



Natural Selections

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Legacy Program Update

FY 2009 Pre-Proposals Due to the Legacy Office no later than Friday, September 4, 2008: The Legacy Resource Management Program is currently accepting Pre-proposals through their website, the Legacy Tracker, at www.dodlegacy.org. Visit the website's guidelines page for details.

Applications for National Public Lands Day (NPLD) funding now closed! The DoD Legacy Resource Management Program and National Environmental Education Foundation (NEEF) have received 54 applications for funding of natural and cultural resource management on DoD installations for the 2008 National Public Lands Day. This family friendly event will take place on September 27, 2008. For more details and to volunteer in your community please visit the NPLD website at <http://www.publiclandsday.org> or contact Claudia Kessel, at claudia@neef.org or Jane Mallory, with the Legacy Program at Jane.Mallory.ctr@osd.mil

Legacy Project Highlight of the Month

Legacy Project 05-273 Biodiversity Outreach Toolkit: Sustaining the Mission, Securing the Legacy

Effective education, outreach, and conservation partnership skills can result in a better understanding of our nation's natural resources and their conservation needs among a variety of audiences. "How Special We Are" was a narrated PowerPoint presentation developed by the Endangered Species program of US Fish and Wildlife Service (USFWS). It was designed to convey messages about the biodiversity and unique ecosystems of the United States, their conservation status, and need for stewardship.

Noting the positive impact of the presentation at the 2004 Department of Defense (DoD) Conservation Conference in Savannah GA, USFWS and DoD Legacy Program determined that adapting this product for DoD natural resources would help promote DoD natural resources.

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In The News

DoD Issues Revised and Updated Biodiversity Conservation Guidance

By Douglas Ripley, e2M
June 24, 2008

The 1996 DoD publication *Conserving Biodiversity on Military Lands, A Handbook for Natural Resources Managers* was prepared by The Nature Conservancy (TNC) and distributed to all DoD natural resources managers. This unprecedented publication was the first and only of its kind prepared by any federal agency that specifically addressed the background, science, and application of biodiversity principles for natural resources managers. Owing to a tremendous additional demand for the publication from other Federal and State agencies, environmental consulting firms, universities, and the general public, the handbook went through three printings for a total of 5,000 copies. The success of this publication led to the DoD Legacy Program funding NatureServe and TNC to prepare an updated revision of the handbook to address the changing policy, legislative context, and

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Training

Bat Conservation and Management Workshops – 2008: July 19-24, 2008, California. Bat Conservation International (BCI) offers a series of comprehensive, introductory field workshops to train serious students of bat conservation in current research and management techniques for the study of bats. Following an intensive 6-day, 5-night agenda, BCI biologists and professional colleagues will present a combination of lectures and discussions, field trips to view bat habitat resources and hands-on training to catch and identify bats. Learn species identification, netting, radio-tracking, night-vision observation and habitat assessment while working in extraordinary settings. Limited to 20 people. Departure city: Medford, Oregon. Cost: \$1,395. For additional information, registration forms and scholarship applications, visit <http://www.batcon.org>.

2008 2nd Annual US Army Sustainable Range Program (SRP) Workshop: July 8-11, 2008, in San Antonio, TX. The workshop is an integrated training event for Range Modernization, Range Operations, and Integrated Training Area Management. The conference will host stakeholders across the DoD, services, agencies and developer community. It will provide the latest Army guidance and procedures for sustainable range management and allow the SRP community to share the latest in effective range development, operation and sustainment by sharing lessons learned and effective training methodology. Visit <https://srp.army.mil/SrpWeb/Content.aspx?ModuleId=454>

The Groundwater Pollution and Hydrology Course Workshop: July 14-18, 2008 in Orlando, FL. The course is designed for groundwater hydrologists, geologists, engineers, chemists, environmental scientists, state/federal regulators, project managers, compliance/regulatory program managers for industry and technical experts. Emphasis is on acquiring an extensive working knowledge of the concepts, principles and professional practices underlying groundwater pollution, hydrology and remediation. The course succeeds in significantly enhancing the technical skills of participants without losing the neophytes and without boring those with 15 years of practical experience, <http://www.princeton-groundwater.com/pollution-and-hydrology-course.htm#Download%20Brochure>

Naturally Speaking

From the Desk of L. Peter Boice,
DoD Conservation Team Leader and Director, Legacy Program



This month we introduce several new biodiversity outreach tools. We also are premiering what I hope will be another enhanced means of outreach – this column.

If you've tracked Legacy's progress for even a short period, you will have noticed the importance we place on partnerships and on providing up-to-date user friendly tools and information to all who are interested in DoD natural resource management issues. The updated Biodiversity Handbook and the newly available Biodiversity Outreach Toolkit highlight both of these purposes, as will a soon to be available Commander's Guide to Biodiversity. The expertise of our long-time partners at The Nature Conservancy and NatureServe were instrumental in revising the Handbook; likewise the U.S. Fish and Wildlife Service's Endangered Species office contributed untold additional hours to making this tool as user friendly and comprehensive as possible.

Sadly, some question why DoD even cares about biodiversity, that in this fiscal climate we can't afford to. My short-hand response – we simply can't afford not to. Part of DoD's national defense mission is to ensure that our nation's amazing natural and cultural resources are passed on to future generations in at least as good condition as we received them. Many of these resources are found on our lands, and in some cases, only on our lands. We value these resources because their continued long-term use is vital to our ability to provide a sustainable and realistic training base for our soldiers, sailors, airmen and marines. We also conserve them for their natural beauty, for the economic and ecological benefits that they provide – and because it is the right thing to do.

Announcements and Events of Interest

NEW! 35th Annual Conference on Ecosystems Restoration and Creation: November 6 - 8, 2008 at the John R. Trinkle Building located on the Plant City Campus of the Hillsborough Community College (Plant City, Florida). Kiran C. Patel Center for Global Solutions at University of South Florida is joining the Institute of Florida Studies in co-hosting this year's Conference. The Conference provides a broad forum for exchange of results of the latest research and experience with restoration, creation, and management of ecosystems. The theme of this year's conference is "Assessment of Wetland Mitigation and Mitigation Banks". Visit <http://www.hccfl.edu/ifs/conference/index.html> for details.

CALL FOR POSTERS! Partners in Environmental Technology Symposium 2008 Symposium: December 2 – 4, 2008, in Washington D.C. The Partners in Environmental Technology Technical Symposium & Workshop will take place December 2 – 4, 2008 in Washington, D.C. This event is sponsored by the Strategic Environmental Research & Development Program (SERDP <http://www.serdp.org/>), DoD's environmental science and technology program, and the Environmental Security Technology Certification Program (ESTCP <http://www.estcp.org/>), DoD's environmental technology demonstration and validation program. This year's Symposium & Workshop has been expanded to a full three-day format that will offer a more comprehensive technical program featuring 13 technical sessions and five short courses. Technical sessions will highlight research and innovative technologies that assist the Department of Defense (DoD) in addressing increasingly complex environmental and mission sustainability challenges. Over the course of the three days, short courses on select technologies in the environmental restoration and munitions management areas will offer unique training opportunities on recent advancements in science and technology. For the most up-to-date information about the Symposium, visit <http://www.serdp-estcp.org/Symposium>.

CALL FOR PAPERS! Tenth Annual Joint Meeting of the Bird Strike Committee USA/Canada: August 18-21, 2008 in Orlando, FL at the Orlando Marriott Lake Mary. The Bird Strike Committee USA/Canada (www.birdstrike.org) and the American Association of Airport Executives have teamed up again to offer the 10th Annual Joint Meeting of the Bird Strike Committee USA/Canada. This year's meeting, hosted by the Orlando Sanford International Airport, is slated to bring together wildlife experts and airport officials from across the U.S., Canada and abroad. This conference will provide a great opportunity to learn not only what options are available in wildlife management, but also what others in the industry are doing to manage the same dilemma. Moreover, this meeting will be of particular interest to military and civilian personnel responsible for airfield operations, wildlife and wetland resource managers, land-use planners, FAA inspectors, university researchers, engineers, pilots, aviation representatives, waste management operators and anyone interested in mitigating bird strikes. To register as an attendee, you may download a registration form http://www.aaae.org/fs03/meeting_documents/0802reg.pdf and fax it to (703) 820-1395 or register online https://www.aaae.org/products/MtgRegOnLine.html?meeting_ID=80802.

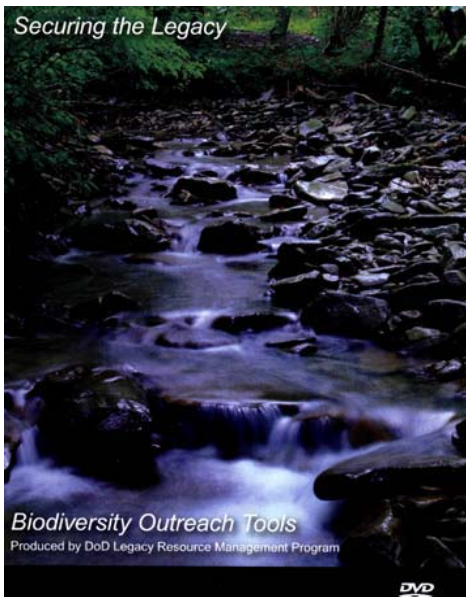
Embry-Riddle's Wildlife Hazard Management Workshop: July 8-10, 2008, at the Denver International Airport in Denver, Colorado. This workshop is being offered as part of Embry-Riddle Aeronautical University - Worldwide's Professional Education programs. The workshop is acceptable to the FAA Administrator for complying with part of the wildlife hazard management requirements of Title 14, Code of Federal Regulations, Part 139. The workshop is a good fit for those who train airport personnel involved in implementing FAA approved wildlife hazard management plans, as well as anyone directly involved in controlling wildlife hazards on airports. Highlights include discussions on wildlife population management and dispersal techniques, endangered species act compliance, strike reporting, wetlands mitigation, pesticides usage, drafting and implementation of integrated wildlife hazard management programs, and an overview of applicable local, state, and federal laws, regulations, and ordinances. For more information and registration form, please link to: <http://www.erau.edu/ec/soctapd/wildlife-management.html>



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resource conservation efforts both on DoD lands and beyond the fence line.

The USFWS worked with the DoD Legacy Program and the military services to develop a package of integrated outreach and education tools for DoD/military services natural resource use by modifying and expanding the How Special We Are program developed by the USFWS. USFWS developed the information and images gathered into a 2 DVD set containing three presentations and supplemental materials. The USFWS also coordinated with NatureServe to incorporate products from a NatureServe Legacy project: Revision of DoD Biodiversity Conservation Handbook into the toolkit DVDs. The first DVD contains three web-based fully narrated presentations containing materials geared to three specific audiences. Information for Installation Leaders provides information about the DoD's leadership role in conserving natural resources and biodiversity on military lands, and how this supports the training mission. Information for Civilian Leaders-Beyond the Perimeter provides an overview of the need for military installations and their civilian neighbors to work collaboratively for the sustainable management of shared natural resources. The Military Community provides information for military personnel and their families on the importance of biodiversity, the natural resources DoD maintains, and how they can participate in their stewardship for the future.



The second DVD contains each presentation in PowerPoint so that each can be modified if so desired. DVD 2 also contains a PDF version of the *2008 Revised Biodiversity Handbook for Natural Resources Managers*, which is described in more detail in "In The News". The 2008 edition updated by NatureServe contains information on the latest innovations in conservation science and planning, landscape and ecosystem ecology, and adaptive resource management. The handbook also contains 17 case studies of installations that have successfully implemented the best conservation strategies.

In addition, the second DVD also contains slide templates, image links and other information so that any of the presentations can be customized with new slides as desired.

The Biodiversity Outreach Toolkit has been distributed to the commanders, Public Affairs office, and natural resource managers at installations throughout the country, and at US installations in Europe, Asia, and the Caribbean. In addition to DoD sites, copies

have been sent to State Fish and Wildlife Agencies, USFWS refuges, and fisheries, and to non-governmental agencies such as The Nature Conservancy.

The end product of this project will help to increase DoD/Military Services' internal awareness of America's and DoD natural resource treasures. The hope is that the toolkit will further will educate DoD/military services natural resource managers and installation commanders about partnerships that can be developed with the FWS, states and other potential partners to create and achieve common resource conservation goals. The toolkit will also publicize and educate NGOs and the general public regarding DoD natural resource conservation stewardship, challenges and successes and increase awareness of FWS and State biologists about the natural resource conservation activities of DoD/military services. To get copies of the Toolkit please contact Legacy staff Jane Mallory at Jane.Mallory.ctr@osd.mil or Pedro Morales at Pedro.Morales.ctr@osd.mil.



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public perceptions relevant to management of biodiversity and natural resources on DoD lands. Reflecting the latest innovations in conservation science, planning, and management, the new guidance is available online at www.dodbiodiversity.org.

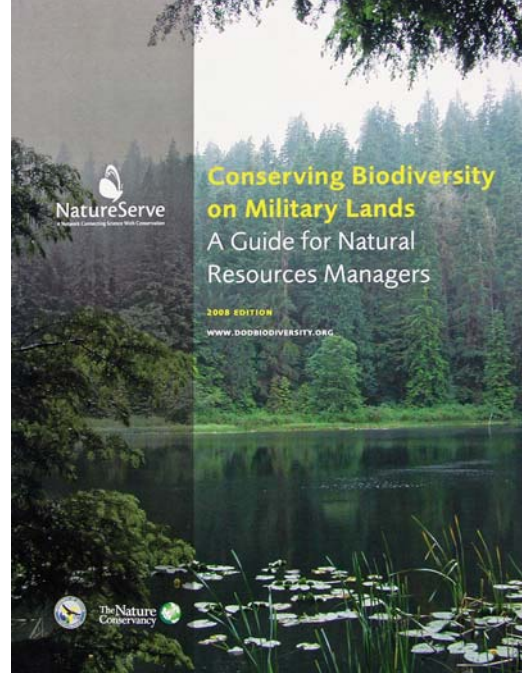
Preparation for the new biodiversity guidance began with an experts workshop hosted by Arnold AFB, Tennessee, in which individuals from each of the military services, along with representatives of NatureServe and TNC, assembled and developed an outline for the new guide. That process was enhanced by earlier interviews of key military natural resources personnel and outside experts to obtain their perspectives on what the handbook should contain and how it should be presented. Finally, NatureServe assembled a team of writers and researchers to prepare the new guidance. The writing team included military natural resources managers, biodiversity experts from and NatureServe and TNC, and a professional science writer who in addition to writing several chapters edited the entire document.

A new feature of the guidance is a section highlighting case study examples of successful biodiversity conservation programs on individual military installations.

The website provides a version of the new guidance in a PDF format that may be viewed on-line or downloaded and printed.

However, NatureServe will soon make the entire document available in an interactive format that will contain a “toolbox” providing links to various sources of information and assistance for biodiversity conservation.

It will also contain a forum section in which individual natural resources managers may discuss biodiversity conservation and other natural resources issues. The interactive version will also allow for periodic updating, including the addition of new case study examples. The DoD Legacy Program is confident that the new biodiversity conservation guidance will continue and expand the excellent success achieved by the original DoD Biodiversity Handbook.



Botanical Society Meeting at ANG-WGR

By Dr. Walter Bien, Drexel University
June 09, 2008

During the 2008 field trip meeting of the Northeastern Chapter of the Botanical Society of America, 54 botanists were treated to observing several rare plant species at the Air National Guard Warren Grove Gunnery Range (WGR). Located in the globally rare dwarf pine plains forest type of the New Jersey Pine Barrens, WGR supports a diversity of common and rare plant species. Large populations of Knieskern's beaked-rush (Federally-listed species) and pine barren gentian (state-listed species) were observed in open fields next to the runway. Dr. Walter Bien, Director of Pinelands Research at Drexel University, explained how frequent disturbance from military operations (e.g. fire) maintains ideal habitat for these rare early successional species. He also explained the beneficial role that wildfire plays in maintaining the dwarf pine plains ecosystem and in maintaining open habitat for fire dependent species such as Conrad's crowberry (state-listed species). By day's end participants gained a better understanding of how Natural Resource Management at WGR successfully protects and conserves sensitive habitat for rare plant species concomitant with the military mission.

SMR Conference Survey

Now is Your Chance to Be Heard!



Some of you may have heard the early promotions for the 2009 Sustaining Military Readiness (SMR) Conference, set for Sunday, August 9 to Friday August 14, 2009 in Phoenix, Arizona. The steering committee has been hard at work thinking up workshops and session subjects that will be of relevance and interest to the wider DoD-environmental community. The Legacy staff would like to have feedback from the *Natural Selections* readership in order to make the conference best meet your needs. Please send your responses, and any elaborations, to Pedro Morales, Pedro.Morales.ctr@osd.mil.

- 1.) Are there any workshops that should be provided for training, continuing education, or skill refinement?
- 2.) What other DoD groups would you like to see targeted to attend NR sessions?
- 3.) What subjects/topics within the field of DoD NR should sessions focus on?
- 4.) If you attended the National Military Fish And Wildlife Agencies Meeting, are there any sessions you would like repeated? Delivered at a more advanced level?
- 5.) Is there any type of training that can help you do your job supporting the military mission more effectively?

Did You Know?

“Biodiversity.” You have heard the term, but what is it? – A simple but good working definition is: the total number of species and their abundance in a given area. That could be a specific type of habitat, for example, at an installation, or all the variety of life within an installation’s perimeter boundaries. It could be the diversity of life within a larger regional landscape, the whole country, or the entire planet. Biodiversity is important for both ecological and economic reasons. Biologically diverse environments provide us with the basic necessities of life such as clean air and water, healthy soils, and more. These products of nature’s processes are called “ecosystem services.”

Conserving and protecting the environment and its diversity of life is the right thing to do, and the smart way of doing business on military lands. It is far less expensive to maintain the land and its resources in a healthy state than to have to restore those same resources when damaged. This is true not only of military lands but for the nation as a whole. Because of its tremendous geographical extent, our nation has more types of ecosystems than any other country. A number of those ecosystems are represented within the boundaries of large military installations. For instance, the desert training areas of Fort Irwin in California, the longleaf pine ecosystem of Eglin Air Force Base in Florida, and other military installations in the Southeast, and the juniper savannah of Fort Hood, Texas, are just three examples of ecosystems with significant amounts of land under the stewardship of the Department of Defense.



Sample ecosystem: *Freshwater marshes* are generally wetlands with an open expanse of grasses and other grass-like plants. Freshwater marshes generally contain few, if any, trees and shrubs. Marshes have standing water for much of the year and act as natural filters. As water passes over the marsh, water flow is slowed down, and suspended particles settle out.



Sample ecosystem: *Hardwood hammocks* are localized, thick stands of hardwood trees that can grow on natural rises of only a few inches of land. In South Florida, hammocks occur in marshes, pinelands, and mangrove swamps. Hammocks may contain many different species of trees such as the sabal palm, live oak, red maple, mahogany, gumbo limbo and cocoplum, epiphytes (“air plants”) and ferns can be found there as well. Wildlife in hammocks can include tree snails, raccoons, opossums, birds, snakes, lizards, tree frogs, and large animals such as the Florida panther, bobcat, and deer.

At about four and a-half percent of the overall Federal total, the Department of Defense manages 29 million acres of land. While that is a lot of ground, it is the smallest share of land managed by any major Federal agency. However, unlike other agencies, well over three hundred federally endangered and threatened species have a safe and secure home on military lands. You may have one or several endangered or threatened species at any given installation.

The conservation of our nation’s biodiversity should be of concern to all of us as citizens. Changes in many areas of the country have created conditions in which many species have found it just too difficult to survive. This loss of habitat is the primary reason why over 1,300 species of our nation’s plants and animals are on the Federal government’s endangered and threatened species lists. Many of these species are struggling to hold their ground. For some, the only secure habitat they have is on land that remains protected and intact.

Content for this month’s Did You Know? section are excerpts from the Biodiversity Outreach Tool

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