

Natural Selections

Fall 2012



Department of Defense Natural Resources Program

IN THE NEWS

DOI Guide to Adaptive Management in Natural Resource Decision Making



Adaptive Management: The U.S. Department of the Interior Applications Guide provides federal, state, tribal and other natural resource managers with tools to address the complexities and uncertainties involved in natural resource management. The new guide covers threats ranging from urban sprawl, to wildfire risk, to climate change-related impacts. Case studies on river flow management, migratory bird protection, and renewable energy project siting show the breadth of adaptive management applications at different scales and levels of complexity.

Visit <http://www.doi.gov/ppa/upload/DOI-Adaptive-Management-Applications-Guide.pdf> to download the guide. Note: File size is 108 MB.

Defense, Interior Departments Join Forces on Renewable Energy

As part of a joint departmental effort to strength the nation's energy independence and reduce military utility costs, Defense Secretary Leon E. Panetta and Interior Secretary Ken Salazar have signed a memorandum of understanding detailing the use of withdrawn military lands as well as onshore and offshore lands near military installations, for development of renewable energy.

For the full story, visit www.defense.gov/news/newsarticle.aspx?id=117413.

SPOTLIGHT

Under Construction: Environmental Program Budgeting

By Sharon Dubrow, Booz Allen Hamilton

The PB-28 exhibit is used for budget submissions to the Office of the Deputy Under Secretary of Defense (Installations and Environment) and to Congress for the President's Budget.¹ The current format used for DoD's environmental program budgeting was created nearly two decades ago and responded to a very different regulatory and fiscal environment than the Department operates in today. Over time, the format has not kept pace with changes in the way DoD Components build programs and budgets and report execution. For example, the "Other" categories grew to represent a large percentage of the total budget amount, which reduced visibility of where the environmental funds are spent. Efforts are ongoing to update the standard format for the PB-28 budget exhibit.

What is included in the PB-28?

The PB-28 includes environmental projects funded primarily from Operations and Maintenance (O&M) accounts; some may be funded by other accounts such as Working Capital Fund (WCF), Sustainment, Restoration, and Modernization (SRM), and Military Construction (MILCON). This exhibit does not include environmental cleanup projects funded by the Defense Environmental Restoration Accounts (DERA) or Base Realignment and Closure (BRAC). These projects are submitted under a separate budget exhibit.

¹The DoD Financial Management Regulations (FMR), Volume 2B, Budget Formulation and Presentation, Chapter 19, provides instructions for completing the PB-28, which is submitted using the DoD Select & Native Programming Data Input System (SNaP).

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NATURALLY SPEAKING

From the Desk of L. Peter Boice, DoD Deputy Director, Natural Resources and Director, Legacy Program



What's Happening in DC and How Might it Affect My Program?

It's with considerable relief that we reinstate publication after an unexpected five month hiatus. Many of the issues I addressed in my March 2012 column, *More Challenges, More Oversight, Fewer Resources*, remain front and center, including Budget, Metrics, and Candidate Species. We also introduce two new features—*Steppingstones* and *What's Hoppin' in DoD PARC*—as recurring corners for the DoD Partners in Flight (PIF) and Partners in Amphibian and Reptile Conservation (PARC) programs, respectively. With these additions, we hope to provide a more holistic voice for all natural resources topics of interest to our more than 1,500 readers.

DoD Legacy Program

This has been an extremely challenging year for our funding program—for Legacy staff, who experienced a lengthy contract break; for our contracting office, which had to institute many process and procedural changes; and for our award recipients, most of whom have waited far too long for their FY 2012 awards. We appreciate your patience and understanding as we continue to adapt to continuing unpredictability in contracting and budgeting.

At the same time as we work to wrap up FY 2012, Legacy's Request for Proposals for FY 2013 was released with preproposals due August 30. Four Areas of Emphasis (AOEs) emphasized integrating natural and cultural resources considerations: Readiness and Range Sustainment, Integrated Planning, Communication and Public Awareness, and National and International Partnership Initiatives. Each AOE also highlighted a particular focus for FY 2013.

A quick word on Legacy's funding levels for FY 2013 and beyond – uncertainty. Barring the potential for sizeable and significant federal budget cuts, we expect a level of funding that would allow us to continue to fund our highest priority natural and cultural resources needs though given the likelihood of election year continuing resolutions, any funding would probably come late in the fiscal year.

Natural Resources Conservation Compliance Manual

We are in the home stretch of completing the new Natural Resources Manual, which will accompany and supplement DoD Instruction 4715.03. I distributed the final informal draft for internal review on June 20, requesting that the Military Services distribute the draft to key installation and regional personnel and provide comments to us by early August. The Manual addresses general INRMP provisions, including coordination, review and public comment; implementation and special management; INRMP contents; and ecosystem-based management. It also covers new issues such as invasive species management, feral and free ranging animals, wildland fire management, and planning for climate change impacts.

Metrics

OSD conducted Environmental Management Reviews (EMRs) with the DoD Components in mid-February. With three years of data for the seven Natural Resources Focus Areas, we were able to estimate the health of DoD's natural resources program, identify key trends, and evaluate the efficacy of the metrics. Information resulting from the Focus Area metrics was well received by our senior leadership, and we are now working with the Military Services to further improve their usefulness. We have updated the overarching Focus Area definitions and will use them in our upcoming Environmental Management data call to ensure consistency across all DoD Components. In addition, we have drafted and are refining more detailed definitions for the Green/Yellow/Red ratings for each of the Focus Areas. Using the detailed G/Y/R definitions to measure performance for each Focus Area will be optional this year, but required next year.

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NATURALLY SPEAKING *Continued*

Candidate Species

The fall 2011 court settlement between the U.S. Fish and Wildlife Service (USFWS) and the Center for Biological Diversity and Wild Earth Guardians required that the USFWS evaluate 251 candidate species by 2017 for potential addition to the Endangered Species list. This April, we asked the Military Departments to determine the potential impacts on military testing and training activities of listing these species in advance of decision-making deadlines. We requested this information to:

- Ensure USFWS considers all DoD data, including those species likely to impact DoD, the magnitude of potential impact, and specific type(s) of impact
- Ensure DoD data meets USFWS needs, by using standardized definitions and best available scientifically-based information
- Enhance understanding of DoD needs/restrictions by key USFWS offices/personnel
- Identify opportunities for collaboration with other agencies
- Identify and prioritize additional DoD actions needed before listing deadlines

Results of this survey suggest that some 32 of the 251 species have either significant or moderate potential to impact military readiness if listing or critical habitat designation occurs. The seven species with the most significant impact potential include Taylor's checkerspot butterfly, streaked horned lark, red knot, Roy prairie pocket gopher, greater sage grouse, Louisiana pine snake, and Washington ground squirrel. An additional 69 species have some minimal potential to impact readiness.

Another way we are coordinating with the USFWS is by submitting comments in response to their Federal Register advance notice of proposed rulemaking (ANPR) on *Expanding Incentives for Voluntary Conservation Actions* under the Endangered Species Act. We proposed several ways to encourage federal landholding agencies generally, and DoD in particular, to explore pre-listing mitigation activities. We plan to continue discussions with the USFWS to chart a mutually beneficial way forward.

Sustaining Military Readiness (SMR) Conference 2013

Due to budget cuts, travel restrictions, and other events, SMR will not take place in 2013. The crystal ball for future gatherings is murky, but suggests smaller gatherings sponsored in conjunction with other events and with a greater focus on training.

Summary

In summary, change seems to be the only constant, and challenging the most overused adjective to describe the current state of most of what we do. I'm glad we're back, and I trust that our newsletter will continue to provide information and insights of value to your day-to-day management activities, as well as insights into broader DoD natural resources issues.

As always, I welcome your comments and your suggestions.

What's Hoppin' In DoD PARC?

DoD Partners in Amphibian and Reptile Conservation (PARC) provides a network through which DoD can work to avoid future mission restrictions while providing stewardship for threatened and endangered herpetofauna. DoD PARC focuses on habitat and species management; inventory, research, and monitoring; and education, outreach, and training.

DoD PARC Action Plan

Currently under development, the DoD PARC Action Plan will provide a coordinated framework and course of action for addressing amphibian and reptile monitoring, research, and management across the DoD landscape.

DoD PARC Group and Photo Web Site

This site contains amphibian and reptile photographs, literature, reports, publications, links, an event calendar, and discussion forums for members to use, share and contribute to the greater DoD PARC community. Sign up at <http://dodparcphotolibrary.shutterfly.com/>!

Amphibian and Reptile Database

This tool provides comprehensive peer-reviewed lists of amphibian and reptile species on more than 700 military installations, ranges, and training areas. The database can be found on the DENIX Natural Resources page under the Fish and Wildlife tab (www.denix.osd.mil/Nr/upload/Herp_Installation_DB_030612_B1.0.accdb).



Advancing Candidate Species Conservation

By Lew Gorman, USFWS, Endangered Species Program, Partnerships Coordinator

“An ounce of prevention is worth a pound of cure,” said Ben Franklin, providing advice that has many applications, including conservation. Applying Mr. Franklin’s admonition to species at risk that have not been listed under the Endangered Species Act as a threatened or endangered species, decisive action should be taken to help prevent species listing. Federal agencies need to work together and with non-federal landowners to conserve candidate species and species at risk. Indeed, such partnerships are ongoing, and other opportunities are available. Investing in natural resource conservation before a species declines to the level requiring its listing is “penny wise, not pound foolish.”

What can federal agencies do to prevent the need to list species under the Endangered Species Act?

Setting the example is a key leadership tenet. Federal agencies, including the Department of Defense, have exercised leadership in candidate and species at-risk conservation.

For example, the combined efforts of the Army National Guard, the U.S. Forest Service, and the Mississippi Department of Wildlife, Fisheries and Parks resulted in the removal of the Camp Shelby burrowing crayfish from the U.S. Fish and Wildlife Service (USFWS) list of candidate species because the threats to the species had been removed or minimized and those agreed upon conservation actions continue.



As a result of the September 2011 Multi-District Litigation (MDL) settlement, the USFWS is required to make listing determinations for 251 candidate species over a five year period that started in FY 2011. Of these, 103 are located on DoD installations. The USFWS prepared a DoD species of concern spreadsheet organized by the year that a listing determination is required. (See DoD Legacy or Lew Gorman, USFWS, 703-358-1911.) Providing information on DoD species of concern to the designated USFWS regional contact will assist in listing determinations.

The Endangered Species Roundtable is a longstanding and effective partnership vehicle for DoD, the USFWS, and nearly all federal land management agencies plus the U.S. Geological Survey to address endangered and at-risk species issues. The Roundtable will continue to help guide both agencies in crafting conservation strategies.

The USFWS has renewed its emphasis on Candidate Conservation Agreements (CCA) and Candidate Conservation Agreements with Assurances (CCAA) to help jumpstart conservation actions. DoD, the USFWS, and its partners have experience using these tools. The Gopher Tortoise CCA is one such example.

DoD resources and commitment were critical for development of the Gopher Tortoise CCA, which covers the eastern range of the species in four southern states and is one of the largest CCAs in area to date. The Gopher Tortoise Team managing this agreement continues to meet annually to review progress and address conservation needs of this species. Although the Gopher Tortoise CCA needs to be enhanced to address specific threats and other tools are needed to comprehensively address the species conservation needs to a level that would preclude the need to list the species, it has provided an effective conservation partnership tool.

Focusing on partnering with private landowners is an essential component of candidate conservation. The CCAA is a powerful tool for non-federal landowners. DoD can assist by promoting candidate conservation practices for its targeted species with landowners adjacent to military installations and in regional initiatives such as the Southeast Regional Partnership for Planning and Sustainability.

DoD-focused species at-risk partnering with federal agencies and private landowners will result in a substantial conservation impact.



Did You Know? Many Candidate Species Call DoD Lands Home

Highlighted here are the seven candidate species with the most significant potential to impact military readiness if listing or critical habitat designation were to occur, as discussed by Peter Boice in *Naturally Speaking*.



Taylor's Checkerspot Butterfly (*Euphydryas editha taylori*) Photo courtesy of Aaron Barna

There are only four known populations of the Taylor's Checkerspot Butterfly—three in Washington and one in Oregon, and three of the populations contain fewer than 50 individuals based on surveys conducted in 2002. The Taylor's Checkerspot is threatened most by practices that degrade and destroy its habitat, including agricultural and urban development, encroachment of trees, spread of invasive plants, pesticide use, and recreational activities.



Streaked Horned Lark (*Eremophila alpestris strigata*) Photo courtesy of Rod Gilbert - Versar, Inc.

The Streaked Horned Lark is endemic to the Pacific Northwest, and its habitat-related threats include range contraction, loss of natural disturbance processes such as fire and flooding followed by encroachment of woody vegetation, invasion of coastal areas by nonnative beachgrasses, and incompatible management practices. These birds are dependent on disturbance and evolved in ecosystems that changed dynamically over very short periods of time—prairie fires, vernal wetlands, flooding events, shifting sands.



Red Knot (*Calidris canutus*) Photo by Byron Holston

Red Knots are noted for their extraordinary long-distance migrations, which include travel between arctic tundra and marine wintering habitats in Tierra del Fuego, 15,000 km away in South America. Red knots concentrate in huge numbers at traditional staging grounds during migration. Delaware Bay is an important staging area during spring migration, where the knots feed on the eggs of spawning horseshoe crabs. The reduction in available food because of the harvesting of horseshoe crabs may be responsible for a decline in red knot populations.



Roy Prairie Pocket Gopher (*Thomomys mazama glacialis*)

The Roy Prairie Pocket Gopher is one of several subspecies of the Western Pocket Gopher and is found south of Seattle. Agricultural expansion, livestock grazing, fire suppression, exotic plant invasion, and urban and suburban sprawl have destroyed or degraded grasslands inhabited by this species. Roy Prairie Pocket Gophers are also threatened by pesticide and herbicide spraying. Their extensive burrowing helps aerate and fertilize soil, as well as improve water drainage and helps maintain plant diversity.



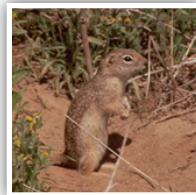
Greater Sage Grouse (*Centrocercus urophasianus*) Photo by John Vlahakis

Once widespread over much of western North America, the Greater Sage Grouse is now found primarily in eastern Montana, Wyoming, northwestern Colorado, Utah, southern Idaho, Nevada, and northeastern California. The major threat to the greater sage grouse is the continued degradation and destruction of sagebrush habitats across the West. Public lands ranching, oil and gas drilling, climate change, fire, cheatgrass and expanding energy development are among the chief threats to the habitat of the greater sage grouse.



Louisiana Pine Snake (*Pituophis ruthveni*) Photo courtesy of Dr. Steve Reichling - Memphis Zoo

One of the rarest snakes in the United States, the Louisiana Pine Snake spends most of its time underground in burrows of its favorite prey, the Baird's pocket gopher. The ideal habitat for both species consists of dry, sandy-soiled ridges covered with longleaf pine trees and an open understory of the grasses and forbs the pocket gophers feed on. Urban development, conversion to agriculture, road construction, and mining have all contributed to loss and fragmentation of the Louisiana pine snake, but the greatest threat to this species has been the loss of the native longleaf and shortleaf-pine ecosystem that it and its prey inhabit.



Washington Ground Squirrels (*Spermophilus washingtoni*) Photo by B.J. Betts

Washington Ground Squirrels are found in the low elevation Columbia basin of southeastern Washington and northeastern Oregon. Their populations are vulnerable to habitat loss and degradation, as well as hunting and poisoning practices. Washington Ground Squirrels influence the composition of regional plant communities through their grazing and cycle nutrients through their burrowing activities.

STEPPINGSTONES CORNER

View from the Eyrie

By Chris Eberly, DoD PIF Coordinator

As some of you may know, the DoD Partners in Flight newsletter, *Steppingstones*, will cease publication. Peter Boice wants to better integrate all aspects of the DoD Natural Resources Conservation Compliance Program, including communications and outreach, in a comprehensive and coordinated manner. Obviously, this is a classic case of “good news-bad news.” While we will no longer have a dedicated newsletter for bird conservation issues on DoD lands, we will now have a “Steppingstones Corner” within the *Natural Selections* newsletter. This will allow bird conservation stories to reach a larger audience, while hopefully providing the same level of updates on key policy and conservation issues related to birds. I hope that you will continue to provide input, articles, and photographs.

I was honored to receive the National Military Fish & Wildlife Association’s *Natural Resource Conservation Management, Model Programs* award at the March meeting (being presented to me by the much taller NMFWA President Rich Fischer). Awards like this are typically the result of many people working in partnership to make a program beneficial to all. This award is no exception. The energy, insight, and enthusiasm of natural resources professionals at military installations everywhere is truly inspiring. I feel privileged to be able to interact with people who are keenly aware of the connections in our natural world and who work tirelessly to protect the resource and the mission. We—soldiers, biologists, civilians—are all indebted to your dedication. Thank you!



The DoD Partners in Flight program held its annual planning meeting in May at the Cornell Lab of Ornithology. The DoD PIF Reps have interacted virtually with Cornell scientists for a

number of years through Legacy project proposals. It was rewarding to have the face time at this meeting to hear and see the great work of the Cornell Lab. We also had discussions about the Lab’s capability to support DoD’s mission in the future.



Monitoring was one of the key discussion topics during the week. The document *Coordinated Bird Monitoring: Recommendations for Military Lands* (previously called the Coordinated Bird Monitoring Plan) is now finished and available at http://www.dodpif.org/legacy/07-246-CBM_Plan.pdf. Prioritizing species is always a challenge, but the DoD PIF Reps have almost finalized a list of mission-sensitive species for monitoring. The species on the list were considered to have the highest potential to negatively impact the mission if they become listed under the Endangered Species Act. Watch the DoD PIF listserv for information about the final list. We are also working with American Bird Conservancy, USGS, and the Great Basin Bird Observatory to create a population estimates database for these species. The project uses habitat and landscape modeling techniques to provide a population estimate for any given installation for each of these species. This and the coordinated bird monitoring document break new ground for mission and INRMP planning and should give resource managers information that will enable them to more effectively and efficiently plan and implement monitoring programs.

And speaking of the DoD PIF listserv, you can sign up at <http://www.dodpif.org/>. If you are already a subscriber and have recently or soon will change your e-mail address (especially those in the Army), make sure you sign up again with your new e-mail address. As always, please contact me or any of the DoD PIF Reps if you have questions about bird conservation on military lands.

Objectives of the PB-28 Redesign Effort

The PB-28 redesign effort will create descriptive categories for tracking and supporting the environmental program. This will benefit DoD by increasing transparency and providing managers with better information to support their budgets and justify any changes or trends.

The redesigned format must align Program and Budget funding submissions with Execution reporting so that changes in funding requirements can be explained. It also must answer some key questions:

- What is our money intended to buy?
- What impacts will changes in expenditures have at the installation level?
- What have we done in the past (Execution reporting)?

One of the initial meetings of the PB-28 Budget Re-Design Working Group included a discussion with the DoD liaison to the Office of Management and Budget (OMB). The liaison explained that while DoD receives significant support for its environmental programs, the PB-28 would be more effective in supporting DoD's environmental programs if it provided additional information on trends and shifts in the budget amounts (by Component), particularly when related to changes in policy and regulation or to broad-scale changes in cost (e.g., increase in cost of water systems). Even though the environmental budget is not a large percentage of the DoD budget, changes in the DoD environmental program are significant to the federal-wide line item due to the relative size of DoD's budget. The liaison emphasized that OMB is looking for what drives the data, not just the fact that it changed.

Project Status

On June 22, 2012, the Environmental Management (EM) office distributed an initial draft of the PB-28 redesigned exhibit to the DoD Components to populate as a pilot run. EM instructed the Components to use their existing Fiscal Year 2013 budget data for the trial and to document any questions, clarifications, or issues encountered.

Changes from the existing PB-28 include:

- Split the Conservation pillar into two pillars: Natural Resources and Cultural Resources
- Included three levels of categories for budget submission and tracking costs
 1. Program Areas: for Congressional level reporting
 2. Sub-Programs: for OSD reporting
 3. Activities: for Component program management
- Created new categories (i.e., program areas) for several pillars. The program areas for Natural Resources include:
 - Listed and At-Risk Species
 - Wetlands
 - Integrated Natural Resource Planning
 - Marine Mammal Protection
 - Other Natural Resources (including the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act)
- Created listings of legal drivers associated with each Program Area

Challenges and Next Steps

One challenge faced during the PB-28 redesign effort is the fact that each of the DoD Components track and execute funds differently. There is a clear need, however, to create categories that truly describe where the funds are being spent. DoD senior leadership, OMB, and Congress should be able to understand these investments based on the category titles and descriptions.

The next steps in this effort are to address issues encountered during the pilot run of the redesigned exhibit.

UPCOMING EVENTS

Conferences, Workshops, and Training

102nd Association of Fish & Wildlife Agencies (AFWA) Annual Meeting

* PIF Implementation Committee Meetings to be Held in Conjunction

September 9-12, Hilton Head, South Carolina

This annual event brings together more than 700 leaders from fish and wildlife agencies and conservation groups from all 50 states, U.S. Territories, Canada, and Mexico to discuss conservation policy and management issues and accomplishments. AFWA's more than 70 committees, subcommittees and working groups will convene to share information, advance positions and resolutions for full membership adoption and shape a North American fish and wildlife conservation agenda. For more information, visit www.fishwildlife.org.

11th Biennial Scientific Conference on the Greater Yellowstone Ecosystem

*Greater Yellowstone in Transition:
Linking Science and Decision Making*

October 8-10, Yellowstone National Park, Wyoming

The 2012 biennial conference will bring together scientists, managers, and other decision makers to examine resource challenges in Greater Yellowstone. The goals are to exchange science-based information relevant to management and to identify resource challenges that demand new research. Building on the body of scientific knowledge shared during past conferences, this year's event will focus on presentations and discussions that help define current resource challenges, identify scientific needs, and support establishing management priorities. For more information, visit <http://gyesciconf.greateryellowstonescience.org/>.

The Wildlife Society 19th Annual Conference

October 13-18, Portland, Oregon

The Wildlife Society's annual conference provides opportunities for information sharing, discussion, professional development, and networking through general sessions, workshops, round tables, symposia, and panel discussions. More than 2,000 attendees from federal, state, and provincial agencies as well as from universities, natural-resources consulting companies, and conservation organizations are expected to attend the 2012 event, which will celebrate the 75th Anniversary of The Wildlife Society. For more information, visit www.wildlifesociety.org/.

ACES and Ecosystem Markets 2012

*A Community on Ecosystem Services Linking Science,
Practice and Decision Making*

December 10-14, Fort Lauderdale, Florida

ACES and Ecosystem Markets 2012 is an international collaboration of three dynamic communities - A Community on Ecosystem Services (ACES), the Ecosystem Markets Conference, and the Ecosystem Services Partnership (ESP). This conference will provide an open forum to share experiences and state-of-the-art methods, tools, and processes for assessing and incorporating ecosystem services into public and private decisions. The focus of the conference will be to link science, practice, institutions, and resource sustainable decision making by bringing together ecosystem services communities from around the United States and the globe. For more information, visit www.conference.ifas.ufl.edu/aces/.

DoD Legacy Webinars

White-Nose Syndrome

White-Nose Syndrome (WNS) is causing the most precipitous decline in North American bat populations this century. To help installations manage for WNS, Bat Conservation International developed and presented two regional workshop-webinars with funding from the Legacy Program. The workshop-webinars



USGS

were conducted in Nashville, Tennessee, and Tucson, Arizona, and consisted of classroom and field discussions. A DVD of the presentations plus all materials is available at <http://www.denix.osd.mil/nr/FishandWildlife/TerrestrialAnimals.cfm>.

Invasive Species Management

Invasive species management requires strategies and tools for prevention, early detection-rapid response, control, and restoration. Selection of strategies and tools depends on overall land or water management goals such as land-use activities (e.g., military training) and natural resource conservation (e.g., biodiversity, threatened and endangered species). An ecosystem approach to invasive species management is ideal for military installations covering large landscapes. Providing installation personnel with the most up to date, regionally specific information and techniques were the goals of three workshop-webinars funded by the Legacy Program and developed and presented by the Center for Invasive Plant Management and Invasive Plant Control, Inc. Videos and other materials from the 2009 workshop-webinar in Phoenix, Arizona, are available at <http://www.denix.osd.mil/nr/OtherConservationTopicsIZ/InvasiveSpeciesManagement.cfm>. Materials from the 2012 offering in Portland, Oregon, will be available later this year.



NPS



NEW! NATURAL RESOURCES DOCUMENTS

Reports, Fact Sheets, Spreadsheets, Presentations

Highlighted here are recently uploaded documents on the Legacy Tracker or on the DENIX site. For Legacy-related products, visit https://www.dodlegacy.org/Legacy/intro/ProductsList_NU.aspx. All Legacy products and many more are available at www.denix.osd.mil/nr. Bird-related products are also posted on the DoD Partners in Flight site at www.DoDPIF.org.

Policy and Guidance

[2012 NMFVA Conference Presentations \(March 12-16, Atlanta, Georgia\)](#)

[Natural Resources Policy Update \(OSD\); Notes Version Improving ESA Implementation \(USFWS\)](#)

[Leatherback Turtle Critical Habitat and Major Coral Reef Regions of the World \(NOAA\)](#)

[Enhanced Online Access to the Interactive Web Site Version of 'Conserving Biodiversity on Military Lands' \(Legacy 09-247\) – Fact Sheet](#)

The revised biodiversity handbook titled “Conserving Biodiversity on Military Lands: A Guide for Natural Resources Managers” (2008 edition) provides military natural resources personnel with up-to-date guidance in meeting their military and natural resources obligations in ways that promote biodiversity conservation while preserving the ability to conduct required testing and training activities. This project enhanced the online web version of the handbook through a review and update of all web links, the addition of a toolbox/resources section, and the addition of new content in the form of ten additional case study “success stories” from DoD lands.

Outreach

[National Public Lands Day 2011 \(Legacy 11-086\) – Final Report; Fact Sheet](#)

DoD provides funds to the National Environmental Education Foundation for National Public Lands Day (NPLD) projects on military lands open to the public for recreation. In 2011, the Legacy funds were used to enhance DoD lands through various cultural and natural resource improvement activities. Participating in NPLD provides resource managers the means and labor to complete small installation-specific projects that while beneficial to the installations may not otherwise get done due to budget or manpower limitations. These projects improve habitat and biodiversity for common and rare species alike, which may help reduce the need for intense management and constraints to installation operations.

Threatened, Endangered, and At-Risk Species Management

[Establishing New Pathways to the Recovery of Species under the Endangered Species Act \(Legacy 06-330\) – Final Report; Fact Sheet](#)

The qualitative definition of a recovered species is one for which the risk of extinction has been reduced to the point that the species' survival in the wild is ensured. Decisions on a species' recovery goals, however, vary widely. The objectives of this project were to (1) assess the recovery status of threatened and endangered (T&E) species on DoD lands, (2) identify success stories, (3) compare the status of T&E species on military lands with those not found on military lands, (4) identify those T&E species that could be future success stories in relatively short time periods, (5) develop realistic time frames for evaluating the recovery status of a listed species, and (6) identify management practices on DoD lands that could prove effective in general species recovery.

Photo Galleries

[DoD Partners in Amphibian and Reptile Conservation](#)

In addition to photos, the DoD PARC photo gallery has extensive web links, an events calendar, and library of reports/publications/brochures of herp-related work on DoD lands. Visit the Library page for details on what is needed in a photo submission, ethics, policy, and permissions.

[DoD Partners in Flight](#)

The DoD PIF photo gallery contains hundreds of images of bird species. Images may be used for personal or educational purposes only. Commercial uses are prohibited. Refer to the guidelines for crediting photographers.

[Bat Conservation International](#)

BCI has the largest collection of bat photographs in the world - about 75,000 professional-quality images of bat species from every continent but Antarctica. The right to use these copyrighted images may be purchased from BCI for a nominal fee, with proceeds supporting bat conservation. Contact Meera Banta, Photo Editor/Collection Manager, at (512) 327-9721 ext. 47 or mbanta@batcon.org.

[Species at Risk on Department of Defense Lands: Updated Analysis, Report, and Maps \(Legacy 10-247\) – Final Report, Appendix 5.2, Appendix 5.7, and Presentation](#)

This analysis represents an update of a previous analysis by NatureServe that was based on 2002 species location data. A key finding of this updated 2011 assessment is that the total number of species at risk on DoD lands remained similar to the numbers based on the 2002 data (519 species at risk were reported in 2011, compared to 523 species reported in the 2004 report), despite an increase of over 25,000 new species at risk element occurrences in NatureServe's databases since 2002. A set of detailed excel spreadsheets accompany this report. The presentation from the 2011 Sustaining Military Readiness Conference summarizes the findings in maps, graphs and charts.

[Coral Ecosystems and Marine Resources Initiative T/E and Sensitive Species Database \(Legacy 10-306\) – Database](#)

This database is an extensive compilation of information and tools for managing and conserving of DoD protected marine species and associated benthic/marine habitat (coral reef ecosystems), including endangered threatened and sensitive resources and habitat. It provides resource information for use in decision-making regarding on-shore or near-shore activities in order to maintain military readiness with minimal adverse impacts to the marine environment. It serves as an in-house resource for locating underwater resources and identifying potential impacts related to mission needs, operations, or development projects.

[DoD Partners to Address 251 Candidate Species – Fact Sheet](#)

The U.S. District Court for the District of Columbia approved a settlement on September 10, 2011 that requires the U.S. Fish and Wildlife Service to decide whether to extend federal protection to 757 plant and animal species. This Multi-District Litigation (MDL) settlement with the Center for Biological Diversity and Wild Earth Guardians established a 6-year schedule for final listing decisions on 251 species on the candidate list and developing initial findings on 506 other species.

NEW! NATURAL RESOURCES DOCUMENTS *Continued*

[Strategy for the Cooperative Recovery of Rare Species Affecting Training Ranges \(Legacy 09-213\) Final Report; Fact Sheet](#)

This project's primary objective is to maintain military training flexibility by precluding the need for Endangered Species Act listing of the four candidate species that occur on the grasslands of Joint Base Lewis-McChord: Taylor's checkerspot and Mardon skipper butterflies, the streaked horned lark, and the Mazama pocket gopher. The project worked toward this goal by promoting cooperative ecoregional recovery of these species throughout their range.

[Workshop Proceedings and Minutes – Streaked Horn Lark; Taylor's Checkerspot; Mazama Pocket Gopher Strategic Plan – South Puget Sound Prairie Conservation](#)

Restoration and active management is a critical conservation strategy for South Puget Sound prairies. Direct seeding of species, especially after sufficient site preparation, is a successful technique. To restore habitat at scale, a sufficient source of native seed is needed yearly. This document details a variety of seed production techniques that can be integrated into an overarching production strategy. Seed collecting techniques, lists of priority species, and species-specific information are included.

[Technical Report – Integrated Prairie-Oak Conservation Report for Oregon and Washington](#)

The importance of prairie-oak habitat in the Willamette Valley-Puget Trough-Georgia Basin (WPG) ecoregion is recognized in the Wildlife Action Plans for Oregon and Washington. Both Plans identify strategies and actions designed to preserve, rehabilitate, and expand prairie-oak habitat. This report extensively draws from, and builds on, those Plans to list the limiting factors to prairie-oak habitat in the WPG ecoregion and the actions to counteract those factors. It also lists the species of greatest conservation need and the actions necessary to protect those species. Finally the report recommends areas where a coordinated, ecoregional prairie-oak conservation effort may be most effective.

[Landscape-Level Habitat Associations and Phylogenetics: Desert Tortoises \(*Gopherus agassizii*\) \(Legacy 09-385\) – Fact Sheet](#)

While impacts to desert tortoise habitat on active military training areas can be substantial, these ranges often provide important refuges where public access is limited and military activities are restricted to specific training areas. As a result, impacts are generally limited to specific locations rather than being diffused across the landscape. The primary objective of this study was to develop a landscape-level predictive habitat model for desert tortoises inhabiting the Yuma Proving Ground and Barry M. Goldwater Range in southwestern Arizona. The secondary objective was to characterize the phylogenetic grouping of desert tortoises inhabiting these DoD managed lands.

[Spatial Ecology of the Island Fox \(Legacy 08-308\) – Final Report; Fact Sheet](#)

Fox densities on San Clemente and San Nicolas Island are unusually high, making this population susceptible to the spread of a novel virulent disease. Furthermore, fox densities vary among habitats within each island in ways that influence home range behaviors, making it difficult to predict the outcome of a disease introduction. By use of radio collars, this project determined how density mediated changes in fox behaviors affect disease spread through changes in the frequency of contact among neighboring foxes and how that information could be used to inform a spatially explicit epidemic model for evaluating effective monitoring, vaccination, and response strategies to minimize the impact of diseases likely to infect island foxes.

[Habitat Use at Multiple Scales by Pinyon-Juniper Birds on Department of Defense Lands II: Nest and Territory/Colony Scale \(Legacy 10-425\) – Final Report; Fact Sheet](#)

Pinyon-juniper habitats on DoD installations are currently threatened by drought, insects, disease, and fire, all of which can be exacerbated by climate change. As part of a four-year study, this project investigated pinyon-juniper habitat use by gray vireos and pinyon jays.

[Determining Marine Migration Patterns and Behavior of Gulf Sturgeon in the Gulf of Mexico off Eglin Air Force Base, Florida \(Legacy 10-428\) – Final Report, Fact Sheet and Presentation](#)

This project documented the timing of Gulf sturgeon migrations into and out of the Gulf of Mexico and determined their geographic distribution in the Gulf during the winter. The study area included water bodies surrounding Eglin AFB that fall within Gulf sturgeon critical habitat, as well as Gulf of Mexico areas where military activities typically occur within the Eglin Gulf Test and Training Range. By identifying Gulf sturgeon movement patterns in these areas, DoD activities can be planned to avoid impacts and Section 7 consultations can be completed more efficiently with accurate scientific data.

Fish and Wildlife Management – Birds

[DoD PIF Key Focus Areas: Bird Conservation in the Military](#)

The DoD Partners in Flight (PIF) Program identifies strategies, goals, and priorities for several key areas that support and enhance the military mission: [Stewardship](#); [Partnerships and Cooperation](#); [Communicating Guidance and Policies](#); [Habitat and Species Management](#); [Monitoring](#); [Research](#); and [Information and Education](#). Its vision is to develop and implement conservation actions that support the mission while minimizing impacts to bird species and their habitats.

[Implementation of the DoD Coordinated Bird Monitoring Plan \(Legacy 09-440\) – Fact Sheet](#)

The Department of Defense is subject to several regulations establishing responsibilities for monitoring migratory birds. The DoD Coordinated Bird Monitoring Plan provides a comprehensive approach for helping DoD fulfill its responsibilities under such regulations. It establishes goals and objectives for monitoring birds, provides guidelines on selection of field methods, describes DoD's role in large-scale monitoring programs, and identifies additional actions that would help DoD biologists.

[Migratory Bird Monitoring Using Automated Acoustic and Internet Technologies \(Legacy 05, 06, & 07-245\) – Final Report; Fact Sheet](#)

This multi-year project led by the Cornell Laboratory of Ornithology developed an innovative acoustic and internet monitoring network that provides tools to monitor migratory activity by species, contributing towards more accurate population estimates and more accurate environmental risk assessments and Integrated Natural Resources Management Plans (INRMPs). The digital autonomous recording units (ARUs) record for periods of up to 10 weeks in duration (improved from 7 weeks).

NEW! NATURAL RESOURCES DOCUMENTS *Continued*

[Tracing the Geographic Origin of Migratory Birds Breeding on Department of Defense Lands Using Stable Isotopes \(Legacy 09-427\) – Fact Sheet](#)

The objective of this research was to use intrinsic markers in tissues of five Neotropical-Nearctic migratory birds to understand local-scale connections between nonbreeding areas in the Caribbean and breeding sites in eastern North America. Multiple stable isotopes in the tail feathers of birds captured at known locations during the breeding and non-breeding period were analyzed.

Fish and Wildlife Management – Reptiles and Amphibians

[Department of Defense Partners in Amphibian and Reptile Conservation \(PARC\) Strategic Plan Workshops \(Legacy 09-423 – Fact Sheet and 2010 Meeting Minutes Legacy 10-423 – Fact Sheet\)](#)

The objective of the DoD PARC Strategic Plan is to better integrate amphibian and reptile conservation and management on the DoD landscape. With the resources that DoD and PARC bring to bear, it is anticipated that DoD will be better able to address amphibian and reptile conservation issues while simultaneously supporting military readiness.

[DoD Installation Herpetofauna Database \(Legacy 11-423\)](#)

This tool will assist with the development of an initial amphibian and reptile species list for military installations, ranges, and training areas primarily within the continental United States. The database can also be used to produce a list of military lands that a particular species may occur within.

Rare Plants

[Guidelines of Establishment of Seed Production Sites on Military Installations \(Legacy 09-326 & 10-326\) – Final Report; Fact Sheet; Management Plan](#)

This demonstration project established the infrastructure needed to provide large quantities of prairie seed as a step towards improving prairie quality at the landscape level through restoration actions that focus on recovering Federal Candidates and other rare species on Joint Base Lewis McChord. The management plan details the steps for operation of The Nature Conservancy's Shotwell's Landing Nursery, which is now fully developed and running at full capacity for both seed and plug production.

[American Chestnut \(*Castanea dentata*\) Test Orchards on Two TNARNG Installations \(Legacy 08-401 and 10-401\) – Fact Sheet; Orchard Data, and Protocol Document](#)

This project is contributing to the efforts of the American Chestnut Foundation to develop a blight-resistant hybrid that may one day be reintroduced into its former habitat across the eastern United States. The protocol documents the process of establishing American chestnut orchards at two Tennessee Army National Guard training sites, highlighting problems, successes, and lessons learned, so that other installations/organizations may also contribute.

Climate Change

[Climate Change Vulnerability Assessment Guidance for Conserving DoD Ecological Resources \(Legacy 10-460\) – Fact Sheet](#)

This project convened leading practitioners in the emerging field of climate adaptation and developed guidance for planners and natural resource managers for carrying out climate change vulnerability assessments. The project also prepared a training curriculum, based on the guidance, to assist managers in developing climate adaptation plans and strategies.

[Sea Level Rise Risk Assessment for DoD Coastal Installations on the North Carolina Coast \(Legacy 08-410\) – Final Report](#)

This project presents sea level rise scenarios on North Carolina military installations in order to aid decision-making regarding management of natural resources and infrastructure for DoD facilities.

[Modeling the Impacts of Climate Change on Birds and Vegetation on Military Lands \(Legacy 10-465\)](#)

In this project, models predict and map how climate change may alter vegetation and bird distribution on DoD lands in California. If regional climate changes result in declines of already sensitive species on military installations, those species could become listed as endangered, which could potentially impact military training. The following presentations were given at the annual conference of the Western Section of The Wildlife Society, which was held February 1-3, 2012 in Sacramento, California.

[Presentation – Using Environmental Clustering to Examine the Potential Regional Effects of Climate Change on Birds on Military Bases in California](#)

[Presentation – Birds and Buffers on Military Lands: The Impacts of Climate and Land-Use Change](#)

Ecosystem Management

[Inventory and Prioritization of Impaired Sites in the Yellow River Watershed in Alabama and Florida \(Legacy 09-432\) – Final Report; Appendices](#)

The Yellow River Basin has been identified as a conservation priority by Eglin Air Force Base, the U.S. Fish and Wildlife Service, the states of Alabama and Florida, and The Nature Conservancy. This document and its appendices inventory and assess habitat degradation within the river corridor and at unpaved road crossings throughout the basin, summarize impacts and restoration potential at each impaired location, and present a prioritized basin restoration plan for implementing conservation and restoration efforts.

[Development of a Management System and Geographic Interface for Biological Resource Data \(Legacy 10-111\) – Final Report, Fact Sheet, Transfer Plan, and Data File](#)

This project developed an online tool to view and archive biological resource data that would be accessible to non-specialist users and consistent with current technology specifications for DoD and its contractors at a pilot location, the Defense Fuel Support Point in San Pedro, California.

Invasive Species Management

[Sustainable Cooperative Invasive Species Management Areas \(CISMAs\) for Effective Management on Military Bases and Adjacent Lands across Florida \(Legacy 11-437\) – Monitoring Report](#)

This FY 2011 Monitoring Report details the invasive species management and restoration efforts on and adjacent to installations within the CISMA. It covers the following five CISMAs and military installations: Six Rivers CISMA (Eglin AFB), Apalachicola Regional Stewardship Alliance (Tyndall AFB), East Central Florida CISMA (Patrick/Canaveral AFB), Heartland CISMA (Avon Park AFR), and the Florida Keys CISMA (NAS Key West).

[Annual Report \(2011\) and Work Plans \(2012\)](#)

This document details the accomplishments, challenges, and plans for future efforts within the five CISMAs in Florida that contain DoD installations as members. The lessons learned and strategies presented could benefit anyone developing and implementing a CISMA.

LINKS OF INTEREST

DoD Natural Resources Conservation Program - www.DoDNaturalResources.net. DoD's NR Program provides policy, guidance, and oversight for management of natural resources on all land, air, and water resources owned or operated by DoD.

DoD Legacy Resource Management Program - <https://www.dodlegacy.org>. This DoD program provides funding to natural and cultural resources projects that have regional, national, and/or multi-Service benefits. The Legacy Tracker lets you download fact sheets and reports for completed Legacy-funded projects.

DoD Partners in Flight - www.dodpif.org. The DoD PIF Program supports and enhances the military mission while it works to develop cooperative projects to ensure a focused and coordinated approach for the conservation of resident and migratory birds and their habitats.

Biodiversity Handbook - www.dodbiodiversity.org. On this web site you will find a thorough introduction to biodiversity and how it applies to the military mission; the scientific, legal, policy, and natural resources management contexts for biodiversity conservation on DoD lands; and practical advice from DoD natural resources managers through 17 case studies. A Commander's Guide to conserving biodiversity on military lands is also available.

DoD Invasive Species Outreach Toolkit - www.DoDinvasives.org. The Toolkit is an education and outreach tool to help DoD land managers communicate about invasive species. It contains modifiable outreach materials such as posters, brochures, reference cards, and a PowerPoint presentation. A list of resources to help identify information and funding sources is also included.

DoD Pollinator Workshop - www.DoDpollinators.org. This web site provides an overview of pollinators and the reasons they are important to DoD. It highlights the 2009 NMFWA workshop on pollinators and has many useful resources, including fact sheets and technical reports, pocket guides to identifying pollinators, and links to other web sites on pollinators.

DENIX - www.denix.osd.mil/nr/. DENIX is an electronic environmental bulletin board that provides access to environmental information, such as Executive Orders, policies, guidance, INRMPS, fact sheets, and reports.

DISDI Portal - <https://rsgis.crrel.usace.army.mil/disdicac> (DoD only, CAC required). The DISDI Portal offers high-level geospatial data on DoD's installations, providing strategic maps of installations and information on how to access more detailed data. IVT data forms the foundation for the DISDI Portal, which is accessible to DoD staff with a common access card.

Strategic Environmental Research and Development Program and Environmental Security Technology Certification Program - www.serdp-estcp.org. SERDP and ESTCP are DoD's environmental research programs, harnessing the latest science and technology to improve environmental performance, reduce costs, and enhance and sustain mission capabilities. They are independent programs managed from a joint office to coordinate the full spectrum of efforts, from basic and applied research to field demonstration and validation.

Readiness and Environmental Protection Initiative - www.repi.mil. Under this initiative, DoD partners with conservation organizations and state and local governments to preserve buffer land and habitat around military installations and ranges as a key tool for combating encroachment. By promoting innovative land conservation solutions, REPI supports effective and realistic military training and testing now and into the future.

Cooperative Ecosystem Studies Unit Network - www.cesu.psu.edu. This network of 17 cooperative units provides research, technical assistance, and training to federal resource and environmental managers. DoD is a member of 14 units of the CESUs National Network.

Bat Conservation International - www.batcon.org. BCI is devoted to conservation, education, and research to protect bats and their ecosystems around the world.

Partners in Amphibian and Reptile Conservation - www.parcplace.org. PARC is a partnership of individuals and entities dedicated to the conservation of amphibians and reptiles and their habitats as integral parts of our ecosystem and culture through proactive and coordinated public/private partnerships.

Armed Forces Pest Management Board - www.afpmb.org. The AFPMB recommends policy, provides guidance, and coordinates the exchange of information on pest management throughout DoD. The AFPMB's mission is to ensure that environmentally sound and effective programs are present to prevent pests and disease vectors from adversely affecting DoD operations.



DOD NATURAL RESOURCES PROGRAM

Enabling the Mission, Defending the Resources

www.dodnaturalresources.net

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