

Aiming to Succeed

Targeting funds to enhance endangered species recovery

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Courtesy U.S. Fish and Wildlife Service

INTRODUCTION

There are over 2,100 species protected by the Endangered Species Act (ESA). From 1989-2010, state and federal agencies spent an average of over \$631 million per year on listed species.¹ Despite this expenditure, only 48 percent of listed species have been reported as stable or improving in the long term.² Although the budget may seem robust, it will likely never be enough to fully recover all the listed species in the United States.

The only practical response to this problem is to prioritize scarce resources to maximize the persistence of as much biodiversity as possible. In fact, wildlife agencies have been prioritizing their resources for decades. There are many ways to prioritize, depending on an agency's mission, organizational structure and conservation goals. One agency might seek to recover as many species as possible irrespective of their ecological role, while another agency might aspire to prevent the extinction of the most genetically distinct species. Regardless of the goal, prioritization works best when the goals are explicit and transparent to the public.

In 1983, the U.S. Fish & Wildlife Service (FWS) developed guidelines for prioritizing the development and implementation of recovery plans for ESA species. The guidelines consider four factors when assigning priorities: degree of threat, recovery potential, taxonomic uniqueness and conflict with human activities. In a 2005 study, the United States Government Accountability Office found that FWS does not strictly follow these guidelines.³ Instead, allocations are based primarily on the workload in each FWS regional office and opportunities to form partnerships and leverage funding. Each regional and field office has different formulas for allocating funding, and no single document describes all of the formulas. This approach lacks transparency and has contributed to the majority of funding being spent on less than 10 percent of listed species.⁴

Given the neglect of the 1983 recovery guidelines and the shortcomings of the prioritization system that FWS actually uses, the agency should ultimately reform its approach to allocating recovery funding across its regional and field offices. FWS should distribute funds based primarily on clear biological priorities, instead of budget and operational factors. Nationwide reform of this scale is difficult, however, and would likely require the agency to revamp its budgeting process and operating guidance. It may be unrealistic to expect such herculean changes in the next few years, given the limited resources currently available to FWS to invest in creating and implementing an improved prioritization system across all of its offices. But FWS and other federal agencies can begin making smarter decisions about their funding through more modest forms of prioritization. They can design specific initiatives or programs that explicitly prioritize funding to achieve a certain goal, such as completing recovery actions with the best potential to produce measureable, cost-effective improvements in the status of targeted species.

The first part of this paper describes three recent examples of these modest prioritization programs for ESA species. The agencies that administer these programs rarely refer to them as prioritization systems. But as we will illustrate, the programs do prioritize resources by using explicit criteria to decide which

competing conservation actions to fund. The paper concludes with recommendations on how agencies can improve and expand on these systems, which can help fill the gap left by the absence of a robust biologically-based nationwide prioritization system.

THREE RECENT PRIORITIZATION PROGRAMS

The FWS Showing Success/Preventing Extinction Initiative

One of the earliest initiatives to explicitly focus dollars on specific, highly-targeted ESA goals was the FWS Showing Success/Preventing Extinction Initiative. FWS introduced this initiative in its 2004 proposed budget and funded it through 2011 using parts of its annual budget for recovery. Typically, recovery funds are allocated by formula to each regional office and then distributed to individual field offices based on staff size, number of species in a geographic region and the previous year’s budget. Funds reserved through this initiative, however, were open to competition by FWS staff throughout the country.

The initiative was designed as a grant program within FWS to make additional resources available to agency staff for two explicit purposes. The first was to implement final recovery actions for a species that FWS could possibly propose for delisting or downlisting within one to two years. For example, a recovery project for Oregon chub funded in 2009 led to the downlisting of the species one year later. Second was to fund urgent actions needed to prevent critically endangered species from going extinct in the very near future.

The criteria for downlisting/delisting projects were different from those for extinction prevention projects (see Table 1). Using these different set of criteria, each regional office was asked to submit a prioritized list of five species for the Showing Success Initiative and another five species for the Preventing Extinction Initiative. To address recovery needs rapidly, the application process was simplified and required only a brief project proposal and simple budget for each species. Overall, FWS chose to prioritize projects for extinction prevention over those for downlisting or delisting. Thus, 77 percent of the \$11.3 million of total funding set aside for the initiative from 2004 to 2009⁵ was allocated to Preventing Extinction projects.⁶ Of the remaining 23 percent for Showing Success projects, over half targeted delisting a species.

Selection Criteria for Showing Success/Preventing Extinction Initiative	
Preventing Extinction	Showing Success
<ul style="list-style-type: none"> • Risk of extinction if unfunded • Likelihood of success with a single year of funding • Cross-program component and involvement of multiple partners • Potential to benefit more than one species 	<ul style="list-style-type: none"> • Immediacy (months or years) of achieving a status change (delisting or reclassification) • Likelihood of success with a single year of funding • Cross-program component and involvement of multiple partners • Breadth of species range (number of states) • Potential to benefit more than one species
<p>Applicants were asked to answer questions about risk and likelihood of success based on a four-point scale of Very High to Low. Source: FWS; 2011 funding request forms/</p>	

Table 1. Despite some similarities, the selection criteria for the Showing Success and Preventing Extinction Initiatives were distinct.

Both programs emphasized the immediacy of outcomes, which is an understandable priority, as delistings, downlistings and extinctions are often used by the Office of Management and Budget and Congress to gauge the success of the ESA. In addition, both programs have the advantage of funding projects that potentially fall between the cracks of routine annual funding to FWS regional and field offices. Recovery funding typically goes to high visibility species, but oftentimes a few targeted actions can make a big difference to those less visible species often left on the sidelines.

The BLM Endangered Species Recovery Fund

The Bureau of Land Management (BLM) manages 253 million acres – more land, and more wildlife habitat, than any other federal agency. Thus the actions of BLM often have profound impacts on threatened and endangered species. For example, there are 31 federally listed species with an estimated 100 percent occurrence on BLM lands.⁸ Since 2001, the agency has spent an average of \$21 million per year on endangered species, but has yet to implement over half of their top priority recovery actions.⁹

BLM chose to set aside 6 percent of its threatened and endangered species budget for targeted recovery actions with a high likelihood of success in the short-term. This initiative, called the Endangered Species Recovery Fund, was established in 2010 with the explicit goal of downlisting or delisting ESA species dependent on BLM lands, or precluding the need to list candidate species that rely on those lands. To maximize its impact, the agency has focused on those species that are wholly or in large part endemic to BLM land. Species with only a small percentage of their populations on BLM land have not been targeted because of the minimal potential impact from BLM’s actions.

BLM Endangered Species Recovery Fund Expenditures				
Year	2010	2011	2012	2013
Total projects new/old*	14	14/8	12/12	0/14
Total grants awarded	\$736,000	\$1,337,000	\$1,438,332	\$1,119,000
Average grant amount	\$52,571	\$60,772	\$59,930	\$72,000

Source: Adapted from BLM Species Recovery Fund Project Tracking 2010-2014 document, Kim Tripp, personal communication BLM.

* The term “old” refers to projects that were funded by the program in previous years and are continuing to receive funding.

Table 2. In the first four years, the fund distributed over \$4.5 million across 40 projects.

The Recovery Fund disburses funds to BLM offices to implement recovery actions based on a competitive process. In its first four years, the program has awarded over \$4.5 million to support 40 projects.¹⁰ In some cases, simple exclusion fencing has been enough to recover endangered plant species. Other projects have involved population surveys, public outreach campaigns, habitat restoration or the reduction of specific identified threats. The type and number of recovery actions in a project is not the prime factor in awarding funds. Rather, BLM state offices must be able to show that proposed projects will achieve significant recovery milestones within two to five years.

The Recovery Fund has targeted only species for which FWS has agreed would likely support a downlisting or delisting, assuming the criteria for a status change are met. BLM has required coordination with FWS from the beginning of a project to ensure clarification of the requirements and strategy for a

status change. As detailed in Table 3 below, the Endangered Species Recovery Fund has achieved its intended results in many instances. Some of these successes would not have been possible without the cooperation of other federal agencies. For example, the Department of Defense played a role in managing habitat for the Inyo California towhee.

Sample Accomplishments of BLM's Endangered Species Recovery Fund			
Species	Funding	Recovery Actions	Result
Maguire Daisy	\$120,000	<ul style="list-style-type: none"> • Population surveys • Relocation of camping grounds • Outreach to increase public awareness and support 	Delisted, January 2011
Inyo California Towhee	\$90,000	<ul style="list-style-type: none"> • Managed and reduced threats to habitat on BLM and military land • Restored degraded habitat 	Proposed delisting, November 1, 2013
Borax Lake Chub	\$45,000	<ul style="list-style-type: none"> • Managed vehicle and foot traffic • Fencing to exclude livestock • Managing geothermal and mineral exploration 	Downlisting recommendation in five-year review, August 2012
Coral Pink Sand Dunes Tiger Beetle	\$138,000	<ul style="list-style-type: none"> • Expansion of conservation areas • Restrictions on off-road vehicle (ORV) use 	Withdrawal of Proposed Rule to list, October 2, 2013

Adapted from May 24, 2013 BLM presentation provided by Kim Tripp.

Table 3. BLM's program demonstrates that relatively small investments in a few basic recovery actions can make it possible to recover and delist certain species, or eliminate the need to list certain candidate species.

Initially, the BLM concentrated the Recovery Fund on the narrow endemics on its land, which created a very fine filter in selecting projects. Now that much of the “low-hanging fruit” has been addressed, BLM may need to use other criteria to help prioritize recovery work on its lands. The agency could consider such factors as the severity of threat to a species, its biological uniqueness and whether it is a keystone species. Longer-term projects might be considered but they must still have the potential to hit key recovery milestones within ten years. To use the words of one BLM employee, “there must be a light at the end of the tunnel.” This reflects the agency’s ultimate goal to strategically do their part to support species recovery and reduce the number of threatened and endangered species on BLM land.

BLM was one of the first federal agencies to set aside a pot of money to implement recovery actions that would meet their specific goals of delisting, downlisting or precluding the need to list a species. Moving forward, BLM intends to expand the scope of the Recovery Fund beyond its own jurisdiction to include other federal land management agencies. In 2011, a total of \$610 million was spent on threatened and endangered species across 661 million acres of public land by BLM, FWS, the Department of Defense, the National Park Service, and the U.S. Forest Service.¹¹

The BLM Recovery Fund was established primarily to push recovering species across the finish line – delisting. But recovery prioritization initiatives should not all focus on this end goal. The FWS initiative profiled below provides funding for actions across the entire spectrum of species protected by the ESA, from those close to extinction to those ready for delisting.

The FWS Cooperative Recovery Initiative

Of its total expenditures on ESA-related activities, FWS spends less than half on recovery actions. For example, in 2011 FWS spent \$81,219,000 on recovery (45 percent of the budget for the Endangered Species Program).¹² Further, the majority of this funding supported staff salaries instead of on-the-ground recovery actions. To carve out funding specifically for recovery actions, FWS created the Cooperative Recovery Initiative, which takes a “strategic approach to implementing endangered species recovery actions on National Wildlife Refuges and in their surrounding ecosystems.” According to its 2012 performance report, the Refuge System had started implementing 61 percent of all recovery tasks for which it was responsible at the time, which is more than the original target of 54 percent in the Refuge System performance plan.¹³

The Cooperative Recovery Initiative has its roots in the Showing Success/Preventing Extinction Initiative and began as a budget initiative meant to support large-scale recovery work that might otherwise go unfunded. In fiscal year 2013, a total of \$5 million was dedicated to support the Recovery Initiative. These funds were distributed across FWS programs based on which projects best met qualifying criteria. The main criterion for projects relates to the occurrence of species relative to National Wildlife Refuges. The supporting criteria for proposals emphasize the likelihood that a project can be initiated within one year and show outcomes or substantial progress in three years (see Appendix 1 for a detailed list of all criteria). Thus, like the other initiatives described above, the Cooperative Recovery Initiative is meant to target recovery actions that will have a relatively immediate effect on a species’ status. Funding may be awarded to on-the-ground projects targeting species at any point in the spectrum of species decline and recovery – from those on the threshold of delisting to those at high risk for extinction.

THE EXTENT OF THE NATIONAL WILDLIFE REFUGE SYSTEM

The National Wildlife Refuge System comprises 562 refuges, 38 wetland management districts and other protected areas. All together the system protects over 150 million acres of land and water across the country. This network of refuges provides habitat for a wide variety of wildlife, including over 380 threatened or endangered plants and animals. Fifty-nine refuges comprising a total of 345,721 acres were established specifically to protect endangered species.

In 2013, the review team recommended ten projects aimed at approximately 50 species on over 15 refuges. The species included endangered invertebrates (e.g., Fender’s blue butterfly, Roswell springsnail, Noel’s amphipod), amphibians (e.g., dusky gopher frog), fish (e.g., Oregon chub, Klamath sucker), birds (e.g., whooping crane, roseate tern), mammals (e.g., Sonoran pronghorn) and plants.¹⁴

Defenders believes that the Cooperative Recovery Initiative is an excellent opportunity for FWS to show tangible and timely progress toward conserving endangered species. In particular, the initiative benefits from an emphasis on on-the-ground implementation over salary costs and collaboration among several vital programs within FWS, including the National Wildlife Refuge System and the Endangered Species Program. FWS requested increased funding for the Recovery Initiative to \$7.7 million in fiscal year 2015, which is a \$1.8 million increase from the previous year.¹⁵

SUMMARY AND RECOMMENDATIONS

The available funding to recover threatened and endangered species will likely continue to be limited for the foreseeable future. Given this harsh reality, explicit prioritization of recovery actions is increasingly necessary. Various criteria and values can be used to prioritize actions. While each of the initiatives profiled in this paper reflects modest efforts to prioritize funding, they share one important trait with more comprehensive prioritization systems: adhering to explicit criteria to decide which conservation actions to prioritize. For example, Table 1 lists the criteria for the Showing Success/Preventing Extinction Initiative, and the Appendix details the criteria for the Cooperative Recovery Initiative. By contrast, FWS's current method of allocating its recovery budget does not adhere strictly to the agency's 1983 recovery guidelines. Further, the three initiatives described here consider the efficiency of spending as measured by meaningful, near-term progress in a species' recovery. And each funds field-based projects instead of only staff salaries.

Defenders applauds the work of FWS and BLM to develop the three recovery initiatives described here. As the programs evolve, more will be learned about how best to implement focused recovery. FWS has already demonstrated such an evolution by basing the Cooperative Recovery Initiative on the previous Showing Success/Preventing Extinction Initiative. The BLM endangered species program is sharing its experiences with the other federal land management agencies.

In their future efforts to improve and expand prioritization systems for ESA species, federal agencies should consider implementing the following recommendations.

- The Department of the Interior should encourage initiatives that help its agencies work together for the overall benefit of endangered species. For example, if populations of a listed species span adjacent federal holdings, then cross-agency recovery efforts likely will be more effective. In addition, the Department of the Interior should seek broader partnerships with other agencies, such as the Department of Defense and Department of Agriculture. By directing their shared resources, these departments can spur species recovery across all federal lands. A joint recovery fund of this nature could either be co-managed, managed by an external third party, or reside within a single agency. Each agency could contribute different amounts of funds, which should be distributed based on which projects have the best potential to aid recovery. This potential should be judged using explicit criteria agreed on by all agencies.
- FWS should incorporate geospatial information to improve tracking, reporting and public understanding of recovery actions and species trends. The use of mapping tools will enable FWS to provide clearer, more objective and defensible assessments of a species' recovery progress. For example, population monitoring data can be overlaid with mitigation sites to evaluate the relationship between the two. Habitat range maps can be cross-checked against federal land designations to identify opportunities for cross-agency recovery projects. FWS can partner with other government departments, non-governmental organizations and other research institutions to

explore how best to combine information to support spatially-explicit recovery planning. Any system should be readily accessible online to encourage collaboration among recovery partners and to better communicate species status to the public.

- In its biennial reports to Congress, FWS should adopt a more consistent and defensible method of reporting incremental changes in species status. As of 2010, FWS has stopped reporting whether a species' status has improved, declined or remained the same relative to the prior reporting period. Instead, the agency simply reports whether a species' five-year status review recommends uplisting, downlisting or no change in ESA listing status. A more precise update on the species' status is needed to meaningfully capture changes in status, especially those that do not trigger a downlisting or delisting. FWS would not necessarily need to provide such updates in every report to Congress, particularly if those updates would require considerable agency resources to produce. For example, FWS could provide the updates in every third biennial report (every six years), with the intervening reports simply noting the results of a species' five-year status review. This is one way to provide meaningful status reviews on a limited budget.

APPENDIX

For the FWS Cooperative Recovery Initiative, the primary criteria for funding are recovery status and location in National Wildlife Refuges, but the additional supporting criteria may increase the priority of a project.

Selection Criteria for Cooperative Recovery Initiative Funding
<p><i>Qualifying Criteria</i></p> <ul style="list-style-type: none"> • Projects must address the implementation of recovery actions for species near a) delisting, b) reclassification from endangered to threatened or c) recovery actions that are urgently needed to stabilize a critically endangered species. The proposed conservation actions should be described in a recovery plan, recovery outline, 5-year review recommendations, action plan or other conservation management plan for the species. • Projects must address one or more qualifying species that occur on lands of the National Wildlife Refuge System (NWRS) or occur in such close proximity as to be strongly affected by management actions on lands of the NWRS.
<p><i>Supporting Criteria</i></p> <ul style="list-style-type: none"> • The extent to which the project ties to goals and objectives in Refuge management documents, such as Comprehensive Conservation Plans (CCPs) or Habitat Management Plans (HMPs). • The extent to which the project demonstrates cross-program coordination, partnership and benefits; addresses the conservation priorities identified in other management or conservation plans; and provides broader conservation benefits while linking to landscape-scale goals. • The extent to which the project demonstrates that it is working within the Strategic Habitat Conservation (SHC) framework. • The likelihood that the project can be initiated within one year and that successful conservation outcomes or substantive progress can be demonstrated within three years. • The quality of the proposal, such that the reader understands the purpose, objectives, methods and expected outcomes of the project and how it will benefit the target species.
<p>Source: FWS, 2013 Cooperative Recovery Initiative: Showing Success of Preventing Extinction on or Near National Wildlife Refuges Funding Request Form.¹⁶</p>

ENDNOTES

¹ U.S. Fish and Wildlife Service Expenditure Reports to Congress for 1989 through 2010.

² Male, T.D. and Bean, M.J. 2005. Measuring progress in US endangered species conservation *Ecology Letters* 8: 986-992. This study found that 52 percent of listed species were reported as stable or improving in the long term. When Defenders updated this analysis with data from 2004-2010, that number fell to 48 percent.

³ U.S. Government Accountability Office (GAO). Fish and Wildlife Service Generally Focuses Recovery Funding on High-Priority Species, but Needs to Periodically Assess Its Funding Decisions. Highlights of GAO-05-211 Prioritizing Recovery Funds, a report to the Chairman, Committee on Resources, House of Representatives. (April 2005).

⁴ Schwartz, M.W. 2008. The Performance of the Endangered Species Act, *Annual Review of Ecology, Evolution, and Systematics*.

⁵ Although the Showing Success/Preventing Extinction Initiative was funded through 2011, detailed funding data was only available for 2004 to 2009.

⁶ U.S. Fish and Wildlife Service. Kate Norman, personal communication (December 13, 2013).

⁷ U.S. Fish and Wildlife Service Memorandum to Regional Directors regarding Solicitation of FY 2013 Cooperative Recovery Proposals, including attachments (September 5, 2012).

⁸ U.S. Bureau of Land Management. Kim Tripp, personal communication (November 17, 2013).

⁹ U.S. Bureau of Land Management. 2010 BLM Endangered Species Recovery Fund. Information bulletin no. 2010-016. (November 17, 2009).

¹⁰ U.S. Bureau of Land Management. The BLM Endangered Species Recovery Fund presentation (May 24, 2013).

¹¹ Ibid.

¹² U.S. Department of the Interior Budget Justifications and Performance Information FY 2013. Fish and Wildlife Service: Endangered Species.

¹³ U.S. Department of the Interior. FY 2013/2014 Annual Performance Plan and FY 2012 Report (APP&R). (April 11, 2013).

¹⁴ U.S. Fish and Wildlife Service. Derived from National Review Team recommendations: regional summary of projects (January 23, 2013), Don Morgan, personal communication (November 15, 2013).

¹⁵ U.S. Department of the Interior Budget in Brief FY 2015, Budget Highlights: U.S. Fish and Wildlife Service).

¹⁶ U.S. Fish and Wildlife Service Memorandum to Regional Directors regarding Solicitation of FY 2013 Cooperative Recovery Proposals, including attachments (September 5, 2012).

Cover: Fender's blue butterfly (*Icaricia icarioides fenderi*)

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