MISSION SUSTAINMENT QUARTERLY NEWSLETTER

News You Can Use from the DoD Range Sustainment Initiative

Summer 2009

The Department of Defense Sustainable Ranges Initiative (SRI) ensures the long-term viability and continuity of military training and testing areas while providing good stewardship for the land. Through a framework of continuing cooperative and coordinated efforts within government, and partnerships with groups beyond installation boundaries, DoD's Sustainable Ranges Initiative is helping to safeguard America and sustain our lands and resources for years to come.

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FEATURE ARTICLE

Tours unearth hidden aspects of bombing range, remote base areas

From Edwards Air Force Base
Report to Stakeholders
February, 2009

Moonscape. No man's land. Desolation. The pictures that come to mind for most people when thinking about a bombing range aren't pretty. However, these pictures are far from the truth at Edwards Air Force Base's Precision Impact Range (PIRA).

Some of the base's best, most beautiful wildflowers grow on display on the PIRA, said Kathy Loetzerich, the base Environmental Resource Specialist who covers the PIRA. "In places, the Joshua trees are so numerous they almost seem like a forest."

The PIRA makes up 60,800 acres of the 300, 723 acres that is Edwards. Of that, only 1,800 acres are cleared for target use. Most of the PIRA is relatively untouched by historic man: the dry desert environment meant the land was not desirable for emigrating farmers. Some mining occurred in the late 1800s and early 1900s and there are ruins of a few old homesteads.

The Army Air Corps arrived on the scene 80 years ago. Now the Air Force keeps the public out with monitored fencing. One way on-base groups and visitors can experience the beauty of the PIRA and other unique features of the base nearby is through educational tours conducted by Environmental Management (EM).

Bob Wood, directors of Environmental Management, sees these tours as an important job for EM. "We can tell folks all about yardangs or the lakebed during a briefing, but people understand better when we go out and see them up close," he said. "They comprehend better when they can kick the lakebed clay and get the dust on their teeth."

Past groups to take tours have included civic leader organizations and college students. "We regularly take out new base leaders and their families," Wood said. "We've had several base groups during Wingman Days."

Wood thinks it is important for base workers to get out of the office and learn about Edwards. "People don't know all the parts of their own base," he said. "Our tours can get them out to places they can't normally access."

Most environmental tours focus on the base's natural and cultural resources. "They really start to understand the magnitude and scope of the base and learn about the complexity of the ecosystem," Wood said. "When you visit a World War

II rifle range here at Edwards, it puts the history of the Air Force in a different perspective."

Once an archaeologist for the base, Loetzerich now leads many of the tours because she knows a lot about the history of the base. She's taken groups to see prehistory and historic sites including Ettinger Cave near the PIRA. Loetzerich said archaeologist suspect Native American women conducted fertility rituals at the cave before the Spanish arrived. Ettinger Cave contains the only known rock art on Edwards. Not far from the cave, tours stop at Downfall, where workers maintain the bombing targets on the range.

Besides providing a usually needed bathroom break, the Downfall facility features several Vietnam-era tanks that tour participants can check out up close.

SEEING THE SITES— The Edwards Air Force Base Officers Spouses Club take a seat on top of a Vietnam-era tank at the Precision Impact Range Area (PIRA) Downfall. The spouses attended an Environmental Management tour and Downfall was just one of the many stops on their itinerary. (Photo courtesy of Edwards AF Base.)

Other historical areas available for tours near the PIRA include the ruins of the original 1930s Army Air Corps camp on the east side of Rogers Dry Lake, abandoned adobe homestead ruins, and an area where suspected moonshiners set up business.

Yet often native biology steals the show from base history, especially on the PIRA. "I've seen desert candle flowers that were 3 feet high after a wet winter," Loetzerich said. "Elsewhere, they were maybe 12 inches high." The undisturbed plant life of the range helps native animals thrive there. "Our biologists have seen many bobcats and even badgers out there," she said.

Much of the PIRA had been designated critical habitat for the desert tortoise. The desert tortoise is protected by federal law because it is considered a threatened species. There are more desert tortoises here than any place else on the base. Most base sightings of desert tortoise have been on the range.

Both Wood and Loetzeich say the range operators out at Downfall take special care with desert tortoises. They generally avoid cleared areas like bombing targets, but do cross roads. "The speed limit on the dirt roads is 35," Loetzerich said. "When they know the tortoises are active, they'll often slow down to 15 just so they have plenty of stopping distance if they see a tortoise ahead on a road."

Besides living wonders, Edwards' unique geology attracts people. Geology students have toured the base several times to see the many different geological features at the base. The clay lakebeds to the west of the PIRA are the largest obviously featured. Haystack Butte, on the edge of PIRA, is made up hexagonal basalt columns seldom seen elsewhere. The yardangs north of the PIRA—sometimes called petrified sand dunes—are found only a few places on Earth. They are more common on Mars.

Environmental Management invites both on- and off-base groups for free environmental tours. Groups interested in scheduling a tour should contact Gary Hatch, Environmental Public Affairs at (661) 277-1454 or email 95abw.pae@edwards.af.mil.

FROM THE WIRES… MISSION SUSTAINMENT IN THE NATIONAL PRESS

Robots remove unexploded ordnance for new range construction

By Stephen Baack
Fort Bliss Monitor
Spring, 2009

FORT BLISS, TEXAS—
The U.S. Army Environmental Command (USAEC) sponsored a demonstration of robotic technologies to detect and remove unexploded ordinance from training ranges in Fort Bliss, Texas in an effort to find innovative technologies that make new range construction safer, quicker, and more affordable.

As Army growth and transformation makes range modernization a priority, leaders from the Pentagon, USAEC, Aberdeen Test Center, Air Force Research Laboratory (ARFL), and the U.S. Army Corps of Engineers, gathered to observe the event.

Two basic robotic systems were developed by the ARFL, the All-Purpose Remote Transport System, and the Automated Ordnance Excavator. Both have attachments that can remove brush and sift dirt for ordnance. They are controlled using cameras and joysticks by an operator at a safe distance away.

A third unit, the Mobility Research and Development System, works completely autonomously and guides itself to cover targeted territory. Gene Fabian, Range Sustainment Program Manager for the U.S. Army Aberdeen Test Center describes "the data for our geophysical detection devices is very clean because it is very precise, fast: it tells you where to go. It doesn't waddle and wander all over the site like a human would, so we actually get much better data quality by using the robotic system."

A researcher moves an autonomous robot to a starting point on McGregor Range, N.M., part of Fort Bliss. (Photo Courtesy of U.S. Army Environmental Command.)

Speed, safety, and cost are critical for the Army as the amount of land that needs surveying constantly increases due to initiatives such as Base Realignment and Closure while the number of unexploded ordnance technicians are in limited supply.

In the past, if the Army needed to reuse land, the only way to find it was to physically send people out on foot. Col. Maria Gervais, commander of USAEC, summarizes, "That's dangerous, that's labor intensive, and this technology right here allows the same thing to be achieved at a much safer, much quicker and at a reduced cost."

Also coming into play are new mapping and surveying technologies. As a result of looking at the unexploded ordnance density of the range, it may sometimes be smarter to move the mapped range. By shifting the range by as few as seven degrees, the Army can avoid the cost of a unexploded ordnance mitigation—roughly around $500,000.

The next step is to get more Army officials on board with the robotics business case proposal. Col. Gervais explicates, "Because with that we'll get the endorsement that we need and with that will come the funding and the resources."

For more information on this story, please visit: http://aec.army.mil/usaec/newsroom/update/spr09/spr0902.html

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Navy to put in $3.8 million to help Beach protect Oceana

By Deirdre Fernandes
The Virginian-Pilot
May 27, 2009

VIRGINIA BEACH—
Over the past two years, local taxpayers have spent more than $8.1 million to acquire land near Oceana Naval Air Station (NAS) in order to buffer the base from encroachment and protect the jobs they bring into Virginia Beach.

Oceana NAS is the city's largest employer supplying 16,000 military and civilian positions with a payroll of more than $1.18 billion.

A 2007 aerial photo of Oceana NAS in Virginia Beach shows the Oceanfront strip in the background (Photo courtesy of Bill Tiernan, *The Virginian-Pilot*.)

In 2005, the federal Base Realignment and Closure (BRAC) Commission recommended that the base move because too many homes were being built close to the perimeter of Oceana NAS. In response, Virginia Beach, with help from the commonwealth, started buying land surrounding the base to prevent encroachment.

Fulfilling a promise made in 2007, the Navy announced that they will contribute $3.8 million to help with the efforts, with additional funds on the way.

In exchange for sharing the purchase cost, the Navy will get restrictive easements over the land that prevent homes from being built on the property.

About $1.5 million of the funds will cover half the cost of purchasing 213 acres under a jet path between Oceana NAS and Fentress Naval Auxiliary Landing Field in Chesapeake. The remaining money will go into Virginia Beach's site acquisition fund which officials use to buy property citywide.

"It's a great partnership," said Kelley Stirling, Navy spokeswomen for Oceana NAS. "The city and Navy are working together to prevent future encroachment."

For more information on this article, please visit: http://hamptonroads.com/2009/05/navy-put-38-million-help-beach-protect-oceana

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Council endorses Camp Bullis Study

By Joni Simon
San Antonio Express-News
June 25, 2009

CAMP BULLIS, TEXAS—
On June 18, the San Antonio City Council agreed to implement the Camp Bullis Joint Land Use Study (JLUS), which tightly regulates development around Camp Bullis.

Mayor Julian Castro announced, "Camp Bullis is a jewel of the San Antonio economy and we are going to do everything we can to protect it."

The $300,000 land use study began last year after concerns were raised about development around the 27,994-acre range. The JLUS is the most comprehensive attempt at land use restriction ever made in San Antonio.

The need for the study was proposed by former Councilwomen Diana Cibrian, following the opening of The Rim shopping center at Interstate 10 and Camp Bullis Road. As development continued down I-10, the Army expressed encroachment concerns. The lighting from the new development was impacting the ability to complete sensitive night vision trainings and the Army was concerned that new residents would complain about noise levels. Development had also driven the endangered cheeked warbler onto the range.

Camp Bullis is run by Fort Sam Houston and trained about 150,000 troops last year, up 50% from 2003. Over the years, the camp has developed into a critical training area with firing ranges, maneuvering areas, airdrop zones, and landing areas for helicopters and airplanes.

Camp Bullis was positioned during the 2005 base realignment and closure round to become the centerpiece of military medical expansion, increasing from 4,500 enlisted medics today to 9,000 in the fall of 2011.

When the council endorsed the JLUS, Fort Sam Houston spokesman Phil Reidinger happily announced, "This is the first step in acknowledgement that this community has got to provide some support to the military missions here in San Antonio."

The JLUS includes more than 60 separate regulations designed to prevent further encroachment. It covers everything from the height of buildings around Camp Bullis, to notifying new owners of excessive noise levels, to ensuring that development does not intrude on endangered species in the buffer zone surrounding the base.

Most recently, concern has developed over a scheme to grandfather Bullis-area properties. Many of the new restrictions will not come into effect until the fall, and will not apply to existing or already approved developments. Already. to the dismay of the Army, the city Planning Commission has approved plans to build a 420-home subdivision 3 miles from Camp Bullis.

If city and county leaders want to preserve the military mission at Camp Bullis and the immense economic investment that comes with it, they will have to do more than just lay out the blueprints of the approved JLUS, and immediately take action to curb further encroachment.

For more information, visit:
http://www.mysanantonio.com/community/north_central/Council_endorses_Camp_Bullis_study.html

For a series of Editorials on the Camp Bullis JLUS, visit:

http://www.mysanantonio.com/news/columnists/carlos_guerra/48120942.html

http://www.mysanantonio.com/news/columnists/carlos_guerra/50091252.html

http://www.mysanantonio.com/opinion/editorials/51052487.html

Fort, river protected by easement: Jelks family, fort and state reach agreement

By Bill Hess
Sierra Vista Herald/Review
June 24, 2009

SIERRA VISTA, ARIZONA—
Fort Huachuca received additional encroachment protection by investing 1,000 acres of the Jelks family's land into a conservation easement.

The Jelks family owns property west of the fort's Rugge-Hamilton Airfield, which is used as a training ground for unmanned aerial systems in the Black Tower area. Now, flight operations on the western border of the fort will not be impacted, and plans have been set in place to increase trainings in that area.

Fort Huachuca spokeswomen Tanja Linton said the easement "will help preserve our ability to conduct unmanned aerial systems training and critical electromagnetic testing by limiting development."

It's a triple win situation according to Tom Finnegan, co-chairman of the Arizona Military Installations Commission, "It's a win for the Jelks, for conservation, and for the fort."

The Arizona Land and Water Trust, a non-profit organization; the commission; and the Arizona Department of Commerce helped facilitate the easement process of the Jenks' Diamond C. Ranch in Cochise County.

When the Arizona Legislature established the special commission, the state agreed to put $5 million a year into a fund to support the military installations in Arizona. Passing the easement through the legislative commission was a "no brainer" according to Finnegan.

Additionally, the easement protects precious water sources. Trust director Diana Freshwater explains "The Diamond C. Ranch augments a critical landscape connection for wildlife movement between the San Pedro River and the Huachuca Mountains."

Furthermore, the property helps the San Pedro Riparian National Conservation, as two drainages flow into the Babocomari River, which is a tributary to the Upper San Pedro River.

Finnegan said that the commission unanimously approved the expenditure of state funds, and the

$1,500 cost-per-acre was extremely reasonable.

For further information, please reference:
http://www.svherald.com/articles/2009/06/24/news/doc4a41d220df979069575193.txt

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Fort Polk conservation branch aids threatened Louisianan pine snake

Alexandria Town Talk (LA)
July 8th, 2009

FORT POLK, LOUISIANA— Without the help from Fort Polk's Conservation Branch, the Louisiana pine snake could be in danger of fading away.

The large-patterned, non-venomous pine snake can reach 4 to 5 feet long as an adult and is considered one of the most rarely seen reptiles in the United States. Already listed as a threatened species, it is a candidate for an endangered listing, and is found only in a handful of isolated sites in Texas and Louisiana.

Christopher Melder, contract wildlife biologist at Fort Polk's Conservation Branch explains, "There are three sub-populations of pine snakes. One is in Texas, one is here in the Vernon and Sabine parish area, and the other is in Bienville Paraish—where the highest density of pine snakes has been found."

The Louisiana pine snake's ecosystem of choice is the long leaf pine forest, where it thrives in the dry, sandy-soiled pine ridges. Unfortunately, most of the long leaf pines were cut due to commercial logging from 1870-1920. By 1935, only 3 percent of the pines remained uncut.

Furthermore, part of a healthy long leaf pine forest succession also lies in periodic burning. This destroys the middle branches (midstory) of the pines and young trees and bushes at ground level (understory.) The reduction in branches allows enough sunlight to filter through and grow numerous grasses.

The young grass roots attract and feed populations of Baird's pocket gophers, a main source of food for the pine snakes. A circular pattern emerges from this interdependency of sandy soil, longleaf pine forest, fire, and gophers. Any break in the cycle results in a decrease of Louisiana pine snakes.

In March 2004, state and federal agencies met at the New Orleans Audubon Zoo to sign a Candidate Conservation Agreement to protect the Louisiana pine snake on federal lands in Texas and Louisiana.

"Fort Polk has a responsibility to follow what we said we were going to do for this particular species. That includes continuing to burn regularly— which is beneficial to this whole ecosystem of the longleaf

pine savanna. As long as we keep the ecosystem healthy, the snake should do well," Melder said.

In order to make people aware of the snake's dilemma, Fort Polk uses a young Louisiana pine snake for outreach purposes. Melder said that the snake is named Lucy, short for Louisiana. Lucy is out and about in the community, especially at school, helping kids understand that the snake is considered a threatened species.

Christopher Melder, a contract wildlife biologist at Fort Polk, handles a wild Louisiana pine snake at the environmental office. The snake is studied and then tagged before being released back into the wild. (Photo courtesy of Fort Polk)

Another way Fort Polk is working to conserve the pine snake is training dogs to potentially sniff out Louisiana pine snakes. Once a snake is known to be in the area, special precautions can be taken to ensure the safety of the snake.

In addition, Fort Polk is looking at using ground-penetrating radar on pocket gopher burrows to prevent military tanks from crushing the systems. Danny Hudson, ecologist for the Conservation Branch, explains, "We'll have the ability to determine the depth of the burrows which could allow us to calculate overpressure for the vehicles. For example, if all pocket gopher holes are an average of 16 inches deep, and I drive a tank over sandy soils at 16 inches, I can have a reasonable expectation of not crushing the burrow."

In the end, Fort Polk's Conservation Brach is trying to proactively manage the ecosystem of the pine snake to have the least effect on military training, while still protecting the species and its habitat.

It's all about good stewardship—locally and Army wide.

For more information, please visit: http://www.thetowntalk.com/article/20090708/NEWS01/90708032

REGIONAL PARTNERSHIP UPDATES

Southeast Regional Partnership for Planning and Sustainability

The 8th SERPPAS Principals' meeting was held on May 19-20, 2009 in Charleston, SC. The meeting, which focused on Adapting to Change: Coastal, Climate, Energy, and Air, marked the introduction of new Co-chairs, Mr. David Duma from DoD and Mr. Bob King from South Carolina, and the first meeting for new partners from the Florida Division of Forestry. As a result of the meeting, key tasks to the SERPPAS Steering Committee include identifying the seven key action areas in the Longleaf Pine Conservation Plan and developing action plans for each agency to lead, presenting future updates and options for furtherance of the red-cockaded woodpecker translocation program, and finalizing the reporting framework required by the Gopher Tortoise Candidate Conservation Agreement. The Principals' also encouraged the establishment of Commander's Councils in states to provide a forum for Commanders to discuss and identify mutual issues of interest, and communicate solutions through the governor's office and legislature. The Steering Committee will meet in September/October 2009 to discuss progress on these objectives. More information is available at: http://www.serppas.org/

Western Regional Partnership

At the Second Western Regional Partnership (WRP) Principals' meeting held in Reno, NV on March 31-April 1, 2009, an Interim Steering Committee (ISC) was formed to provide additional definition to WRP and ultimately guide the WRP to become a more robust and resilient organization. That ISC meeting was held June 24 in Albuquerque, New Mexico. Participants included representatives from Bureau of Land Management, Environmental Protection Agency, Federal Aviation Administration, National Park Service, U.S. Fish and Wildlife Service, Native American Leadership, military services and Office of Secretary of Defense, as well as representatives from each of the five WRP States (Arizona, California, Nevada, New Mexico and Utah). Discussion centered on WRP Background, Mission and Vision statement & ISC input on the WRP

focus. The ISC also formed a sub-committee tasked with drafting a charter for the WRP, outlining the processes and structure of the organization. ISC recommendations will be presented to the WRP Principals at their next meeting, which is currently slated to be held in New Mexico in the early 2010 timeframe. The Western Regional Partnership continues to make steady progress in addressing regional issues of significance. For more information on WRP, please see www.wrpinfo.org.

MEETING RESOURCES

Conferences & Training

August 25-27
Innovative Approaches to Wildlife/Highway Interactions Course
Shepherdstown, WV
http://doilearn.doi.gov/training/classscheduler/index.cfm?Fuseaction=Home.CourseDetails&intCSCourseID=1312&AddPopularity=1
Topics include an overview of wildlife issues relative to existing highways and future highway planning; differences in impacts and solutions between low volume and high volume roads; structural and nonstructural solutions to wildlife mortality and habitat connectivity; and an introduction to current resources on wildlife/highway crossings and interactions. This course is taught through a partnership with the U.S. Forest Services, Pacific Southwest Research Station.

September 14-18
Strategic Conservation Planning Using the Green Infrastructure Approach
Shepherdstown, WV
http://www.conservationfund.org/course/strategic_conservation_planning_using_green_infrastructure_approach
This introductory course provides participants with a strategic approach for prioritizing conservation opportunities and a planning framework for conservation and development – integrating the green and the grey. Through hands-on class projects, lectures, and numerous case studies, participants will experience firsthand how the green infrastructure approach can be used to connect environmental, social, and economic health across urban, suburban, and rural settings. Participants will also learn how green infrastructure planning can serve as a tool to inform land use decisions and build consensus among diverse interests.
Registration Deadline: ***August 14, 2009.***

September 21-23
IAP2 Annual Conference: Making Sustainable Decisions
San Diego, CA
http://www.iap2.org/displayconvention.cfm
The 2009 IAP2 Conference will focus on the multiple facets of

sustainability; how decision-making can be a sustainable process; how to include stakeholders in sustainable projects; and success stories of sustainable decisions.

October 26-30
Strategic Management of Invasive Species in the Southwestern United States
Phoenix, AZ
This five-day invasive species workshop for installation personnel in the southwestern United States (AZ, CA, CO, NM, NV) is sponsored by the DoD Legacy Resource Management Program. The workshop will provide participants with knowledge and resources that will enable them to improve land stewardship by building partnerships and effectively addressing invasive species problems. Science and management experts will address pressing ecological issues and explain key components of an invasive species management strategy. Participants also will learn about local, state, and federal invasive species initiatives and regional partnership opportunities. There is no charge for the workshop. Registration is not open yet; however, please contact Melissa Brown at weedcenter@montana.edu to be placed on a list to receive notices about this workshop.

October 27-30
GIS Tools for Strategic Conservation Planning
Shepherdstown, WV
http://www.conservationfund.org/node/670
The National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center and The Conservation Fund offer this course to teach students how to apply GIS tools, methodologies, and analyses to strategic conservation planning using a "Green Infrastructure" approach. The format includes lectures, demonstrations, small group discussions, and hands-on problem-solving exercises. Participants will use ArcView 9x and Spatial Analyst software to apply principles of strategic conservation planning and address a realistic conservation scenario using GIS. Students will use data sets from coastal areas to develop conservation priorities and strategies.
Registration Deadline: October 1st

CONTACT

Sustainable Ranges Initiative
Office of the Deputy Under Secretary of Defense, Installations and Environment (ODUSD(I&E))
1225 South Clark Street, Suite 1500
Arlington, VA 22202
Tel. (703) 604-1795, Web: http://www.denix.osd.mil/sustainableranges