RIPRAP

U.S. Army Corps of Engineers
Albuquerque District

Photo by Sonny Franks, Environmental PM

Textured photo of scrap metal resting near a Magdelena, New Mexico mine. See story on pg. 4.

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US Army Corps of Engineers ®
Albuquerque District

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In this issue…

District Engineer,
Lt. Col. Jason Williams

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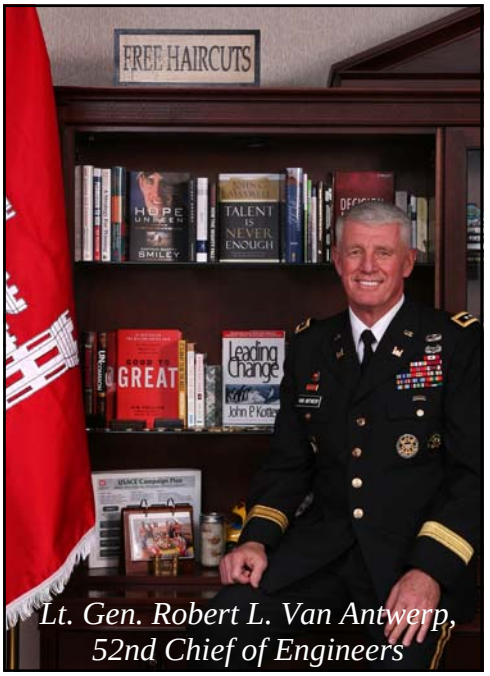
USACE Leader to Retire

Lt. Gen. Robert L. Van Antwerp, 52nd Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers (USACE), was honored during a retirement ceremony at Fort McNair, Washington, D.C., May 3. He will formally retire and relinquish command of the Corps of Engineers at a later date.

Maj. Gen. Merdith "Bo" Temple will assume duty as the acting commanding general until a new Chief is confirmed.

On May 18, 2007, Lt. Gen. Van Antwerp became the U.S. Army Chief of Engineers and Commanding General of USACE. As Commander, Lt. Gen Van Antwerp serves as the senior military officer overseeing most of the Nation's civil works infrastructure and military construction. He is responsible for approximately 36,000 civilian and 600 military employees, who provide project management and construction support to 250 Army and Air Force installations in nearly 100 countries around the world. USACE has a key role in support to Overseas Contingency Operations, with thousands of civilians and Soldiers deployed to support reconstruction in Iraq and Afghanistan. The general is also responsible for hundreds of environmental protection projects and for overseeing the regulatory permit program to protect, restore and enhance thousands of acres of wetlands. In addition, USACE has an emergency response mission to support the Federal Emergency Management Agency in restoration and repair after a disaster.



Lt. Gen. Robert L. Van Antwerp, 52nd Chief of Engineers

Secretary of Defense Robert M. Gates has announced that the President has nominated Lt. Gen. Thomas P. Bostick, United States Army, for reappointment to the rank of lieutenant general and assignment as Chief of Engineers/Commanding General, United States Army Corps of Engineers, Washington, D.C. He is currently serving as Deputy Chief of Staff, G-1, United States Army, Washington, D.C.

This issue of Rip Rap is dedicated to the memory of: Julia Davis, John Martin, and Gary Valdo, Cochiti Lake

The Rip Rap supports action 10 of our Operations Plan (Promote the common regional picture and execute strategic communications).

District Team Marches to Remember

More than 6,000 people came to New Mexico March 27 for the 22nd Annual Bataan Memorial Death March.

By Kristen Skopeck, Public Affairs

A dedicated team representing the Albuquerque District traversed the high desert terrain of White Sands Missile Range, N.M., March 27 for the 22nd Annual Bataan Memorial Death March. They joined more than 6,000 others from across the globe for the event.

Lt. Col. Jason Williams, Maj. Richard Collins, Russ Jaramillo, Jerry Nieto and Honorary District Commander Christine Glidden faced daunting winds and rugged conditions throughout the 26.2 mile march, conducted in honor of the heroic service members who defended the Philippine Islands during World War II, sacrificing their freedom, health and, for some, their lives.

"The team endured some of the best elements that New Mexico can provide to include 40 mph headwinds while ascending a 1,500 foot, five mile incline and some of the finest loose gypsum that White Sands Missile Range has to offer," District Commander, Lt. Col. Williams said. "The greatest honor was meeting several of the Bataan Death March survivors."

"I was humbled to be standing in the shadows, literally, of the great men who actually endured and survived the Bataan Death March," said Emergency Operations Chief, Russ Jaramillo. "Their presence, alone, was very powerful and provided motivation that just can't be described."

Master Sgt. Bernie Lujan accompanied the team in a supporting role. He was able to get

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the signatures of several of the survivors on the team member's march completion certificates.

"What truly impresses me about the survivors is their enthusiasm and generosity," said Honorary Commander Christine Glidden. "They stand at the start line willing to greet each marcher with a smile and a handshake. What I have noticed, over the five years that I have participated in this event, is that their numbers are dwindling. The actual Bataan March occurred nearly 70 years ago. Also, nearly 15 percent of the actual Bataan marchers were from New Mexico."

(L to R) Lt. Col. Williams, Jerry Nieto, Christine Glidden, Russ Jaramillo, Master Sgt. Bernie Lujan, and Maj. Richard Collins pose with survivors of the Bataan Death March.

"After reading about what the original Bataan Death marchers went through, this run/walk was only a small sample of what the original marchers endured," said Jerry Nieto, engineer and project manager. "This was my first Bataan Memorial, but I have run several marathons and this one ranks up there with being a very well organized event. The course was the toughest I have participated in."

Jerry Nieto at mile 17.

Nieto said the temperature was in the low 40's when they started the march and about 72 when they ended. The winds varied with gusts as high as 30 mph, and the course started at 4400 feet and peaked at about 5400 feet.

When asked if she would participate in the march again or recommend it to others, Glidden said, "Yes, I would absolutely recommend this event. The sunrise over the Organ Mountains, the flyover, and the bagpipes at the start line are very powerful. Thousands come to show their respect, and their energy is palpable. However, it's a tough course."

Jaramillo said several men and women entered the heavy division of the march and carried 35 pounds of non-perishable food goods on their backs the entire distance, while keeping pace with unencumbered marchers.

"They donated the food items to a local food bank at the end of the race," he said. "Their strength and endurance was amazing."

Course organizers placed aid stations every two miles which were stocked with water, Gatorade, oranges, bananas and other nourishment. There was a food stand around mile 13 that offered hamburgers and hotdogs.

"I would not run this course in the individual category, as I think it is too difficult without the support of a team to get through it," Nieto said. "I would run it with a team again, and I would recommend that category to others."

When asked about how she trained for the march, Glidden said, "As a triathlete, I train all year. However, this is one of my most difficult events. I love to run and peaked with a 5 hour run/hike three weeks before the event and then tapered. The march is a beautiful and brutal experience."

Corps Asked to Investigate Mysterious Dynamite

By Mark Slimp, Public Affairs

In the somewhat orderly world of precise engineering models, plans and projects that encompass the routine workday facing most District project managers, one of our own was tasked with solving a somewhat unusual mystery.

Recently, a person from the Federal Bureau of Alcohol, Tobacco and Firearms (ATF) contacted Therman Franks of the District's Environmental Project Management Section. The ATF investigator was looking into a report that there was a cache of unused dynamite just outside the entrance of an old Magdelena, N.M. underground mine, and, more importantly, the dynamite may have been leftover from an old U.S. Army Corps of Engineers project.

Therman, or "Sonny" as he is known to most, has extensive experience in ordnance and explosives safety; and ATF wanted him to check out the report and investigate.

ATF wanted Sonny to explain the following: Where did the dynamite come from? What was its intended use? Who was the legal owner and did they have proper permits for storage? Was the ordnance stable? And, most importantly, why did ATF find two weather beaten signs indicating, at one time, the mine was the site of a Corps of Engineers project, and was the dynamite left there by us?

Within 48 hours of the ATF inquiry, Sonny was on the site conducting his own investigation. He quickly learned the mine was one that had been in operation off and on since 1888 and was called the Linchburg mine, located about 20 miles southwest of Magdalena.

Sonny found the two signs which had led the ATF to initially contact him. The signs did indicate, at one time, the Corps had managed a project near or within the mine, but, beyond those facts, he had little else to go on.

Sonny Franks

Boxes of explosives were found outside a mine entrance, and the Corps was asked to investigate their origin and purpose.

Sonny's first order of business was tracking down the current mine owner or operator.

After arranging a visit to the private property, led by the owner's ex-wife and the mine caretaker, Sonny began inspecting the dynamite and the two storage munitions magazines to verify the ordnance was in a stable state and of no immediate concern from a safety standpoint. Only then was he able to start unraveling the story behind the eight cases of dynamite and blasting caps he found in two rustic storage lockers.

As it turned out, the dynamite had been left at the site sometime around 2002, when the mine was mothballed due to low prices for silver, zinc and lead. The mine owner had planned to use the explosives at other mines he owned or operated around the state.

Slowly, the mine owner's ex-wife started to fill in some of the gaps in the background

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story. She told Sonny that, at one point, the mine had been leased by the Air Force, Navy, Army and the Republic of South Korea for an underground explosives testing project, but the agency workers wouldn't tell her much.

So how was the Corps involved? Well, Sonny finally uncovered that, back in 1994, the District was tasked with overseeing a project being conducted as a joint exercise between the US Armed Forces and the Republic of South Korea to verify the viability of using old mine shafts to store large amounts of explosive ordnances.

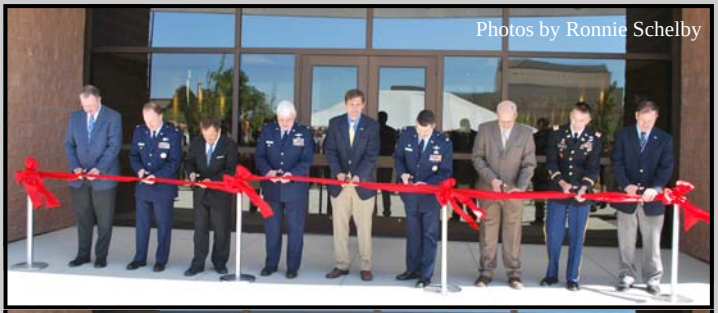
After his investigation, Sonny was relieved to find the dynamite posed no imminent danger to the public, although he did counsel the caretaker on better facility maintenance, and he determined the Corps was not responsible for leaving unused dynamite at a project site. He compiled a report and relayed the information to ATF, answering all of their questions. Mystery solved!

This activity supports our Operations Plan: Action 7 (Execute the regional Military Program and capitalize on Interagency and International Services opportunities).

Corps Ensures Lab Built to Fulfill Air Force's Needs

A contract the Corps awarded in 2008 for the construction of a 145,000 square foot Battlespace Environment Laboratory at Kirtland Air Force Base was seen to fruition, and the structure, which cost nearly $60 million, was officially opened for business April 21.

Construction of the lab was a result of Congress' 2005 Base Realignment and Closure decision which directed the relocation of the Air Force Research Lab's Battlespace Environment Division from Hanscom AFB, near Boston, to Kirtland by 2011. The Corps broke ground on the lab in early 2009 and constructed the facility in less than 18 months. The project engineer was Joan Coffing, the project manager was Connie Runyan and the quality assurance was performed by Al Lopez and Carlo Trujillo.



Photos by Ronnie Schelby

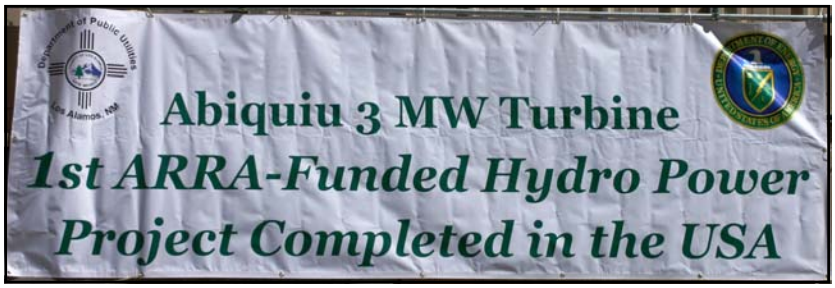
Included in the ribbon-cutting (L to R): Mr. Donald Greenwood, president of construction, Burns & McDonnell Corporation; Lt. Col. David Hornyak, vice commander, 377th Air Base Wing; Mr. John Garcia, chairman of the Kirtland Partnership Committee; Col. Daniel Morin, vice commander, Air Force Research Lab; U.S. Representative Martin Heinrich; Col. William Cooley, director, Space Vehicles; Dr. Joel Mozer, associate chief, Battlespace Environment Division; Lt. Col. Jason Williams, Albuquerque District Commander, U.S. Army Corps of Engineers; Mr. Brent Wilson, base civil engineer, Kirtland Air Force Base.

This activity supports our Operations Plan: Action 5 (Develop collaborative approaches to address watershed-based, multi-stakeholder and multi-benefit regional water resource challenges).

District Happenings

New Turbine Increases Hydroelectric Power

By Elizabeth Lockyear, Public Affairs



At the ceremony celebrating the new low-flow turbine at Abiquiu was (L to R), Operations Project Manager Dave Dutton, Senator Tom Udall, Deputy Commander Maj. Richard Collins and Abiquiu Park Ranger Eric Garner.

Despite a rough beginning more than two decades ago, the Abiquiu hydroelectric facility's third turbine officially turned on when Sen. Tom Udall (D-NM) pushed the start button at a ceremony at the facility April 21.

In the mid-1980s, the original contractor hired to install two, 6-megawatt hydroelectric generators at Abiquiu Dam, N.M., said the project was unbuildable and walked off the job. Overcoming this setback, the Los Alamos Department of Public Utilities (LADPU) hired another contractor who completed the project and the two generators have produced electricity for more than two decades. Now, the first major American Reinvestment and Recovery Act (ARRA)-funded hydropower project in the nation is complete, and a third turbine is boosting the facility's renewable energy generation capacity by 22 percent.

The 3-megawatt turbine allows the facility to operate when water flow levels from the dam are below or above the capacity of the other two turbines. The electricity generated from the new turbine is enough to supply approximately 1,100 homes annually.

The new turbine works with low water flows, 75-235 cubic feet per second (CFS), like in the winter, when less water is released from Abiquiu Dam, said Dennis Garcia, chief of the District's Reservoir Control Branch.

While unable to be present at the start-up ceremony, U.S. Energy Secretary Steven Chu said in an official statement, "Today marks a major milestone in securing America's clean energy future as we celebrate the completion of the Department of Energy's first major Recovery Act-funded water power project. The Abiquiu Low-Flow Turbine Hydropower Project highlights the clean energy potential and local economic benefits that come with the environmentally responsible use of our rivers."

Water released from the dam by the Corps is channeled into the Abiquiu hydroelectric facility. The water turns the blades of the turbines, which spin a shaft connected to a generator and electricity is generated.

"That same water then continues down the Rio Chama with no water loss, no created pollutants and no greenhouse gasses emitted into the air," said LADPU Manager John Arrowsmith. "Hydropower is

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a clean and renewable energy source in the truest sense."

All the speakers at the ceremony mentioned the many natural resources New Mexico has, which can lead the nation in the production of renewable energy.

Speaking at the start-up ceremony, District Deputy Engineer Maj. Richard Collins said he believes "the Corps, [Los Alamos] County and Department of Energy have taken a small but very significant step in the right direction toward the goal of helping meet the Nation's need for reliable, affordable and environmentally sustainable hydropower."

Lt. Gen. Robert Van Antwerp, soon to retire as the Corps' Chief of Engineers, said that the Corps' goal is "to stretch energy security to see how far we can go."

"We take these words very seriously. We must always seek and push for new solutions to meet the needs of our country," said District Operations Chief Mark Yuska.

The new turbine stems from a March 2010 Memorandum of Understanding (MOU) among the Department of Energy, Department of the Interior and the Corps of Engineers. This MOU signified a new approach in hydropower development. These three federal agencies will cooperate more closely and align priorities to support the development of environmentally sustainable hydropower. They also agreed to focus on increasing energy generation at federally owned facilities and exploring opportunities for new development of low-impact hydropower. The Corps is the largest hydropower owner in the nation.

Sen. Tom Udall pushed the button making the low-flow turbine at Abiquiu operational at a ceremony April 21.

Corps and County Amend Agreement to Produce More Power

Last summer, the District and Los Alamos County, N.M., amended their existing Memorandum of Agreement (MOA) to produce more renewable power when possible at the Abiquiu hydroelectric plant.

The Corps and County agreed that the Corps' owned and operated Abiquiu Dam facilities will receive 100 percent qualifying renewable energy credits (RECs) from the new low-flow turbine. In exchange, the District will proactively manage water releases from the dam to maximize energy production, while respecting flood control and water right obligations.

The RECs are important to the District, because federal agencies must begin meeting energy management requirements as required by federal statutory laws and regulations.

One such law is the Energy Independence and Security Act of 2007, which established energy management goals and requirements relative to a 2003 baseline. The goal: a 30 percent energy reduction by fiscal year 2015. Other acts and laws deal with renewable energy. The EPAct 2005 set the goal that a minimum of 7.5 percent of energy used by the federal government in fiscal year 2013, and beyond, come from renewable energy.

This activity supports our Operations Plan: Action 5 (Develop collaborative approaches to address watershed-based, multi-stakeholder and multi-benefit regional water resource challenges).

District Happenings

Measuring Restoration Success in the Virtual Bosque

By Ariane Pinson, District Technical Writer / Editor

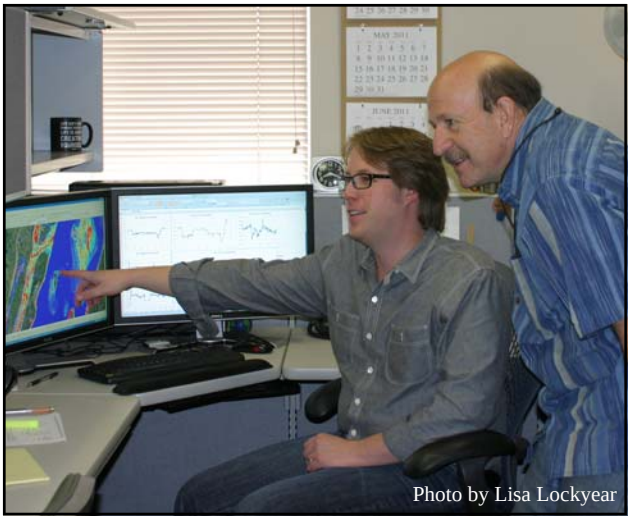

Photo by Lisa Lockyear

Civil Engineer Stephen Kissock explains his work to Michael Porter, a Corps' biologist.

Do built environments last? Despite evidence that the character of a building changes over its lifetime, we tend to think of the built environment as something fixed and durable. However, not all built environments are enduring ones.

Smaller-scale projects built as part of efforts to restore ecosystems, critical riparian habitats and endangered species are cases in point. Situated in the most dynamic part of the river, the active channel, these features are silted in, scoured out and left high and dry by the changing flows of the river. Blink, and they have changed.

Ecosystem restoration is expensive, and it is fair to ask whether there is any long-term benefit to today's investments: if high flow, low flow and slackwater channels are constructed to create ideal Rio Grande silvery minnow habitat, will these ideal habitats still be present in five or 10 years, or will they be wiped away by the next big flood?

Traditional monitoring, by counting individual animals and plants, is costly: a team of biologists may take a day or more to visit a single restoration site and must do so several times a year.

Stephen Kissock, a civil engineer with the District, thought there had to be a more cost-effective way to tackle this monitoring question. What if, he reasoned, there was a way to remotely determine whether or not ecosystem restoration features were continuing to function as designed? For example, eight years on, do the features in a given reach continue to provide suitable habitat for minnows, flycatchers, and other species?

He tackled these questions in his recently-completed Master of Science degree in Civil Engineering at the University of New Mexico.

Kissock combined LiDAR, a technology for collecting detailed topographic data from an airplane, with hydraulic modeling of a range of river flows to determine whether a restored river reach continued to provide suitable habitat for endangered species. The data were brought together for visualization and analysis in ArcMap, where a habitat suitability map was created for each flow level based on water depth, velocity and sediment movement across the floodway.

"It's not the individual techniques that are new, but the combination of visualization methods and modeling that are ground breaking," Kissock said.

Although the Corps did not fund Kissock's thesis, the Corps helped to fund some of the modeling studies and data collection from its Middle Rio Grande Endangered Species Collaborative Program appropriations.

Kissock developed tools that allow engineers to give feedback to planners and biologists about restoration projects, not just for completed projects, but throughout the planning and design process. Kissock conducted his study at the Los Lunas Habitat

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Restoration site, a Collaborative Program site established by the Corps and Bureau of Reclamation, following a devastating fire in 2000. At this site, ecologists had created a series of channels to promote inundation of the overbank area to create suitable spawning and rearing habitat for the minnow. By saturating the overbank area, they were also hoping to more closely mimic the natural system and encourage the establishment of native vegetation, creating habitat favorable for flycatchers as well.

The results of Kissock's modeling efforts are encouraging: "Eight years post-restoration, the major conservation features continue to function as designed," he said, "with the added benefit that I can readily quantify the amount of optimal and suboptimal habitat that remains. The modeling data are also in agreement with the field monitoring data from that reach."

The technique has additional benefits. If LiDAR data are collected before project construction, it could be fed into pre-project models in order to optimize feature design in terms of lifetime, flow rates, water depth at different stages and potential deposition or erosion in the feature. Subsequent LiDAR data could be used to provide more detailed feedback on individual project features, both in the short-run for the benefit of the minnow, but also in the long-run for flycatcher nesting habitat. The LiDAR data can be reused for other projects, as well.

Kissock is jazzed about this project and wants to develop it further. He said the next step is to use a Corps' model to predict the hydrograph, or daily flow amounts, for the year and put this data into the model of the study area to study how flows change daily and seasonally." Kissock could then examine the performance of restoration features in different seasons.

In addition, by running his model forward over multiple years, he may be able to estimate the likely lifetime of different restoration features.

Kissock's modeling approach has one final benefit. As climate warms over the next century, average stream runoff is likely to decline across the Southwest, while peak flows are likely to increase. By adjusting the hydrograph to account for these altered flows, Kissock's approach can be used to optimize the design of ecosystem restoration features, so they continue to provide critical habitat even under more challenging flow conditions.

Seeing Sedimentation in 3D

Since completion of Cochiti Dam in 1975, sediment has been steadily accumulating within Cochiti Lake and upstream within the Rio Grande channel. The Corps has taken aerial photography from different dates and geo-referenced it with ground coordinates to prepare a digital terrain model of pre-dam and post-dam conditions. Once bathymetry information was added, comparisons between the data clearly showed both quantity and distribution of sediment deposition over time.

The information was shown in 3D, using special stereo projection equipment.

The viewing took place April 1 and was intended to showcase fairly recent developments in GIS and its associated visualization tools.

Wildfire Ravages Corps Property in Colorado

By Karen Downey, Operations Manager at John Martin Reservoir

Range fires across western states are not uncommon in early spring and summer, especially during times of extended drought. But, the wildfire that engulfed 14,000 acres across southeast Colorado, which started on April 9, was something veteran firefighters said they hadn't seen … a fire they just couldn't put out.

Most of the burned acreage was on the John Martin Reservoir property, a U.S. Army Corps of Engineers owned irrigation and flood control facility. High winds and abundant buildup of fuels over the years added to the difficulty of containing the raging, six-day-long fire.

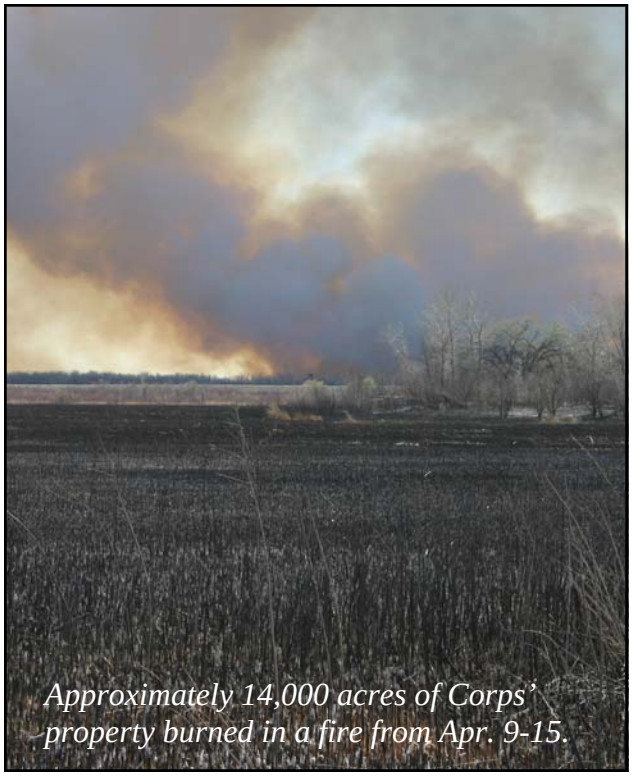
The fire started on Sunday, near U.S. Highway 50 and then quickly traveled southeast to John Martin Reservoir State Park. The fire burned approximately 10 miles to the east, where it came within 500 yards of the Colorado State Park Visitor Center and threatened the residents of Hasty. However, winds shifted direction and blew the fire back on itself, causing it to extinguish. Firefighters were able to prevent the spread of the fire to the east side of the dam and were able to save camping areas and Corps facilities there.

Firefighters thought they had the fire contained by Monday, but the fire flared up again near the Fort Lyon Correctional Facility, located on the west end of the Corps property. The same fire rekindled Tuesday and burned along the Arkansas River, west toward the city of Las Animas. Fighting winds of 20 to 30 mph in the area, firefighters set backburns to char grasses in the path of the fire and secure a perimeter. On Wednesday and Thursday, two air tankers dropped fire retardant on the blaze.

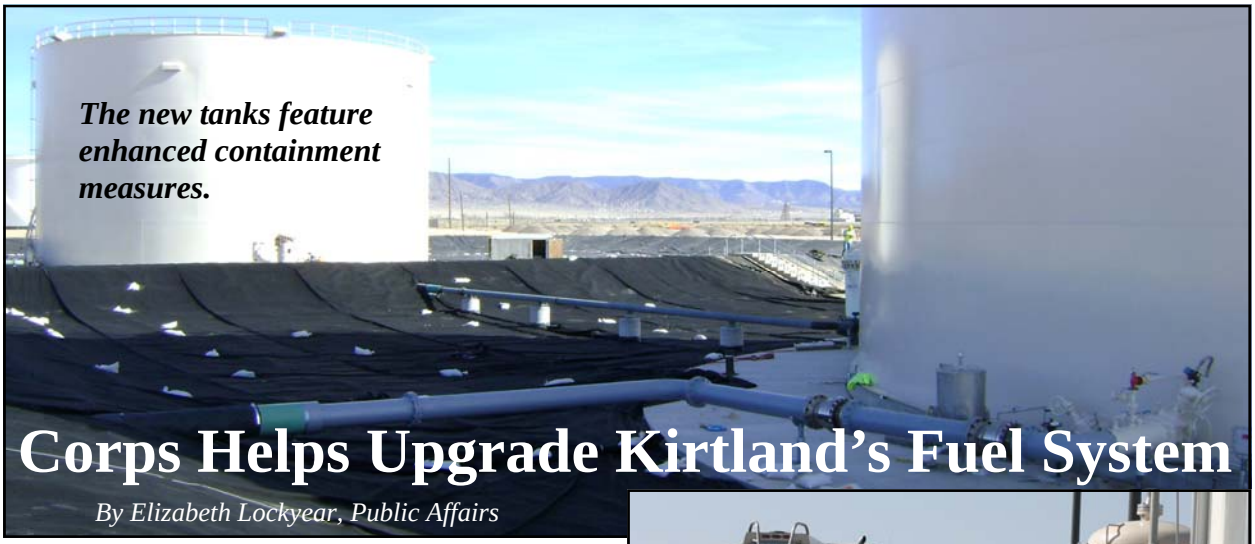
The Red Cross opened a shelter at a community center in Las Animas for brief evacuations that took place Saturday, Monday and Tuesday nights of the fire. For the large area that burned, amazingly little damage was done. Affected was a large hay barn, farm and fire equipment and power sources to the prison.

Three firefighters were treated for smoke inhalation and first and second-degree burns, after being caught in a flashover event when their fire engine lost power and the wind changed direction, pushing the fire toward them. All three were able to evacuate to a safe zone. More than 54 neighboring fire and emergency agencies responded to help the firefighting effort.

The John Martin Reservoir area has been under drought conditions for the past 12 years. Extremely flammable fuel sources along the Arkansas Valley River corridor and throughout the prairie grasslands contributed to the explosive nature and long duration of the fire. Certain areas of the river were so choked with vegetation, firefighters were unable to reach some areas where the fire burned. Local officials for the Corps of Engineers plan to meet with firefighters in the near future to discuss the placement of permanent firebreaks to aid in fighting wildfires on the project.



Approximately 14,000 acres of Corps' property burned in a fire from Apr. 9-15.



The new tanks feature enhanced containment measures.

Corps Helps Upgrade Kirtland's Fuel System

By Elizabeth Lockyear, Public Affairs

When environmental officials on Kirtland Air Force Base found leaking fuel pipes in their fuel distribution system, they approached the Corps for a solution. An entirely new fuel delivery system was designed and contracted for, and the project is in its final stages.

In the original fuel system, constructed decades ago, the pipes were buried underground, offering virtually no inspection accessibility. The new system incorporates multiple containment measures that offer easy access for inspection as well as provide much more protection from spills and leaks.

The new fuel system has three major subsystems: the uploading station, the dispensing station and two storage tanks, each with a storage capacity of 1.7 million gallons. The new tanks feature enhanced containment measures. Before, only earthen spill-containment surrounded the tanks. Now the containment is lined with special material and gravel covered.

The old, single-walled, underground pipes throughout the system have been removed. The new upload and dispensing pipes are mostly above ground. Where it was necessary to put them below ground, they are in concrete trenches under metal grating. This makes all the pipes easily accessible for inspections.

Semi-trailers bring JP8 fuel to one of four fully automated uploading stations, where it is transferred to one of the two storage tanks.

When needed, fuel is dispensed to a special transport truck for delivery to planes.

The old system had two fill stands that could accommodate one transport truck each. These were replaced with two new fill stands that can accommodate two trucks each, doubling the dispensing accommodations.

Another enhancement made during the project involved upgrading the electrical system from a 208 volt system to a 3 phase 480 volt system. The new system is more energy efficient, saving energy and money.

The project is ahead of schedule, despite one of the storage tanks collapsing twice. The tank was partially completed when it collapsed during unusual and extremely high wind gusts last spring. Then, in a strange twist, the same tank collapsed again in early summer when it was hit by a dry microburst.

The contractor broke ground in December 2009, and the contractual completion date is in mid-June. However, the system became operational for the base in March.

This activity supports our Operations Plan: Action 7 (Execute the regional Military Program and capitalize on Interagency and International Services opportunities).

This activity supports our Operations Plan: Action 8 (Develop a risk-informed and budget-aligned regional lifecycle asset management plan to optimize critical infrastructure investment).

District Employs New Equipment to do Surveying

By Kristen Skopeck, Public Affairs

Trent Simpler (left) and Ronnie Casaus deploy the Proteus Hydroacoustics ROV on Trinidad Lake.

When Civil Engineering Technician Ronnie Casaus learned about possible erosion of the rip rap along the water side of Trinidad Lake's dam, he gathered a small crew to conduct a survey of the areas April 5. He knew the trip would be the perfect opportunity to test the Corps' new surveying equipment.

Prior to that expedition, the surveying equipment used by the Corps could only investigate above water, so damage that was occurring below water was difficult to see or locate. The Corps' new equipment is known as the Proteus Hydroacoustics ROV, and it has a camera attached to allow underwater viewing.

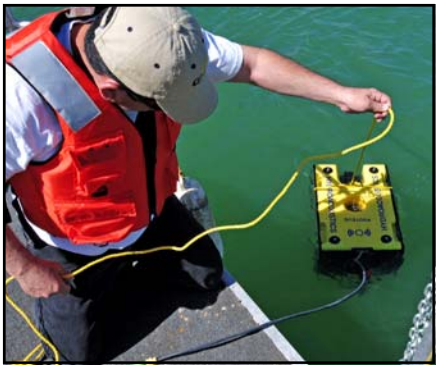
The crew decided to meet at the lake during the early morning hours to become familiar with the ROV and get it functioning.

Trent Simpler, a civil engineer with the group, was tasked to read the ROV's manual the night before, and, after an hour of trouble shooting, he was able to operate the ROV. At that point, he and Casaus launched the ROV in the water to take video footage and photos.

"We wanted to get some video and pictures beneath the water, where the erosion might be occurring," Casaus said. "We were hoping to locate any problem areas, so we could use long survey poles to take elevation readings."

Casaus said some video and photos were captured, but they learned it is best to use the ROV later in the day, as they experienced a lot of glare from the sun. In the end, the data was too bright and grainy. However, the trip allowed three individuals in Albuquerque and one at John Martin to learn how to operate the Corps' new equipment, and it provided lessons learned for future survey missions.

The team launches the boat with equipment in the lake.



Ronnie Casaus places the ROV into the water.

Trent Simpler maintains cover to operate the ROV.

Rangers Teach at Tucumcari for Earth Day

By John Mueller, Corps Ranger

More than 900 participants visited the Tucumcari Outdoor Classroom to celebrate the 41st annual Earth Day on April 21. Students and teachers from Tucumcari, Fort Sumner, San Jon and Logan elementary schools, in N.M., attended the all-day event, which rotated groups of students through 10 separate learning stations.

Presenters included experts from the Nature Conservancy, speaking about reptiles and amphibians; the New Mexico Department of Cultural Affairs, who talked about archeology; an NMSU entomologist, who talked about butterflies; New Mexico Game and Fish, who presented on N.M. wildlife; and the U.S. Army Corps of Engineers, who talked about invasive species.

Natural Resource Specialist Ranger John Mueller from Conchas Lake and Ranger Bob Mumford from Santa Rosa Lake provided 20 interpretive presentations that centered on the invasive species known as the Zebra/Quagga mussel. Students learned about the nuisance species' origin, history, how to identify the mussel and ways to prevent their spread to new habitats.

Ranger Mueller unveiled a new educational tool, a Quagga mussel infested propeller submerged in Lake Mead, Nev., for 13 months and enclosed in a protected display case. The tool helped to inspire interest by the children and provoked many questions.

USACE Photo

On Earth Day, Natural Resource Specialist Ranger John Mueller described the damage mussels inflict in lakes, dams.

John Martin Reservoir Employees Debby Schibbelhut and Park Ranger Don Headlee greeted people as they stopped at the Corps' booth at an RV and Outdoor Sport Show in Colorado Springs, Colo., March 28.

Park Rangers Darrel Six and Headlee, Operations Manager Karen Downey and Automation Clerk Schibbelhut took turns manning the booth, which highlighted the reservoir and provided information on water safety and aquatic nuisance species.

More than 300 people stopped at the booth and asked questions.

USACE Photo

Have a Plan; Know Your Plan!

By Elizabeth Lockyear, Public Affairs

You're at your desk and gunshots are fired out in the hall. What do you do?

Federal Protective Service (FPS) officers addressed this scenario on April 6 in a seminar about what to do if there is an active shooter in the building.

The most important thing to do is be aware of your surroundings before an incident happens, and know where all the exits are. Mentally practice reviewing how you could quickly leave the building in an emergency.

The Department of Homeland Security has a new initiative: See Something, Say Something. If you observe something abnormal or out of place, tell someone: your supervisor, a security guard, or call the police department's non-emergency number. {In Albuquerque, the number is 505-242-COPS (2677).} This may prevent an incident and save lives.

If you are involved in an active shooter event, the FPS gave this information:

Evacuate: Know your building's active shooter plan. Have an escape route in mind. Leave your belongings behind (although if you can grab your cell phone, do it) and keep your hands visible. If you work in the Albuquerque office, Safety, Security and RCO offices have the evacuation plan. If you work at a field site, ask your supervisor for your plan.

Hide out: If it's not safe to evacuate, get out of the shooter's view, block the entry and lock the door, if possible. Wait until law enforcement shows up and says to come out.

Last resort—Take action: Only as a last resort, when your life is in imminent danger, act with aggression and attempt to incapacitate the shooter. Throwing things at the shooter is a possible way to do this.

Call 911: When it's safe to do so, call 911. If you are hiding and unable to speak, call 911 anyway and leave the line open. When it is safe to speak, give as much information as you know about the shooter's location, description (i.e. what they are wearing), number of shooters, number of people in the building and what weapons the shooter is using.

When law enforcement arrives, they operate under two assumptions: that the intruder(s) are armed and dangerous, and everyone is a suspect until they know otherwise, because the top priority of the responders is to take care of the threat.

This is why it's important when you are evacuating to keep your hands clear. It's also important to not grab at or make sudden movements towards law enforcement, because their first response is to view this type of action as a threat and respond in kind.

ANTITERRORISM — What is it?

Individual personal protection ensures members of the Army community (Soldiers, Army civilians, and family members) are aware of the risks associated with the threat of terrorist activity and the personal security measures they can take to reduce that risk.

Why is it important to the Army? When informed about the indicators of terrorist activity, and empowered by the knowledge of how to protect themselves, the Army community is postured to defend against the threat. The risk to individuals and small groups living and traveling throughout the world is real. An effective way to reduce the risk is by training and educating the community and providing them with information and resources on individual personal protection.

New Teammates Join the Albuquerque District

Amy Louise, Project Manager

Angela Mobly, Paralegal

Christopher Parrish, Archaeologist

Frank Edison, Military Const.

Vince Vigil, Hydraulic Eng.

Memrie Clarke, Admin. Asst.

Patricia Lewis, Admin. Asst.

Robin Holbrook, Admin. Asst.

Tracy Wolf, Eng. Tech.

Timothy Eng, Military Const.

Andrea Gonzales, Office Automation

Francina Martinez, Realty Specialist

Family Readiness Network Cares!

The District has a robust Family Readiness Network (FRN) to help the families of deployed teammates. The hope is to keep families informed and involved in District activities. Along those lines, several employees donated goodies that were made into Easter baskets and handed out in April. Pictured at right receiving baskets are Aiden (5) and Jessica (7) Faerber, and their mom, Chrystal.


Photos by Lisa Lockyear

The FRN program is successful largely due to the work of coordinators, Crystalin Medrano (left) and Angela Sims.

Fish Squeezing is Focus of Dirty Jobs Episode

By Ronnie Schelby, Public Affairs

What do Santa Rosa Lake, the New Mexico Department of Game and Fish and the popular television show, *Dirty Jobs*, have in common? The answer: Fish Squeezing!

In the early hours of April 12, Mike Rowe, star of *Dirty Jobs*, and his crew, assembled at the boat launching area of Santa Rosa Lake for a fun-filled day of fish squeezing.

The walleye are not able to spawn naturally because of the type of water in the lake, so the employees of Game and Fish are there to help.

Every spring, Game and Fish personnel capture walleye in large traps and nets. They then squeeze them to express their eggs into large enamel pans. All fish caught during the filming of *Dirty Jobs* were females, but males are needed to accomplish the mission.

"Male walleye are smaller than females and are captured by electro-fishing at night, or when they enter a Merwin Trap," said Marty Frentzel, chief of public information and outreach, New Mexico Dept. of Game and Fish.

After male fish are captured and squeezed, the milt, or sperm, is mixed together with the eggs, which are sticky. In the wild, the eggs stick to weeds and rocks in order for fertilization to take place. In the manmade venture, all the material is washed and added to bentonite clay. The eggs are fertilized in 60 seconds.

For the 2011 season, Game and Fish took in more than 10 million eggs. The fertilized eggs are transported to the Rock Lake Fish Hatchery in Santa Rosa, where they continue to grow.

"The fertilized eggs are kept for six to seven days, then they are released into the lakes," said Roddy Gallegos, assistant chief of fish over hatcheries, Dept. of Game and Fish. "We release the fish to 10 to12 lakes, including Santa Rosa, Stubblefield and Clayton Lakes," he said. The episode will air later this summer.

Photos courtesy of NM Dept. of Game and Fish

Above: *Mike Rowe, star of "Dirty Jobs," and Shawn Denny, southeast area fisheries manager with New Mexico Department of Game and Fish, discuss fish squeezing and prepare to board the boats to capture female fish for their eggs.* ***Below:*** *Mike Rowe prepares to board the boat to take part in actual fish squeezing.*


Bottom photos by Ronnie Schelby

Mike Rowe is filmed on the cliffs above Santa Rosa Lake.

Children Learn About Corps

By Ronnie Schelby, Public Affairs

On April 28, the District hosted its annual "Bring Your Child to Work Day," and more than 35 children, ages 6-12, participated in numerous festivities, which took place both inside and outside of the District headquarters building in Albuquerque.

Activities and exhibits included the Rolling River hands-on display, a raptor from Hawks Aloft, a cloud machine demonstration, archeology artifacts, a fractal experience and a group structural activity involving marshmallows, toothpicks and gelatin.

Several speakers engaged the children, including a fascinating Google earth presentation by GIS specialist Doug Walther, and a presentation by Ranger Phil Martinez from Abiquiu Lake, who spoke about walking down the Old Spanish Trail.

Children and their parents also enjoyed an informative nature walk, learning about some of the biological and environmental aspects of our local environment. The children took pictures with Bobber the water dog, received certificates and an official district coin. Several people commented that it was an educational, yet fun-filled, day for everyone.

Acting Chief of Contracting, Leslie Molina, and her daughter, Marisa, participated in the District's "Bring Your Child to Work Day" activities and learned about artifacts.

"Bring Your Child to Work Day" coordinators planned a full compliment of activities to allow the children to understand the various types of work that is performed by employees of the Corps. The schedule even took the children on an outdoor hike near the District headquarters. More than 35 children and parents participated in the event.

News Briefs—News Briefs—News Briefs—News Briefs

Asian Pacific American Heritage Month

During the month of May, we celebrate Asian Pacific American Heritage Month, and the 2011 theme is "Leadership, Diversity, Empowerment and Beyond"

In 1990, the holiday was declared by President George H. W. Bush to officially be celebrated in May. May was chosen to commemorate the immigration of the first Japanese to the United States on May 7, 1843, and to mark the anniversary of the completion of the transcontinental railroad on May 10, 1869. The majority of the workers who laid the tracks were Chinese immigrants.

American Indian Cultural Course

A DoD American Indian Cultural Communication Course will be held August 16-18, 2011 in Colorado Springs, Colorado. American Indian specialists in history, culture, and intercultural communication, and DoD legal staff will teach this free training. The course provides valuable information for DoD employees whose work could affect Indian tribes and for those already working with tribes and tribal members. The training will include: history of Indian laws and the legal basis for DoD American Indian and Alaska Native Policy; federal law and policies that impact DoD relationships with Indian tribes; explanation of DoD's Instruction 4710.02, DoD Interactions with Federally Recognized Tribes; introduction to tribal concepts and cultures; intercultural communication practices; and strategies and steps for consulting with tribes. If you would like to register, email the following information to Laura Berg, no later than July 15, 2011: 1) your first and last name; 2) military branch; 3) installation location and mailing address; 4) rank, if applicable; 5) job title; 6) status as a DoD employee or contractor; 7) email address; 8) telephone number; and 9) briefly, your reasons for wanting to take the course.

Confirmation of your registration will happen via email, and you'll receive information about transportation, course location, lodging options and other logistics. For more information, contact Ms. Berg at the email below, or at (503) 281-4716 (PST), lberg@teleport.com.

Contracting Kudos

The District's Contracting Team was recognized with the Team Excellence award at the New Mexico Federal Executive Board's annual awards luncheon on May 5. Contracting Officer Stephanie Parra was also recognized with the Federal Employee of the Year "Professional, Administrative and Technical award."

Corps Sets Up Flood Fight Facebook Page

The Corps of Engineers has developed a Facebook page with information about the flood fight in the Midwest: http://www.facebook.com/#!/OperationWatershed2011

It is designed to share information about the entire flood fight up and down the Ohio and Mississippi Rivers and all the tributaries feeding them.

Rio Chama Rafting

Responding to drought conditions in Northern New Mexico, the Water Authority announced a partnership with Federal agencies that will allow weekend rafting on the Rio Chama this summer.

This will occur through planned releases of the Water Authority's allotment of San Juan-Chama water into the river between the Heron, El Vado and Abiquiu reservoirs.

The releases will occur on 10 weekends, starting Memorial Day weekend and ending Labor Day weekend. The San Juan-Chama project currently supplies about half of the Albuquerque area's drinking water.