



# Natural Selections

## Legacy Program Update

**The Legacy Program announces FY 2008 approvals on the Legacy Tracker:** The Office of the Assistant Deputy Under Secretary of Defense for Environment, Safety and Occupational Health has approved the release of Round 1 Legacy funding for 50 projects. This list will be posted and updated periodically on the Legacy Tracker at [www.DoDLegacy.org](http://www.DoDLegacy.org).

## Legacy Project Highlight of the Month

### **Legacy Project 06-322 DoD Coordination of Conservation Issues with the Bureau of Land Management**

As DoD continues its conservation efforts throughout the United States, increased coordination with the Bureau of Land Management (BLM), especially within the West, is a requisite for success on many potential projects. In order to better collaborate with such a critical agency, OSD- Installations and Environment tasked ManTech SRS Technologies with providing a study on BLM's history, organizational structure, priorities, current and potential means of collaboration, and a GIS analysis on priority areas of joint conservation. A large proportion of DoD operating areas are adjacent to or near BLM-managed lands, so the impact of a stronger relationship with BLM on the military mission could prove tremendously beneficial.

This project provides a background on BLM's internal structure and agency priorities, an analysis of current collaborative efforts with DoD, and a GIS analysis of potential geographic areas for mutual conservation efforts. The main objectives are: 1) provide DoD with a better understanding of BLM as an agency, 2) better understand where gaps exist within their current relationship in order to strengthen collaborative efforts, and 3) highlight potential areas of interest for collaborative conservation for both agencies. This paper serves as a foundation for strengthening the existing relationship between DoD and BLM. [See Legacy, page 4](#)



## In The News

### A little fish catches military's eye

Eglin Air Force Base finds that helping the Okaloosa darter is in its best interest.

By [William R. Levesque](#)  
St. Petersburg Times

EGLIN AIR FORCE BASE - Learning to bomb enemies out of existence is kind of a way of life at Eglin Air Force Base.

From gargantuan bunker busters to the Air Force's vaunted "smart bombs," more weaponry is exploded and developed at the 724-square-mile base than just about any place on the planet. "We're the military," said Mike Spaits, an environmental spokesman for Eglin. "We like to blow things up."

So where would one of the most fragile, reclusive and endangered fish in North America live?

Why at Eglin, of course.

This is the unlikely story of a scrawny fish called the Okaloosa darter, typically shorter than a stick of gum, and the world's mightiest Air Force.

[Okaloosa Darter, page 5](#)

## INSIDE THIS ISSUE

- 1 [Legacy Program Update](#)
- 1 [Legacy Project Highlight of the Month](#)
- 1 [In The News](#)
- 2 [Training](#)
- 3 [Announcements and Events of Interest](#)
- 7 [Recent Natural Resources Documents On DENIX](#)
- 8 [Did You Know?](#)
- 8 [Contact Us](#)

## Training

**FEATURED! Conservation Law Enforcement Workshop:** April 15-18, 2008, at the National Training Center in Phoenix, AZ. The DoD Legacy Resource Management Program has funded a project to develop a DoD Conservation Law Enforcement course. This is a three and a half day course that uses a series of practical exercises and scenarios for managers and senior Law enforcement officers to demonstrate and apply knowledge of: Authority and Jurisdiction; Principles of Federal Law Enforcement; Tort and Liability; Federal Criminal Laws and Enforcement; DOD Law Enforcement Policy; Use of Force; Managing Critical Incidents and related stress; Investigations; Law Enforcement Planning. Target Audience: DoD Conservation Law Enforcement Officers and Line Managers who supervise Conservation Law Enforcement Officers or Special Agents. Participants must attend with his/her counterpart law enforcement officer (only 15 CLEO pairs available – max 30 attendees). You may register for the course on the CECOS website, visit: <https://www.npdc.navy.mil/csfe/cecos/>

**FEATURED! Applied Plant Conservation Workshop:** March 2-8 2008, at the Bishop Museum, Honolulu, Hawai'i. The Center for Plant Conservation, with botanists nationwide, has created a curriculum covering key conservation topics. The workshop sponsored by the DoD Legacy Program is open to DoD personnel only. Participants will receive pragmatic tips, information resources, contact lists of experts and an opportunity to get your questions answered by experts in the field. There will be over 17 topics taught throughout the week, including academic and practical components such as population evaluation-demography, population viability analysis, plant conservation genetics, restoration and management (ex-situ and in-situ), tools and Partnerships, and many more! [Register](#) for this unique workshop by visiting their website at <http://www.centerforplantconservation.org/2008dodpcworkshop.html>

**COMING SOON! 2008 NMFWA Training Workshop:** March 25-28, 2008 in Phoenix, Arizona. For details visit the National Military Fish and Wildlife Agencies announcement at [http://www.nmfwa.org/2008\\_Meeting/index.cfm](http://www.nmfwa.org/2008_Meeting/index.cfm).

**NEW! Interagency Consultation for Endangered Species:** January 28-February 1, 2008 Shepherdstown, WV. Acquire basic information on conducting interagency consultation under section 7 of the Endangered Species Act. Address key information needs and procedures, with a focus on the information needs related to biological assessments and biological opinions and emphasis on interagency exchange of information and solutions to support species' conservation. Contact Rhonda Miller 304-876-7325 before 11/28/07. Course registration fee is \$850. Details at <http://training.fws.gov/branchsites/CSP/Schedule.html>.

**NEW! Airport Wildlife Management:** March 5-7, 2008 - Dallas/Fort Worth, TX. The Embry-Riddle Aeronautical University's Wildlife Hazard Management Seminar is acceptable to the FAA Administrator and meets all the requirements for Compliance with Advisory Circular 150/5200-36 on training and part of the wildlife management requirements of Title 14, Code of Federal Regulations, Part 139. For details see their brochure at [http://wildlife.pr.erau.edu/general/DFW\\_flyer.pdf](http://wildlife.pr.erau.edu/general/DFW_flyer.pdf)

**Riparian Zone Ecology Restoration/Management:** June 23-27, 2008, in Phoenix, AZ. This course addresses planning and management issues that pertain to riparian (streamside) ecosystems in a variety of ecological and geographical settings. Emphasis is placed on the ecology, restoration and stewardship of riparian habitats associated with Civil Works projects and activities. Students will receive instruction on the functions and ecological importance of riparian zones, conservation needs, and potential impacts resulting from various land use practices, restoration and management techniques that can be applied to maintain or improve riparian systems. For more details visit <http://pdsc.usace.army.mil/CourseListDetail.aspx?CtrlNbr=281>.

**Natural Resource Compliance:** January 15-18, 2008 in Corpus Christi, TX. This course offers instruction in specific natural resource laws, regulations, policies, Executive Orders, DoD Instructions, and other guidance, noting Service-specific requirements. Course addresses stewardship, preservation, and process; fish, game, and wildlife management laws; protection of wetlands, waterways, and other protected ecological areas; forest and land use management laws; and interservice cooperation. Practical exercises and guest speakers are included. This course is approved by the Interservice Environmental Education Review Board (ISEERB). For details visit <https://www.cecocos.navy.mil/course/detail.cfm?courseid=42>.

## Announcements and Events of Interest

**PRESENTERS WANTED!** [64th Annual Northeast Fish and Wildlife Conference](#), April 27 - 30, 2008 at the Marriott Seaview Resort Galloway, NJ. You are invited to share your projects and presentations with the audience at the 64th Annual Northeast Fish and Wildlife Conference. Presentations will be made in the following subject areas: Wildlife, The Impacts of Roads on Wildlife, Inland Fisheries (Freshwater, Diadromous, Fish Culture Health), Marine Fisheries, Conservation Law Enforcement, and Outreach. You may submit one of the following formats: a) 20 minute presentation to be combined with other like topics, b) Panel presentation for 1.5 hours that you develop and coordinate, c) 1.5 hour workshop or symposium on a specific topic, d) Poster display

Abstracts will only be accepted online. Applications and criteria are available by visiting <http://www.neafwa.org>. The deadline for submissions is January 1, 2008. If you would like your presentation to be considered for the 64th Annual Northeast Fish and Wildlife Conference, [submit](#) an abstract today!

### [Integrating Invasive Plant Species Data in the Midwest: Solutions for Data Collection and Management](#)

January 24-25, 2008 at the Pyle Center, in Madison, Wisconsin. Join regional data managers, resource managers, researchers, and members of the National Institute of Invasive Species Science to discuss how to address issues related to regional invasive species data collection, integration, and dissemination. Information and directions for the Pyle Center can be found at <http://conferencing.uwex.edu/pyle.cfm>. Hotel rooms are blocked at the Lowell Center (<http://conferencing.uwex.edu/lowell.cfm>), located just ½ block from the conference facilities. When making reservations, you will need to indicate the following reservation code: IISD. Additional information on the city of Madison can be found at <http://www.ci.madison.wi.us/Visitors/>. Workshop fee: \$40 (pre-registration); \$80 (day of event). This fee includes lunch on both days. Maximum 200 participants, so register early! Pre-Registration Deadline: January 4, 2008

### [Desert Tortoise Council, 33rd ANNUAL MEETING AND SYMPOSIUM:](#) CALL FOR PAPERS AND POSTERS.

February 22-25, 2008, in Las Vegas, NV. The Desert Tortoise Council will host its Thirty-third Annual Symposium on Friday, Saturday, Sunday, and Monday, February 22 to 25, 2008 at Sam's Town, Las Vegas, Nevada. Titles and abstracts for sessions or contributed papers and posters are requested. The Council welcomes pertinent papers on turtle and tortoise biology and conservation. Please submit your abstract by December 1, 2007. For registration and call for paper details view page 5 of their Fall newsletter at: <http://www.deserttortoise.org/newsletter/2007fall.pdf>.

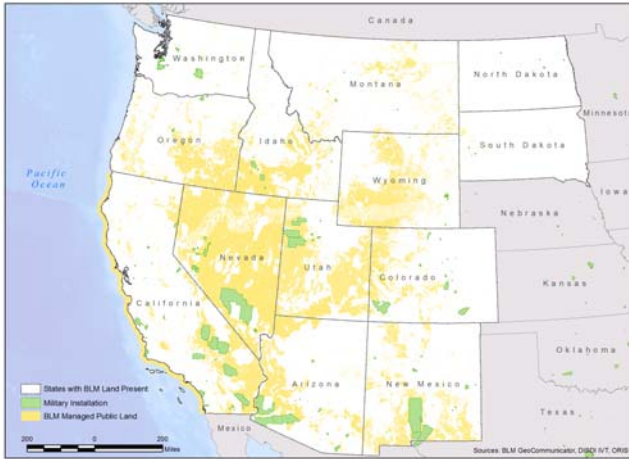
### [National Mitigation & Ecosystem Banking Conference:](#) May 6–9, 2008, at the Hyatt Regency Hotel in

Jacksonville, Florida. Learn from & network with the nearly 400 attendees the conference draws, offering perspectives from bankers, regulators, and users. Participate in several workshops covering: Stream Banking, a Primer on Banking issues, as well as Field trips, Regulator, Banker & User Forums and Interactive sessions on banker, regulator and user perspectives. For details visit <http://www.mitigationbankingconference.com/>



**Legacy, continued from page 1**

This project is presented in three informational papers. The first provides an overview of BLM's structural organization and historical background and lays the foundation for better understanding of how this key agency functions. The second paper analyzes several current collaborative efforts between BLM and DoD as well as offers recommendations for further collaboration. The final paper presents an exploratory analysis of geospatial information, including key maps, intended to facilitate collaborative research between the two agencies. That research is intended to identify cooperative conservation areas of interest.



Distribution of DoD and BLM Lands throughout the Western United States.

This project benefits DoD by providing pertinent background information on one of its key partner agencies as well as an analysis of their current working relationship. Our conservation mission benefits through the identification of potential conservation areas of interest. This project provides further benefit by identifying other policy and partner-level potential collaborative efforts. A stronger, more robust relationship between the two agencies will ultimately yield positive results for both organizations' missions.

To date, DoD held a successful first meeting of the Western Regional Partnership, at which BLM was present. Local, state, and headquarters level representatives' demonstrated interest in partnering at the regional level, including on GIS projects.

OSD successfully engaged BLM headquarters leadership on the WRP and will continue to interact with officials to keep all levels of the organization updated on regional collaboration.

DoD and BLM representatives currently are providing comment on the wind energy MOU, an interagency collaboration BLM is co-leading with DoE, which will circulate throughout the agencies again for further review and approval for leadership signing. Several other key recommendations are currently under review by DoD representatives with the intention of providing a timeline for potential implementation.



*Okaloosa Darter, continued from page 1*

It's about two seemingly awkward companions that learned to share the same slice of real estate on Florida's Panhandle. Improbably, the darter has been brought back from the edge of extinction. And in July, the U.S. Fish and Wildlife Service recommended that the species be downlisted from endangered to threatened. It's happening because a military Goliath, biologists say, figured out how to be a good neighbor to the skinny kid next door. "It's pretty cool that we could do this on a military base when some people said it was too big a mountain to climb," said Bill Tate, a fishery biologist with the wildlife service. "If you can do this here, you can do it anywhere."

**The fish's fall and rise**

The darter is something of a quirky fish. Unlike many species, it lays individual eggs on plants. It doesn't like to cross open streams without the cover of vegetation. It might spend much of its life on only one side of a creek. Up to 95 percent of the Okaloosa darter's habitat falls within the watershed of six streams on Eglin, the rest on neighboring land, and nowhere else on Earth.

The fish blends into its habitat to defend itself from predators. Once vegetation dies, the darter dies, too. The Air Force says the degradation of the darter's habitat began long before Eglin existed. But major degradation came with the military's arrival in the mid 1930s. Dirt roads cutting through the forest and more than 100 clay pits to provide material for those roads led to erosion and a buildup of silt in streams, eliminating crucial plant life.



The Okaloosa Darter inhabit cool to warm, small to moderate size streams, 1.5 to 2.0 meters wide, in depths ranging 4 centimeters to 1.5 meters. Immature aquatic insect larvae comprise the bulk of this species' diet, principally midges, mayflies, and caddisflies.

When the Endangered Species List was created in 1973, the darter went right on it and never left. At its nadir, perhaps 1,500 fish survived. An environmental awakening, some say, came to the military slowly, prompted perhaps by more stringent environmental laws starting in the 1970s. "A lot of them came kicking and screaming," Tate, the wildlife service biologist, said of those early days. "But the military's changing." The Air Force says it wants to be a good steward of the land, and is working with the wildlife service and others to save the darter. But it also concluded that a thriving darter made its job easier. "The reason we do this stuff isn't because we're bleeding-heart tree huggers," said Spaits, the Eglin spokesman. "We're doing it to allow more flexibility for the mission."

With an endangered species comes more regulation. Troops, for example, might not be able to cross a stream during a march if the fish within it are endangered. The Air Force might be forced to build a bridge. "If the darter's abundant and thriving, we don't have to build that bridge," said Spaits.

Beginning in the early 1990s, the Air Force began to close little-used dirt roads that were eroding into streams. It closed dozens of clay pits. It re-evaluated its land management. Eglin planted vegetation and reworked the contour of the land to direct drainage away from darter habitat. Misplaced culverts were removed or repaired. Millions were spent on erosion control. The biggest challenge came at a base golf course, especially where a culvert directed a darter stream under a fairway. Closing the course wasn't an option. But opening the culvert to let the stream take its natural course would have split the fairway in a ball-landing area.

So the tunnel was widened. And skylights made from material used in fighter canopies provide sunlight for vegetation and darters who are normally afraid of the dark spaces where predators hide. "We've basically built a very large terrarium," said Tate. Results have been dramatic. The darter population has climbed up to 500,000 and the wildlife service may downlist it from endangered to threatened within a year, Tate said. Delisting it completely, once a distant hope, is now a reachable goal. Usually wary environmentalists praise the Air Force's efforts. "The military protecting the environment is not an oxymoron," said Brock Evans, president of the Endangered Species Coalition. "They're human. And they love and care for the environment in the same proportion as the rest of us."

The military occupies 25-million acres nationally, and up to 80 percent of it is pristine land. At Eglin, only one-eighth

of the base is used for military activity. And that land is home to 11 endangered species, from the bald eagle to the red-cockaded woodpecker. To Tate, the darter is a key indicator of the overall health of the environment and is well worth saving. "It's the canary," he said, "in the coal mine."

## Fort Lewis Wades In to Support Toad Population

By [Rachel Young](#)  
Northwest Guardian

On an unseasonably warm Friday this spring, the cheerful chirps of Western toads filled the air around Fiander Lake in the Rainier Training Area on Fort Lewis, Wash. The toads' vocalization was the first indicator to Jim Lynch, fish and wildlife biologist for the Fort Lewis Fish and Wildlife Program, that breeding season was under way. The Western toads' breeding season is of particular interest because the toads are a federal species of concern and they are candidates for Washington's endangered species list. Fort Lewis is one of the last large habitats in the area for Western toads. The toad thrives in buffers around post wetlands and its masses of undeveloped forest and prairie habitats.

Because little is known about them, the goal of studying Western toads is to discover "anything...that will help us protect them better," Lynch explained. "By monitoring the health of our toad population, we hope to be able to respond quickly to any threats, and assess the impact of any diseases before they decimate our population." The breeding season at Fiander Lake provides an opportunity to get more information on Fort Lewis' Western toad population. With a rowboat, nets and buckets, Lynch, fish and wildlife biologist Todd Zuchowski, and fish and wildlife technicians Nick Miller and John Richardson headed out into a patch of cattails to scoop toads out of the water.

The spotted, forest-green toads skimmed the surface of the water while they loudly announced their presence. A few males were amplexed, or clasping females, their goal being to fertilize eggs the females lay. They clutched the females tightly from behind and waited for them to begin laying eggs. The captured toads were brought ashore in large buckets, where they were weighed, measured and implanted with a Passive Integrated Transponder. "This helps us determine the lifespan, breeding site fidelity, changes in size over time, and long-term movements," Lynch said. After all the information was recorded, the toads were rowed back out to the cattail patch and released.

Lynch has studied Western toad migration and breeding patterns for three years in an effort to learn how far they travel from the breeding ground, whether they all go in the same direction and where they go after breeding. Lynch hopes to have enough information in the next year to publish a study that will show how the Western toad is using Fort Lewis land and how that can apply to other areas, as well.

"Fort Lewis has a lot of these rare species, but we want other people to keep their populations, too," Lynch said. If a species gets on the endangered species list, Fort Lewis does not want to have the only population, he said. "We want to share the burden, not to be solely responsible for the recovery of these rare species." The long-term goal is to partner with agencies that have suitable lands for Western toads and move some of the Fort Lewis population to areas that do not have the species.

The regional recovery of listed and rare species in the region is one of the goals of the Installation Sustainability Plan. "That's one reason we're doing work with the toads - it's one species that has declined quite a bit over the last several years," said David Clouse, fish and wildlife manager for Fort Lewis. The first step of the recovery process is to find out what species and habitats are on Fort Lewis. The next will be to create recovery goals for each species, Clouse said. "We are interested in managing all species on Fort Lewis," Clouse said. "One of our primary responsibilities...is managing the listed and candidate species."



Nick Miller and John Richardson, fish and wildlife technicians at Fort Lewis, insert a transponder under the skin of a Western toad at Fiander Lake. Transponders help biologists monitor the health of the toad population on Fort Lewis.

Photo by Jason Kaye.

## Recent Natural Resources Documents On [DENIX](#) and Web

The New DENIX Web Site is now available at <https://www.denix.osd.mil>  
All previously used links and bookmarks to DENIX are no longer available!

**YOU'VE GOT TO LOVE THAT!**

You can provide **FEEDBACK** to the content management team at  
<https://www.denix.osd.mil/portal/page/portal/denix/tools/feedback>

The DENIX content management team is working to get tens of thousands of content items correctly migrated and made available on the new DENIX system. This work is still ongoing and is expected to be complete no later than December 31, 2007. If you have any problems finding the content item(s) you are looking for, you may choose to use the [old DENIX web site](#) which will remain available until December 31.

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### ***Did You Know?***

*The **Guardian Angels For Soldier's Pet** primary mission is recruiting potential foster home caregivers in all states that are interested in opening their homes to care for a beloved pet(s) of a military service member deploying to harm's way, where resources are available we work with military service members and veterans on a case-by-case basis with an emergency hardship.*

Please visit their website at: <http://www.guardianangelsforsoldierspet.org/>

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### ***Help a Soldier this Holiday!***

*Please help **Soldiers' Angels** deliver a gift and personal holiday message into the hands of all the deployed men or women this December. They are committed to providing Holiday Gift Bags for every soldier, Marine, airman and sailor deployed in Iraq and Afghanistan, as well as those working or recuperating in a Combat Support Hospital.*

Please visit their website at: <http://soldiersangels.org>

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## Did You Know?

### Department of Defense Legacy Resource Management Program

- RE-PROPOSALS
- PROPOSALS
- PROJECTS
- ADMIN
- RESOURCES
- PURPOSES
- FEDERAL REGULATIONS
- BUDGET DETAILS
- PROJECT DETAILS
- FOLLOW-ON WORK
- EXPECTED PRODUCTS
- TECHNICAL POC

#### Administrative Details

**New Field! Look here to find out the Legacy Staff member assigned to your project!**

2007 Navy Project {Active}

Author:	Brian Hudgens	Co-Author:	
Owner:	Navy CNO Natural Reviewers		
Created:	9/4/2006 4:53:34 PM	Last Modified:	11/5/2007
Project Number:	07-308	Legacy Project Lead:	Jane Mallory
Project Title:	Digital radio-telemetry monitoring of San Nicolas Island foxes		
Service/Sponsor:	Navy		

**NEW FIELD: LEGACY PROJECT LEAD:** The Legacy Program is introducing a new field to projects posted on the Legacy Tracker. The new field of information for all projects is the Legacy Project Lead. This new field informs you of the name of the Legacy Program Staff assigned to monitor all aspects of a project. The Legacy Project Lead should be your primary point of contact for submitting expected products, inquiring about reports and fact sheets on the project, etc. Only projects on the tracker have this field available, it is not used for assigning a point of contact for proposals under consideration.

## Contact Us

For further information about the Legacy Resource Management Program please contact:

[L. Peter Boice](#)  
Conservation Team Leader

[Pedro Morales](#)  
Natural Resource Management Specialist  
703-604-1933

[Jane Mallory](#)  
Natural Resource Management Specialist  
703-604-1774

[Hillori Schenker](#)  
Cultural Resource Management Specialist  
703-604-1724

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