United States Government Accountability Office

GAO

Report to the Chairman, Committee on Resources, House of Representatives

April 2005

ENDANGERED SPECIES

Fish and Wildlife Service Generally Focuses Recovery Funding on High-Priority Species, but Needs to Periodically Assess Its Funding Decisions

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GAO-05-211

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Highlights

Highlights of GAO-05-211, a report to the Chairman, Committee on Resources, House of Representatives

Why GAO Did This Study

Currently there are more than 1,260 species listed as endangered or threatened under the Endangered Species Act of 1973. While few species have gone extinct since 1973, only 9 have been "recovered" or removed from the list because they no longer need the act's protection. This has raised questions about how the U.S. Fish and Wildlife Service (Service) allocates its recovery funds. Proponents of the act believe that the Service's recovery funds are only a small fraction of what is needed to make greater recovery progress.

The act and agency guidelines require the Service to prioritize species to guide recovery fund allocation. In fiscal year 2000 through 2003, the Service spent $127 million dollars in recovery funds attributable to individual species. In this report, GAO analyzed (1) the extent to which the Service's allocation of recovery funds compares with its recovery priority guidelines and (2) what factors influence the Service's recovery allocation decisions.

What GAO Recommends

To help ensure that the Service is making the best use of available recovery resources, GAO is recommending that the Service periodically assess the extent to which higher priority species receive recovery funds and report this information publicly. The Department of the Interior agreed with GAO's findings and recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-05-211.

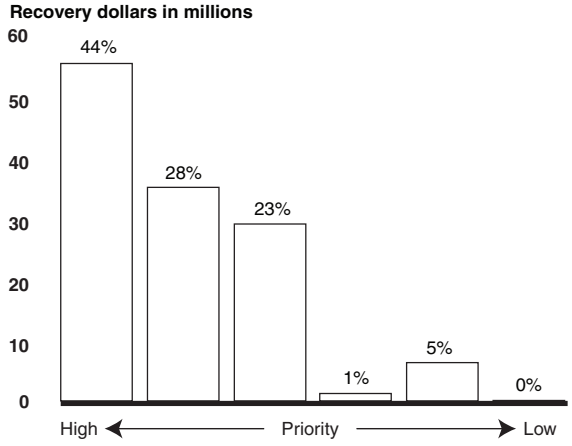
To view the full product, including the scope and methodology, click on the link above. For more information, contact Robin Nazzaro at (202) 512-3841 or nazzaror@gao.gov.

What GAO Found

The Service spent its recovery funds in a manner generally consistent with species priority in fiscal years 2000 through 2003, spending almost half (44 percent) of the $127 million on the highest priority species (see figure below). Species in the next two highest priority groups received almost all of the remaining recovery funds (51 percent). Species in the three lowest priority groups received very little funding (6 percent). Most listed species (92 percent) are in the top three priority groups.

When Service officials allocate recovery funds, they base their decisions to a significant extent on factors other than a species' priority ranking. At the headquarters level, a formula that focuses on each region's workload determines how recovery funds are allocated to regional offices. Each regional office allocates its recovery funds to their field offices differently, but in no case is priority ranking the driving factor. Instead, regional officials focus primarily on opportunities for partnerships, though they told us that they also focus on species facing the gravest threats. Field office staff we spoke with emphasized the importance of pursuing funding partnerships in order to maximize their scarce recovery funds. The Service does not know the effect of these disparate allocation systems because it does not have a process to routinely measure the extent to which it is spending its recovery funds on higher priority species. While we found that for fiscal years 2000 through 2003 the Service spent a majority of its recovery funds on high priority species, without periodically assessing its funding decisions, the Service cannot ensure that it spends its recovery funds on the species that are of the greatest priority and, in cases where it does not, determine whether its funding decisions are appropriate.

Recovery Funds Spent on Species by Priority, Fiscal Years 2000-2003



Source: GAO analysis of Fish and Wildlife Service data.

Note: Percentages add to more than 100 percent due to rounding.

Contents

Letter

1

Results in Brief 3
Background 5
The Service Spends a Significant Portion of Recovery Funds on the Highest Priority Species 13
The Service Considers Factors Besides Species Priority When Allocating Recovery Funds but Does Not Assess the Results of Its Funding Decisions 19
Conclusions 30
Recommendations for Executive Action 31
Agency Comments and Our Evaluation 31

Appendixes

Appendix I: Scope and Methodology 33

Appendix II: Comments from the Department of the Interior 38
GAO Comments 40

Appendix III: GAO Contact and Staff Acknowledgments 42
GAO Contact 42
Staff Acknowledgments 42

Tables

Table 1: Total Reported Expenditures for All Endangered Species Activities and Fish and Wildlife Recovery Expenditures by Year for Fiscal Years 2000-2003 9
Table 2: Fish and Wildlife Service's Recovery Priority Ranking Schedule 10
Table 3: Total Reported Expenditures for All Endangered Species Activities Compared to Fish and Wildlife Service's Recovery Expenditures During Fiscal Year 2003—for Top 20 Species 27
Table 4: Fish and Wildlife Service's Recovery Expenditures Compared to Total Reported Expenditures on All Endangered Species Activities During Fiscal Year 2003—for Top 20 Species 29
Table 5: GAO Groupings of Priority Numbers 35
Table 6: Number of Species in Each Priority Group, by Year 36

Figures

Figure 1: Recovery Expenditures by Priority, Fiscal Years 2000-2003 4
Figure 2: The Fish and Wildlife Service's Fiscal Year 2003 Budget 8
Figure 3: Location of Fish and Wildlife Service's Seven Regions 12
Figure 4: Recovery Expenditures by Priority Ranking, Fiscal Years 2000-2003 14
Figure 5: Distribution of Species by Priority Ranking as of September 2003 15
Figure 6: Weighted Average Per Species Expenditure, by Priority Ranking, Fiscal Years 2000-2003 16
Figure 7: Distribution of Endangered and Threatened Species by Priority Ranking as of September 2003 17
Figure 8: Weighted Average Per Species Expenditures, by Taxonomic Classification, Fiscal Years 2000-2003 18
Figure 9: The California Red-Legged Frog Is Important to a California Community Due to Its Prominence in a Famous Mark Twain Story 25

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Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, D.C. 20548

April 6, 2005

The Honorable Richard W. Pombo
Chairman, Committee on Resources
House of Representatives

The Endangered Species Act of 1973 protects more than 1,260 species facing extinction or likely to face extinction (referred to as endangered and threatened species, respectively). The purpose of the act is to conserve endangered and threatened species and the ecosystems upon which they depend. Critics of the act are concerned that this goal is not being met because only 9 species have been "recovered"—brought to the point where they no longer need the act's protection—since the act's inception in 1973.[1] However, proponents of the act counter that because of the act's protections only 9 species have gone extinct. Proponents also point out that funding available to recover species is only a small fraction of what federal scientists believe is needed, making greater recovery progress a practical impossibility.

The U.S. Fish and Wildlife Service (Service) is responsible for implementing the act for freshwater and land species.[2] To recover species, the Service develops recovery plans, which include site-specific recovery tasks such as identifying the size of a population or restoring habitat. Recovery plans can take years or decades to fully implement, depending on the needs of the species covered by the plan. In 1979, Congress amended the act, in part, to require the Service to establish guidelines for prioritizing the development and implementation of recovery plans. The Service established guidelines that, among other things, prioritize species based on factors such as the degree of threat the species faces and its potential to be recovered.[3] Under these guidelines, therefore, species facing a high degree of threat and having a high potential for recovery are to be afforded the highest priority. Species in this category include the northern spotted owl,

[1]As of September 30, 2004.

[2]The Department of the Interior has delegated its responsibility for freshwater and land species to the U.S. Fish and Wildlife Service, which established an endangered species program to implement the requirements of the act. Responsibility for implementing the act for anadromous fish and most marine species resides with the Department of Commerce, which has delegated its responsibilities to the National Marine Fisheries Service. This report does not address the National Marine Fisheries Service program.

[3]48 *Fed. Reg*. 43098 (Sept. 21, 1983).

the grizzly bear, and the American crocodile as well as lesser-known high-priority species such as Fender's blue butterfly, Texas wild rice, and the Hawaiian dark-rumped petrel (a sea bird). The recovery guidelines emphasize that they should be used only as a guide, not as an inflexible framework for determining funding allocations.

During fiscal years 2000 through 2003, the Service allocated $245 million—between $56 million and $65 million per year—to develop and implement plans under its recovery program.[4] Biologists inside the Service and elsewhere believe these funds are a small fraction of what is needed in the face of the daunting recovery challenge. As a result, the Service increasingly relies on partnerships with other federal agencies, the states, and private organizations to help implement recovery plans and has cultivated relationships with many of them by jointly funding projects. For example, the Service's Hawaii field office is jointly funding a project with other federal agencies, local governments, and The Nature Conservancy to revitalize watersheds to help recover the endangered Hawaiian duck, among other species. Although the Service is required to report annually on all federal and some state expenditures on listed species,[5] it does not separately report on how it spent its recovery funds by species.[6]

You asked us to assess how the Service allocates its recovery funds among endangered and threatened species. In this report, we (1) analyze how the Service's allocation of recovery funds compares with its recovery priority guidelines and (2) determine what factors influence the Service's recovery funding allocation decisions. Since most of the Service's recovery funding was spent on salaries that are not allocated on a per species basis, we asked each of the Service's regional offices to identify, to the extent possible, the spending on individual species for fiscal years 2000 through 2003. Collectively, the regions were able to attribute to individual species $127 million (52 percent) of the $245 million the Service allocated to the recovery program. We also obtained the individual species' priority ranking based on the recovery priority guidelines for those years. We then

[4]All dollars in this report are in current year dollars.

[5]The act requires the Service to submit to Congress by January 15th an annual report covering the preceding fiscal year containing an accounting of a species by species basis for all reasonably identifiable expenditures made primarily for the conservation of endangered or threatened species pursuant to the act.

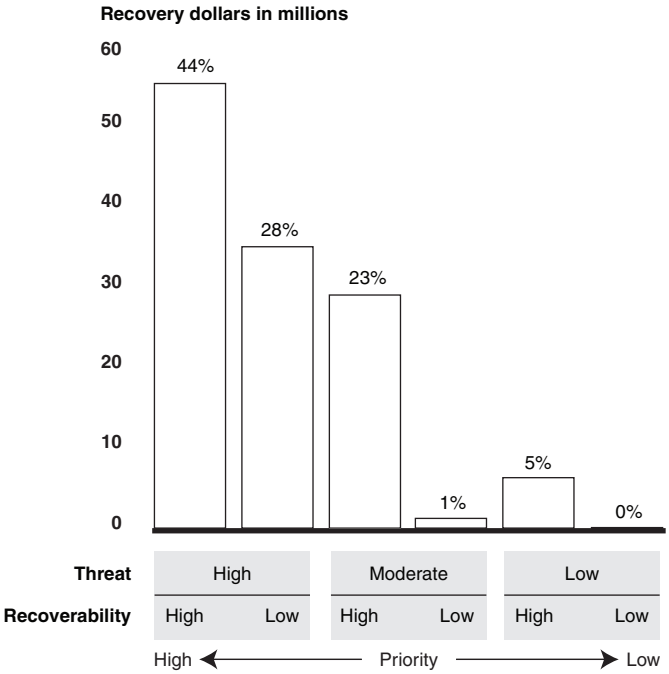
[6]In this report, the term "spent" refers to budget outlays or expenditures.

compared the recovery expenditures for individual species with those species' priority rankings for fiscal years 2000 through 2003. In addition, we interviewed Service recovery officials in headquarters, all seven regional offices, and several field offices throughout the country. (See App. I for a more detailed description of the scope and methodology of our review). We did not make a judgment about the adequacy or accuracy of the Service's recovery priority system. In this report we analyzed only Fish and Wildlife Service's recovery expenditures, not expenditures on other endangered and threatened species activities (which are reported, in combination with recovery expenditures, in Fish and Wildlife Service's annual expenditure report to Congress) or expenditures from other entities. We performed our work between February 2004 and January 2005 in accordance with generally accepted government auditing standards.

Results in Brief

The Fish and Wildlife Service has spent its recovery funds in a manner generally consistent with its recovery priority guidelines. For fiscal years 2000 through 2003, the Service spent nearly half (44 percent) of the recovery funds attributable to individual species on species with both a high degree of threat and a high potential for recovery (see fig. 1). These species constitute one-third of all endangered and threatened species, and they received, on average, more funding than species that were lower priority. Of the remaining recovery funds, almost all (51 percent) was spent on species in the next two highest priority groups—species with a high threat assessment but a low potential for recovery, and species with a moderate threat assessment but a high potential for recovery. Very little (6 percent) was spent on species in the remaining three lowest priority groups and most of this is attributable to spending on two species: the Bald Eagle (which is nearing delisting) and the Canada Lynx (which was embroiled in controversy).

Figure 1: Recovery Expenditures by Priority, Fiscal Years 2000-2003



Source: GAO analysis of Fish and Wildlife Service data.

Note: Percentages add to more than 100 percent due to rounding.

When Service officials allocate recovery funds, they base their decisions to a significant extent on factors other than those contained in the recovery priority guidelines, including workload and partnerships with other organizations. Headquarters allocates most of its recovery budget among the Service's seven regional offices using a formula to estimate each region's workload based on the number of species that the region is responsible for and a relative estimate of the cost to recover each species. This formula does not necessarily reflect the threats facing a species or its recoverability. Service officials told us that they use this formula because it provides relatively stable funding to each region—an important consideration because most of a region's recovery budget supports staff salaries for recovery biologists. These biologists work on a variety of recovery activities including helping to develop recovery plans, coordinating recovery tasks and developing recovery partnerships. After headquarters allocates funds to the regional offices, the regional offices then allocate funds to the field offices, relying extensively on factors such as long-standing arrangements to work with partners to recover specific

species and other opportunities to have partners bring funding and resources to the recovery program. Officials throughout the Service told us that, in allocating funding, it is crucial to have flexibility to stray from the recovery priority guidelines to maximize recovery resources contributed through partnerships. However, the Service does not have a process to routinely measure the extent to which it is spending its recovery funds on high-priority species. As a result, the Service cannot be certain that it will continue to spend its recovery funds on the highest priority species as it attempts to maximize its partners' contributions. In addition, because the Service does not separately report on how it spent its recovery funds by species, it cannot show Congress or the public the extent to which it is focusing its resources on the highest priority species, or explain, in cases where it is not, that its resource decisions are still appropriate. To make its allocation process more systematic and transparent, we recommend that the Service periodically assess the extent to which it is following its recovery priority guidelines, identify how factors other than those in the guidelines are affecting its funding allocation decisions, and report this information publicly.

We provided the Department of the Interior with a draft of this report for review and comment. In general, the Department agreed with our findings and recommendations. The Department's letter and our response to it is presented in appendix II.

Background

The purpose of the Endangered Species Act of 1973 is to conserve endangered and threatened species and the ecosystems upon which they depend. The act defines "conservation" as the recovery of endangered and threatened species so that they no longer need the protective measures afforded by the Act. The act defines as endangered any species facing extinction throughout all or a significant portion of its range and defines as threatened any species likely to become endangered in the foreseeable future. The act requires the Secretary of the Interior to publish a list of species it determines are endangered or threatened in the Federal Register and specify any critical habitat of the species with in its range—habitat essential to a species' conservation. Loss of habitat is often the principal cause of species decline. Additionally, the act establishes a process for federal agencies to consult with the Service about their activities that may affect listed species. Federal agencies must ensure that their activities, or any activities they fund, permit or license, do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of its critical habitat.

There were 1,264 species in the United States listed as endangered or threatened as of September 30, 2004.[7] The Service has responsibility for 1252 of these species. Thirty-two species have been removed from the list: 9 species as a result of recovery efforts, 9 because they have been declared extinct, and 14 species for other reasons, mostly because new information showed that listing was no longer warranted.[8]

The Service develops and implements recovery plans, among other things, to reverse the decline of each listed species and ensure its long-term survival. A recovery plan may include a variety of methods and procedures to recover listed species, such as protective measures to prevent extinction or further decline, habitat acquisition and restoration, and other on-the-ground activities for managing and monitoring endangered and threatened species. According to Service officials, it is their policy to issue a recovery plan within two and a half years of the species' date of listing. The Service exempts species from the plan requirement when it is determined a plan will not promote their conservation.[9] For example, the ivory-billed woodpecker is exempt because the Service thinks it is extirpated from the wild throughout its range.

Recovery plans aim to identify the problems threatening the species and the actions needed to resolve them. The act directs the Service, to the maximum extent practicable, to incorporate into each recovery plan (1) a description of site-specific recovery tasks necessary to achieve the plan's goal for the conservation and survival of the species; (2) objective measurable criteria that will result in a determination that the species can be removed from the list of endangered and threatened species (delisted); and (3) an implementation schedule that estimates the time and cost required to carry out the recovery tasks described in the recovery plan. Service employees, independent scientists, species experts, or a mix of

[7]This does not include foreign species—species whose current and historic range occurs entirely under the jurisdiction of other countries.

[8]Some species were delisted because new information showed the species to be more widespread or abundant than believed at the time the species was listed. Other species were delisted for taxonomic reasons, meaning that additional analysis found the species was not unique; for example, it was simply a population of another common species making it ineligible for listing. One species, the Hoover's woolly-star, was delisted as a result of recovery actions and because of the availability of new information—specifically, a new population was discovered. We counted this species as one of the 9 species delisted as a result of recovery efforts.

[9]The Service does not require recovery plans for foreign species.

these people can develop recovery plans. According to Service officials, as of September 2004, the Fish and Wildlife Service had 551 approved recovery plans covering more than 1025 species (more than 80 percent of all listed species).

The act also requires the Service to report biennially to certain Congressional committees on efforts to develop and implement recovery plans, and on the status of listed species for which plans have been developed. The Service implements this requirement through its biennial *Recovery Report to Congress*.[10] Additionally, the act requires the Service to submit an annual report to the Congress on federal expenditures for the conservation of endangered or threatened species, as well as expenditures by states receiving federal financial assistance for such conservation activities.[11] As part of its efforts to compile data for this report, the Service collects data on recovery fund expenditures on a species-specific basis, although these data have not been reported separately in published expenditure reports.

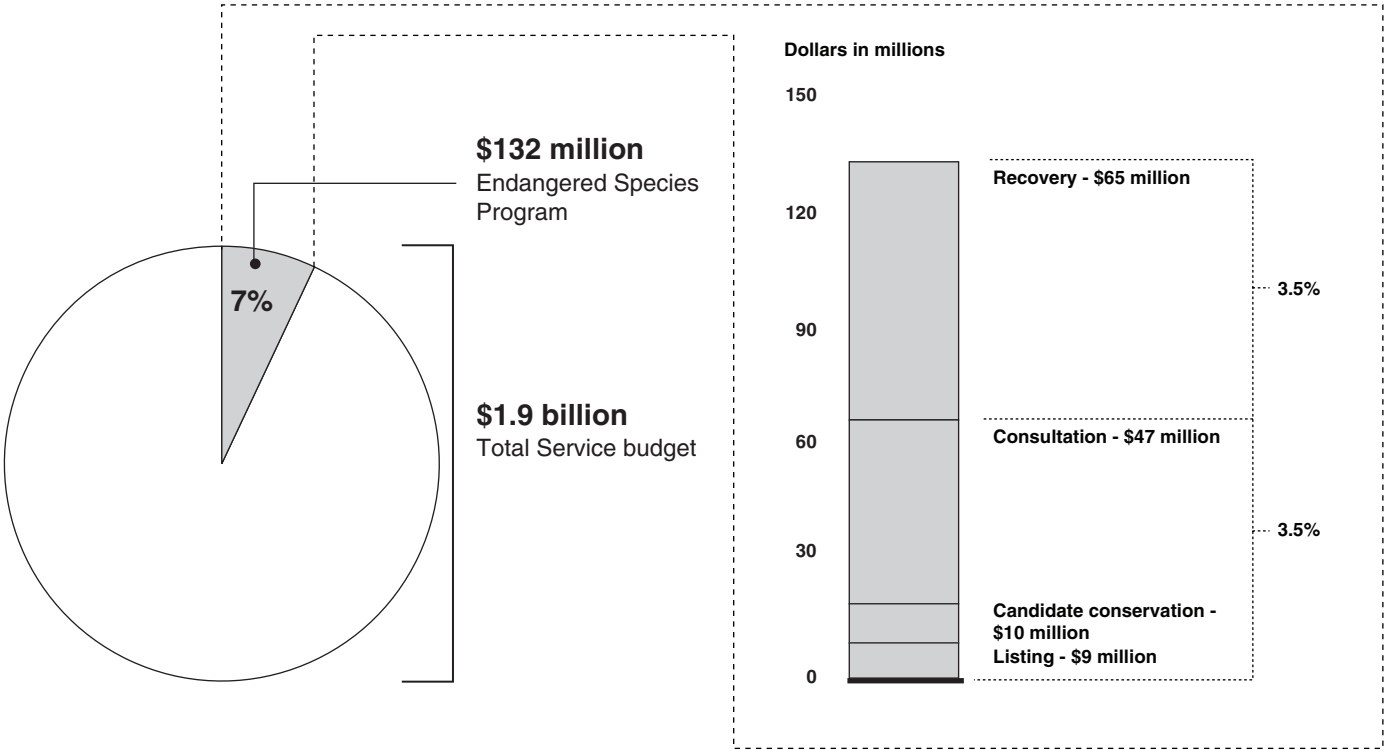
With regard to Service funds, the Endangered Species program is a small portion of the Service's overall budget ($132 million of $1.9 billion in fiscal year 2003). Of this amount, about one-half is devoted to the recovery program, $65 million (see fig. 2). This is similar to previous fiscal years.[12] The funds spent on the recovery program, however, are only a portion of the total money spent to recover species. Some of the Service's other programs, including refuges, contribute funds and staff to species recovery. In addition, according to the Service, other federal and non-federal entities contribute substantial funds to species recovery.

[10]The latest report is *Recovery Report to Congress*, *Fiscal Years 2001-2002*; U.S. Fish and Wildlife Service.

[11]See, for example, *Federal and State Endangered and Threatened Species Expenditures*, *Fiscal Year 2003*, U.S. Fish and Wildlife Service. This is the most recent report available.

[12]In fiscal years 2000, 2001 and 2002 the Service allocated, respectively, $56 million, $60 million and $64 million in recovery funds.

Figure 2: The Fish and Wildlife Service's Fiscal Year 2003 Budget



Source: Fish and Wildlife Service and Department of the Interior budget information.

Note: Candidate species are plants and animals for which the Service has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act, but for which development of a listing regulation is precluded by other higher priority listing activities. The Candidate Conservation Program provides a means for conserving these species.

In addition to the Service's Endangered Species Program expenditures to recover species, other programs in the Service as well as other federal and state agencies spend substantial funds on endangered species activities, including land acquisition (see table 1).

Table 1: Total Reported Expenditures for All Endangered Species Activities and Fish and Wildlife Recovery Expenditures by Year for Fiscal Years 2000-2003

In thousands of dollars	FY 2000	FY 2001	FY 2002	FY 2003
Total reported Federal and State Expenditures for All Endangered Species Activities (including land acquisition)	610,286	2,442,356	1,191,752	1,201,166
Service Recovery Expenditures	37,905	27,814	39,021	48,418

Source: Fish and Wildlife Service.

Note: The source of data for the row "Total Reported Federal and State Expenditures on All Endangered Species Activities (including land acquisition)" is the Service's fiscal year 2003 expenditure report (Federal and State Endangered and Threatened Species Expenditures, Fiscal Year 2003, U.S. Fish and Wildlife Service). In this report, the Service identifies a number of differences in reporting methods that make it difficult to compare expenditure data from different years. For example, prior to the fiscal year 2001 report, the Service did not include cost data that could not be attributed to a specific individual species. These data are now included, and partially explains the notable difference between the fiscal year 2000 and the fiscal year 2001 totals. The data contained in this row also include Service recovery fund expenditures. The source of data for the row "Service Recovery Expenditures" is unpublished data that the Service collected for its expenditure reports. The Fiscal year 2000 data does not include cost data that could not be attributed to a specific individual species while the fiscal year 2001-2003 data does.

Congress amended the Endangered Species Act in 1979 to require the Secretaries of the Interior and Commerce to establish, and publish in the Federal Register, agency guidelines that include a priority system for developing and implementing recovery plans. The Service adopted recovery priority guidelines in 1980 and amended them in 1983.[13] The guidelines consist of two parts:

[13]48 *Fed. Reg.* 43098 (Sept. 21, 1983).

- Species are assigned a priority ranking between 1 and 18 on the basis of (in descending order of importance) (1) the degree of threat confronting the species, (2) recovery potential (the likelihood for successfully recovering the species),[14] and (3) taxonomy (genetic distinctiveness).[15] (See table 2.) Additionally, a "c" is added to the ranking if there is conflict with economic activities, like development; this gives the species priority over other species with the same ranking but without a "c". Thus, the highest possible priority ranking is a "1c". The Service sometimes changes a species' priority ranking when warranted by a change in the species' situation.

Table 2: Fish and Wildlife Service's Recovery Priority Ranking Schedule

Priority rank	Degree of threat	Recoverability potential	Taxonomy
1	High	High	Monotypic genus
2	High	High	Species
3	High	High	Subspecies
4	High	Low	Monotypic genus
5	High	Low	Species
6	High	Low	Subspecies
7	Moderate	High	Monotypic genus
8	Moderate	High	Species
9	Moderate	High	Subspecies
10	Moderate	Low	Monotypic genus
11	Moderate	Low	Species
12	Moderate	Low	Subspecies
13	Low	High	Monotypic genus
14	Low	High	Species
15	Low	High	Subspecies

[14]According to the Service's priority guidelines, the criteria used to determine recovery potential are how well the ecological processes and threats that affect the species are understood, how easily the threats can be alleviated, and whether intensive management is needed to recover the species.

[15]According to the Service's priority guidelines, the criterion related to taxonomy (genetic distinctiveness) is intended to devote resources on a priority basis to those species representing highly distinctive or isolated gene pools, as reflected by the taxonomic level at which they are recognized.

(Continued From Previous Page)

Priority rank	Degree of threat	Recoverability potential	Taxonomy
16	Low	Low	Monotypic genus
17	Low	Low	Species
18	Low	Low	Subspecies

Source: Fish and Wildlife Service Endangered and Threatened Species Listing and Recovery Priority Guidelines.

Note: A species that is a monotypic genus is the only remaining species representing the entire genus.

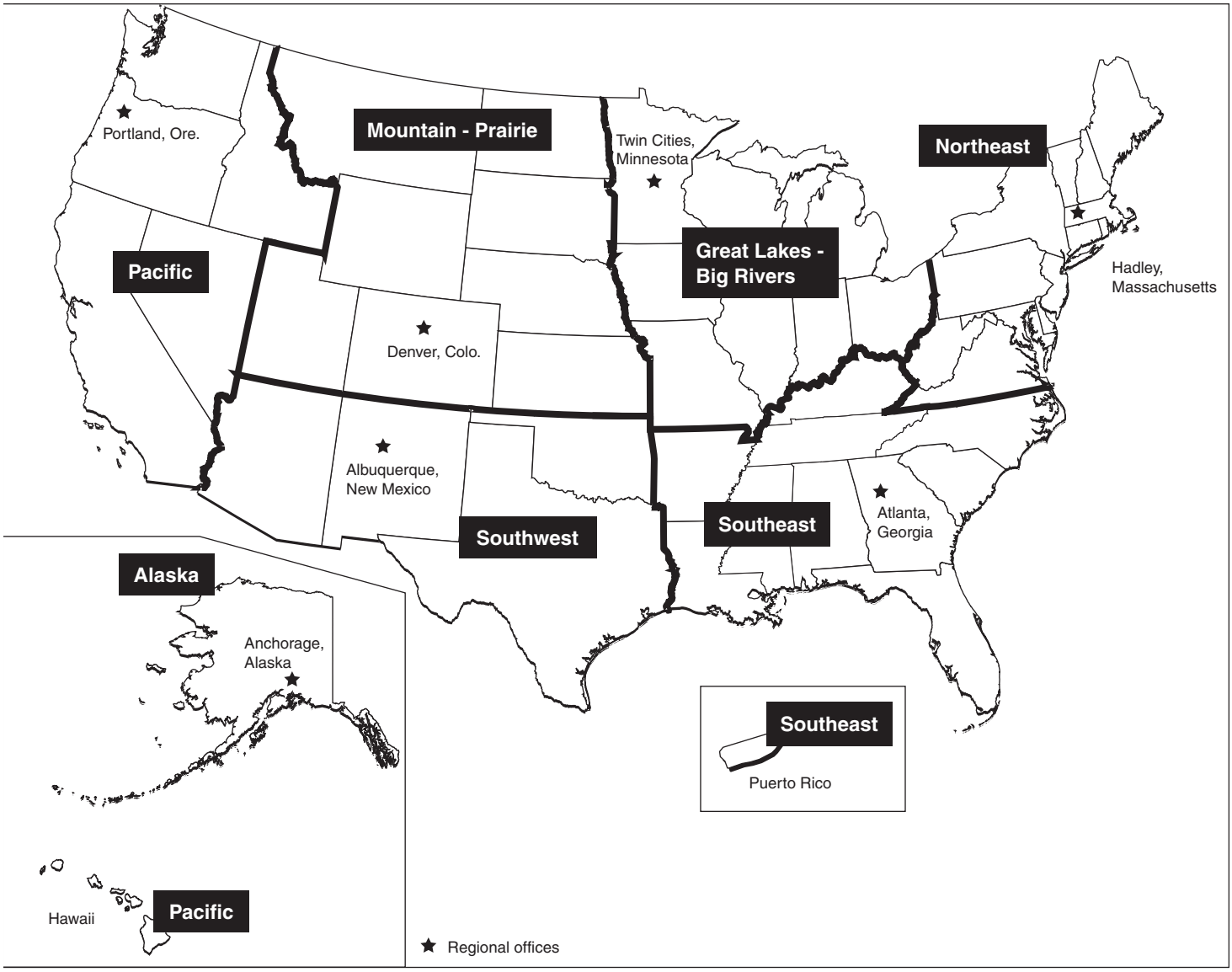
- The second part of the priority system ranks the recovery tasks within each recovery plan. Each task is assigned a priority number from 1 to 3, with 1 being the highest. A priority 1 task is "an action that must be taken to prevent extinction or to prevent the species from declining irreversibly." A priority 2 task is "an action that must be taken to prevent a significant decline in species population/habitat quality or some other significant negative impact short of extinction", and a priority 3 task is "all other actions necessary to provide for full recovery of the species."[16]

The recovery guidelines emphasize that they should be used only as a guide, not as an inflexible framework for determining funding allocations.

Within the Service, responsibility for implementing the act is divided among its three administrative levels: headquarters, regions and field offices. Headquarters officials develop policy and guidance and allocate funding to the regions. Regional directors in the seven regions (shown in figure 3) make most decisions on how to spend endangered species program funds and are responsible for managing their field offices' program activities. Field offices are responsible for implementing program activities and setting priorities for projects they will undertake.

[16]We did not assess how the Service's allocation of recovery funds compares with task priority.

Figure 3: Location of Fish and Wildlife Service's Seven Regions



Source: GAO's representation of information provided by the U.S. Fish and Wildlife Service.

Note: The U.S. Virgin Islands (not shown) is also part of the Southeast Region.

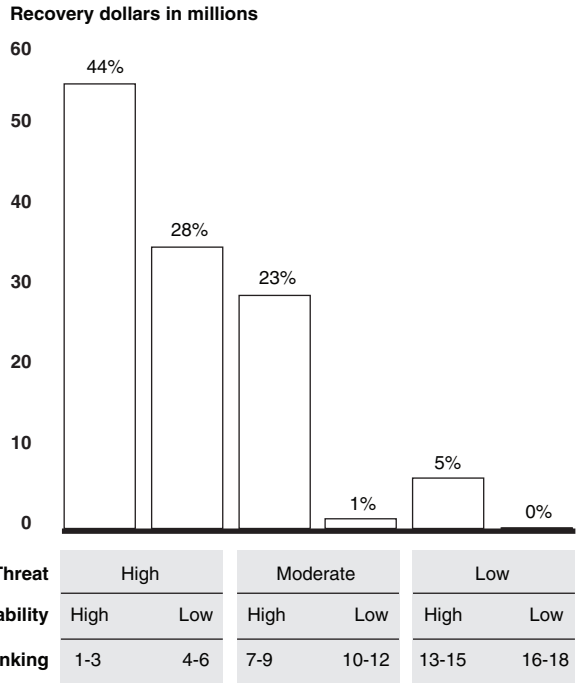
The Service Spends a Significant Portion of Recovery Funds on the Highest Priority Species

The Fish and Wildlife Service spent its recovery funds in a manner generally consistent with species priority in fiscal years 2000 through 2003. From fiscal years 2000 to 2003, the Service spent 44 percent of its recovery funds attributable to individual species on those species with the highest priority, the 415 species ranked 1 through 3 on the 18-point priority ranking scale (see fig. 4).[17] However, 25 of these species received no recovery funding at all during fiscal years 2000 through 2003.[18] Additionally, two species with low priority rankings, the bald eagle (with a priority ranking of 14c) and the Canada lynx (with a ranking of 15), received substantial recovery funding during fiscal years 2000-2003.

[17]There were 415 species ranked 1 through 3 at the end of fiscal year 2003. In fiscal years 2000 through 2002 there were 395, 408 and 416 species ranked 1 through 3, respectively. Our analysis of species priority rankings considered species, subspecies and populations of species, as appropriate. For example, different wolf populations have different priority rankings.

[18]Twenty-five of the 415 species ranked 1 through 3 in fiscal year 2003 received no funding attributable to individual species during fiscal years 2000-2003.

Figure 4: Recovery Expenditures by Priority Ranking, Fiscal Years 2000-2003

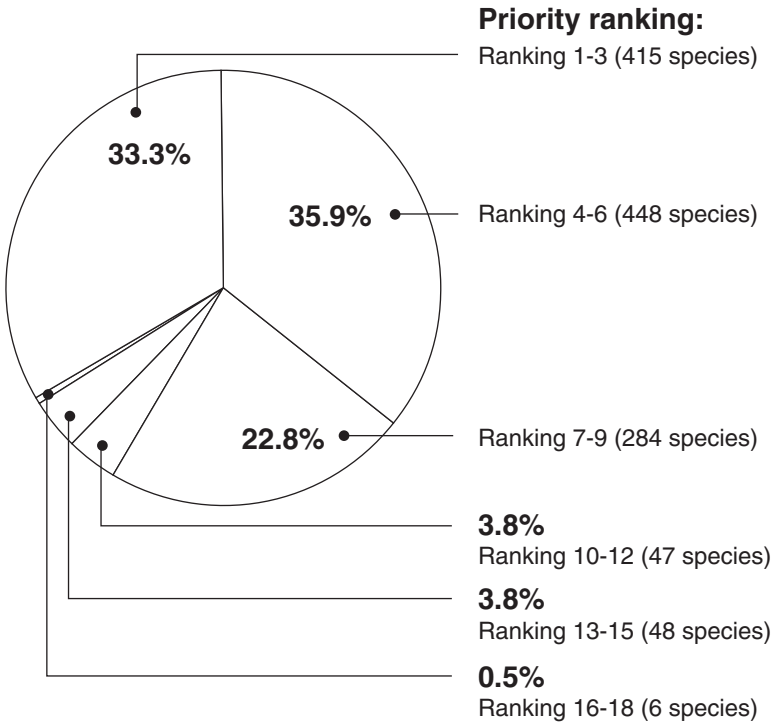


Source: GAO analysis of Fish and Wildlife Service data.

Note: Percentages add to more than 100 percent due to rounding. Recovery expenditures on species with priority numbers 16-18 are less than one percent.

One reason the Service spent 44 percent of its recovery funds attributable to individual species on the highest priority species is that this group accounts for a significant portion of all listed species—one-third (see fig. 5). Similarly, the Service spent almost all (94 percent) of its attributable recovery funds on species ranked 1 through 9 on the 18-point scale, which account for 92 percent of all listed species.

Figure 5: Distribution of Species by Priority Ranking as of September 2003

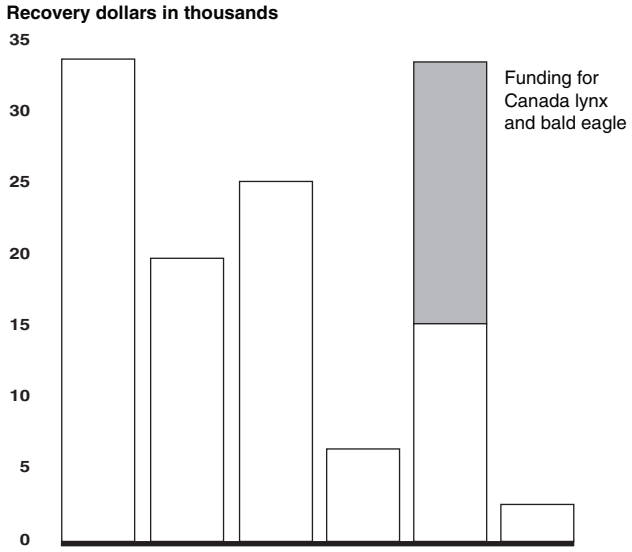


Source: GAO analysis of Fish and Wildlife Service data.

Note: The distribution of species by priority ranking in fiscal years 2000, 2001 and 2002 is not substantially different from the distribution in fiscal year 2003, see app I.

As shown in figure 6, analysis of average spending on a per species basis also reveals that more expenditures are made on higher priority species. Additionally, the analysis shows the emphasis the Service placed on species with a high degree of recoverability. The relatively large amount of funding spent on species with low priority rankings (13 through 15) is greatly influenced by spending on the bald eagle (with a priority ranking of 14c) and the Canada lynx (with a ranking of 15). The bald eagle is nearing delisting and the funding was spent on delisting activities. The Canada lynx was embroiled in controversy that required recovery staff to respond to litigation. When spending on these two species is removed, the average amount spent on species in this priority group is significantly lower.

Figure 6: Weighted Average Per Species Expenditure, by Priority Ranking, Fiscal Years 2000-2003

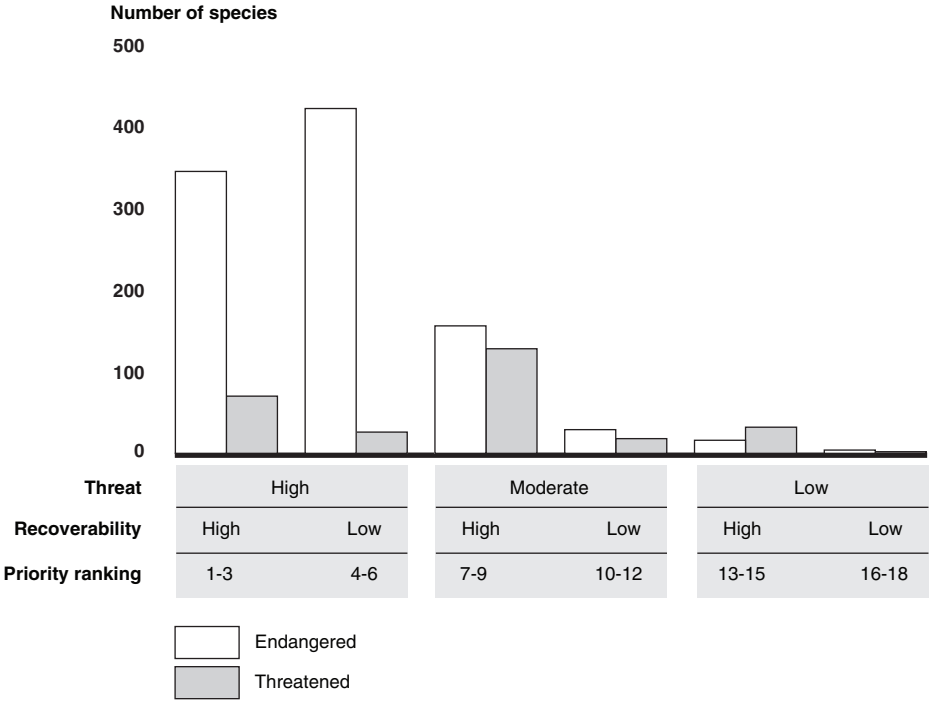


Threat	High		Moderate		Low	
Recoverability	High	Low	High	Low	High	Low
Priority ranking	1-3	4-6	7-9	10-12	13-15	16-18

Source: GAO analysis of Fish and Wildlife Service data.

In addition to species priority ranking, another obvious measure of priority is whether a species is endangered or threatened. Over three-quarters (78 percent) of species protected under the act are listed as endangered, and most of these have high priority rankings (see fig. 7). We analyzed spending by species status (endangered or threatened) and found that the Service spent a majority (64 percent) of its recovery funds on endangered species during fiscal years 2000 through 2003.[19]

Figure 7: Distribution of Endangered and Threatened Species by Priority Ranking as of September 2003

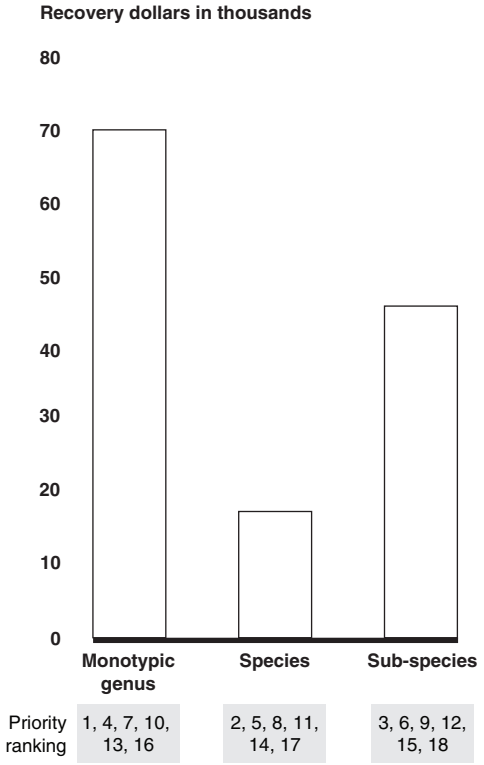


Source: GAO analysis of Fish and Wildlife Service data.

[19]This analysis compares spending in fiscal years 2000 through 2003 with species status as of September 30, 2003. Between fiscal years 2000 and 2003, the Service changed the status of only two domestic species, both from endangered to threatened. The species were the large-flowered skullcap and two populations of the gray wolf.

Finally, we analyzed spending by the three taxonomic classifications included in the Service's recovery priority guidelines—monotypic genus, species, and subspecies. As shown in figure 8, an analysis of average spending on a per species basis reveals that more expenditures are made on listed entities classified as monotypic genus. A species that is a monotypic genus is the only remaining species representing the entire genus.

Figure 8: Weighted Average Per Species Expenditures, by Taxonomic Classification, Fiscal Years 2000-2003



Source: GAO analysis of Fish and Wildlife Service data.

The Service Considers Factors Besides Species Priority When Allocating Recovery Funds but Does Not Assess the Results of Its Funding Decisions

When Service officials allocate recovery funds, they base these decisions to a significant extent on factors other than a species' priority ranking. At the headquarters level, a formula that accounts for each region's workload, but not species' priority rankings, determines how recovery funds are allocated. Each regional office allocates recovery funds to their field offices differently, but in no case is priority ranking the driving factor. Instead, regional officials focus primarily on partnership opportunities, though regional officials told us they do try to provide funds to species that have a high degree of threat. Although field office staff we spoke with use priority rankings, they also emphasized the importance of having flexibility to allocate funds to develop partnerships. The Service does not know the extent to which these disparate allocation systems yield results consistent with the Service's priority guidelines because the Service does not have a process to routinely measure the extent to which it is spending its recovery funds on higher priority species.

Headquarters Allocates Funds to the Regions Based on Workload

In making allocation decisions, headquarters does not consider a species' priority ranking or any of the factors that go into determining priority rankings. Instead, it allocates recovery funds to its seven regions based primarily on a formula that estimates each region's workload.[20] The formula estimates the recovery workload for each region by assigning each species a score of between 2 and 7 points, based on the type of species and its habitat needs. Higher points are assigned to those species whose recovery requires higher levels of funding or effort—factors that are not clearly related to a species' priority ranking. For example, animals are assigned 2 points while plants are assigned 1. Species that occupy habitats larger than 1 million acres or are migratory or aquatic are assigned 5 points whereas species that occupy less than 1,000 acres are assigned 1 point. Recovery funds are then allocated to the regions based on the number of species occurring in each region and the points assigned to those species. Additionally, headquarters uses a workload-based formula to allocate funds to regions to develop recovery plans. Funds are allocated to each region based on the number of species that it is responsible for that have not been

[20]Some funds are not allocated according to this formula. For example, headquarters sets aside approximately $1,000,000 for delisting and downlisting activities and approximately $1,000,000 for "capability funding" annually. Capability funding is used to help staff in each region maintain a basic competency in recovery-related tasks. Additionally, the Service allocates some funds based on direction provided it by Congress, for example, through appropriation committee conference reports.

exempted from the plan requirement and that have been listed for 4 years or less. If after 4 years there is still no plan, then the region no longer receives recovery-planning money for that species, though the region is still responsible for completing that species' recovery plan.

Service officials in headquarters told us that they use an allocation system based on workload rather than the priority guidelines for a number of reasons. First, this system provides relatively stable funding to each region from year to year. In contrast, priority rankings can change over time, which would add an element of unpredictability to the annual allocations. Stability is important, according to Service officials, because most of a region's recovery budget supports staff salaries for recovery biologists. These biologists work on a wide variety of recovery activities including helping to develop recovery plans, conducting as well as coordinating on-the-ground actions to implement recovery plans, conducting periodic species status reviews, developing recovery partnerships, and litigation support. Second, although priority rankings indicate which species are higher priority, they do not reflect how much money a species needs. Service officials pointed out that higher priority species are not necessarily more costly to recover than lower priority species. Lastly, Service officials told us that a system based on workload is more objective, and they expressed concern that the subjective nature of priority rankings could create conflict between the regions if allocations were based on these rankings. While Service officials at headquarters told us that recovery funds should be spent according to priority rankings, they believe those decisions should be made at the regional level.

Almost all of the regional officials we talked to agreed that the allocation system used by headquarters works well and is fair and equitable, although some of them suggested changes. For example, some regional and field office officials noted that a species' priority ranking, particularly its degree of threat, could be included, along with the existing workload factors, in headquarters' formula for allocating recovery funds.

Regional Offices Focus on Opportunities for Partnerships When Making Funding Decisions

While each region allocates recovery funds to its field offices differently, we found that the most important consideration among the regions is to maintain and develop recovery partnerships, either by funding long-standing arrangements to work with partners to recover specific species or by taking advantage of opportunities to develop new partnerships. For example, officials at the Southwest region told us that for the last 10 years the region has allocated its discretionary recovery funds primarily to four

Source: Bill Reaves, Texas Parks and Wildlife.

Source: U.S. Fish and Wildlife Service.

Source: U.S. Fish and Wildlife Service.

species for which it has long-standing partnerships with other entities—the Kemp's Ridley sea turtle, the whooping crane, the Mexican wolf and the Attwater's prairie chicken.[21] The financial support from long-term partners, in concert with expenditures from the Service, provides a stable funding source for recovery projects from year to year, helping to create viable recovery programs for these four species. For example, the Kemp's Ridley sea turtle population has increased from a low of 270 females to several thousand females in the course of this long-term partnership.

Service officials told us that it is important to maintain their yearly contributions to long-standing partnerships, regardless of the species' priority ranking, because the funds these partners contribute are critical to species' recovery and the partners could lose interest without the Service's contributions. Officials at all levels of the Service reported to us that they have insufficient recovery funds. Although it is difficult to develop an accurate estimate of the full cost to recover all listed species (and it is unlikely that some species will ever be recovered), we analyzed the cost data contained in 120 recovery plans covering an estimated 189 listed species.[22] Based on the Service's estimated recovery costs in these plans, we found that it would cost approximately $98 million dollars to fully fund these plans—plans that cover just 15 percent of listed species—for a single year.[23] This amount is well above the $65 million the Service allocated in fiscal year 2003 to develop and implement recovery plans and does not account for the recovery needs of the remaining 1000 listed species. Even implementing only the highest priority recovery plan tasks for those 120 plans—recovery plan tasks "necessary to avoid extinction," would cost approximately $57 million, nearly 90 percent of the Services' total recovery budget in fiscal year 2003. Consequently, the Service is dependent on monetary contributions from partners to facilitate species recovery.

Regional officials not only fund long-standing partnerships, but look for opportunities to develop new ones as well. Service officials expressed concern that if they were confined to allocating funds strictly by the

[21]Discretionary recovery funds are those funds left after the region covers salaries, benefits, directives from headquarters, including items funded at the direction of Congress.

[22]These 120 plans were the ones for which the Service provided us with electronic versions of the plans' implementation schedules, which enabled us to complete this analysis.

[23]We calculated this number by determining the average cost to implement each plan based on the cost data in the plan and then summed the averages. This figure does not include all estimated recovery costs, particularly land acquisition costs, which can be expensive.

Source: U.S. Fish and Wildlife Service.

priority system, they could alienate potential recovery partners. For example, some regional officials pointed out that land acquisition can take many years, so if willing sellers present themselves, the region will take advantage of that opportunity by allocating recovery funds to acquire those lands even if they do not benefit a species of the highest priority. In another example, officials in a field office in the Pacific region told us they were able to leverage its $20,000 investment into a $60,000 project by developing an agreement with the U.S. Forest Service to jointly fund a study to identify how the California red-legged frog was using suitable habitat. Fish and Wildlife Service officials in the Pacific region also leverage funds with non-federal partners. In 2002, a $10,000 investment in desert tortoise monitoring from the Fish and Wildlife Service was matched by $16,540 from Clark County, Nevada and $5,000 from the Arizona Game and Fish Department. Almost all of the Service officials we talked with stressed the importance of having the flexibility to develop partnerships for recovery, particularly to leverage the Service's scarce recovery funds.[24] Finding partners and other sources of funds to implement recovery actions is also strongly emphasized in the Service's course on recovery implementation, which is offered at the National Conservation Training Center in West Virginia and other locations around the country.

While a species' priority ranking is not a primary factor for determining how regions distribute recovery funds, regions do consider priority rankings when making recovery allocations. The two regions responsible for the most species, the Southeast region and the Pacific region, specifically incorporate the priority system into their funding allocations. In the Southeast, field offices and other divisions of the Service, like Refuges,[25] submit proposals to obtain recovery funding to implement recovery plan tasks. Once the regional office receives all the proposals, officials determine which ones to fund that year. In doing so, they consider a number of factors, including the species' priority ranking. Similarly, the Pacific regional office reserves a portion of the recovery funds it receives and uses them to fund proposals submitted by its field offices to implement recovery plan tasks. One of the factors the region considers when determining which proposals to fund is the species' priority ranking. Most of the other regions we talked to told us that they consider some aspects of

[24]We were not able to quantify all funds provided by federal and non-federal partners in implementing recovery actions because they do not maintain expenditure data in this way.

[25]Refuges are a division of the Service that is responsible for managing National Wildlife Refuges.

the priority system when making funding decisions, particularly the species' degree of threat, although they do not directly consider a species' priority ranking.

Sometimes regions will also target funds to lower--priority species if they are nearing recovery.[26] For example, the bald eagle ranked 20th among those species with the highest recovery expenditures from fiscal year 2000 to fiscal year 2003, despite having a priority ranking of 14c. A Service official attributed most of these expenditures to delisting activities for the bald eagle. Many Service officials pointed out that the priority system does not contain a mechanism for funding species that are nearing recovery. Because a species' priority will decrease as its threats are alleviated and it moves closer to recovery, the priority system would dictate that other more imperiled species be funded before those that are close to delisting. Consequently, species close to recovery might never be delisted because funds would not be allocated to complete the tasks required for delisting. Service officials told us they need flexibility to provide funds that will help get species off the list. Headquarters officials have also recognized this issue and, beginning in fiscal year 2004, created a special fund that directs funding to species close to delisting (as well as those close to extinction) in its "Showing Success, Preventing Extinction" initiative.

Field Offices We Talked to Use the Priority System When Making Funding Allocations

In the field offices we contacted, we found that species' priority rankings play an important role in recovery allocations. Service personnel in four of the ten field offices we spoke with told us that a species' priority ranking is one of the key factors they use to allocate recovery funds.[27] For example, in the Pacific Islands field office, which is responsible for the recovery of over 300 species, officials use the recovery priority system as a "first step," then overlay other factors, like opportunities to leverage funding. Staff in five of the remaining six offices we spoke with told us that while they do not specifically use the priority system when making recovery allocations, they do consider a species' degree of threat. Staff in the last field office said they did not use the priority system because most of their funds were spent according to direction provided by the region.

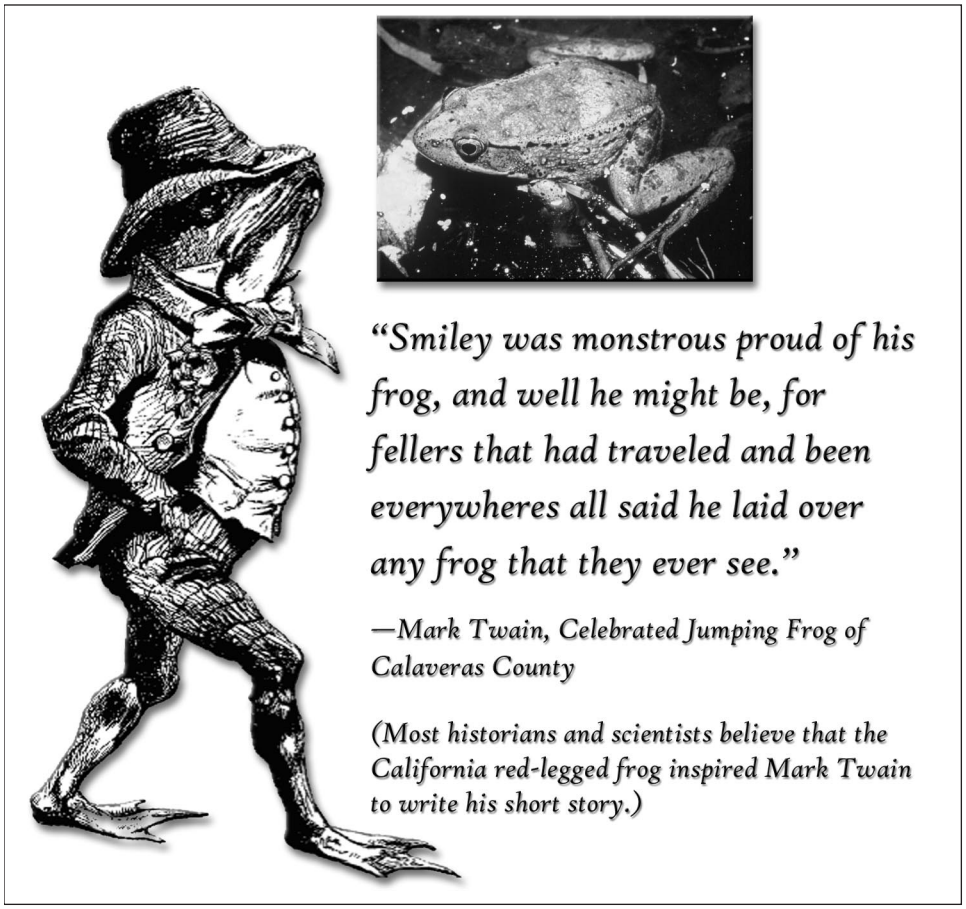
[26]These funds may come from the $1,000,000 headquarters sets aside for delisting and downlisting or they may come from the region's recovery budget.

[27]According to Service officials, there are approximately 70 field offices that have lead responsibility for recovering species.

Despite their use of the priority system, most of the field office staff we contacted also stressed the importance of having the flexibility to allocate funds to take advantage of unique opportunities when they arise. For example, officials in a field office in California told us they took advantage of an opportunity to leverage recovery funding for the California red-legged frog. A population of this frog was recently discovered in Calaveras County, site of Mark Twain's famous story *The Celebrated Jumping Frog of Calaveras County*, which featured the California red-legged frog. The landowner where the population was discovered was eager to work with the Service to build a stock pond to provide habitat for the red-legged frog and eradicate bullfrogs (red-legged frog competitors). The discovery of the frog population was momentous because the species is important to local lore, and a population of the frog had not been found in Calaveras County since the late 1800s (see fig. 9). Even though the field office has 65 species with higher priority rankings than the red-legged frog,[28] officials decided to address this recovery opportunity because of the frog's importance to the local community. Other unique events also require funding flexibility. In a Utah field office last year, for example, a road expansion threatened the existence of the clay phacelia, an endangered plant. The field office staff responded to this threat by working with partners to collect seeds for future propagation.

[28]This California field office has the lead responsibility for 104 species.

Figure 9: The California Red-Legged Frog Is Important to a California Community Due to Its Prominence in a Famous Mark Twain Story



Source: U.S. Fish and Wildlife Service.

The Service Does Not Assess and Report on Its Recovery Fund Expenditures

The Service does not know the extent to which recovery fund expenditures are consistent with its priority guidelines. All of the Service's organizational levels participate in funding decisions, often relying on factors other than species priority. Although our analysis shows that the Service generally spent its recovery resources on higher priority species during fiscal years 2000 through 2003, we found that the Service has no process to routinely measure the extent to which it is spending its recovery funds on higher priority species. Without this information, the Service cannot ensure that it is spending its recovery funds on such species, and in cases where it is not,

determine whether the funding decisions are appropriate. This is especially problematic as circumstances change—for example, when species are added to the list or priority rankings change for already-listed species.

Although the Service is required to report all federal and some state expenditures on listed species,[29] it does not separately report how it spent its recovery funds by species. This lack of separate reporting can make it difficult for Congress and others to determine whether the Service is focusing its recovery resources on the highest-priority species. For example, the species that received the greatest total federal and state expenditures in fiscal year 2003 are substantially different from those we identified as having received the greatest portion of the Service's recovery fund expenditures. Of the 47 species that the Service reported as having received the greatest total expenditures in fiscal year 2003,[30] the Service has joint or lead responsibility for 20 of them. The list of 20 species is radically different from the list that we identified as having received the greatest portion of the Service's recovery fund expenditures (see table 3). In the case of the Southwestern willow flycatcher, the Service reported that more funds were expended on the flycatcher in fiscal year 2003 than for all but three other species for which the Service has lead responsibility. However, the information the Service provided to us shows that it spent relatively few recovery funds on the Southwestern willow flycatcher in fiscal year 2003—it ranked 84th in the Service's recovery expenditures.

[29]The act requires the Service to submit to Congress by January 15th an annual report covering the preceding fiscal year containing an accounting on a species by species basis of all reasonably identifiable federal expenditures made primarily for the conservation on endangered or threatened species pursuant to the act. The act also requires the Service to report similar expenditure information for states receiving grants under section 6 of the act.

[30]See *Federal and State Endangered and Threatened Species Expenditures*, Fiscal Year 2003. This is the most recent report available.

Table 3: Total Reported Expenditures for All Endangered Species Activities Compared to Fish and Wildlife Service's Recovery Expenditures During Fiscal Year 2003—for Top 20 Species

Species name	Priority ranking	Total reported federal and state expenditures on all endangered species activities	Rank by total reported federal and state expenditures on all endangered species activities	Service recovery fund expenditures	Rank by service recovery fund expenditures
Bull trout	9c	$29,295,633	1	$2,063,748	2
Rio Grande silvery minnow	2c	11,300,700	2	220,000	37
Red-cockaded woodpecker	8c	11,069,069	3	505,676	18
Southwestern willow flycatcher	3c	9,909,284	4	54,160	84
West Indian manatee	5c	9,798,514	5	996,457	4
Bald eagle	14c	7,831,531	6	239,866	31
Colorado pikeminnow (=squawfish)	8c	7,262,592	7	225,009	35
Razorback sucker	1c	7,127,470	8	242,733	30
Desert tortoise	8c	6,522,281	9	223,064	36
Florida panther	6c	6,301,276	10	135,869	50
Atlantic salmon	6c	5,832,648	11	9,350	202
Louisiana black bear	9	5,613,874	12	193,107	42
Grizzly bear	3c	5,469,681	13	571,461	15
Mexican spotted owl	9c	5,443,009	14	40,000	110
Indiana bat	8	5,218,103	15	256,750	28
White sturgeon	3c	5,197,021	16	21,900	148
Humpback chub	2c	5,072,205	17	234,270	33
Northern spotted owl	3c	5,053,263	18	845,418	7
Whooping crane	2c	5,029,588	19	589,912	14
Loggerhead sea turtle	7c	$4,767,416	20	$270,623	26

Source: GAO analysis of Fish and Wildlife Service data.

Note: The source of data for the column "Total Reported Federal and State Expenditures on All Endangered Species Activities" is the Service's fiscal year 2003 expenditure report (Federal and State Endangered and Threatened Species Expenditures, Fiscal Year 2003, U.S. Fish and Wildlife Service). We excluded species for which the National Marine Fisheries Service has sole responsibility. We combined expenditures for experimental and non-experimental populations when a listed entity had both. The data include Service recovery fund expenditures. The source of data for the column "Service Recovery Fund Expenditures" is data reported to us by each of the Service's regional offices. We did not determine the extent to which recovery fund expenditures reported to us correspond with those included in the Service's published expenditure report.

Total reported expenditures and Service recovery fund expenditures differ substantially because the Service's recovery priority guidelines do not apply to most of the reported funds—those funds provided by other federal agencies and some funds reported by state agencies.[31] The Service has little control over how other organizations spend their funds. The reported expenditures also include Service expenditures in addition to recovery funds, such as expenditures on listing and consultation, which are also not subject to the Service's recovery guidelines. In fact, in many instances, the Service does not have discretion over which species should receive these funds. For example, the Service spends consultation funds largely based on projects submitted to it by other federal agencies.

Not unexpectedly, the list of 20 species receiving the greatest portion of the Service's recovery fund expenditures in fiscal year 2003 is also different from the list of species receiving the greatest portion of total federal and state expenditures in fiscal year 2003 (see table 4). For example, the California condor and the Western population of the gray wolf ranked first and third, respectively in recovery fund expenditures but are ranked 25th and 29th, respectively in overall federal and state expenditures.

[31]One exception is grants made to states. The act authorizes the Service to provide financial assistance to states to assist in the development of programs for the conservation of endangered and threatened species and for other reasons. The Service considers recovery priority rankings when awarding these grants.

Table 4: Fish and Wildlife Service's Recovery Expenditures Compared to Total Reported Expenditures on All Endangered Species Activities During Fiscal Year 2003—for Top 20 Species

Species name	Priority ranking	Service recovery fund expenditures	Rank by service recovery fund expenditures	Total reported federal and state expenditures on all endangered species activities	Rank by total reported federal and state expenditures on all endangered species activities
California condor	4c	$2,810,000	1	$3,526,183	25
Bull trout	9c	2,063,748	2	29,295,633	1
Gray Wolf, Western Distinct Population Segment	3c	1,789,940	3	3,261,662	29
West Indian Manatee	5c	996,457	4	9,798,514	5
Red wolf	5c	951,345	5	993,080	63
Puerto Rican parrot	2	900,000	6	1,419,800	50
Northern spotted owl	3c	845,418	7	5,053,263	18
Gray Wolf, Southwestern Distinct Population Segment (Mexican wolf)	3c	800,000	8	934,170	66
Steller's eider	9	799,600	9	1,062,836	60
Giant garter snake	2c	724,038	10	1,561,474	46
Marbled murrelet	3	677,739	11	4,754,652	21
Bog turtle	6c	655,880	12	1,542,655	47
Virgin River chub	2c	631,751	13	462,136	96
Whooping crane	2c	589,912	14	5,029,588	19
Grizzly bear	3c	571,461	15	5,469,681	13
Karner blue butterfly	5	533,080	16	1,179,941	57
Spectacled eider	5	520,900	17	574,980	86
Red-cockaded woodpecker	8c	505,676	18	11,069,069	3
Black-footed ferret	2	451,859	19	2,360,970	40
Western snowy plover	3c	$451,786	20	$2,824,184	35

Soure: GAO analysis of Fish and Wildlife Service data.

Note: The source of data for the column "Total Reported Federal and State Expenditures on All Endangered Species Activities" is the Service's fiscal year 2003 expenditure report (Federal and State Endangered and Threatened Species Expenditures, Fiscal Year 2003, U.S. Fish and Wildlife Service). We excluded species for which the National Marine Fisheries Service has sole responsibility. We combined expenditures for experimental and non-experimental populations when a listed entity had both. The data include Service recovery fund expenditures. The source of data for the column "Service Recovery Fund Expenditures" is data reported to us by each of the Service's regional offices. We did not determine the extent to which recovery fund expenditures reported to us correspond with those included in the Service's published expenditure report.

Without a process to measure the extent to which it is spending its recovery funds on the highest-priority species, the Service lacks valuable information that would aid it in making management decisions. For example, while maintaining partnerships to fund certain species may be reasonable, many of these partnerships have been in place for many years, and changes to the species' status or threat level, as well as changes to the threat level of other species and the addition of newly listed species, could have occurred in that time. As such, perhaps the reasons for creating some of these partnerships may have been superseded by other needs and it may no longer be appropriate for particular species to garner so much funding from the region. Officials in the Southwest region, for instance, told us that most of the region's discretionary recovery funds are spent on four species (Kemp's Ridley sea turtle, Whooping crane, Mexican wolf, and Attwater's prairie chicken). These officials stated that they did not know these species' recovery priority rankings until after we scheduled a meeting with them, although they did believe the species to be highly ranked. While these four species all have high priority rankings—2c, 2c, 3 and 3c, respectively—the region has lead responsibility for about 80 other species with a priority ranking between 1 and 3. Although many of these species also received funding during fiscal years 2000-2003, more than one-quarter (20 species) had no Service recovery fund expenditures attributable to them.

Conclusions

The Service faces a very difficult task—recovering more than 1,200 endangered and threatened species to the point that they no longer need the protection of the Endangered Species Act. Many of these species face grave threats and have been imperiled for years. There are few easy solutions. Like many other federal agencies, the Service has limited funds with which to address these challenges. Fortunately, many other organizations contribute resources to help species. The Service maintains that its ability to be flexible in allocating its scarce recovery resources is the key to maximizing those contributions from other organizations. We agree that exercising flexibility in allocating recovery funds under its priority guidelines is important, but this needs to occur within the bounds of a systematic and transparent process. The Service, however, does not have such a process. While the Service acknowledges that it strays from its priority guidelines, it does not routinely analyze its allocation decisions to determine whether it is focusing on the highest priority species and, if not, why. Such an analysis is important to ensure that the Service continues to spend its recovery funds on the highest priority species over the long term. Without this information, the Service cannot show Congress or the public the extent that it is focusing its resources on the highest priority species, or

explain, in cases where it is not, that its resource decisions are still appropriate.

To this end, we believe the Service's priority guidelines provide it with the means to create a systematic and transparent allocation process while still allowing it needed flexibility. Because the Service already collects data, on a species by species basis, on how it spends its recovery funds, it would be a simple task to measure the extent to which it is spending its recovery funds on high-priority species. It could then make this information publicly available, thus providing the Congress and the public a yardstick with which to judge the efficacy of the Service's resource allocation decisions.

Recommendations for Executive Action

To help ensure that the Service allocates recovery resources consistent with the priority guidelines over the long term and in a transparent fashion, we recommend that the Secretary of the Interior require the Service to take the following two actions: (1) periodically assess the extent to which it is following its recovery priority guidelines and identify how factors other than those in the guidelines are affecting its funding allocation decisions, and (2) report this information publicly, for example, in its biennial recovery report to Congress.

Agency Comments and Our Evaluation

We received written comments on a draft of this report from the Department of the Interior. In general, the Department agreed with our findings and recommendations but believes that we underestimated the extent to which the Service's funding decisions are consistent with its recovery priority guidelines. Because we found that the Service spent its recovery funds in a manner generally consistent with species priority, we do not believe this is a significant issue. See appendix II for the Department's letter and our response to it. Additionally, the Department provided technical comments that we have incorporated into the report, as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At the time, we will send copies of this report to the Secretary of the Interior and other interested parties. We also will make copies available to others upon request. In addition, the report will be available at no charge on the GAO web site at http://www.gao.gov.

If you or your staff have any questions, please call me at (202) 512-3841. Key contributors to this report are listed in appendix III.

Robin M. Nazzaro

Robin M. Nazzaro
Director, Natural Resources
and Environment

Scope and Methodology

In response to a request from the Chairman, House Committee on Resources, we (1) analyzed how the U.S. Fish and Wildlife Service's allocation of recovery funds compares with its recovery priority guidelines and (2) determined what factors influence the Service's recovery funding allocation decisions. As agreed with the Chairman's staff, we evaluated only those funds specifically spent by the Service to implement its recovery program.

To address our first objective, we requested recovery expenditure data, on a per species basis, from each of the Service's seven regions for fiscal years 2000-2003.[1] Because the Service spends most of its recovery funds on salaries that are not allocated on a per species basis, we asked officials in each region to attribute salaries to specific species to the best of their abilities. To assess the reliability of these data, we compared the total estimated expenditures we received from each region for each year to budget documentation provided by headquarters officials, the Department of the Interior's Budget for fiscal years 2000-2003, and House and Senate committee reports for Department of the Interior appropriations for fiscal years 2000-2003. We also asked the regional officials who provided these data a series of data reliability questions covering issues such as data entry, access, quality control procedures, and the accuracy and completeness of the data, as well as any limitations of the data. All responded that the data were generally accurate, and all but one performed some form of data review to ensure its accuracy. Additionally, officials from all but one region noted, as a limitation to the data, that it is sometimes difficult to link expenditures on activities to specific species. We determined that the expenditure data received from each of the Service's seven regions were sufficiently reliable for the purposes of this report.

We also obtained from the Service data on each species' priority number for fiscal years 2000 through 2003, as well as other information about each species, such as whether it is threatened or endangered and whether it has a recovery plan. We did not make a judgment about the adequacy or accuracy of the Service's recovery priority system. The Service also provided us with information on the estimated costs to implement approximately 120 recovery plans. We assessed the reliability of these data by (1) electronically testing required data elements, (2) reviewing existing

[1]Similar data collected by the Service for its fiscal year 2001, 2002, and 2003 expenditure reports became available in January 2005—too late to be used for most of the analyses in this report.

information about the data and the system that produced them, and (3) interviewing agency officials knowledgeable about the data. In addition, we compared the data set sent to us by the Service to the Service's publicly available (online) Threatened and Endangered Species System (TESS), which contains data on listed species similar to that we received from the Service. When we identified any difference between these two data sets, we independently corroborated, to the extent possible, which data set was correct by obtaining documentary evidence, either from the Federal Register or the appropriate recovery plan. When appropriate according to this documentary evidence, we made changes to the data sent to us by the Service. For example, the spineless hedgehog cactus was listed in the data set sent to us by the Service but was not found when we compared it to online TESS. We checked the Federal Register and found that this species was removed from the endangered species list in 1993, so we removed it from the data set sent to us by the Service because our time frame of interest is 2000 through 2003. In another instance, the data set sent to us by the Service contained the Berkeley kangaroo rat, but this species was not in TESS. We checked the recovery plan and found that this is a "species of concern," not an endangered or threatened species. The status field in the data sent to us by the Service was blank, so we re-coded it as a species of concern and then removed it from the data set because species of concern are not part of our review. We also made changes to records that contained errors. For example, the green sea turtle has two different populations. However, the Fish and Wildlife Service reported the total recovery expenditures for these two populations together. When expenditures were merged with species lists, this expenditure total was shown twice. To address that error we removed one expenditure total. All of these types of changes, 5 records with factual errors (or 0.4 percent of the records) and 9 with missing information (0.7 percent of the records), were reviewed and agreed to by all team analysts and supervisors. We also found and removed 14 duplicates and 27 records that were outside our scope (e.g., outside our date range or species managed by the National Marine Fisheries Service, not the Fish and Wildlife Service). On the basis of all of this work, we determined that the data on species and recovery plans we received from Fish and Wildlife Service were sufficiently reliable for the purposes of this report.

We then compared the expenditures on each species with the species' priority ranking for fiscal year 2000 through 2003. We grouped together species with similar rankings to deemphasize minor differences in species' rankings. Grouping species this way had the effect of eliminating the

taxonomic distinction among species found in the recovery priority guidelines. Table 5 shows the groupings.

Table 5: GAO Groupings of Priority Numbers

GAO group	Priority number
GAO group 1	1, 1c 2, 2c 3, 3c
GAO group 2	4, 4c 5, 5c 6, 6c
GAO group 3	7, 7c 8, 8c 9, 9c
GAO group 4	10, 10c 11, 11c 12, 12c
GAO group 5	13, 13c 14, 14c 15, 15c
GAO group 6	16, 16c 17, 17c 18, 18c

Source: GAO.

We also assumed that the average cost to implement recovery plans in each group was the same. We made this assumption explicitly because the cost to implement individual recovery plans can vary substantially among species. For example, we analyzed the cost to implement 120 recovery plans (the only plans with these data available electronically) covering an estimated 189 species (or 15 percent of listed species) and found that some plans are very costly—$107,516,000—and some are not—$18,000. However, many plans fall between these two extremes, costing between $1 million and $6 million. We discussed this assumption with the Service, and they agreed to its reasonableness.

The number of species in each priority group varied by year (see table 6).

Table 6: Number of Species in Each Priority Group, by Year

	Number of species in each priority group			
Priority group	FY 2000	FY 2001	FY 2002	FY 2003
1	395	408	416	415
2	432	436	444	448
3	290	285	286	284
4	47	47	46	47
5	45	46	47	48
6	7	6	6	6

Source: GAO analysis of Fish and Wildlife Service data.

In order to analyze overall average spending on a per species bases, we calculated weighted average expenditures per species by priority ranking. To do this we weighted the average expenditure per species for a specific priority group and fiscal year by the proportion: (Number of species in a particular priority group and fiscal year)/ (Number of species in same priority group over all fiscal years).

In addressing our second objective, to determine what factors influence the Service's recovery funding allocation decisions, we interviewed managers and recovery biologists in the Service's recovery division in headquarters, all seven regions and a nonprobability sample of 10 field offices.[2] We selected at least one field office from each region and selected a second field office from the two regions that collectively have lead responsibility for more than 50 percent of the endangered and threatened species in the United States. Within each region, we selected field offices that have lead responsibility for a high number of species relative to other field offices in that region. The region responsible for the largest number of species, the Pacific region, is operated as two divisions, and we selected a field office from each division. The field office locations in our nonprobability sample were:

[2]Results from nonprobability samples cannot be used to make inferences about a population because in a nonprobability sample some elements of the population being studied have no chance or an unknown chance of being selected as part of the sample.

- Hawaii (Pacific Region)
- Sacramento, California (Pacific Region)
- Arizona (Southwest Region)
- Columbia, Missouri (Great Lakes Region)
- Cookeville, Tennessee (Southeast Region)
- Vero Beach, Florida (Southeast Region)
- Virginia (Northeast Region)
- Utah (Mountain-Prairie Region)
- Anchorage, Alaska (Alaska Region)
- Fairbanks, Alaska (Alaska Region)

Through our interviews we obtained information on how recovery funds are allocated, the role of the recovery priority system, and suggested improvements to the recovery priority system. We compared the answers we received in these interviews to documents or expenditure data provided by the Service, to the extent this corroborating evidence was available.

In addressing both objectives, we reviewed publicly available documents and other information obtained from the Fish and Wildlife Service's Website. We also reviewed articles in academic and scientific literature related to recovery planning and recovery prioritization, including an extensive study of recovery plans conducted by the Society for Conservation Biology and funded by the Fish and Wildlife Service.

We performed our work from February 2004 to January 2005, in accordance with generally accepted government auditing standards.

Comments from the Department of the Interior

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

United States Department of the Interior

OFFICE OF THE ASSISTANT SECRETARY
POLICY, MANAGEMENT AND BUDGET
Washington, DC 20240

TAKE PRIDE IN AMERICA

MAR 1 1 2005

Ms. Robin Nazzaro
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Ms. Nazzaro:

Thank you for providing the Department of the Interior the opportunity to review and comment on the draft U.S. Government Accountability Office report entitled, "Endangered Species: Fish and Wildlife Service Generally Focuses Recovery Funding on High-Priority Species but Needs to Periodically Assess Its Funding Decisions," GAO-05-211, initially dated January 10, 2005, and revised on February 14, 2005. In general, we agree with the findings and the recommendations in the revised report.

We appreciate GAO's recognition that recovering endangered species takes a significant amount of time and money, and that we are doing a good job with the resources available. We are spending recovery funds on high priority species, but we are also spending money on species that are close to downlisting and delisting. We continue to make strides at both levels - keeping species from going extinct and moving species toward the ultimate goal of not needing protection under the Endangered Species Act.

See comment 1.

However, we would like to highlight an issue that appears only as a footnote on page 18 of the report. Each year, Congress directs that certain of the funds appropriated for the recovery program be expended on projects for particular species. As written, the revised report appears to reflect these funds as discretionary dollars available to the Fish and Wildlife Service (Service) to allocate under its recovery priority guidelines. In fact, the President's annual budget proposes not to fund Congressionally directed projects and requests the funds for high priority species and projects. However, each year Congress directs or re-directs that such specific projects be funded, regardless of their priority. We believe that by including funds spent on these Congressionally directed project dollars with the Service's discretionary funding decisions, the draft report underestimates the degree to which the Service's funding decisions are consistent with its recovery priority guidelines.

See comment 2.

In addition, while we agree with GAO's finding that the U.S. Fish and Wildlife Service does not "separately report on how it spent its recovery funds by species," it should be noted that the Service does comply with the requirement under section 18 of the Endangered Species Act to

2

report annually on all reasonably identifiable Federal and State expenditures for listed species, by species. This report includes all reasonably identifiable expenditures for recovery efforts. The recovery expenditures are not separately identified by species because the Act does not call for such a breakdown.

See comment 3.

Lastly, we take issue with a conclusion found in the opening section of the report and repeated elsewhere. The draft report states in paragraph 2 of page 1 that the Act requires the Service to establish guidelines for prioritizing the development and implementation of recovery plans to address concerns that recovery funds were not being directed *at the most imperiled species*. (emphasis supplied)

While we are not in a position to address the concerns which Congress may have had in adopting this provision, the plain wording of the Act would indicate that concern for the most imperiled species was not the purpose here.

Neither the Act nor Service guidelines provide that funding should be allocated preferentially to species with the highest priority ranking as depicted on Table 2. To the contrary, the Act expressly requires, in section 4(f)(1)(a), that the Service:

> "in developing and implementing recovery plans shall, to the maximum extent practicable—
>
> > (A) give priority to those endangered species or threatened species, without regard to taxonomic classification, that are most likely to benefit from such plans, particularly those species that are, or may be, in conflict with construction or other development projects or other forms of economic activity."

Accordingly, the Service focus on opportunities for partnerships, where multiple parties will act to the benefit of the species, seems fully in accordance with statutory direction.

The enclosure provides specific comments from the Service and the Department's Office of Policy Analysis. We hope these comments will assist you in preparing the final report.

Sincerely,

P. Lynn Scarlett

Enclosure

The following are GAO's comments on the Department of the Interior's letter dated March 11, 2005.

GAO Comments

1. We agree that some of the recovery funds included in our analysis of how recovery fund allocations compare with the Service's recovery guidelines include funds for which Congress has provided direction that they be spent on particular projects or species. However, we do not believe that by including these funds we have underestimated the degree to which the Service's funding decisions are consistent with its recovery priority guidelines. First, we found that the Service spent its recovery funds in a manner generally consistent with species priority. Second, we analyzed a list, provided to us by the Service, of congressionally directed funds and associated projects for fiscal years 2000 through 2003. We compared this list with the priority rankings of the species associated with the projects in a way similar to how we compared species' expenditures and priority rankings in our report. We found that the list of congressionally directed funds resulted in a spending pattern similar to what we identified when we compared species' expenditures and priority rankings in our report. Thus, by including these funds in our analysis of how recovery funds allocations compare with the Service's recovery guidelines, we do not believe that we have underestimated the degree to which the Service's funding decisions are consistent with its recovery priority guidelines.

2. We agree that the Endangered Species Act does not require it to report separately on how it spent its recovery funds by species. However, reporting this information could be part of an effective strategy to help ensure that the Service allocates recovery resources consistent with the priority guidelines over the long term and in a transparent fashion.

3. In our report, we use the term "imperiled" instead of "threatened" to avoid confusion with the distinction the act makes between "threatened species" and "endangered species." We agree that the act does not state that the purpose for requiring the Service to establish guidelines for prioritizing the development and implementation of recovery plans was to address concerns that recovery funds were not being directed at the most imperiled species. We have modified the report accordingly.

   However, we disagree with the Department's contention that its recovery priority guidelines do not provide that funding should be

allocated preferentially to species with the highest priority ranking as depicted in table 2 of our report. The Department relies on a table in the guidelines that is virtually identical to table 2 in our report to describe its priority system. Section 4(h)(4) of the act specifically directs the Service to establish guidelines that shall include "a system for developing and implementing, on a priority basis, recovery plans under subsection (f) of this section." Further, the guidelines state that "the species with the highest degree of threat have the highest priority for preparing and implementing recovery plans." In addition, the guidelines state that they are to "aid in determining how to make the most appropriate use of resources available to implement the act."

The Department also contends that allocating funding preferentially to species with the highest priority ranking is contrary to section 4(f)(1)(A) of the act. This provision, which was added in a 1982 amendment to the act, states that recovery plans shall, to the maximum extent practicable, give priority to species most likely to benefit from such plans, particularly those that are, or may be, in conflict with construction or other development projects, or other forms of economic activity. The guidelines specifically state that the priority system established by the guidelines "is intended to satisfy the requirements of the amended Act." Accordingly, the guidelines include likelihood to benefit from recovery plans and conflict as factors.

We agree with the Department that focusing on opportunities for partnerships where multiple parties will work to the benefit of the species is consistent with section 4(f)(1)(A) of the act. In fact, we conclude in our report that the Service's ability to be flexible in allocating its scarce recovery resources is the key to maximizing contributions from other organizations. However, we believe that this flexibility needs to occur within the bounds of a systematic and transparent process and make recommendations to this effect.

GAO Contact and Staff Acknowledgments

GAO Contact

Trish McClure (202) 512-6318

Staff Acknowledgments

In addition to the individual named above, Charles Egan, Jaelith Hall-Rivera, Barry T. Hill, Summer Pachman, Paula Bonin, Judy Pagano, and Cynthia Norris made key contributions to this report.

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