to continue my interest as an innovator and eventually be a bridge between our two great nations in a small way to promote peace and harmony in the Pacific."

## Pittsburgh mid-wives endangered ospreys

By Liane Freedman  
Pittsburgh District

The largest inland osprey program in the U.S. Army Corps of Engineers added six new baby birds this year to its list of 20 ospreys born in the Pittsburgh District since 1995. The osprey (a type of hawk which hunts fish) is a state endangered species in Ohio and West Virginia and a state threatened species in Pennsylvania. This year's ospreys were hatched at Stonewall Jackson Lake, Berlin Lake and Loyalhanna Lake.

This success story not only includes the birth of rare birds, but also the cooperation of the caretakers of these wild creatures -- the Pittsburgh District, the Army National Guard, electric utility companies, and the wildlife agencies in Ohio, Pennsylvania and West Virginia.

In 1998, six different osprey pairs used nesting platforms surveyed and maintained by the Corps. To date, 22 osprey platforms have been installed at 10 district reservoirs. All are installed on Corps lands by reservoir project personnel and the Natural Resources



Twenty-two nesting platforms, all on Corps lands, are helping bring the osprey off the endangered species list. (Photo courtesy of Pittsburgh District)

Section's Fish and Wildlife Team, in cooperation with wildlife personnel from the state agencies, with additional assistance from local electric utility companies and the National Guard.

"I estimate that volunteered assistance from the utility companies and the Guard alone amounted to \$40,000 in labor and material costs," said Kirk

Piebler, district wildlife biologist.

The osprey platforms are actually made from telephone poles and "spared" in place by National Guard helicopters or "augured" in by utility line trucks.

Each nesting platform, consisting of a steel hoop with a bracing structure, is secured to the small end of telephone poles ranging from 25 to 45 feet tall.

The man-made platforms are used to encourage nesting by ospreys at locations where natural structures are absent or limited.

"Preferred natural nest sites for ospreys in inland habitats usually include large isolated trees, often dead, located over or very near open water," said Piebler. "These features are in short supply at district reservoirs." To preclude the nests from being flooded, the platforms have to be located as much as 45 feet above normal summer water levels.

Besides this year's three successful nests, ospreys also built nests on platforms at Woodcock and Shenango Lakes. However, no eggs were produced at these sites. Another pair of ospreys nesting at Stonewall Jackson produced a pair of infertile eggs. "We suspect that these osprey pairs were immature, so the nesting attempt was somewhat of a trial run," said Piebler. "We have observed similar occurrences at Berlin and Loyalhanna Lakes before a successful nesting occurred. We expect all six, and maybe a few more platforms, to be used again in 1999."

# Woman dons corset to re-enact Civil War wife

By Deborah Horne  
Baltimore District

*Chemise, corset, hoop skirt, petticoat, jumper slip, pantaloons, stockings, square-heeled lace-up boots, hat and gloves.* These are not the kind of clothes usually associated with Civil War re-enactors, but Kristin Budzynski is not the typical re-enactor.

While most re-enactors are men, and are interested in re-creating the weapons, uniforms, and combat tactics of the Civil War, Budzynski portrays the life of a camp-follower. That term did not have quite the same unsavory meaning back then that it does now. A number of women in that era followed their husbands to the front, and took care of the camp while their men fought.

## A re-enactor's life

One weekend a month each summer Budzynski, who works in Baltimore District's Office of Counsel, wears her *Gone With the Wind* clothes as she portrays the wife of a captain in the Confederate Army. Budzynski attempts to experience and portray the hardships of living in a Civil War camp.

She and the other re-enactors do this for their own interest and education, and to convey a feeling of the Civil War era for spectators who come to view the re-created battles.

"One cannot completely recreate the hardships of that war," said Budzynski. "But after three summers of cooking over a fire in the hot sun, sleeping on the ground, and having no bathing facilities or running water, I learned to appreciate modern conveniences.

"These inconveniences don't stop me from participating as a re-enactor," she continued. "I love the history surrounding the Civil War, and we re-enac-

tors participate for other reasons. It's one way of educating the public and raising funds for historical preservation of battlefield land. Ancestral lineage is another. It's also affordable for families at only \$10 a car to participate or just be a spectator."

A typical Civil War day begins at 7 a.m. for Budzynski. All of the layers of clothing take half an hour. More time is then spent on a hairstyle appropriate for the period. But makeup takes almost no time at all because respectable Victorian women wore very little or no makeup.

## Meals in minutes

"I cook breakfast over the fire using cast iron, metal or wooden utensils," said Budzynski. "Homemade breads, fruits, instant oatmeal, porridge, and tea are common menu items. My husband, Mike, makes his own essence of coffee, a thick coffee syrup which produces coffee when boiling water is added. He also bakes his own hardtack, a saltless hard biscuit, and takes it along during the drills and battles. In fact, most of the foods are prepared at home so they only need re-heating at the campfire.

"For meal preparation, we use woven dishcloths and pot handlers, tinware and other reproduction items available from the shopkeepers authorized to follow the armies," said Budzynski. She and the other re-enactors perform daily chores of tending the fire, maintaining water and firewood supplies, tidying the tent, and making sure all modern items of convenience are out of sight when the public comes to visit.

## Other activities

Activities during the day could include sewing, quilting, reading, candlemaking, visiting neighbors, letter writing, and visiting the shopkeepers.



Unlike most Civil War re-enactors, who are men, Kristin Budzynski of Baltimore District's Office of Council wears a corset, hoop skirt and petticoat to battle. (Photo courtesy of Baltimore District)

While the women are busy cooking and performing their chores, the men conduct morning drills such as maneuvers, marching, and equipment placement to prepare to re-enact a battle in the afternoon for the spectators.

Although her husband continues to participate in re-enactments, Budzynski is temporarily on hiatus until her son, Adam, is older. Then she said she will return to the Civil War lifestyle as mother and child re-enactors.

# L.A. man's hobby is nothing to carp about

Some people have goldfish. Others have aquariums. But Ed Louie of Los Angeles District turned his backyard into an aquarium in the Japanese art of raising koi, a colorful species of carp.

"I first became intrigued with this hobby when I was in the Navy in 1968, on a destroyer homeported in Pearl Harbor," said Louie. "I did a lot of walking and window shopping at the Ala Moana shopping mall in Waikiki. The mall has a linear koi pond from one end to the other with a wide variety of koi. I found myself glued to the spectacular array of colors. It reminded me so much of a kaleidoscope but, instead of bits of colored glass changing positions, there were koi splashing around in constantly changing patterns of red, black, orange, and white."

Louie is a landscape architect with L.A. District. Soon after purchasing a home about 20 years ago, he started landscaping their backyard. "I wanted something different, a theme or a focal point that would capture the five senses of sight, sound, smell, feel, and taste," Louie said. "So I decided to incorporate a koi pond into my backyard."

Louie and his brother dug and built a 1,000 gallon pond, layering the excavated hole with chicken wire, concrete,

plaster cement, and rubber paint. "I built my pond at ground level to not only maintain a cooler water temperature, but to let one reach down and hand-feed the koi swimming by below," said Louie. "This is part of the feel of a koi pond."

But in the Japanese art of raising koi, the pond is just the beginning. Other features are added to frame the pond and create a peaceful, meditative environment.

"I built a foot-bridge as the focal point," said Louie. "I built a waterfall

to provide a soothing, relaxing sound of water as it splashes and cascades over the rocks into the pond. This satisfied the hearing.

"I placed plants in and around the pond, from border flowering plants such as begonias, impatiens, and vincas to larger plants like agapanthus, jade plants, and honeysuckle," said Louie. "I planted bamboo beside the waterfall as a background screen. In the pond itself, I placed water lilies and iris. On the face of the waterfall, I placed baby tears and spider plants. These satis-

fied the sight and smell. And I also planted loquat, fig, and peach trees nearby to shade the pond and keep the water temperature in tolerable ranges for koi. The fruit trees satisfy the taste sense."

Louie says that koi are excellent pets. They don't bark or bite, and maintenance and upkeep is minuscule. "I thoroughly enjoy walking out each morning to feed my koi," he said. "In fact, they come scurrying to the feeding site as soon as they hear (or feel) my footsteps. I tried sneaking up to the feeding site, but they were still able to detect my approach."

And maintenance is minimal. All Louie has to do is net fallen leaves from the peach tree out of the water, and once a week he rinses out the filter box to maintain water clarity.

But there is an emotional side to raising koi that is even more important.

"It's an open-air think-tank for me to relieve stress as I sit next to the bedroom window, watching and listening to the cascading water," Louie said. "And I enjoy sitting outside under the patio or peach tree and laying back in my easy chair as I watch and listen to the koi as they splash through the water lilies."



Ed Louie, a landscape architect with L.A. District, raises koi, large Japanese carp, for fun and relaxation. (Photo courtesy of L.A. District)

# Around the Corps

## New Chief Counsel

Robert Andersen is the new Chief Counsel for the U.S. Army Corps of Engineers. Andersen has been a member of the Senior Executive Service (SES) since 1986 and holds the rank of SES-6. He is currently the General Counsel with the Defense Nuclear Facilities Safety Board. From 1986 to 1990, Andersen served as the Deputy Chief Counsel with the National Science Foundation. He has also served with the Environmental Protection Agency and non-government organizations. His reporting date will be determined.

## Maritime data

On Sept. 28 the Office of Management and Budget (OMB) designated the Corps as the central collection agency for the U.S. Foreign Waterborne Transportation Statistics program, effective Oct. 1. The U.S. Bureau of the Census was previously responsible for the program.

The Corps will collect and publish the data under authority of the 1922 River and Harbor Act by which it has historically collected and published waterborne commerce statistics, with operational support from the Maritime Administration.

Under the new arrangement, MarAd will produce monthly and annual vessel movement reports and "Data Bank" cargo reports previously produced by Census. These reports contain movement data on all vessels engaged in U.S. foreign trade and cargo data by type of service, U.S. and foreign port, country of origin/destination, commodity, value, weight, and containerized cargo.

## Whale of a tale

The Corps' vessel *Driftmaster* found and removed a dead 51-foot fin whale in Newark Bay on Oct. 2. The *Driftmaster* crew, skippered by Cat. Rich Bulvid, transported the carcass to Craven Point, N.J., where they pulled it out of the water and onto a dock, where marine biologists examined it.

"It's unusual to see," said Pete Shugert, a district spokesman on the scene. "Whales don't generally go up that way."

The *Driftmaster* is a 99-foot, 285-ton drift collection vessel homeported in Craven Point, N.J.

## Contractor of the Year

Nuna Contractors, Inc., a Native America owned contractor in Anchorage, Alaska, is the Corps' Military Construction Contractor of the Year. Lt. Gen. Joe Ballard, Chief of Engineers, gave the award to Pearl Strub, Nuna Contractors' president of the board, at the Senior Leaders Conference. They were honored for renovating Aurora Elementary School on Elmendorf Air Force Base.

Alaska District nominated Nuna Contractors, saying the company's performance was the best of more than 40 construction contractors who worked with the district in 1997.

"Nuna overcame numerous challenges during construction," said Michael Rogers, chief of the district's Construction-Operations Division. "Unexpected damage from the 1964 earthquake was not apparent until after demolition activities were underway. Despite these unexpected structural changes, Nuna effectively scheduled their activities to ensure that the project was completed before the beginning of the 1997 school year."

The \$7.3 million design/build contract included building a 1,500-square-foot addition to the school's entrance for administrative space. Renovation included asbestos abatement, sprinkler system upgrade,

electrical system replacement, handicap access, kitchen renovation and expansion, new intercom system, heating and ventilation system renovation, a seismic upgrade to the structure and roof, and replacing all finishes in all classrooms.

## Safety partnership

To enhance construction safety in Korea, Far East District (FED) and the Korea Military Construction Association (KMCA) worked together to translate into Hangul (the Korean Language) Engineer Manual 385-1-I, the Corps' *Safety and Health Requirements Manual*.

Hong Sung-Chan, a retired Corps engineer, and Kim C. H., a personal friend of Hong and an officer of the KMCA, translated the manual. Due to the problems of translating a technical publication, a Korean engineer familiar with the English language, construction, and engineering terms had to be found to do the translation. Hong, on his own time and without pay, undertook the challenge.

"The importance of safety cannot be overemphasized," said Col. David Rehbein, FED Commander. "This translation is excellent example of two governments working together to improve the quality of life for both Korean and Americans working in the construction business in the Republic of Korea."

The KMCA printed the manual and will sell it to Korean contractors at a minimum price to cover printing cost. Pacific Ocean Division's Safety Office originally sought funds from Corps Headquarters for the translation, but Hong's efforts saved the Corps about \$50,000, the estimated amount for the translation by a English/Korean professional engineer.

"The impact on safety and accident prevention due to Mr. Hong's efforts is immeasurable in terms of costs and quality of life for our Korean construction workers," said Sam Barnes, FED's chief of Safety and Occupational Health. "The translated manual will provide the Korean workforce with the skills and

knowledge required to perform their work in a more safe and healthful manner. Increased safety understanding and subsequent improvements in the quality of life of construction workers in the Republic of Korea can be directly attributed to Mr. Hong's unselfish contribution and his personal investment in the Korean construction industry."

## Chicken Soup writer

Capt. Bob Whittle, currently assigned to Philadelphia District, is a contributing author in the popular *Chicken Soup for the Soul* series. His article, titled "My Mother Says...", recalls how his mother's encouragement helped him make it through Ranger School as a young second lieutenant. It appears on page 55 of *Chicken Soup for the Mother's Soul*. Other contributors include Barbara Bush, Reba McEntire, Joan Rivers, Erma Bombeck and Dave Barry.

## R&D agreement

Topographic Engineering Center (TEC), the U. S. Geological Survey (USGS), and EarthData Technologies (EDT), Limited Liability Co. signed a one-year Cooperative Research and Development Agreement (CRADA) to develop and establish calibration procedures and techniques for digital aerial cameras.

"Combining the R&D experience of TEC, EarthData's operational experience, and the calibration experience of USGS will help bring aerial mapping projects into the 21st century," said John Griffin of TEC's Office of Research and Technology Applications.

This CRADA will aid the entire mapping community by establishing a certified procedure for digital aerial camera calibration, promoting further development and refinement of these digital camera systems, and contributing to the further use of these systems by government and civilian organizations in military and civilian mapping applications.

## District nails down soil erosion solution

Article and Photo  
By Brenda Beasley  
Memphis District

Scenic Magnolia Bluff in Hickman, Ky., is falling apart. Erosion from ground and surface water is causing chunks of the hillside to fall off, threatening adjacent homes, civic buildings, and structures. The caving bluffs have already engulfed part of one city street.

The solution? Nail the bluff back together with nails 45 feet long.

"We needed help on short order, so we solicited proposals to stabilize the bluff," said Ronnie Smith, a geotechnical engineer with Memphis District's Geotechnical Engineering and Survey Section. "We

awarded the design contract to D'Appolonia, a geotechnical engineering firm, because of their unique 'soil-nailing' expertise."

Soil nailing, a European technology, imbeds and anchors steel rods into the bluff face. This technique also called for an experienced construction contractor. Schnabel Foundation Co. of Cary, Ill., got the construction contract in a selection process that incorporated best value with best experience, according to Dave Porter, a civil engineer in the district's Construction Management Section.

"This was also the first time we've used this type of selection process in awarding a construction contract," said Porter.

The project is scheduled to be completed in the winter of 1999.



Forty-five foot steel rods are "nailed" into the hillside, which is then covered in shotcrete, to stabilize the bluff. Shotcrete is a mixture of cement, sand and water sprayed through a specially adapted hose.

**Lab re-engineering**

# Center consolidates Corps R&D

On Oct. 1, the U.S. Army Corps of Engineers "stood up" a new organization, the U.S. Army Engineer Research and Development Center (USAERDC), headquartered at the Waterways Experiment Station (WES) in Vicksburg, Miss.

This action begins Phase 1 of a re-engineering effort to consolidate all research and development operations at the existing four laboratories under a central command structure within the USAERDC.

The new organization has five major objectives:

- Deliver new technology needed by the Corps to achieve its strategic vision.
- Increase the relevance of the Corps to its customers.
- Increase the focus on priority future operational capabilities of the Army and the nation.
- Comply with the Department of Defense (DoD) and Army Research, Development, Testing and Evaluation Defense Reform Initiatives.
- Sustain world-class research capability in critical mission areas.

The re-engineering effort supports DoD initiatives to reduce costs and increase efficiencies of its research laboratories. The new structure will also reduce the cost of doing business, improve coordination and teamwork among technical experts at the four sites, and provide "one-door" access and increased responsiveness to customers.

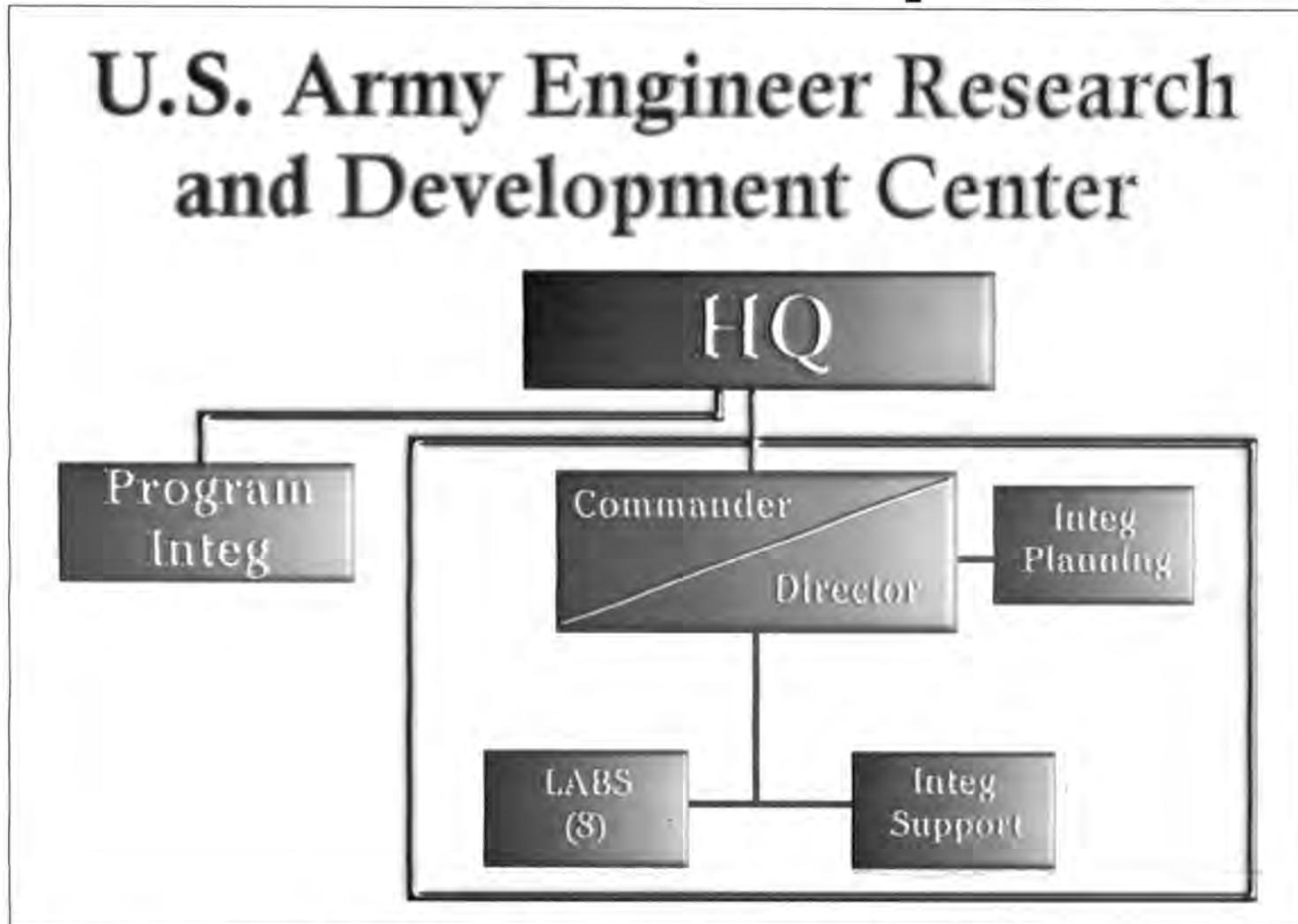
Col. Robin Cababa, formerly commander at WES, will command the new organization.

"The Implementation Study Team and personnel from all Corps laboratories have already done a lot of excellent work to make USAERDC a reality," Cababa said. "I am confident that the USAERDC team will continue to provide the quality research and development efforts which our customers have come to expect from the Army Corps of Engineers laboratory organization."

The Corps' Research and Development Laboratory system previously consisted of four independent laboratories -- Cold Regions Research and Engineering Laboratory (CRREL) in Hanover, N.H.; Construction Engineering Research Laboratories (CERL) in Champaign, Ill.; Topographic Engineering Center (TEC) in Alexandria, Va.; and WES. The laboratories employ 2,150 people and execute a \$450 million annual research and development program which includes combat engineering, infrastructure, and environmental quality under the Corps' military and civil works missions. In 1998, WES and CRREL earned the titles of Large and Small Army Research Laboratories of the Year, respectively.

**Phase I**

Under Phase 1 of the re-engineering, the business functions at each of



The newly re-engineered U.S. Army Engineer Research and Development Center combines the Corps research facilities into a one organization with a single commander. A separate Program Integration Office will centrally manage customer outreach efforts and ensure the Corps research program remains focused on the customer.

the four sites are combined into one management structure. The administrative and support personnel and functions from the four laboratory sites were reassigned to the USAERDC commander effective Oct. 1.

The former commanders of CRREL, CERL, and TEC were reassigned to the USACE Directorate of Research and Development to establish a Program Integration Office. The PIO will centrally manage customer outreach efforts and ensure the Corps research program remains focused on the customer. USAERDC will develop and implement standard business practices for all of the laboratory sites in fiscal year 1999.

All contracting activities and the personnel who perform them will be reassigned to Vicksburg District by the middle of fiscal year 1999 (FY99).

There are no plans to close any of the existing laboratories or facilities, and all efforts will be made to minimize adverse personnel actions. USAERDC will achieve expected staff reductions through normal attrition and the judicious use of early retirement incentives.

The Phase 2 effort will focus on the management of the technical program. The goal is to consolidate all technical staff under the USAERDC no later than Oct. 1, 1999.

A technical director from the Senior Executive Service (SES) will be respon-

sible for all aspects of the research and development programs for the USAERDC.

SES leaders currently assigned to the four laboratories will be responsible for the direction, execution, and quality of major components of the R&D programs within the laboratories. The Integrated Planning and Program Office will be established and further refined in FY99.

The implementation of the fully functioning re-engineered organization is tentatively scheduled for FY00.

**Need**

The need for re-engineering the Corps laboratories follows several DoD initiatives to streamline its R&D organizations since 1989. Under these initiatives the military services have achieved savings by closing several R&D facilities, reorganizing laboratories, and reducing manpower. Also, the Tri-Service Project Reliance reduced redundancies and improved coordination among the R&D organizations across the military services.

Despite these savings, the Defense Authorization Acts of 1996 and 1998 require the Secretary of Defense to achieve even greater savings by eliminating overlap and identifying opportunities for additional improvements in efficiency. New DoD guidelines re-

quire its laboratories to achieve a 25 percent reduction in costs by 2005. The Corps laboratory re-engineering effort began two years ago with an initial study of its business functions.

**Progress**

"We've already made excellent progress towards our goals of improving efficiencies and reducing costs," according to Dr. Lewis Link, Director of Research for the Corps. "As of Oct. 1, we've already achieved a staff reduction of more than 14 percent from our baseline of two years ago. When you add the savings from our consolidation of our laboratory physical plant, we're well on our way toward meeting the DoD goals."

In addition to savings from the reduction of manpower, the USAERDC has already achieved an annual saving of \$1.5 million from the consolidation of laboratory physical plant.

"The goal of the USAERDC will be to meld the already successful Corps research and development team into a single organization which better serves the Army and the nation by revolutionizing effectiveness, seeking growth opportunities, and investing in people," Cababa said.

(Headquarters Public Affairs Office writers compiled this article from Headquarters and field sources.)