



January 2011

Report to STAKEHOLDERS

Volume 16 No. 1



2010 Annual Eddie Awards

2010 Eddies in Environmental Quality



E=TRASH²



Report to STAKEHOLDERS

Report to Stakeholders is a publication of Edwards Air Force Base, 95th Air Base Wing, Civil Engineer Division, Environmental Management. Its purpose is to inform and educate the public, base workers and residents about continuing environmental and safety efforts on base. It currently has a circulation of 6,000, including about 2,000 subscribers.

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WHAT'S ON THE COVER

To celebrate another year for the *Report to Stakeholders*, an award show theme was chosen. Eddie the Edwards tortoise the Environmental Management mascot, is the host. Enjoy the Year-in-Review issue of the *RTS*.

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2010 was another year of doing more with less for Environmental Quality at Edwards Air Force Base. Huge savings in hazardous waste, space conservation in solid waste, reusing batteries, rethinking hazardous materials and bringing more compliance responsibility to the local shops put Environmental Quality in the running for saving the government the most money this year.



TOP PENNY PINCHER

After a 50-percent reduction in hazardous waste recycling and disposal funding, Edwards Air Force Base hazardous waste employees came up with an idea that saved the Air Force several hundred thousand dollars between January and September 2010. The Bulk Waste Segregation Program reduces disposal costs, paperwork, supply costs and labor by combining

waste into bigger packages. These bigger packages include 40-cubic-yard roll-off bins: enclosed metal shipping containers that are 22 feet long, 8 feet wide and 4 1/2 to 8 feet tall. A 40-cubic-yard bin can hold about the same volume of waste as 45 55-gallon drums.

Consolidating the waste into these large bins also allows the Air Force to reuse steel drums. This eliminates disposal costs for the 50 pounds of steel in each drum and saves individual shops the \$70 to \$80 cost of a new drum. That is why the hazardous waste team gets the Eddie award in Environmental Quality for "Top Penny Pincher."

(See full article, "Good things don't always come in smaller packages," featured in April 2010)



NEW REFLECTIONS

A new Air Force instruction published in March 2010, AFI 90-803 *Environmental, Safety, and Occupational Health Compliance Assessment and Management Program*, will require individual shops to conduct quarterly environmental compliance self-assessments. The new quarterly self-assessments will help shops prepare for the official assessments through good work practices and by proactively addressing potential issues. Quarterly shop-level assessments will be conducted

by shop personnel using simple checklists that focus on everyday compliance operations. The checklists will contain the types of questions that outside assessors, like regulators, would normally ask shop staff members during an inspection. Creation of the checklists is waiting on an online tool currently being developed by the Air Force. Until the online tool is available, shops should maintain current practices for inspections.

(See full article, "New Air Force regulation brings environmental compliance task home," featured in October 2010)



The demolition of 50-year-old housing units a few years ago threatened to cut the life of the existing on-base landfill by 20 years because of the excessive debris. With quick thinking and great timing on the part of the Edwards team, Kern County regulators approved a 10-foot vertical expansion permit that should keep the landfill open at least another 13 years. However, those 13 years depend on ramped-up recycling efforts already reducing the amount of refuse being buried.

An innovation that could extend the landfill life even longer is construction of a waste-to-energy system. The system shreds and compresses waste into fuel pellets. Then, these fuel pellets are put into a gasification unit that produces electricity. If this process works well, there might even be a day that Edwards may mine its old landfill cells to feed the waste-to-energy unit.

(See full articles, "Landfill expansion saves Air Force dollars" and "Edwards seeks to turn waste into energy," featured in May 2010)



BEST CONDITION AND REPEAT

The 412th Maintenance Group discovered a way to save money and landfill space by recharging dead absorbed glass mat (AGM) batteries with the use of a battery conditioner. Considering that the group went through 20 to 30 batteries a month while powering aerospace ground equipment, this adds up to a significant savings. The conditioner — which can double the lifetime of a battery — only takes a few hours to fully recharge an AGM battery and plugs directly into a 110-volt wall outlet. The price of the battery conditioner was \$2,400, and according to maintenance group supervisor Gerardo Herrera, the machine paid for itself within the first few weeks of operation.



(See full article, "412th Maintenance Group reduces battery waste by 80 percent, saves money," featured in August 2010)



RETHINKING BUSINESS

Everything that is hazardous waste has been a hazardous substance and a hazardous material through its entire life," said Kathryn Curtis, Environmental Management's program manager for both hazardous materials and waste. That simple concept is guiding a new effort, led by Environmental Management, to reduce some of the cost and hassle of managing hazardous material and hazardous waste separately. Right now, although they overlap in many ways, hazardous materials and hazardous waste are managed under two separate programs. The hazardous materials program covers substances from the

time they come onto the base until they are used or expire. The hazardous waste program then picks up the product and either finds a way to reuse it or sends the product off base to a recycler or disposal site. The Edwards team is already working on combining the programs locally. Updates to existing plans and local instructions are getting the programs closer to transitioning into one program.

(See full article, "New hazardous substances concept could save money for Edwards Air Force Base," featured in September 2010)

Restoration



For the base restoration program, 2010 meant steady cleanup progress and internal policy changes. Officials hosted public meetings for several cleanup projects, and petroleum sites were taken from the different operable units on base and consolidated into one group to streamline program management. To optimize resources and save money, the Air Force introduced a program for fiscal year 2011 called the Compliance Restoration Program. Now, the base restoration team handles all contaminated soil and groundwater cleanup, regardless of when the release occurred.



BEST TEAMWORK

The teamwork spirit among regulators, Air Force management and the base restoration staff proved particularly valuable this year with regard to scheduling. To accommodate limited regulatory agency resources, the restoration staff pursued several extensions on cleanup deadlines with Air Force management. Previously, base officials were striving to meet an Air Force requirement to have all cleanup remedies in place by 2012. But given the magnitude of the Edwards program and regulators' busy schedules, the deadlines for documents needed to be rescheduled. This cooperative effort among the agencies will continue to make reaching agreement on cleanup decisions possible.

(See full article, "Environmental orchestra: seamless teamwork produces an earthy symphony," featured in June 2010)

BEST UNMANNED PROJECT

Once again, Air Force officials illustrated how warfighter support takes precedence at Edwards. Many base organizations — including Environmental Management — worked together to support the Army's testing of an unmanned aerial vehicle known as Sky Warrior.

Base restoration officials coordinated lead-contaminated soil excavation activities to ensure minimal disruption to the Sky Warrior schedule. An estimated 800 cubic yards of soil was excavated from Site 231 between Phase I and Phase II of the Sky Warrior project. Located 300 feet northwest of Rogers Dry Lake, the site's lead contamination was the result of battery waste stored at the site from the late 1940s to 1970s. The coordinated cleanup effort allowed the Army to focus on its operational deployment deadline, and eliminated long-term monitoring costs for Site 231.



(See full article, "Timing is everything," featured in September 2010)



BON APPÉTIT

The war on perchlorate contamination continued as Edwards played host to a company field testing an innovative treatment technology. The system's innovation lies in its ability to treat perchlorate-contaminated groundwater without producing secondary waste. Microbeads within the system act like Pac-Man™ and "eat" or degrade perchlorate molecules. The Microvi Biotech, Inc., treatment system took contaminated groundwater directly from extraction wells at Site 285. Different operating conditions were field tested to find the most efficient settings to treat the groundwater. Site 285 is one of the locations at Edwards with detected amounts of perchlorate in the groundwater. The Microvi technology has the potential to remove perchlorate and trichloroethene (a solvent), two contaminants found at Edwards.



(See full article, "Site 285 plays host to 'hungry' microbeads," featured in May 2010)



PASSING THE TORCH

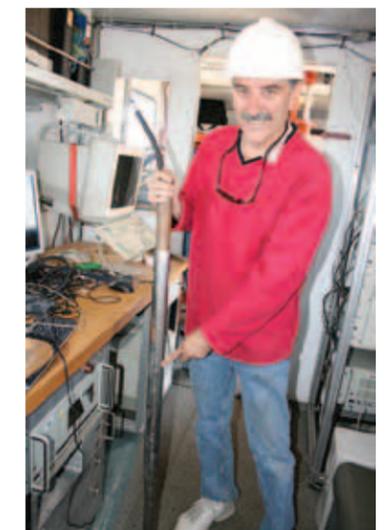
When 15-year veteran Ruby Messersmith retired as public co-chair and North Edwards public representative, she left behind big shoes to fill on the base's Restoration Advisory Board (RAB). Stepping into those shoes was Lancaster representative Peter Zorba, who first officiated as public co-chair in February 2010. Zorba has served as the Lancaster representative since 2007. Other changes to the RAB this year included three new members: North Edwards public representative Bruce Davies, 95th Air Base Wing representative Nancy Zimmerman, and Lancaster alternate representative Marvin Crist. Air Force officials are currently processing applications for Base Housing and Rosamond representative positions. Volunteers to represent NASA and North Base are still needed.



BEST TECHNO-GEEK

Cleanup experts around the world may be able to quickly identify perchlorate-contaminated groundwater in the field using a sensor being developed by Navy researchers. The sensor's real-time analysis means an expedited cleanup process that translates into time and money saved. Navy researchers collected soil samples from Site 285 to test the sensor's ability to accurately measure levels of perchlorate concentrations in contaminated groundwater. Because perchlorate acts like a solid in soil but dissolves like table salt in water, the researchers were able to obtain groundwater samples from the Site 285 soil. Located in the northern part of the base, Site 285 is the former site of NASA's Jet Propulsion Laboratory solid rocket motor activities. Contamination at the site resulted from the use of ammonium perchlorate, an ingredient in solid rocket fuel.

(See full article, "Navy tests real-time perchlorate sensor with contaminated base soil," featured in March 2010)



Conservation



2010 was a good year for Environmental Management's conservation program. Employees identified new species, managed known species, mitigated impacts on the environment, developed habitat models using lasers and much more. Here are the winners of the 2010 Eddies in Conservation.



BEST NEW POLICY

In response to the vehicle-related death of a desert tortoise on Mercury Boulevard in June, the U.S. Fish and Wildlife Service (USFWS) requested that base biologists add a strong message to their mandatory desert tortoise-awareness training. That message is to urge all drivers to take immediate action, whenever possible, and move the sure-footed reptiles off of the road. Biologists stress that safety for the driver must come first, but they want drivers to be proactive and gently pick up and move the tortoise if they can.



"Moving a tortoise out of harm's way on roads is not a permit or exemption from the prohibitions of Section 9 of the *Endangered Species Act*," said Ray Bransfield, senior biologist with the USFWS. "However, having people stand by while an individual of a federally listed species is about to be killed is not productive. I think having anyone on base be able to move desert tortoises, when they are in trouble, is truly the best course of action. It is simply the right thing to do."

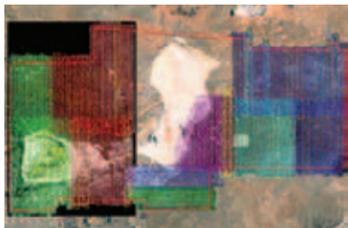
(See full article, "Watch out for desert tortoises crossing the road," featured in September 2010)



BEST TREKKY MOMENT

Hyperspectral imaging sounds like something from a science fiction story, but scientists at Environmental Management used that type of technology to beam up information about plant life on base.

The team conducted aerial imaging and surveys with hand-held devices to collect spectral signatures from plant species. That is, a Joshua tree absorbs and reflects a different series of colors than a creosote bush or desert cymopterus, and so forth. Plants have unique spectral signatures. Obtaining this type of information can aid scientists in creating habitat models that determine the presence of different plant species in a given area, thereby assisting with natural resource management.



(See full article, "Hyperspectral imaging technology at Edwards," featured in April 2010)

BEST IN COMMAND



The cultural resources management team continued to work tirelessly to protect the cultural resources and history at Edwards. Team members surveyed thousands of acres, expanded curation facilities, trained thousands of base personnel, conducted educational tours and documented several sites for placement on the National Register of Historic Places. Their efforts earned an Air Force Materiel Command Gen. Thomas D. White award in Cultural Resources Management at the beginning of this year, and now we give them the Eddie in Conservation award for "Best in Command."

(See full article, "Edwards Cultural Resources Program wins command-level Thomas D. White award," featured in January 2010)

TOP DISCOVERY



During the seasons of heavy rain, thousands of ephemeral ponds on base fill with standing water and biologists studying these fragile ecosystems discovered a new shrimp in town — the Colorado fairy shrimp. While each ephemeral pond can have a unique mix of plants and animals, not every species is present each year, according to Wanda Deal, a natural resources specialist. Shrimp species sometimes stay dormant for decades underneath the surface until water temperatures and chemistry reach ideal settings.

Biologists took samples of the species and were able to hatch them in the laboratory for ongoing studies and reports. To date, biologists have documented six species of freshwater shrimp on base, including their new find. This is why the natural resources team has earned the Eddie in Conservation for "Top Discovery."

(See full article, "Ephemeral ponds provide new worlds for biologists at Edwards Air Force Base," featured in June 2010)



MOST UNUSUAL SIGHTING

Base biologists encountered some interesting and unexpected animal visitors this year, earning them the Eddie in Conservation for "Most Unusual Sighting." After a routine water sampling activity at Piute Ponds, biologists were surprised by a fast-moving herd of cattle. The Piute Ponds area is known to attract birds and water-loving mammals, but this was the first-time biologists have reported cattle on base.

The 95th Security Forces Squadron joined the biologists in an adventure to track and corral the herd until the owner, who had been looking for his lost cattle, could remove them from base property.



(See full article, "Round 'em up, buckaroos," featured in September 2010)

Where to find more INFORMATION



Published data and documents relating to Environmental Management are available for public review at three information repositories. They are updated when new documents are released. Here is a list of our current information repositories:

Edwards Air Force Base Library

5 W. Yeager Blvd.
Edwards AFB, Calif.
(661) 275-2665
Hours of operation: Mon–Thu 9:30 a.m. – 7 p.m.
Fri 9:30 a.m. – 6 p.m.
Sat–Sun 10:30 a.m. – 6 p.m.

Kern County Public Library

Wanda Kirk Branch
3611 Rosamond Blvd.
Rosamond, Calif.
(661) 256-3236
Hours of operation: Wed 11 a.m. – 7 p.m.
Fri–Sat 9 a.m. – 5 p.m.

Los Angeles County Public Library

601 W. Lancaster Blvd.
Lancaster, Calif.
(661) 948-5029
Hours of operation: Mon–Wed 10 a.m. – 8 p.m.
Thu–Fri 10 a.m. – 5 p.m.
Sat 11 a.m. – 5 p.m.

For questions about information in the repositories, you may contact Gary Hatch, Public Affairs chief of current operations, at (661) 277-4127 or by e-mail at 95abw.pae@edwards.af.mil.

For general information about Edwards or other documents of public interest, you may visit the following link:
www.edwards.af.mil/library/environment.

Restoration Advisory Board (RAB) Information

The RAB is made up of appointed representatives from communities in and around Edwards Air Force Base, regulators from federal and state agencies and base officials. The board's purpose is to provide a forum for two-way communication among base restoration officials, regulators and the community representatives regarding the cleanup of contamination from past military activities.

The board meets quarterly, rotating meeting locations in communities surrounding the base. The public is welcome to attend. Those who have questions

or concerns about cleanup activities at Edwards may contact any RAB member or Gary Hatch, Public Affairs chief of Current Operations, at (661) 277-4127.

NEXT QUARTERLY MEETING

Date: February 2011
Time: 5:30 p.m.
Location: Mojave, Calif.
Venue to be determined

RAB Members

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