

ENGINEER UPDATE

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ERDC R&D protects Soldiers

USACE teams deploy to American Samoa

By Lacey Justinger
Honolulu District

The U.S. Army Corps of Engineers, under the leadership of the Federal Emergency Management Agency (FEMA), is deploying teams to American Samoa in response to the Sept. 29 earthquake and tsunami to support President Barack Obama's major-disaster declaration there.

USACE Planning and Response Teams (PRT) and subject-matter experts are in American Samoa to provide assistance, while others are en route or preparing for the emergency situation.

Honolulu District has deployed team members with expertise in handling debris, emergency power support and water systems to American Samoa. They are helping assess and evaluate the extent of the damage and working with the local American Samoa government to assist with repair plans.

The management cell of Honolulu Dis-

trict's emergency power PRT is joining 15 Soldiers from the 249th Engineer Battalion (Prime Power) in American Samoa. This team will oversee the installation of FEMA generators at critical life-saving and life-sustaining public facilities like shelters, sewer and water treatment plants or emergency management and response facilities, like police stations, fire stations and medical facilities.

Honolulu District has established a Reception, Staging, Onward Movement and Integration center at Fort Shafter, Hawaii, to coordinate transportation, lodging, training and integration of all USACE responders nationwide deploying to Samoa, Guam, the Philippines and Indonesia for this event and others.

Honolulu District engineers and project managers are working with project sponsors in American Samoa to gather initial damage assessments by using satellite imagery to augment on-scene evaluations. Among

the areas to be assessed are shore protection projects, small boat harbors and flood control projects. If any of these projects have been damaged, Honolulu District employees will conduct an engineering evaluation of the damage for possible government rehabilitation.

With several other potential weather or nature-related events possible in the near future, additional USACE PRTs have been alerted and are on standby for deployments in the Pacific region.

FEMA is the lead agency for coordinating government response to natural disasters. USACE PRTs provide essential support for Emergency Support Function (ESF)-3 under the U.S. Department of Homeland Security's National Response Framework. Each USACE district has at least one PRT dedicated to one of the seven ESF-3 response tasks: ice, water, emergency power, debris removal, temporary housing, temporary roofing and structural safety assessment.



Photo by Joseph Bonfiglio, Honolulu District

Kevin Mishimura (left), Gary Chalifoux and Roberto Tan set up a Containerized Tactical Operations Center in Honolulu District.



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Insights

Share ideas with others

By Col. Hanson Boney
Chaplain, U.S. Army Corps of Engineers

As a chaplain, I have a difficult time promoting theft, considering that I am bound by the commandment that says, "Thou shall not steal." While I detest the unlawful taking of another's possessions, I *do* believe that ideas, even those generated by others, should be shared. After all, ideas, inventions, and good news are meant to be passed on to others.

Some ideas, of course, seem to be original, but when we read the book of Ecclesiastes (a fascinating but much-neglected book), we are advised that there is nothing new under the sun. Someone has had the same idea before, but failed to capitalize on it.

"What has been will be again, what has been done will be done again; there is nothing new under the sun. Is there anything of which one can say, 'Look! This is something new'? It was here already, long ago; it was here before our time."

Ecclesiastes 1: 9-10

In the U.S. Army Corps of Engineers, we are encouraged to use the ideas of others to produce valued and sustainable products and outcomes. Workable solutions to solve age-old problems should be shared between districts and

divisions, as well as among individuals. As Lt. Gen. Robert Van Antwerp, the Chief of Engineers, says, "Steal ideas shamelessly; share ideas willingly."

The ancient Roman engineers would have endorsed the Chief's philosophy. In the ancient world, the Romans were considered the world's greatest engineers. Much of their work still stands, and we admire their expertise and study their techniques.

What most people don't realize is that the Romans stole shamelessly from the great civilizations that preceded them -- the Greeks, Egyptians and Babylonians. Everything from architectural design to philosophy and religion became the "borrowed" domain of the Roman world.

Of course, the Romans were not just content to steal the ideas of others. They also shared those ideas by recreating them in the lands they conquered. For example, the bath house was borrowed from the Greeks, but everywhere the Roman army went they built a bath house. They learned weapons and tactics from barbarian warriors, and then improved them.

Even the bagpipe was a Middle Eastern instrument adopted by the Romans and taken to the British Isles, where the Scottish clans improved it and became famous for it.

The church has done the same thing. Over the years, the

church has borrowed methods of government from secular institutions. This was especially true during the Middle Ages when the hierarchy of the church had to contend with ecclesiastical issues far away from its center of gravity in Rome. As the number of Christians increased, the church began to adapt the Roman Empire's administrative structure, which still exists to this day.

As the church, we are admonished to share willingly the gospel of Christ to a world that teeters on hopelessness. Christ's work of grace and words of encouragement are meant to be shared, encompassed and passed on from person to person and from generation to generation. You can steal shamelessly from God's word because it is not something that you can keep as your own personal possession. It must be passed on.

If you have great ideas, inventions, or advice pass them on. There is a troubled and sometimes anxious world out there that needs your help. Don't keep good things to yourself. Share them generously and you may find that what you have the world needs.

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

District works during summit

By Dan Jones
Pittsburgh District

As the world descended on Pittsburgh for the G-20 Economic Summit Sept. 24-25, Pittsburgh District took action to ensure its employees were safe and its mission successful.

Pittsburgh District headquarters is in the William S. Morehead Federal Building, less than 300 feet from the David L. Lawrence Convention Center, where world leaders converged.

"We wanted to reduce the risk to our mission and to our workforce due to the potential civil unrest that may be associated with the G-20, as well as the uncertainty with transportation routes in and out of the downtown," said Col. Mike Crall, Pittsburgh District commander. "It would be irresponsible to expose the 266 district employees in the federal building, or any of the 450 field personnel conducting official business in the federal building that week, to the potential risk of violence that protests may bring."

Pittsburgh District took advantage of this opportunity.

"This has given us an opportunity to execute our Continuity of Operations Plan (COOP)," Crall said. "Regardless of any incident, we are prepared to and will continue our federal civil works mission."

The district relocated all headquarters personnel from the Morehead Building to several locations within the district Sept. 21-25. Employees were sent to the Pittsburgh Engineering Warehouse and Repair facility (PEWARS), the COOP site and several lock and dam and lake projects.

According to C.J. Infantino, Emergency Operations Cen-



Photo by Dan Jones, Pittsburgh District

Rich Egger (left) and Joe Arnett, park rangers with Pittsburgh District, talk with Lt. Bryan Harrell of the U.S. Coast Guard during a boat patrol for the G-20 Economic Summit.

ter coordinator, preparations began in mid-June. "We had an exercise then, so this is the second time we have used the site for operations."

The challenge has been microwave communications.

"Communications may have been a little slow, but everyone accepted the work conditions and realized that this is a temporary situation, and our level of productivity has been maintained," Infantino said.

Despite the challenges, Pittsburgh District has continued to work at a high level. For some headquarters employees, this will be their first opportunity to get out and meet the field employees and see some of the facilities.

According to Don Zeiler, lockmaster at Emsworth Lock

and Dam, this has been a nice change of pace. "One challenge was making sure that we have the ability to meet their needs and to keep the mission going."

Before the temporary relocation, the Army Corps of Engineers-Information Technology (ACE-IT) service spent many hours preparing offices for the increased workload.

"ACE-IT did a really good job," said Ed Jones, maintenance supervisor at PEWARS. "They brought in temporary T-1 lines and by 9:30 a.m. everyone was working."

To accommodate the increased workforce, PEWARS also used a building that had been closed for more than a year. Workers cleaned the facility, tested the air quality and ensured that it was a safe working environment.

"A lot of people put in a lot of effort to make it habitable," Jones added. "We set up break rooms and put in an access road to the building. Everyone seems comfortable."

"PEWARS did a really great job," said Arlene Bigger, contracting officer. "I want to give them all of the credit they deserve. Many PEWARS employees have been checking on us regularly to ensure that we have everything we need."

In addition to relocating its offices, Pittsburgh District also supported the G-20 Economic Summit. Six district park rangers and one operations manager participated in boat patrols to provide safe navigable water around the Point of Pittsburgh. The two-man patrols began at 6 a.m. on Sept. 24 and continued until 10 p.m. Sept. 25.

District rangers also supported the U.S. Coast Guard and other partner agencies. They helped distribute communications equipment, water, and ice and assisted the movement of personnel.

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Commander, USACE.....Lt. Gen. Robert L. Van Antwerp
Chief, Public AffairsW. Curry Graham
EditorBernard W. Tate



Army Geospatial Center opens

New center has expanded responsibilities to warfighter, nation

By Jamal Beck
Army Geospatial Center

The U.S. Army Geospatial Center (AGC), formerly known as the Topographic Engineering Center (TEC), became a major subordinate command of the U.S. Army Corps of Engineers on Oct. 1. The center held a ribbon-cutting ceremony to celebrate its expanded mission, as well as its new responsibilities to the warfighter and the nation.

"I view this as the nation's geospatial center," said Lt. Gen. Robert Van Antwerp, Chief of Engineers, in his keynote speech to more than 200 AGC employees and distinguished visitors attending the ceremony. "What you are able to give the Soldier is amazing. With study, and with your products, they can know the terrain in which they're going to operate. We're so much better as an Army because of what you do."

The AGC will continue TEC's legacy of providing timely, accurate, geospatial support and products to warfighters. But the center will expand its mission to support Army Battle Command Systems (ABCS) by facilitating the dissemination of relevant geospatial information to every level across the dynamic battlefield environment.

In addition, AGC will coordinate, integrate and synchronize geospatial information requirements and standards across the Army, and develop and field geospatial systems and capabilities to the Army and Department of Defense.

The Army relies heavily on geospatial information and services (GI&S) for all of its warfighting and peacetime operations. GI&S is more than simply maps. It includes the presentation and setting of operational, intelligence, human, social, cultural and weather information overlaid in context with all other spatial and temporal information. This information provides an Army common operating picture (COP), as well as situational awareness and actionable information within the battlespace.

GI&S also is used in support of logistics, training ranges, installation management, modeling and simulation, civil works, remediation and environmental activities.

"GI&S is undergoing a revolutionary change," said Robert Burkhardt, AGC director and the Army's geospatial information officer. "While hard-copy mapping products remain critical to current operations, more detailed interactive digital geospatial data is providing new opportunities for both commanders and Soldiers. Geospatial data provides the foundation for a common operating picture. The AGC will provide standard and shareable geospatial information necessary to enable this COP, support ABCS on the move, and allow Soldiers to operate effectively and efficiently in a net-centric environment within an overall Army-wide, network-enabled system of systems."

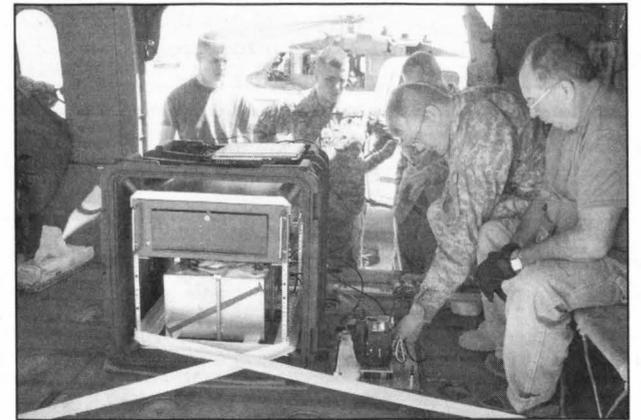
ABCS have emerged as a powerful framework for organizing and sharing other layers of varied spatial and temporal data, matched to the foundation layer of a map. However, our deployed forces use a number of incompatible geospatial data formats to collect this information, requiring repeated collections over the same area of interest to achieve the same end. This in turn slows our commanders' ability to act decisively within the complex operational environment.

For example, the Army has more than 40 geospatial data standards in Operation Iraqi Freedom, and the average age of a typical tactical map is 25 years old, representing an inefficient and potentially inaccurate means of distributing actionable geospatial information to commanders at all levels.

Enabling an Army Geospatial Enterprise (AGE) is one of the AGC's primary goals. This will correct several geospatial capability gaps preventing these systems from achieving a true common operational picture. AGE is a distributed database



(Left) The Army Geospatial Center's BirdsEye team with one of their aircraft. (Right) Soldiers in Iraq train with the BirdsEye equipment.



Photos courtesy of Army Geospatial Center

and supporting infrastructure that is based on a common suite of interoperable software. The AGE allows geospatial data and information to be collected, stored, fused, analyzed and disseminated horizontally from peer to peer and vertically from echelon to echelon down to the Soldier.

The center's development of an Army standard data model agreed upon by all battlefield functions, development and fielding of enterprise-enabled systems and capabilities, and direct geospatial support and products to the warfighter will address these gaps. These efforts will allow warfighters to view relevant information across every level of the battlespace, helping them better understand the operational environment for full-spectrum operations, and make forces more effective, survivable and lethal.

"This reorganization allows us to enhance military battle

planning systems by looking at a functional data model that bridges data stovepipes and provides the planner the ability to use the data collected by anyone, but in a fused form as opposed to one that has different geometries and data dictionaries," Burkhardt said. "Being able to standardize among those areas has given us the key, and doing that not just as the Army, but also as part of the National System for Geospatial-Intelligence, and working hand-in-glove with them."

The AGC's people, projects and programs will equip commanders and Soldiers to exploit a net-centric enterprise environment that allows geospatial information to be collected once, then processed, exploited and shared among all Soldiers and their organizations in a timely manner. These efforts will reduce redundancy, conserve scarce resources and personnel and improve the probability of mission success.

USACE gets VE honor

The U.S. Army Corps of Engineers has been honored for excellence in value engineering. The Society of American Value Engineers (SAVE) International presented a Golden Shears Award to the USACE value engineering program "for cost-effective stewardship of taxpayer resources." USACE joined 11 other federal agencies that received the award Sept. 17 at a reception in the Cannon House Office Building in Washington, DC.

Maj. Gen. Don Riley, deputy commander, accepted the Golden Shears Award on behalf of USACE presented by David Wilson, president of SAVE International.

"Many thanks to SAVE International for this award, and to Congressman Moran and Congressman Petri for sponsoring this reception," Riley said. "I am terrifically proud of our value engineering team. I'd like to thank Jeff Hooghouse, our chief of value management and value engineering, and Mike Holt, our retired value engineering chief, who is also with us today. And of course we owe it all to the 50-plus value engineers in the field who work hard every day to make our missions a success. Essayons!"

USACE was recognized for implementing one of the most diverse value engineering/value management programs in the world. More than \$300 million in net VE savings were documented in 2008, contributing to a five-year total of almost \$1.4 billion.

USACE leadership directed 14 value management studies to develop alternatives to increase execution. Accepted alternatives have allowed USACE to execute more than five times its previously normal workload, with each project being awarded quicker and with an initial cost reduction per facility of 15 percent.



USACE Photo

Maj. Gen. Don Riley, deputy commander, holds the Golden Shears Award with (left) Fred McAuley, value engineer for Jacksonville District; James Weber, value project manager with Louisville District; Carole Rankin, value engineer for Louisville District; Riley; Pat Rivers, chief of Programs Integration Division; Jeff Hoogland, chief of Value Management; and David Pezza, deputy chief of Engineering & Construction.

Value engineering is a method for reducing costs, increasing productivity, and improving quality. By analyzing functions of an item or process, a VE team is able to determine the best relationship between cost and worth to ensure that the owner understands the lifecycle cost implications of his or her decisions.

(Jeff Hooghouse, chief of value management and value engineering, and Bernard Tate of the Public Affairs Office contributed to this article.)

Top NCO likes safety, people

By Bernard Tate
Headquarters

It can be hard to find the command sergeant major in any Army headquarters. The top noncommissioned officer is always in the field, keeping tabs on his troops. Command Sgt. Maj. Micheal Buxbaum is no different, except that his "troops" are mostly civilians, and "the field" spans most of the globe.

So Buxbaum is on the road a lot, and he is pleased with what he sees.

"As we approach the end of the summer season, I'd like for our folks to stay focused on safety," Buxbaum said. "We've done a good job across USACE. I think the numbers of fatalities and accidents are down at all of our facilities."

"I've seen a lot of great safety initiatives," Buxbaum continued. "A lot of our facilities have a free life jacket program. Just sign out a life jacket, use it at your leisure and return it at the end of the day. Our park rangers are doing day programs to teach the kids what right looks like. The districts are tapping into their local resources and there are a lot of good joint ventures. Mark Twain Lake in St. Louis District partnered with a local trucking company to put their water safety messages on 40 tractor-trailers."

"So let's stay focused on safety," Buxbaum said. "Because of the downturn in the economy, more folks are staying home and using USACE recreation facilities."

"And we need to be cautious as winter ramps up," Buxbaum continued. "The Army always seems to have a bad couple of weeks at the beginning of winter, people skidding more due to the weather. So let's start in late September and early October teaching winter driving. USACE spans from Florida to Alaska, so we have the whole range of winter driving conditions. So we need to get start-

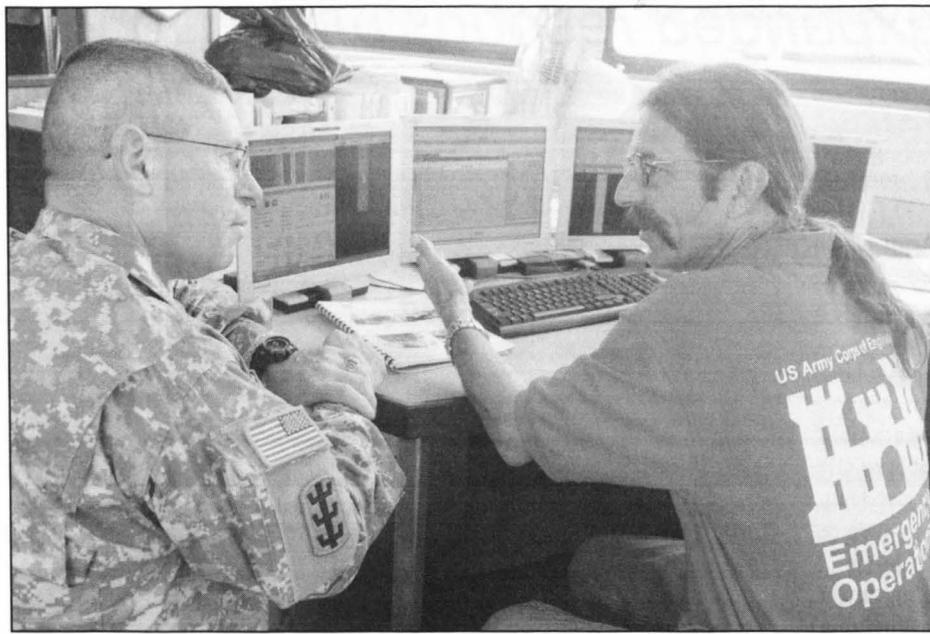


Photo by Chris Gardner, New York District

Command Sgt. Maj. Micheal Buxbaum talks with Steve Simon onboard the survey vessel *Moritz* during a recent visit to New York District.

ed early. There are a lot of good safety sites available on the Web, including the Army Readiness and Safety Center."

"Let's stay focused," Buxbaum added. "Let's keep safety at the forefront."

True to the tradition of the Army sergeant major, Buxbaum is always out with the troops, so he always spends a lot of time on the road. The map in his office is studded with push-pins, green for 2008 and yellow for 2009. This past quarter he visited South Pacific Division; Huntsville Center; and Jacksonville, Tulsa, Savannah, Nashville and Little Rock districts, to name just a few. He visited New York District to talk to those who helped find the airplane and helicopter that crashed in the Hudson River. He even visited a lock and dam at Toad Suck, Ark.

"Visiting the projects never gets old, but it's the people that make these trips interest-

ing," Buxbaum said. "Webber Falls is one of Tulsa District's hydropower plants, and they were pulling one of the turbines. It's a 12-degree-angle turbine, which is different from anything else we have. I got to go down inside the dam and watch them take that out. Safety, of course they were all over it. I had my hardhat and safety glasses and earplugs and they kept me all tied in."

"Watching them pull that turbine apart was cool, but meeting people is what I *really* enjoy," Buxbaum said. "I meet park rangers who love with what they do. They can't get out there enough to talk with the public."

"I met some of the volunteers who work the registration booths at our recreation projects," Buxbaum said. "That's a pretty hot job, and the selection process is tough because everyone wants to do it. A lot of them are retired folks who want to travel the

country, so they volunteer for that. They get camping space and hook-ups for their trailer or RV. Along with the park rangers, they are probably the best face of the Corps. I haven't run across one that wasn't energized and motivated about welcoming people to their facility, because it's *their* facility. That's how they think of it."

Other people stood out for Buxbaum during his recent travels.

"I really enjoyed my time with Richard Rusk, the Castle Award winner," Buxbaum said. "He was my escort in Savannah District. Very humble individual. Everywhere we went he always pointed out, 'That's the guy who helped me do this. There's the guy who helped me do that.' It was a 'pay forward' thing -- he got the Castle Award, but he gave the accolades to the folks who helped him get there."

"We recently conducted the USACE NCO of the Year board here at Headquarters," Buxbaum said. "The panel was five sergeants major, each asking 15 or 20 questions. We had two young sergeants in front of the board for an hour-and-a-half each."

They selected Staff Sgt. Timothy Florentine of A Company, 249th Engineer Battalion (Prime Power), as the NCO of the Year.

"Both of them did well," Buxbaum said. "I remember going through the same process when I was a young sergeant, so I know it was tough. But they handled it just great; both remained calm and cool and did well."

As this article is written, Buxbaum is back on the road, this time visiting USACE personnel in Iraq and Afghanistan.

"My goal is to visit every district," Buxbaum said. "If you have a project you want me to visit, drop me a note and give me a few days to get there. And when I visit I don't like to hang around headquarters. I like to go out to projects and meet the people."

MVD cuts drowning deaths 80%

By Bob Anderson
Mississippi Valley Division

Mississippi Valley Division's (MVD) drowning accidents dropped from 20 in fiscal 2008 to four in fiscal 2009. The 80 percent reduction in lost lives is credited to hard work, cooperation and courage.

"Cooperation and teamwork between the natural resources officers and safety officers from each of our districts were major contributing factors," said Jeffrey Pfannes, the division's acting safety officer. "The courage of our commanding officer, Brig. Gen. Michael Walsh, to require mandatory life jacket use at lakes with high drowning rates was another key success factor."

Pfannes is referring to Vicksburg District's participation in the Life Jacket Policy Test program directed by Maj. Gen. Don Riley, deputy commander, in 2008. The life jacket policy went into effect on all U.S. Army Corps of Engineers lakes in Mississippi during Memorial Day weekend.

Despite concerns about visitor push-back, Walsh willingly made the requirement for all users of USACE lakes in Mississippi to wear life jackets. The test program, which in-



Photo courtesy of New Orleans District

Visitors to Bonnet Carre Recreation Area in New Orleans District can check out loaner life jackets for the day.

cludes Pittsburgh District, will run for the next three years.

"Our rangers and support staff fully supported the new program, and they used excellent people skills to explain why greater use of life jackets would help save lives," Pfannes said. "Because leadership was willing to take concrete action

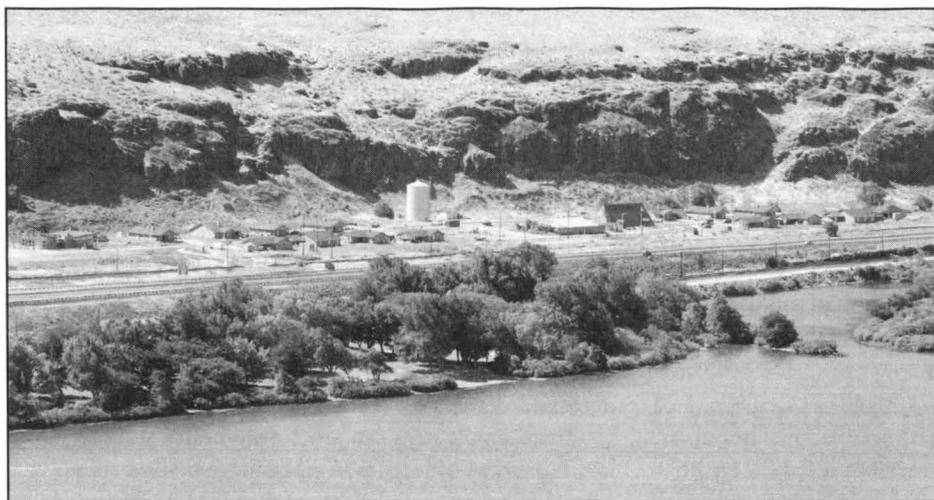


Photo courtesy of St. Paul District

Children crowd around Seamoor, the water safety sea serpent, at a picnic at Lake Elmor, Minn., in St. Paul District.

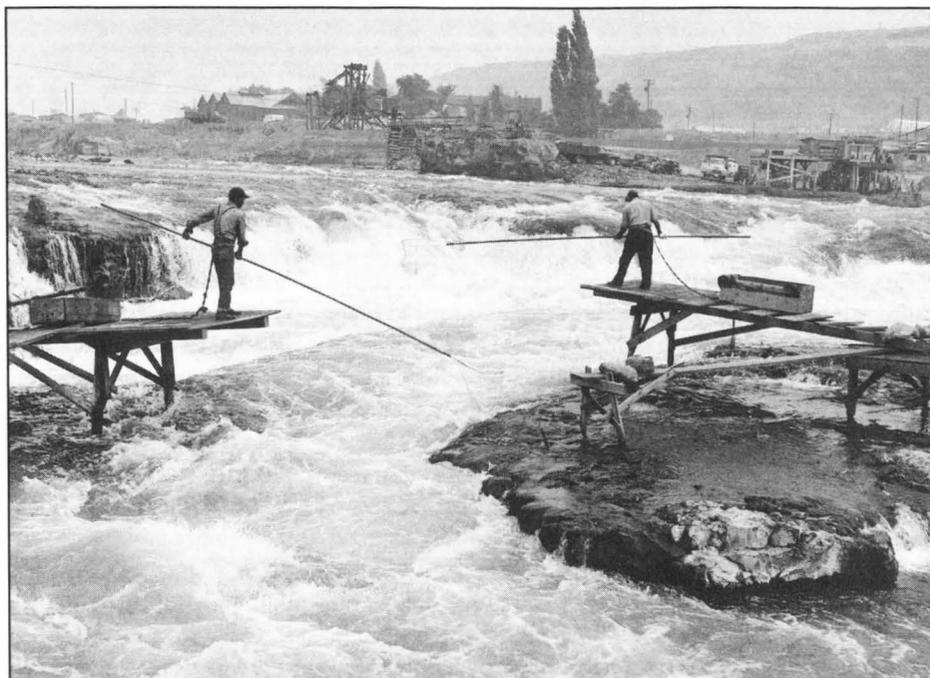
that would improve safety, our natural resources staff were willing to give the extra time and effort to enforce the new rules. I think that made a real difference this year."

Continued on next page



Left photo by Jergen Hess, Portland District. Right photo from the Portland District archives

(Above) When The Dalles Dam was built in 1957, Celilo Village was moved a quarter mile. After 52 years, the redevelopment of Celilo Village is complete. (Right) For many generations, Native Americans made their living at Celilo Falls fishing with traditional methods.



USACE rebuilds historic village

By Diana Fredlund
Portland District

Thousands of cars pass a small strip of land just off Interstate 84 between The Dalles and John Day dams, many without realizing how important this arid, windy place is to a group of Native Americans who made their living from fishing there. They called it Wy-Am in their language, and it was their home for generations.

That changed in 1957 when The Dalles Dam was built and the federal government moved the village a quarter mile. It took 52 years, including nearly 10 years of planning, design and construction, but today the redevelopment of Celilo Village is complete. New homes face each other across a newly paved road. The road circles the longhouse (the spiritual center of the community), and loops around to pass in front of the new classroom and administration building on the east side of the village.

Guests gathered in the longhouse Aug. 20 to celebrate completion of the \$21 million project. The ceremony included a Wash'ut, a traditional drum ceremony that included seven songs. Afterward, everyone walked to the new school

Water safety

Continued from previous page

"We're seeing some phenomenal life jacket wear rates in Vicksburg District," said Lynda Nutt, manager of the National Operations Center for Water Safety. "More than 70 percent of the Vicksburg lake boaters now willingly comply with the regulation without law enforcement contact. Considering that the national voluntary wear rate average is 6 to 8 percent, this is quite encouraging. We know lives are being saved."

District water safety teams throughout MVD also developed and implemented smart strategies to insure fewer public fatalities at our projects. This included participating in multiple local community events to increase public awareness, improving life jacket loaner programs at boat launches and by using a variety of techniques to share water safety messages with visitors at each of our projects.

For example, water safety messages were delivered on tray liners and place mats at fast food restaurants, placed on billboards near lakes and rivers, posted on the sides of freight trucks, emphasized during boating classes and through Life Jacket Zone signs at numerous boat ramps.

Perhaps some of the most innovative tools and techniques

and administrative building to watch Portland District commander Col. Steven Miles present documents transferring control of the infrastructure and facilities of Celilo Village from the U.S. Army Corps of Engineers to the Bureau of Indian Affairs (BIA).

With such a simple gesture, something big occurred.

Redeveloping Celilo Village

The Dalles Dam became operational in 1957, and not long before that the village was moved about a quarter mile from its original location. At that time, the U.S. policies of termination clouded the planned relocation of Native Americans from Celilo Falls.

The poor quality of materials and inadequate maintenance caused the new Celilo Village to badly deteriorate, leaving residents with water and sanitary conditions that violated federal and state statutes and endangered public health and safety.

While Brig. Gen. Carl Strock was the commander of Northwestern Division, he visited the fishing village and the tribal leaders and made a commitment to them to revitalize

used to improve water safety this year involved mascots and robots. Characters including Bobber the water safety dog, Seamoor the safety sea serpent, and Coastee the safety sea-boat helped USACE better tell our water safety story to children.

"Seamoor and Coastee are robots that are remote controlled water safety ambassadors," said Alan Dooley, public affairs officer for St. Louis District. "While the robots move, a water safety person talks with the kids in ways they are familiar with from TV. It really makes an impression on them because they remember the basic message."

More than 10,000 children throughout MVD learned safety lessons from the variety of mascots and robots employed at USACE recreation areas, and as Dooley points out, "you can't quantify even one saved child's life, so they're a wonderful investment."

"Brig. Gen. Walsh had a vision to do what we could to reduce the number of accidental deaths on USACE lands, and our park rangers and staff rose to his challenge," said Chris Accardo, New Orleans District operations chief. "We will continue to look for new and innovative ways to engage the public on ways to save lives."

their historic fishing village.

Before this pledge, extensive delays in providing assistance to Celilo Village made it difficult for residents and tribal leaders to accept that USACE would complete this project. It was through the personal dedication of Strock and Portland District project manager George Miller that both residents and leaders began to believe it.

"Gen. Strock was very visible in his support to correct what he saw as a Corps responsibility," Miller said. "He listened to the residents and tribal leaders about what was needed, and supported the district's recommendations to prepare specific, quantifiable actions on how to proceed with Celilo Village's redevelopment."

After Strock became commander of USACE, his commitment to fulfilling promises made to the Native American tribes remained a high priority. "Lt. Gen. Strock's personal commitment was critical to explaining our project needs to Congress," Miller said.

With authorization and funding in place to redevelop Celilo Village, Miller knew he needed to gain the support of village residents, tribal leaders and elders, a task he knew would be difficult.

"These people had been waiting for the government to fulfill its promises for nearly 50 years," Miller said. "It was very hard for them to believe what they first saw as just more words, and I didn't blame them at all."

From the beginning, Miller listened to the residents with respect; more important, he backed up his words with action. The first meetings were planning sessions, exploring how best to accomplish the revitalization. Miller took all suggestions seriously, and members of the Wy-Am board, a council made up of leaders from Celilo Village residents and the Treaty Tribes, saw their suggestions incorporated into the plans. (The Treaty of 1855 was signed by the Yakama Nation, the Nez Perce, the Confederated Tribes of the Warm Springs Indian Reservation, and the Confederated Tribes of the Umatilla Indian Reservation.)

Today, when a car passes Celilo Village, its driver might see children on a playground and not realize that those children helped design their play area. It may not be clear that USACE, BIA, and tribal sovereign governments worked through highly complex and emotional issues that many thought could not be resolved. It may not be clear that the water tower brought clean running water to residents for the first time in years, or that USACE was involved.

But for the residents of Celilo Village, Miller is respected as a friend, and USACE has accomplished its task.

Flu defense is common sense

By Jennifer Lynch
Headquarters

The U.S. Army Corps of Engineers, the Department of the Army and the Department of Defense are closely monitoring the spread of the H1N1 influenza virus, sometimes called "swine flu." The Centers for Disease Control and Prevention (CDC) reports that influenza A (H1N1) is a new flu virus that is infecting people in the U.S. and worldwide.

"H1N1 influenza so far has been no more severe than seasonal flu," said a statement from the Army Surgeon General's office. "It is expected to be the dominant strain of circulating influenza this year because, until vaccination, most people lack immunity to it."

It is thought that H1N1 flu spreads in the same way that regular seasonal influenza viruses spread, mainly through the coughs and sneezes of people who are sick with the virus. H1N1 and the seasonal flu also cause similar symptoms -- fever, sore throat, cough, runny nose, chills, headache, muscle aches and feeling rundown.

"H1N1 seems to infect young adults more frequently than seasonal flu, which is most dangerous to the elderly or the very young," the statement said. "Symptoms normally last three to five days, but a person may infect others for several days before showing symptoms and for as much as 10 days after symptoms end."

"There are no indications of any adverse impact to USACE operations," said Col. Frank Ford, the senior operations officer of USACE. "In the event this becomes more serious, USACE has contingency plans to minimize impacts to operations."

Influenza is *not* the common cold, and it can be a severe to life-threatening disease. The flu is a contagious respiratory illness caused by influenza viruses. It spreads from person-to-person and can cause mild to severe illness, and in some cases can lead to death. In the U.S., yearly outbreaks of flu usually happen during the fall through early spring.

According to the CDC, every year in the U.S. more than

200,000 people are hospitalized from flu-related complications, and about 36,000 people die from flu-related causes.

Defending yourself from the flu is simple, using common-sense measures:

Immunizations – the first defense -- Immunization remains the best method of reducing illness from flu viruses. Getting an annual influenza vaccine, either a shot or an inhaled nasal spray, protects many people from getting the seasonal flu or becoming severely ill.

The H1N1 vaccination will be available in October. Federal Occupational Health, USACE's occupational health care provider, will administer H1N1 vaccines at federal facilities. USACE military personnel will receive their vaccine through the military health care system.

The H1N1 vaccine will also be available at vaccine clinics throughout the country.

Preventive methods for your daily routine -- You can take common-sense precautions to protect yourself and your

family and decrease the spread of the virus. These simple, effective steps to reduce your risks are basic:

- Cover your mouth with a tissue if you can, or your upper arm, when you cough. Then throw the tissue away.
- Wash your hands often with soap and warm water, especially after coughing or sneezing. Alcohol gel hand cleansers are an effective alternative.
- Avoid touching your eyes, nose or mouth.
- If you or a loved one are sick, stay home and follow your doctor's orders.

"These simple steps can protect our health and that of our loved ones and colleagues so we can stay focused on our vital missions," said Andrea Pouliot of the USACE Safety and Occupational Health Office. "When you add other good health habits to these simple precautions, you significantly boost your body's ability remain healthy through this outbreak."

For more information about the seasonal flu and H1N1 flu, visit: www.ready.army.mil and www.flu.gov.

Fast facts about H1N1

• **H1N1 (sometimes called the swine flu) is a new influenza virus causing illness in people.** It has two genes from flu viruses that normally circulate in pigs in Europe and Asia, plus avian genes and human genes. Scientists call this a "quadruple reassortant" virus.

• **H1N1 flu is contagious.** This new virus was first detected in people in the United States in April 2009. The virus is spreading from person-to-person, in the same way that regular seasonal influenza viruses spread.

• **H1N1 flu is NOT caused by eating pork or pork products.** H1N1 flu is not a foodborne disease; it is a respiratory disease. The U.S. Food and Drug Administration reminds consumers that all meat and poultry products are safe to eat when properly prepared and cooked.

• **Illness with the new H1N1 flu virus has ranged from mild to severe.** While the vast majority of people who have

contracted H1N1 flu have recovered without needing medical treatment, hospitalizations and deaths have occurred.

• **About 70 percent of people hospitalized with H1N1 flu have had one or more medical conditions that placed them in the "high risk" category** for serious seasonal flu-related complications. These include pregnancy, diabetes, heart disease, asthma and kidney disease.

• **Unlike the seasonal flu virus, adults older than 64 do not yet appear to be at increased risk of H1N1 flu-related complications.** Laboratory studies by the Centers for Disease Control and Prevention have shown that about one-third of adults older than 60 may have antibodies against this virus. It is unknown how much protection may be afforded against H1N1 (swine) flu by an existing antibody.

(This information is from the Centers for Disease Control and Prevention.)

HR Corner

Courses offer career growth

It is surprising how many people in Career Program 18 (CP-18, Engineer and Scientists – Resources and Construction) are still unaware of the education available to help further their career.

During the CP-18 workshop in July, the results of the first CP-18 journeyman survey were presented and discussed. The survey went out to determine how well USACE is doing to develop and train our work force.

More than 800 people participated, and their input was invaluable. More than 75 percent of the respondents reported that they had five-year individual development plans (IDP), and that they routinely discussed their training with their supervisors.

However, the survey also revealed that more than 80 percent of the respondents were not aware of the Army Civilian Training, Education and Development System programs, the CP-18 Web site, or professional development maps. Nor had they heard of the Civilian Education System (CES) leadership development program.

That means we need to get the word out to everyone and ensure that those programs are incorporated into IDPs.

You may be familiar with the legacy courses, such as Professional Personnel Management for Executives I and II, Organizational Leadership for Executives, and others. In 2007, the Army began phasing out these courses and introduced a

tiered development training framework that has eight levels, all funded through the Army Management Staff College.

The eight courses are offered as resident classes, through distance learning, or a combination. The training Web site, <http://www.train.army.mil>, provides a great deal more information about each of these classes, which are available to all Department of Defense civilians and military members.

• The **Foundation Course** is mandatory for all interns and for new Army employees.

• The **Action Officer Development Course** is mandatory for all interns. The course, delivered via distributed learning online, targets employees in GS 5-9 entry level positions or their pay band equivalents.

• The **Supervisor Development Course** is required for new Army civilians and military supervisors of Army civilians in GS 7-9 and above positions or their pay band equivalents. This course is delivered via distributed learning online.

• The **Basic Course** is a two-week resident course at Fort Leavenworth, Kan., that includes a Web-based module that must be completed prior to the resident phase. Target attendees include GS 11 and above or pay band equivalents who are team leaders or supervisors.

• The **Intermediate Course** targets GS 11-14 employees or pay band equivalents who are direct and indirect supervisors, including military supervisors of civilians. The train-

ing is a two-week resident course at Fort Belvoir, Va., plus a Web-based module that must be completed prior to attending.

• The **Managers Development Course** is required for new managers whose responsibilities include managing the work of subordinate supervisors. The target audience is GS 12 and above or pay band equivalent. This course is delivered via distributed learning online.

• The **Advanced Course** is a three-week resident course at Fort Belvoir that also has a Web-based prerequisite. The target audience is GS 13 and above or pay band equivalent senior-level, and military supervisors of civilians.

• **Continuing Education for Senior Leaders** consists of 40 hours of distance learning and a one-week resident course at Fort Belvoir that focuses on current issues and challenges. The target audience is GS 14 and above or pay band equivalent employees.

Some of you may have taken one or more of the legacy courses. Part of the program is an equivalency matrix that allows you to determine which courses you or your employee needs to take. Applicants for senior service colleges must demonstrate completion of the CES courses or their equivalents to be eligible.

To learn more, visit the CES Web site at www.amsc.belvoir.army.mil/ces.

AROUND THE CORPS

New ASA(CW)

The Honorable Jo-Ellen Darcy was sworn in Oct. 2 as the Assistant Secretary of the Army for Civil Works (ASA(CW)).

"I'm honored to serve as the Assistant Secretary of the Army for Civil Works," Darcy said. "America is faced with many challenges in how to conserve, protect, enhance and use its critical water resources today and in the future. We also need to modernize and maintain the nation's aging water infrastructure that is critical to our environment, economy and the quality of life for all Americans."

As ASA(CW), Darcy will establish policy and supervise the civil works program. This includes all reimbursable work performed on behalf of other federal and non-federal entities, as well as overseeing the program and budget of the Army National Cemeteries. Her responsibilities include programs for conservation and development of water and wetland resources, flood risk reduction, navigation and shore protection.

President Barack Obama appointed Darcy Aug. 11 following her confirmation by the Senate Aug. 7. She had previously been the senior environmental advisor to the Senate Finance Committee, responsible for environment, conservation and energy issues.

Flood supplies & materials

USACE announced Sept. 23 that it will pre-position flood fighting supplies and materials in the Green River Valley to prepare for flood season. The state of Washington requested that USACE provide flood fighting assistance and materials to augment state and local efforts. USACE will:

- Purchase about 400,000 sand bags and 45,000 linear feet of expedient flood barrier products.
- Pre-position flood fighting materials in Seattle District and make them available for loan to protect river levees.
- Continue to provide technical assistance to state and local agencies, including continuous review of flood risk, identification of additional actions based on changing field conditions and advice and/or recommendations for the proposed secondary protection measures.
- Work with U.S. Geological Survey and the National Weather Service to investigate immediate improvements of early flood warning systems.

Iraq city parks

The city of Kirkuk, in partnership with Gulf Region Division, is building six new parks. The parks are designed to provide safe recreation for more than 40,000 Kirkuk residents. The \$850,000 project is managed by GRD's Kirkuk Resident Office, funded through the U.S. State Department's Economic Support Fund.

Three parks are near completion, and three more are in the planning stage. All of the parks are in urban neighborhoods and include a grass soccer field, a playground area for small children and a picnic area with benches.

The parks will also have pre-fabricated buildings to house a guard shack, concession stand and utility room. Wells were dug and an underground sprinkler system is being installed at each park to maintain the grassy areas.

All of the two-acre parks are enclosed by an eight-foot wall, and area lighting provides a safe area for children and

families during the evening. A back-up generator will provide electricity to the parks during power interruptions.

Iraqi school project

"Most people in this area missed the opportunity to go to school and learn as children. We want our children to have a better-educated future," said Ali Jalab Hasson, Al Hamza district mayor and civil engineer with the Qadisiyah Education Department.

That dream of a better education is just months away, as Gulf Region Division helps build the Al Hasan Al Basri school. The \$1.1 million project is managed by Gulf Region South District and built using funds from the Emergency Support Fund.

The school project in Qadisiyah Province will improve the quality of education for more than 800 students. The project will include 12 classrooms, an administrative area, library, potable water system, communication system with Internet capabilities and a fire alarm system.

The project is 15 percent complete and is expected to be finished in December.

Kelley Hill barracks

Savannah District completed a large-scale project last year at Fort Benning, Ga., that turned heads in the construction industry. Caddell Construction of Montgomery, Ala., and the district finished a 205,000-square-foot Kelley Hill Barracks Complex three months ahead of schedule and well under budget, with less than one percent cost growth.

The Associated Builders and Contractors awarded them the 2008 ABC National Excellence in Construction Pyramid Award. The award recognized the complex as the number two project in the nation for the institutional category in the \$25 million to \$99 million range, typically the most competitive category.

George Condoyiannis, Fort Benning area engineer, and Monty Eddins, project manager for Caddell Construction, accepted the award in Washington, D.C.

The \$40.9 million Kelley Hill Barracks Replacement Complex demolished 11 buildings and replaced them with two barracks, three headquarters buildings and five company operations facilities. Created for Soldiers of the 3rd Brigade Combat Team, the barracks were designed so that each Soldier has a private bedroom and shares a kitchen and bathroom with one roommate.

Hawaii harbor project

Honolulu District has completed the Kikiaola light draft harbor project in Kikiaola, Kauai. The \$18 million project was cost shared between USACE and the Hawaii Department of Land and Natural Resources.

The project eliminates breaking waves and makes the harbor safer for boaters. The work dredged an 11-foot-deep, 725-foot-long entrance channel varying from 105 to 205 feet wide; and dredged a seven-foot-deep, 320-foot-long access channel varying from 70 to 105 feet wide. The project removed 150 feet of the existing outer east stub breakwater, raised the crest elevation and flattened the seaward slope of about 764 feet of the existing east breakwater, removed and rebuilt the 71-foot-long inner east breakwater, and modified 245 feet of the existing west breakwater.

Joseph Kimble award

Molly McKegney, an attorney with St. Paul District, has received the 2009 Joseph W. Kimble Award. The award recognizes a USACE attorney who is a rising star in the USACE legal field.

McKegney was recognized for this award primarily for her performance during the spring flood fight in the Red River of the North river basin.

"Molly developed standard emergency levee construction contract templates that could be drafted and reviewed in real time to send contractors to work on emergency construction, but still provide essential protections to the Corps, contractor employees and suppliers," said Joe Willging, McKegney's supervisor. "Molly's initiative and efficiency, especially in a crisis, is second to none."

Blacks In Government honor

Oscar Eason Jr., an engineer with Seattle District, has received the highest honor from the Blacks in Government (BIG). He was among the first five honorees selected for the Distinguished Service Hall of Fame Award by the 2009 BIG National Delegates Assembly. This is the highest honor bestowed on any member of BIG.

Individuals recognized with this award have been recommended by their chapter and regional council and must have distinguished themselves by making exceptional contributions at the national, regional or chapter levels of BIG or their communities.

Technology awards

Three Savannah District women were honored during the Women of Color Awards Conference. They were Leila Hollis, Wilhelmina Pierce and D'Lorah Small.

Each year, the National Women of Color Science, Technology, Engineering and Math Conference recognizes minority women from both private and government for leadership and accomplishments in their fields.

Hollis, chief of the Small Business Office, received the Women of Color Technology All-Star award; Pierce, resident engineer in the Special Operations Resident Office at Fort Bragg, N.C., received the Women of Color Technology - Special Recognition award; and Small, project engineer in the Barracks Resident Office at Fort Bragg, received the Women of Color Technology Rising Star award.

Geophysics tool

Anthony Lobred, a senior regulatory specialist at Vicksburg District, presented his research in using magnetic susceptibility (MS) as a tool for wetland delineation in Europe. It's like using a metal detector to determine the perimeter of a wetland based on how water affects the oxidation states of magnetic compounds in the soil.

The research was a joint venture between Lobred and Janet Simms of the Engineering Research and Development Center. The presentation was made to the 15th European Meeting of Environmental and Engineering Geophysics in Dublin, Ireland.

Several universities are preparing to use this approach to research and compile data to develop a universal, consistent approach for wetland delineation.

Great Wonders of USACE

ERDC work protects Soldiers

By Megan Holland
Engineer Research
& Development Center

One of the world leaders in groundbreaking research is part of the U.S. Army Corps of Engineers. For the third year in a row, the Department of the Army has selected the Engineer Research & Development Center (ERDC) as the Army Research Lab of the year for its support of Soldiers and the nation.

No other lab has received the honor three years in a row. Recognized as one of the most diverse engineering and scientific organizations in the world, ERDC and its 2,500 employees strive to be the best in specialized areas such as environmental protection, cold climate issues and water resources.

ERDC's Major Shared Resource Center is ranked in the top 10 percent of supercomputing systems in the world, and the research facility is home to the U.S. Army centrifuge, a technology that played a significant role in establishing how the New Orleans levees failed during Hurricane Katrina.

But it is perhaps ERDC's work to support Soldiers that is the most critical and, in turn, has become the most rewarding. Although ERDC serves hundreds of customers, a large portion of funds and research is dedicated to supporting the warfighter, with 80 percent of ERDC's annual \$1.3 billion budget.

ERDC solutions are improving training opportunities, helping our Soldiers dominate the battlefield and, most important, saving their lives.

"We're great problem solvers, coming up with solutions that the warfighter can use, especially when it comes to force protection, force projection, maneuver/counter maneuver, terrain battlespace environments, and military facilities and infrastructure," said Dr. James Houston, ERDC director.

Saving Soldiers

ERDC is in the business of saving lives on the battlefield, including in base camps.

"When we started our research in late 2004, 63 Soldiers had already been killed that year by rockets and mortars in vulnerable base camps," Houston said. "With the introduction of ERDC protective technologies, the number of Soldiers killed by rockets and mortars has plunged to around six annually, with no fatalities in facilities protected by the ERDC-developed technologies."

The Modular Protective System (MPS) is a lightweight expanding frame combined with special armored panels. The technology addresses the need for rapidly deployable and recoverable protection against a wide range of weapons and threats. Developed through a three-year Army technology objective research program, the moveable wall was designed so that all components can be

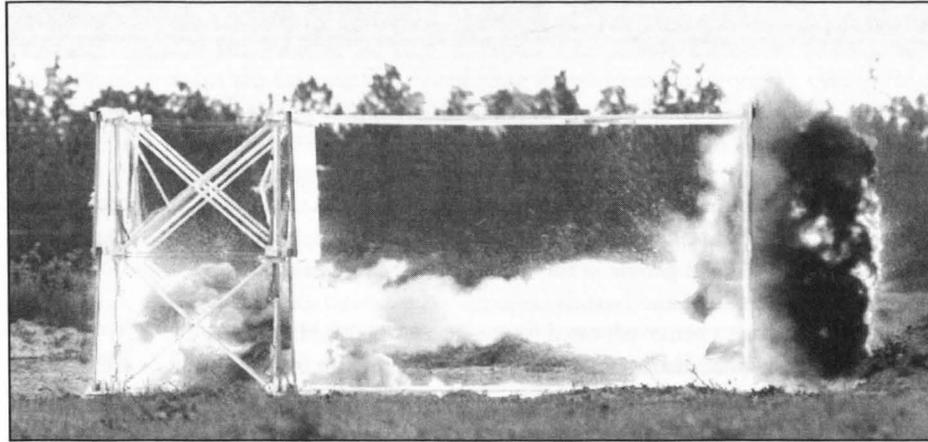


Photo courtesy of ERDC

The Modular Protective System stops a rocket-propelled grenade.

transported by one or two men and requires no construction assets to emplace.

Before implementation of the MPS, warfighters used soil berms, earth revetments, and concrete barriers for protection, which are certainly not portable and require a lot of personnel or heavy equipment to emplace.

Conquering another threat to the troops, ERDC has developed defenses for combat outposts against large vehicle-borne improvised explosive devices (car bombs), and the Joint Improvised Explosive Device Defeat Organization recently named ERDC as program manager of seven new anti-IED rapid-fielding initiatives.

ERDC has also developed an elastomeric material that sticks to walls like wallpaper and reduces blast effects by a factor of 15. The material is applied to the interior walls of permanent structures used as temporary barracks or headquarters.

Saving civilians

ERDC protective technologies that save Soldiers lives on the battlefield and the engineering expertise and knowledge behind those technologies are also used to protect our citizens at home. ERDC is credited with saving hundreds of lives in the Pentagon on Sept. 11, 2001, because the incoming plane struck an area of the building that had been renovated using blast resistant windows and wall retrofits developed by ERDC.

"We have photos of offices just 50 feet from where the plane hit where it appears nothing happened," Houston said. "The windows and walls were undamaged and the people in there lived. We also have photos of offices that were in the portion of the Pentagon that had not yet been protected with our technologies. These offices were 300 feet away from where the plane hit, and windows were blown out, inner walls came apart and brick was thrown throughout the rooms. Those areas were severely damaged."

Call for help

Tele-engineering is another ERDC innovation that serves Soldiers. With hundreds

of thousands of Soldiers deployed worldwide, ERDC receives thousands of requests every year for engineering expertise to help our forces with engineering problems.

Modern, secure telecommunications technology and a process known as "reach-back engineering" has significantly expanded the concept of "being there." ERDC and other subject matter experts can provide answers to forces in the field concerning everything from roads and structures, to potential flooding, to force protection, to a host of other engineering issues.

"Our Reachback Operations Center gets about 2,000 requests a year directly from combat engineers in theater," Houston said. "When our forces were racing to Baghdad, we were contacted by a unit that wanted to know if they could get their vehicles across a bridge Saddam's forces had tried to blow up, but that had not actually collapsed. Combat engineers carried a camera right up to the damaged areas and ERDC experts were viewing the bridge live from the battlefield. The Soldiers had to stop transmission because they came under sniper attack. After our Soldiers suppressed the sniper fire, ERDC told them the bridge would hold, and they rolled right across in a short time."

Different protection

ERDC technologies also protect our nation and our citizens in other ways. ERDC has developed a system of sensors, software, and computer equipment to detect clandestine tunneling activities. This is a major accomplishment supporting Overseas Contingency Operations, and has significantly improved tunnel detection capabilities.

ERDC is a member of the Tunnel Deterrence Committee, which includes 11 other law enforcement and intelligence organizations. ERDC's role is significant since all technology developments to detect tunnels come through ERDC. These innovative tunnel detection technologies are being used by Immigration and Customs Enforcement on the U.S.-Mexico border to locate tunnels. In 2009, the Tunnel Deterrence Committee exposed 15 tunnels.

National asset

The support that ERDC provides to the American Soldier plays a major role in the safety of those who keep us safe. It is also a major reason ERDC was recently named the Army Research Laboratory of the Year for the third year in a row, and for the fifth time in the eight years since the start of Overseas Contingency Operations.

ERDC was the first to receive the award in consecutive years, in 2007 and 2008, and receiving the honor three years in a row is unprecedented.

"This is a major, unequalled feat in Army research," Houston said. "This award shows that the Army recognizes the important and innovative research technologies that ERDC provides the nation."

Recent technologies that contributed to the honor include the Discrete Element Method (DEM), a modeling and simulation method for complex problems. ERDC has used DEM in fielding Army equipment, testing the Mars rover wheels for NASA, developing snow tires, developing a model for changes in Arctic sea ice for the National Science Foundation and NASA and simulating "brownouts," dust clouds that are the leading cause of helicopter crashes in Iraq and Afghanistan, for the Defense Advanced Research Projects Agency.

The Lightweight Modular Causeway System (LMCS) is another ERDC innovation. The LMCS is a lightweight, easily deployed, floating roadway that allows vessels to unload equipment in small or damaged ports or even on the beach. The LMCS can be transported by ship or air, can be put together by as few as seven people, is designed to withstand 20-foot waves, and can support the Army's heaviest main battle tank.

The Human Capital Initiative is ERDC's own major personnel and management movement. The initiative promises to take care of team members from the day they are hired to the day they retire, with an ultimate goal of making ERDC the employment choice of the best and brightest engineers, scientists and support personnel in the U.S.

"This award really belongs to all the people at ERDC," said Dr. Jeff Holland, the current deputy director of ERDC. Holland will succeed Houston as the permanent ERDC director when Houston retires in January. Holland also accepted the Army Research Laboratory of the Year Award for ERDC in Washington, D.C., on Oct. 4.

"You can have the best research equipment and facilities in the world, but without the right people to conduct that research, you may as well close the doors," Holland said. "Our people are the best and brightest. They're the reason we continue to succeed; they're the reason ERDC technologies are protecting our Soldiers and making our nation better."