United States Government Accountability Office

Report to the Chairman, Subcommittee on Regulatory Affairs and Federal Management, Committee on Homeland Security and Governmental Affairs, U.S. Senate

December 2016

ENDANGERED SPECIES ACT

U.S. Fish and Wildlife Service's American Burying Beetle Conservation Efforts

Accessible Version

GAO-17-154

GAO Highlights

Highlights of GAO-17-154, a report to the Chairman, Subcommittee on Regulatory Affairs and Federal Management, Committee on Homeland Security and Governmental Affairs, U.S. Senate

Why GAO Did This Study

The ABB is a large scavenger insect that FWS listed as endangered in 1989 under the Endangered Species Act (ESA). FWS uses various strategies to address potential adverse impacts on protected species from construction and other projects. In some cases, FWS has required project proponents to take specific steps to avoid, minimize, or compensate for a project's potential impacts on the ABB or its habitat. When these proponents make financial contributions to compensate for the impacts of these projects, FWS generally refers to it as compensatory mitigation. GAO was asked to provide information on how FWS uses different compensatory mitigation strategies.

This report examines: (1) how FWS has sought to avoid and minimize potential adverse impacts on the ABB from projects and (2) what is known about FWS's compensatory mitigation strategies and how FW has used two of them, in-lieu fee programs and conservation banks, for the ABB. GAO reviewed relevant laws, policies, guidance, and conservation efforts for the ABB; analyzed FWS data on ESA consultations and the use of conservation banks; and interviewed officials from FWS, project proponents, and organizations involved in ABB conservation.

What GAO Recommends

To ensure that appropriate plans are made to obligate funds, GAO recommends that FWS establish a timetable with milestones for modifying RIBITS to incorporate FWS's in-lieu fee program information.

FWS concurred with this recommendation.

View GAO-17-154. For more information, contact Anne-Marie Fennell at (202) 512-3841 or fennella@gao.gov.

December 2016

ENDANGERED SPECIES ACT

U.S. Fish and Wildlife Service's American Burying Beetle Conservation Efforts

What GAO Found

To address the potential adverse impacts of construction and other projects on the American burying beetle (ABB) and its habitat, the U.S. Fish and Wildlife Service (FWS), within the Department of the Interior, first focuses on avoidance and minimization approaches. For example, to avoid impacts on ABB habitat, FWS may suggest that project proponents—public and private entities—relocate the project or part of the project to another location. If complete avoidance is not possible, FWS may suggest ways to minimize the potential impacts, such as reducing soil disturbance during construction or limiting the use of pesticides. If avoidance and minimization actions are impractical or inadequate, then FWS may suggest compensatory mitigation strategies, which allow project proponents to choose to compensate for the potential adverse impacts of their projects.

The American Burying Beetle, a Winged Insect

Sources: Anita Barstow; U.S. Fish and Wildlife Service. | GAO-17-154

FWS uses several types of compensatory mitigation strategies, including (1) conservation banks, in which third parties invest up front in protected lands that are conserved and managed for a species, and then sell mitigation credits to project proponents, and (2) in-lieu fee programs, in which third parties generally collect money from several project proponents and conduct conservation activities for the species in a location away from the project site after the project's potential impacts have occurred. FWS has used two conservation banks in Oklahoma and three in-lieu fee programs in several states specifically to conserve the ABB. FWS tracks key information about its conservation banks, such as the location and mitigation credits available, and uses this information to help manage activities. However, FWS has not fully implemented its plan to track in-lieu fee programs. FWS signed an interagency agreement with the U.S. Army Corps of Engineers in February 2016 to modify its Regulatory In-lieu fee and Bank Information Tracking System (RIBITS) to enable FWS to track its in-lieu fee programs. However, FWS has not obligated funds for the necessary modifications or developed a timetable for doing so. Federal internal control standards provide that management should design control activities to achieve objectives and respond to risks. To accomplish this, federal internal control standards recommend that management define the time frames for how objectives will be achieved. Until FWS collects relevant and reliable data on its in-lieu fee programs, the agency will not be able to evaluate the effectiveness of its programs and determine the most effective strategy for conservation.

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Abbreviations

ABB	American burying beetle
ESA	Endangered Species Act of 1973
FWS	U.S. Fish and Wildlife Service
RIBITS	Regulatory In-lieu fee and Bank Information Tracking System
TAILS	Tracking and Integrated Logging System

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U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

December 22, 2016

The Honorable James Lankford Chairman Subcommittee on Regulatory Affairs and Federal Management Committee on Homeland Security and Governmental Affairs United States Senate

Dear Mr. Chairman:

Historically, the American burying beetle (ABB), a large scavenger insect native to North America, was present in more than 30 U.S. states and parts of Canada. However, as of the late 1980s, two known populations of the ABB remained—one on Block Island, Rhode Island, and the other in eastern Oklahoma. Consequently, in 1989 the Department of the Interior's U.S. Fish and Wildlife Service (FWS) listed the ABB as an endangered species, providing it certain protections under the Endangered Species Act of 1973 (ESA).[1] Since listing the ABB, FWS has taken steps to conserve the ABB and has used several strategies to mitigate potential harm to the species from the construction of new roads or oil and gas pipelines and other projects. In some cases, FWS has required project proponents to take specific steps to avoid, minimize, or compensate for a project's potential impacts on the ABB or its habitat.[2] When project proponents make financial contributions to compensate for the impacts of these projects, FWS generally refers to it as compensatory mitigation.

FWS has used different compensatory mitigation strategies for the ABB, including in-lieu fee programs and conservation banks. Generally, under in-lieu fee programs, project proponents make financial contributions to a third party that conducts off-site conservation activities (i.e., in a location

[1]Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. §§ 1531-1544). The Department of the Interior, which has responsibilities for implementing the ESA for all terrestrial (land-dwelling) and freshwater species, as well as for sea turtles when on land, and all birds, including seabirds, has largely delegated these responsibilities to FWS. The Department of Commerce, which is responsible for implementing the act for most anadromous (saltwater-freshwater migrant) fish, such as salmon, and most marine species has delegated its responsibilities to the National Marine Fisheries Service. This report does not address the National Marine Fisheries Service.

[2]FWS uses the term "project proponent" to refer to federal and state agencies, private companies, or other entities that propose, plan, or carry out projects that have the potential to adversely affect endangered or threatened species or their habitat. We also refer to these entities as "project proponents" throughout this report.

away from the project site). These third parties generally bundle contributions and, once they obtain sufficient funds, they conduct their conservation activities. As a result, conservation activities usually occur after the project's potential impacts on endangered and threatened species or their habitat have occurred. In contrast, conservation banks, in accordance with FWS-approved conservation bank instruments, are protected lands that are conserved and permanently managed for species that are endangered, threatened, candidates for listing, or at risk.[3] Conservation banks, also in a location off-site from the project, are to offset the adverse impacts to these species in advance of the project. For example, land may be purchased and set aside as an ABB reserve. Conservation bank sponsors then sell credits to project proponents who are seeking to mitigate the potential impacts of their projects.[4]

Scientists have found it difficult to study and understand the ABB because of its unique life cycle. Specifically, the ABB lives for approximately 1 year; is typically inactive underground for 6 to 9 months; and, when active, emerges from the ground only at night. As of October 2016, ABB populations were known or believed to exist in nine U.S. states, predominantly in the Midwest, including as part of reintroduction programs and experimental populations.[5] FWS expects to complete a national-level scientific evaluation of the ABB's current condition in 2017 and then, in response to a petition to delist the ABB, make a determination about the ABB's status as an endangered species.

[3]A conservation bank instrument is an FWS-approved document that describes in detail the physical and legal characteristics of the conservation bank and how it will be established and operated, including plans for habitat restoration or development.

[4]Conservation bank sponsors make up-front investments to conserve a species and then sell credits to project proponents to recover their investment. Credits are often expressed as a measure of land area (e.g., an acre), number of individuals or mating pairs of a particular species, ecological functions or services provided to the species, or other appropriate metric that can be consistently quantified. Conservation bank sponsors set a monetary value for each credit that they sell.

[5]As of October 2016, the ABB is known to or believed to exist in parts of the following states: Arkansas, Kansas, Massachusetts, Missouri, Nebraska, Oklahoma, Rhode Island, South Dakota, and Texas. The ABB population in Massachusetts is a result of a reintroduction program, and the population in Missouri is a non-essential, experimental population, which means that it is not covered by the endangered listing. FWS has also attempted to reintroduce the ABB to Ohio; however, it has not yet documented a successful reintroduction there.

You asked us to examine how FWS uses compensatory mitigation strategies for endangered or threatened species, including the ABB. This report examines (1) how FWS has sought to avoid and minimize potential adverse impacts on the ABB from construction and other projects and (2) what is known about FWS's compensatory mitigation strategies and how FWS has used two of these strategies, in-lieu fee programs and conservation banks, for the ABB. In addition, you asked us to review the contributions and disbursements for a specific in-lieu fee program for the ABB. We briefed your office on the results of that review on August 30, 2016, and have included the briefing slides as an appendix to this report.

To conduct our work, we reviewed and analyzed relevant laws, agency policies, guidance, and other documentation related to the ESA, compensatory mitigation strategies, and conservation efforts for the ABB, as well as our body of work on endangered species issues.[6] We interviewed officials from FWS headquarters, FWS regional offices, and FWS Ecological Services field offices in states with an ABB presence. We also interviewed officials from other relevant federal agencies, such as the Department of the Interior's Bureau of Land Management and the U.S. Army Corps of Engineers; representatives of The Nature Conservancy, a nonprofit organization involved in ABB conservation efforts; as well as private companies, including representatives of the oil and gas industry. To determine how FWS has sought to avoid and minimize potential adverse impacts on the ABB, we reviewed FWS biological opinions and other official correspondence with federal and nonfederal project proponents.[7] We analyzed data from FWS's Tracking

[6]See GAO, *Endangered Species Act: The U.S. Fish and Wildlife Service Has Incomplete Information about Effects on Listed Species from Section 7 Consultations*, GAO-09-550 (Washington, D.C.: May 21, 2009), *U.S. Fish and Wildlife Service: Endangered Species Act Decision Making*, GAO-08-688T (Washington, D.C.: May 21, 2008), *Wetlands Protection: Corps of Engineers Does Not Have an Effective Oversight Approach to Ensure That Compensatory Mitigation Is Occurring*, GAO-05-898 (Washington, D.C.: Sept. 8, 2005), and *Endangered Species Act: Fee-Based Mitigation Arrangements*, GAO-01-287R (Washington, D.C.: Feb. 15, 2001).

[7]Under ESA section 7, federal agencies must consult with FWS when any action they carry out, fund, or authorize—such as through a permit—may affect a listed endangered or threatened species or its habitat. If the federal agency determines that its action may affect a listed species or habitat, then it must generally initiate a formal consultation with FWS, at the conclusion of which FWS issues a biological opinion. A biological opinion contains a detailed discussion of the effects of the action on listed species and critical habitat, if any has been designated, and FWS's opinion on whether the agency action is likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of designated critical habitat.

and Integrated Logging System (TAILS) on the number of consultations with FWS that have occurred about the ABB across FWS regions for fiscal years 2008 through 2015.[8] To assess the reliability of TAILS data, we interviewed agency officials and reviewed agency documentation about TAILS. We determined that the data were sufficiently reliable for our purposes.

To determine what is known about FWS's compensatory mitigation strategies and how FWS has used in-lieu fee programs and conservation banks for the ABB, we reviewed agency documentation related to compensatory mitigation, including agency guidance and policies. We conducted a site visit in April 2016 to FWS's Oklahoma Ecological Services Field Office, which is FWS's lead field office for the ABB, and the Tallgrass Prairie Preserve in Oklahoma, where The Nature Conservancy has conserved ABB habitat. We requested data from FWS regarding all current FWS in-lieu fee programs for endangered and threatened species. We checked the data we received for missing data and other errors and determined that the data were not sufficiently reliable for our purposes. We also reviewed related documentation from FWS and other federal agencies, such as the Bureau of Land Management, the Oklahoma Department of Transportation, and conservation organizations involved in the in-lieu fee programs.

We interviewed representatives from the American Burying Beetle Conservation Bank and the Muddy Boggy Conservation Bank, which both operate for the conservation of the ABB. We also analyzed FWS data on the number of conservation banks for all species listed under the ESA, which is reported in the U.S. Army Corps of Engineers' Regulatory In-lieu fee and Bank Information Tracking System (RIBITS).[9] To assess the reliability of data in RIBITS, we interviewed agency officials and reviewed agency documentation and determined that the data were sufficiently reliable for our purposes. Appendix I contains a more detailed description of our objectives, scope, and methodology.

[8]TAILS is a field office activity tracking system that is part of FWS's Environmental Conservation Online System. It records ESA section 7 consultations for listed species, among other things.

[9]RIBITS is an Internet-based tracking system developed by the U.S. Army Corps of Engineers to provide information on mitigation banking and in-lieu fee programs across the country. FWS and the National Marine Fisheries Service also use RIBITS to report information on conservation banks they have approved for conserving species listed under the ESA.

We conducted this performance audit from November 2015 to December 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

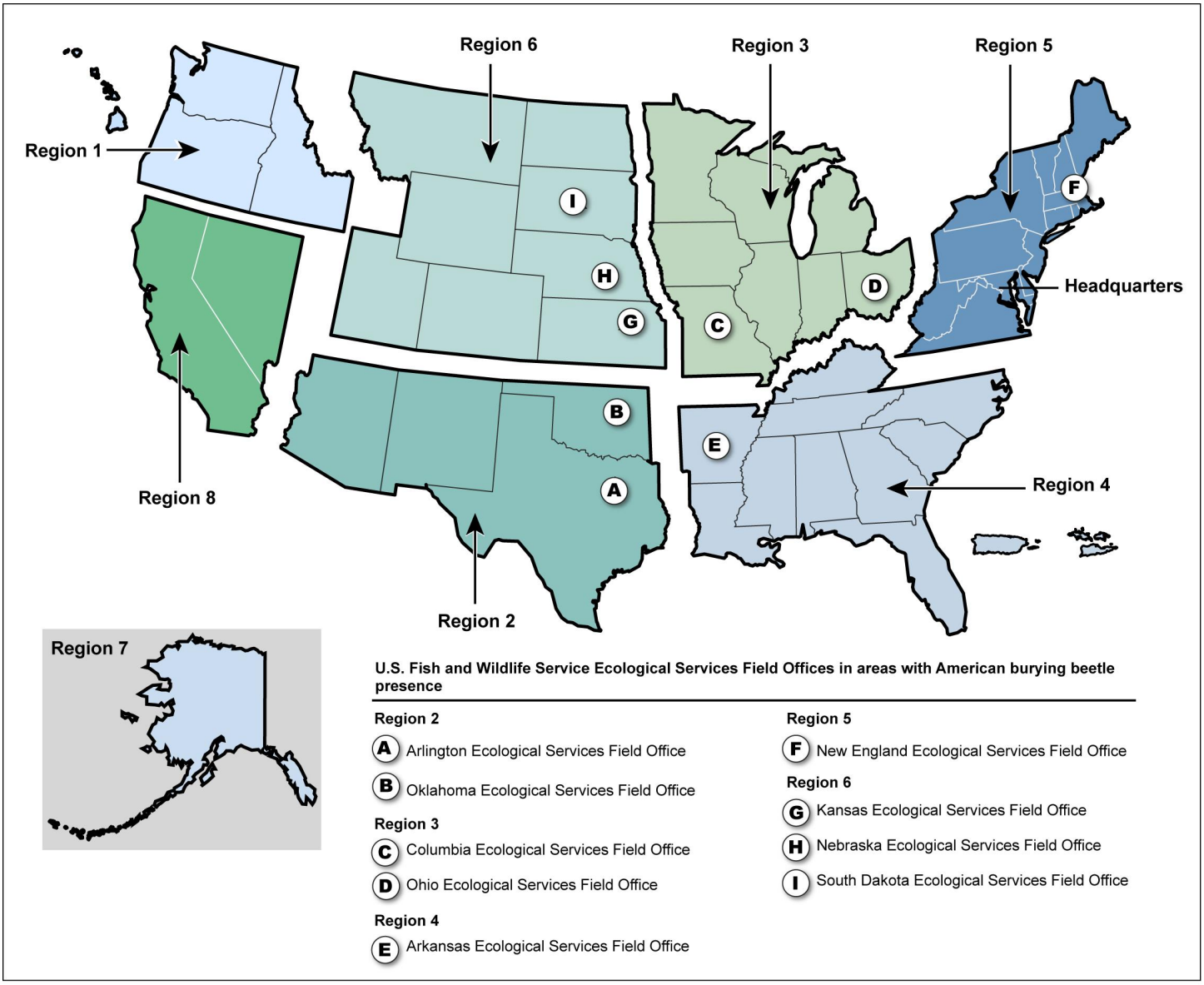
Background

This section discusses the organization of FWS, the provisions of the ESA, and the life cycle of the ABB.

U.S. Fish and Wildlife Service Organization

Among its duties, FWS is responsible for administering the ESA for certain species, including terrestrial species, such as the ABB. FWS headquarters, regions, and field offices are responsible for implementing the ESA within their area of responsibility. Since 2008, FWS's Oklahoma Ecological Services Field Office within FWS's Southwest Region has served as the lead field office for the ABB. Figure 1 shows a map of FWS regions and the Ecological Services field offices in areas where ABBs are known or believed to be present.

Figure 1: U.S. Fish and Wildlife Service Regions, Including Ecological Services Field Offices in Areas with American Burying Beetle Presence



Source: GAO analysis of U.S. Fish and Wildlife Service documents. | GAO-17-154

Note: The New England Ecological Services Field Office is responsible for conserving the American burying beetle populations in Massachusetts and Rhode Island.

Endangered Species Act Provisions

The purposes of the ESA include providing a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and providing a program for the conservation of such endangered species and threatened species. Section 4 of the ESA contains the requirements and processes for listing or delisting a species as endangered or threatened, designating critical habitat, and developing a recovery plan for a listed species.

Sections 9 and 10 of the ESA generally prohibit the "take" of endangered species unless the take is incidental to, and not the purpose of, carrying out an otherwise lawful activity.[10] Section 7 of the ESA and its implementing regulations direct a federal agency to consult with FWS when the agency determines that an action it authorizes, funds, or carries out may affect a listed species or critical habitat. Federal actions requiring consultation under section 7 include issuing nonfederal entities a permit or license for their activities. For example, oil and gas companies are required to get a permit from the Bureau of Land Management before drilling into a federally owned mineral estate. If the agency, with FWS's concurrence through informal consultation, determines that the proposed action is not likely to adversely affect the listed species or its critical habitat, then formal consultation is not required. Formal consultation usually ends with FWS issuing a biological opinion for the proposed action, which may include an incidental take statement containing provisions that the project proponent must comply with to minimize the project's impact on the species.[11] Under section 10 of the ESA, for actions by project proponents that might take a listed species and that do not have a federal nexus—such as federal funding, approval, or permit—the

[10]Take is defined as harassing, harming—including significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing breeding, feeding, or sheltering—pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting a listed species.

[11]Specifically, when FWS concludes that the project will result in the incidental take of a species that is not likely to jeopardize the continued existence of the species, FWS must prepare an incidental take statement with the biological opinion. The statement must include, among other things, (1) an assessment of the impact of the incidental take on the species, (2) reasonable and prudent measures necessary or appropriate to minimize the impact, and (3) terms and conditions that the federal agency and the project proponent must comply with to implement the reasonable and prudent measures.

Secretary of the Interior may issue permits to allow "incidental take" of listed species.[12] Table 1 summarizes key provisions of the ESA.

Table 1: U.S. Fish and Wildlife Service and Key Endangered Species Act Provisions

Provision of the Endangered Species Act	Description	Information used to make decision
Petition to list, delist, or reclassify (section 4)	Request for the U.S. Fish and Wildlife Service (FWS) to list, delist, or reclassify a species	Petitions must contain the information required by regulation
90-day petition finding (section 4(b)(3)(A))	The Secretary of the Interior must make a finding, within 90 days after receiving a petition to the maximum extent possible, on whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted	Information presented in the petition or information readily available
12-month petition finding (section 4(b)(3)(B))	If the 90-day petition finding is that the petition presents substantial information indicating that the petitioned action may be warranted, the Secretary of the Interior conducts a status review of the species and must make a finding within 12 months of receiving the petition on whether the petitioned action is warranted or not	Best scientific and commercial data available
Listing (section 4)	Adding a species to the endangered or threatened species list because it meets specified criteria	Best available scientific and commercial data
Delisting (section 4)	Removing a species from the endangered or threatened species list because data substantiate that it is neither endangered nor threatened	Best available scientific and commercial data
Critical habitat (section 4(a)(3))	Designation of habitat determined to be essential to a species' conservation and which may require special management considerations or protection	Best scientific data available, taking into consideration the probable economic, national security, and other relevant impacts
Recovery plan (section 4(f))	Plan for the conservation and survival of endangered and threatened species	Information from scientific experts, stakeholders, and others
Section 7 consultation	Mechanism by which federal agencies ensure the actions they take, fund, or authorize do not jeopardize the existence of any listed species or result in the destruction or adverse modification of habitat	Best available scientific and commercial data

[12]To receive an incidental take permit, the project proponent must submit a habitat conservation plan that specifies the impact that will likely result from the take, the steps the project proponent will take to minimize and mitigate the impact, the funding available for the minimization and mitigation steps, the alternative actions to the take the project proponent considered and the reasons why such alternatives are not being utilized, and other measures that the Secretary of the Interior may require.

Provision of the Endangered Species Act	Description	Information used to make decision
Habitat conservation plan (section 10(a)(2))	Plan required for FWS to issue incidental take permits of listed species for projects that are not funded, authorized, or carried out by federal agencies that minimizes and mitigates the impacts of such take	Not specified
Experimental populations (section 10(j))	Authorized release and transportation of an endangered or threatened species outside its current range to further the species' conservation	Best available information on whether or not such a population is essential to the continued existence of an endangered or threatened species

Source: GAO analysis of the Endangered Species Act, federal regulations, and FWS policies. | GAO-17-154

American Burying Beetle Life Cycle

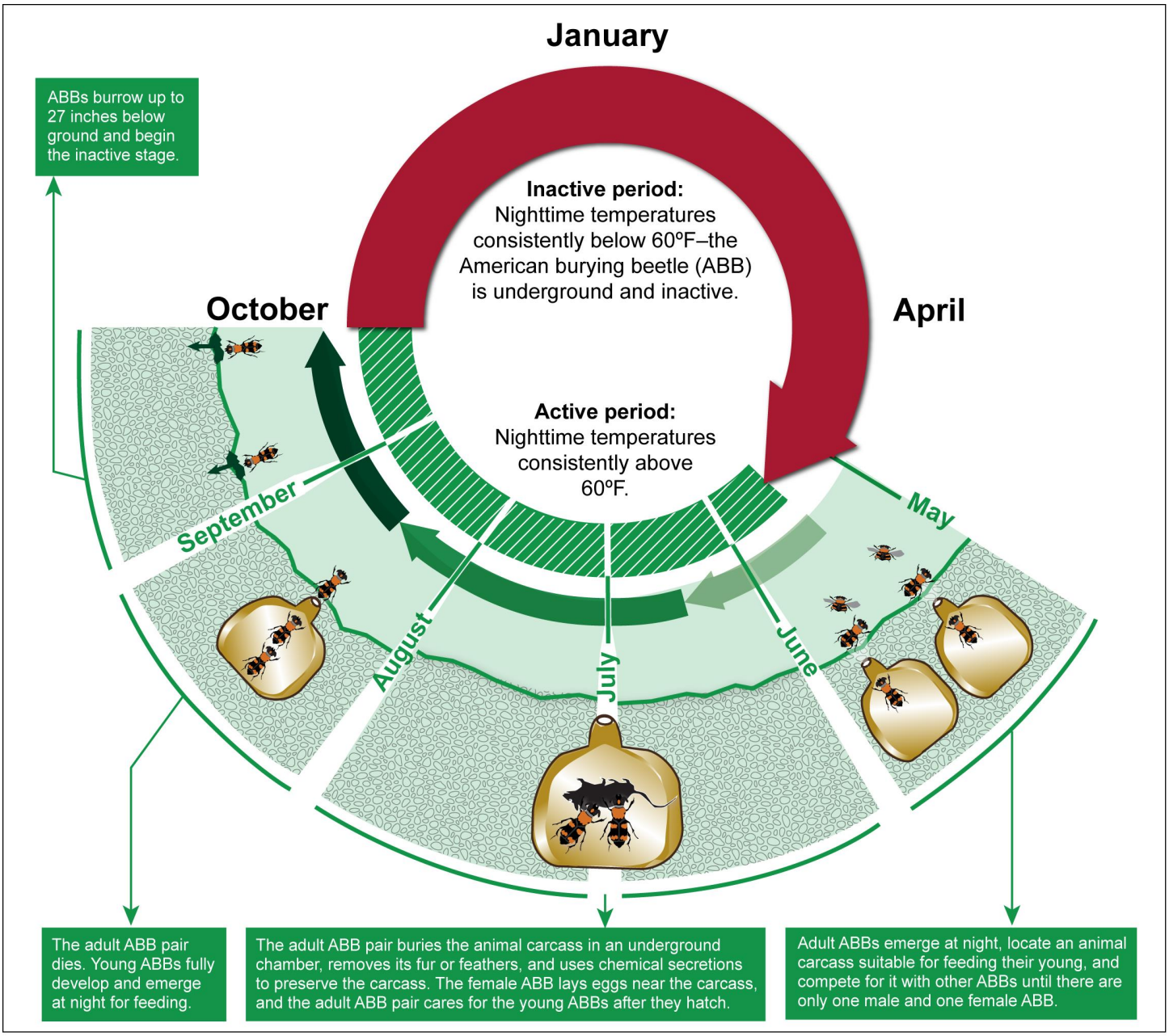
At about 1-1/2 inches long, the ABB is the largest of the North American carrion beetles, known for its orange-red markings and named for its unique behavior of burying animal carcasses—such as birds and small mammals—to provide a source of nourishment for its developing young. ABBs depend on dead animals for food and reproduction. The ABB is an annual species that lives underground and emerges nocturnally when surface temperatures consistently exceed 60 degrees Fahrenheit. Once emerged, the ABB seeks a suitable carcass and competes for a mate. The mated pair then buries the carcass, which the ABB uses to sustain its young. The ABB is a winged insect, and, according to FWS's evaluation of available research, it can travel up to 18 miles in one night. The ABB pair raises its young underground using chemical secretions to preserve the carcass for its offspring. Figure 2 shows two ABB specimens.

Figure 2: The American Burying Beetle, a Winged Insect

Sources: Anita Barstow; U.S. Fish and Wildlife Service. | GAO-17-154

Through its actions to find and bury carcasses in the soil, ABBs are beneficial in controlling pests, converting carcasses into soil nutrients, and aerating the soil. To preserve the carcasses of their prey, ABBs secrete chemicals that researchers are studying for applicability in treating bacterial infections, preventing fungal growth, and preserving meat at room temperature for human consumption. According to scientists, ABBs also benefit human health and agriculture by reducing disease vectors. Specifically, ABBs limit outbreaks of flies and other animals that could affect livestock production. ABBs are one of the few insects that provide parental care for their offspring. In addition, ABBs are considered an indicator species that is useful in evaluating the overall health of the environment. Figure 3 shows the life cycle of the typical ABB.

Figure 3: Key Stages of a Typical American Burying Beetle Life Cycle



Source: GAO analysis of U.S. Fish and Wildlife Service documents. | GAO-17-154

Note: According to U.S. Fish and Wildlife Service biologists, the ABB life cycle can differ slightly in parts of its geographic range. For example, the temperatures at which the active period begins and the depth that the ABB buries during the inactive period may vary by location. In the southern portion of the range, young ABBs may emerge sooner and complete a second reproduction cycle during the

summer. This figure is intended to depict key stages of a typical ABB life cycle and does not account for every activity within each key stage.

According to FWS documentation, the ABB, which was once found in more than 30 states, had disappeared from over 90 percent of its historical range by March 2008.[13] The exact reasons for the decline of the ABB are unknown. However, according to FWS documentation, biologists have identified some potential reasons for the decline, such as the elimination or decline of appropriate-sized carcasses, habitat loss and fragmentation due to widespread agriculture and development, and increased competition from other animals and invasive species.[14] According to officials at FWS, the agency improves its knowledge about the ABB through research and scientific surveys to detect and record the presence of the ABB in specific locations, which must be conducted during the ABB's limited active season.[15] Appendix II provides more detail about the species' current and historical range.

FWS Has Sought to Avoid and Minimize Potential Adverse Impacts on the ABB through Discussions with Project Proponents and by Requiring Mitigation Activities

FWS has sought to avoid and minimize potential adverse impacts on the ABB from construction and other projects by discussing mitigation options with project proponents and by requiring mitigation activities.[16] These

[13]According to FWS documentation, the historical range includes those geographic areas the species was known or believed to have occupied in the past.

[14]Other potential factors leading to the ABB's decline include deforestation, artificial lighting, and pesticide use, according to FWS documents.

[15]FWS Ecological Services field offices generally require an individual to meet certain qualifications, such as a documented ability to identify the species in the wild, before FWS will certify that individual to conduct presence surveys for the ABB. In addition, surveys must meet several conditions for FWS to consider them valid. For example, the Oklahoma Ecological Services Field Office has specific guidance for designing and conducting valid presence surveys for the ABB, including the time of year surveys can occur and certain weather conditions, such as excessive precipitation, that may invalidate survey results.

[16]According to March 2016 documentation from FWS's Oklahoma Ecological Services Field Office, projects that have the potential to adversely affect the ABB are those that occur within areas considered suitable habitat for the ABB and include the following types of activities: soil disturbance; use of vehicles or heavy equipment; artificial lighting; vegetation removal; use of herbicides, pesticides, or other hazardous chemicals; and any activity that may impact soil or vegetation in suitable ABB habitat or otherwise harm ABBs.

discussions can result in project proponents choosing to incorporate mitigation options into project proposals. FWS may also require project proponents to take mitigation actions specified in incidental take statements included in biological opinions it issues or habitat conservation plans it approves. To help monitor project proponents' mitigation actions, FWS records information about certain types of these discussions in its TAILS database.

In their discussions with project proponents about protecting endangered and threatened species, FWS officials said they use the principles contained in the agency's 1981 mitigation policy, which outlines a hierarchy of actions to address potential harm to fish and wildlife resources that can occur as a result of construction and other projects.[17] The first step in this hierarchy of actions is to avoid any impact on the listed species, such as by relocating the construction site outside the species' habitat. The second step is to minimize the impact on the species, such as by placing restrictions on when construction or other activities can occur.[18] According to FWS documentation, FWS can recommend a combination of avoidance and minimization measures to protect listed species.

FWS has worked with project proponents to develop avoidance measures for the ABB in an effort to help ensure that projects do not have a direct or indirect adverse impact on the ABB. For example, some Ecological Services field offices recommend that project proponents conduct presence surveys for the ABB if the project is located where ABBs may

[17]46 Fed. Reg. 7644 (Jan. 23, 1981). FWS's 1981 mitigation policy was intended to assist staff involved in making recommendations to protect and conserve fish and wildlife resources to (1) make consistent and effective recommendations, (2) allow federal and private developers to anticipate FWS recommendations and plan for mitigation needs early, and (3) reduce conflicts and project delays. The 1981 policy does not apply to threatened and endangered species, but FWS has used the principles of the 1981 mitigation policy to avoid, minimize, and compensate for potential adverse impacts on endangered and threatened species. FWS finalized a revised mitigation policy that includes threatened and endangered species in November 2016. 81 Fed. Reg. 83440 (Nov. 21, 2016). In addition, FWS issued a draft ESA compensatory mitigation policy in September 2016 for public comment that is intended to improve consistency in the use of compensatory mitigation as recommended or required under the ESA. 81 Fed. Reg. 61032 (Sept. 2, 2016). FWS intends to finalize this policy once it has had an opportunity to consider input from the public, according to agency officials.

[18]The third step is to compensate for the unavoidable impacts of the projects that remain after all appropriate and practicable avoidance and minimization measures have been applied by using a compensatory mitigation strategy. Compensatory mitigation strategies are discussed later in this report.

be present, and, according to FWS officials, project proponents often choose to conduct such surveys. According to FWS documentation, if surveys indicate that no ABB are present within the project area, the project proponent may conduct its project at the proposed location with concurrence from FWS that the project is not likely to adversely affect the ABB. Other examples of avoidance efforts for the ABB include the following:

- Officials in the South Dakota Ecological Services Field Office said that sometimes project proponents have relocated their projects to avoid potential harm to the ABB. For example, in 2009 a project proponent selected a site for a wind development project outside the ABB's range in South Dakota, and officials said that ABB presence was likely one factor that influenced the selection of that site. According to these officials, project proponents in South Dakota are able to select alternative project sites to avoid potential impacts on the ABB, in general, because ABB are known to be present in only a few counties in the state, where little development occurs.
- In 2011, the New England Ecological Services Field Office and a project proponent agreed that the project proponent could avoid harming the ABB for an airport lighting project on Block Island in Rhode Island by eliminating certain activities that could cause ground disturbance. For example, the project proponent agreed, among other things, to leave buried cable in place and decided not to excavate existing lighting poles in areas where ABB could be living.
- Officials in the Oklahoma Ecological Services Field Office stated that they provide project proponents in Oklahoma with the option to avoid take of the ABB by locating projects in habitat unfavorable to the ABB or where surveys indicate no ABB presence in the area. For example, FWS considers land to be unfavorable to the ABB if it is tilled on a regular basis or located in urban areas with paved surfaces or roadways.

FWS has also worked with project proponents in other cases to minimize potential impacts on the species when avoidance was not feasible. For example, some incidental take statements included in FWS biological opinions discuss reducing disturbances to soil in areas considered suitable habitat for the ABB and require restoration of any soil that is disturbed in these areas to its natural state after construction as ways for project proponents to minimize their projects' potential impacts on the ABB. Other examples of minimization efforts for the ABB include the following:

- In 2009, the Kansas Ecological Services Field Office required a project proponent to mow vegetation in areas that would be directly disturbed during the installation of a water pipeline. According to FWS's biological opinion for this project, mowing vegetation on at least a monthly basis during the ABB's active period would make the area less attractive to the ABB and therefore help minimize potential adverse impacts on the species by reducing the likelihood that ABB would be present in the areas where the project proponent would be disturbing the ground.
- In 2010, the South Dakota Ecological Services Field Office issued a biological opinion to the Federal Highway Administration for stream crossing projects. The incidental take statement included in the biological opinion required that the agency use construction practices that would minimally impact suitable habitat for the ABB adjacent to the project area.
- In 2014, the Oklahoma Ecological Services Field Office developed the Oil and Gas Industry Conservation Plan. According to that plan, its purpose is to provide a voluntary process for oil and gas project proponents to obtain permits for incidental take of the ABB from their projects that are not funded, authorized, or carried out by federal agencies. In order to be eligible for a permit under the plan, project proponents must agree to implement certain measures to minimize potential impacts on the ABB from their projects. For example, project proponents must agree to reduce the use of motor vehicles, machinery, or heavy equipment, which can result in take of the ABB.
- In 2015, the Nebraska Ecological Services Field Office conducted a section 7 consultation with the Western Area Power Administration for a wind energy development project in Nebraska. In the course of this consultation, the Nebraska Ecological Services Field Office and the project proponent agreed to several measures, including minimizing, to the extent possible, the use of artificial lighting that can attract insects like the ABB and result in take of the species. The project proponent also agreed to minimize the use of pesticides and avoid using them during the ABB's active season, and incorporated both of these measures into its project proposal.

If a federal agency is involved in authorizing, funding, or carrying out a proposed project, FWS's discussions with project proponents about options to avoid and minimize potential adverse impacts on the ABB can occur within the context of consultations under section 7 of the ESA. To help monitor actions, FWS tracks information on its formal section 7 consultation activities using its TAILS database. Table 2 shows the number of ABB-related formal section 7 consultation activities by FWS

regions and field offices from fiscal years 2008 through 2015. The Oklahoma Ecological Services Field Office conducted 46 out of 118 of the formal consultations on the ABB during this period—more than one-third of those conducted nationwide.

Table 2: U.S. Fish and Wildlife Service (FWS) American Burying Beetle Formal Consultation Activities under Section 7 of the Endangered Species Act (ESA) by Region and Field Office, Fiscal Years 2008 through 2015

FWS region	FWS Ecological Services field office	ESA section 7 formal consultations
Region 2 (Southwest)	Arlington	1
	Oklahoma	46
Region 3 (Midwest)	Columbia	1
	Columbus	13
Region 4 (Southeast)	Arkansas	6
Region 5 (Northeast)	New England	0
Region 6 (Mountain-Prairie)	Colorado	7
	Kansas	7
	Nebraska	13
	South Dakota	24
Total		**118**

Source: GAO analysis of FWS data from the Tracking and Integrated Logging System (TAILS). | GAO-17-154

Note: This table does not represent the total number of unique consultation activities that FWS has conducted related to the American burying beetle because consultation activities may include both formal and informal consultation types and may change over time, according to FWS officials. This table includes only formal consultation activities recorded in TAILS as formal consultations and formal emergency consultations.

FWS also uses TAILS to track informal activities conducted under section 7 of the ESA, such as informal consultations and technical assistance, but FWS officials said that Ecological Services field offices differ in how they interpret and record these informal activities. According to FWS officials, FWS field offices also work with project proponents to avoid and minimize potential adverse impacts on the ABB and other listed species for projects that are not funded, authorized, or carried out by a federal agency, but the details of the technical assistance through such discussions are not

always included in TAILS.[19] According to FWS officials, FWS is planning to develop standard operating procedures for using TAILS to improve the reliability of the data. According to these officials, FWS anticipates completing these standard operating procedures for TAILS in 3 years.

While avoiding and minimizing are FWS's preferred alternatives, they may not always be practical for project proponents. For example, it may not be practical to relocate a road project or an oil and gas well to avoid ABB habitat or to wait for the ABB's active period to conduct a presence survey. In these cases, FWS has other options—compensatory mitigation strategies—that project proponents may choose to use to compensate for the impact of their projects. We discuss compensatory mitigation in detail in the following section.

FWS Has Used In-Lieu Fee Programs and Conservation Banks to Conserve the ABB but Does Not Track the Use of In-Lieu Fee Programs Across Regions

FWS uses several compensatory mitigation strategies, such as in-lieu fee programs and conservation banks operated by third parties, to provide project proponents the option to compensate for remaining unavoidable impacts to endangered or threatened species after project proponents have implemented all appropriate and practicable avoidance and minimization measures, and FWS has used these strategies to conserve the ABB. In September 2016, FWS issued a draft policy that would set standards for all of its ESA compensatory mitigation strategies to achieve greater consistency, predictability, and transparency in the implementation of the law.[20] FWS tracks information about its conservation banks but has not fully implemented its plan to track its use

[19]The ESA generally prohibits project proponents from taking endangered or threatened species unless it is incidental to an otherwise lawful activity. Under section 10(a)(1)(B), FWS can issue incidental take permits to project proponents for projects without federal agency authorization or funding if certain conditions are met. Project proponents may contact FWS Ecological Services field offices for assistance to help ensure that take does not occur or to obtain an incidental take permit under section 10 of the ESA. Those who knowingly violate the ESA's prohibition on take of endangered and threatened species can face civil and criminal penalties.

[20]81 Fed. Reg. 61032 (Sept. 2, 2016).

of in-lieu fee programs across regions and field offices. Since listing the ABB as endangered in 1989, FWS has used three in-lieu fee programs in several states and two conservation banks in Oklahoma to conserve the ABB.

FWS Uses Several Types of Compensatory Mitigation Strategies and in September 2016 Issued a Draft ESA Compensatory Mitigation Policy

In addition to discussing and, in some cases, requiring measures to avoid and minimize potential adverse impacts to listed species, FWS may also discuss compensatory mitigation strategies with the project proponents so that they can compensate for any remaining unavoidable impacts on listed species from their projects after implementing all appropriate and practicable avoidance and minimization measures. As a result of these discussions, a project proponent may incorporate compensatory mitigation strategies into its project, and FWS may also require them in the nondiscretionary terms and conditions of incidental take statements included in biological opinions or in habitat conservation plans and incidental take permits, according to FWS officials.[21] FWS uses several compensatory mitigation strategies, including conservation banks and in-lieu fee programs. These strategies may involve project proponents providing financial support for mitigation in other locations (i.e., outside the boundaries of the proposed project) to offset some or all of the project's impacts. For conservation banks and in-lieu fee programs, project proponents provide money to a third party to conduct the conservation activities. Responsibility for conducting the conservation activities is transferred to the third party.

In addition, FWS uses other strategies, including habitat credit exchanges, permittee-responsible mitigation, and other third-party mitigation (see table 3).[22] FWS gives project proponents options to conduct mitigation on their own or through other arrangements, such as purchasing conservation bank credits or contributing to an in-lieu fee program, if those options exist and the project proponent is eligible under

[21]According to FWS officials, the agency only includes compensatory mitigation in the nondiscretionary terms and conditions if the project proponent has proposed it.

[22]According to FWS officials, habitat credit exchanges are still in the experimental phase, and, as of October 2016, FWS had two compensatory mitigation arrangements that operate similarly to a habitat credit exchange.

the terms and conditions of those arrangements. FWS officials said that when conservation banks or in-lieu fee programs have been available as mitigation options, nearly all project proponents choose to use these options over other compensatory mitigation strategies, such as permittee-responsible mitigation, because of issues of mitigation costs and liability.

Table 3: U.S. Fish and Wildlife Service's Primary Compensatory Mitigation Strategies

Strategy	Definition
Conservation bank	A site that provides ecological functions and services expressed as credits that is conserved and managed in perpetuity for a particular species and used expressly to offset impacts occurring elsewhere to the same species. Responsibility for ensuring that compensatory mitigation activities are successfully completed is transferred from the project proponent to a third party operating the bank.
In-lieu fee program	A program sponsored by governmental or nonprofit entities that collect funds used to establish sites that are conserved and managed for particular species or habitats. Responsibility for ensuring that compensatory mitigation activities are successfully completed is transferred from the project proponent to the in-lieu fee program's operator.
Habitat credit exchanges	A market-based system that operates as a clearinghouse in which an exchange administrator, acting as a mitigation sponsor, manages credit transactions between compensatory mitigation providers and permittees or others authorized to implement actions that adversely affect protected species.
Permittee-responsible mitigation	Conservation or mitigation activities or projects undertaken by the permittee or an authorized agent or contractor to compensate for or offset the unavoidable adverse impacts of an action on listed or at-risk species or their habitat. Project proponents retain responsibility for the mitigation.
Other third-party mitigation	This strategy operates similarly to permittee-responsible mitigation, except that responsibility for conservation can be transferred from the permittee to the third-party mitigation provider if an instrument provides for the legal transfer of responsibility.

Source: GAO analysis of U.S. Fish and Wildlife Service documents. | GAO-17-154

FWS has issued guidance to its regional offices for the establishment and use of conservation banks but has not finalized guidance that addresses operational considerations for in-lieu fee programs and other types of compensatory mitigation strategies. According to the guidance FWS issued in 2003 for establishing and using conservation banks as a compensatory mitigation strategy, conservation banks must conduct conservation for species in advance of any project development. Conservation banks should also obtain a permanent conservation easement on the mitigation lands, establish a management endowment that will support the perpetual management of the mitigation land, and establish a time limit for fully funding the endowment. Furthermore, according to this guidance, conservation bank proposals that are submitted for FWS approval must contain a conservation bank agreement that establishes a monitoring program, such as an annual reporting

requirement, a long-term management plan, and a dispute resolution process to be used if the banks' owners fail to meet their obligations.

According to an FWS official, the lack of guidance addressing the establishment or use of in-lieu fee programs and other types of compensatory mitigation strategies has led to differences in the structure, monitoring, and oversight of these strategies across FWS. In September 2016, however, FWS issued a draft policy for public comment in the *Federal Register* on ESA compensatory mitigation strategies that covers all these compensatory mitigation strategies.[23] This draft policy is intended to align with departmental directives and a 2015 presidential memorandum on mitigating impacts on natural resources from development.[24] It establishes standards for compensatory mitigation and minimum criteria for achieving these standards. The draft policy stresses the need to hold all compensatory mitigation strategies to equivalent and effective standards, but it would not apply to mitigation arrangements that have already been approved unless the in-lieu fee program, conservation bank, or other arrangement is modified or amended. In addition, according to FWS's website, the draft policy seeks to improve collaboration and coordination among all interested parties when FWS is engaged in the planning and implementation of compensatory mitigation strategies. Once finalized, the draft ESA compensatory mitigation policy would revise and replace FWS's 2003 conservation banking guidance. According to FWS officials, the agency intends to finalize the policy after the public comment period ends in October 2016.

FWS Tracks Key Information about Conservation Banks, but Its Plan to Track In-Lieu Fee Programs Has Not Been Fully Implemented

FWS tracks key information about the conservation banks it approves, such as the location and credits available, but it does not track in-lieu fee

[23]81 Fed. Reg. 61032 (Sept. 2, 2016).

[24]A 2015 presidential memorandum on mitigating impacts on natural resources from development and encouraging related private investment directs federal agencies to take advantage of landscape-scale planning documents to guide better decision making for mitigation. Landscape-scale mitigation is an approach to conservation planning that applies the mitigation hierarchy for impacts to resources and their values, services, and functions at the relevant scale, however narrow or broad, necessary to sustain or otherwise achieve established goals for those resources and their values, services, and functions.

programs. FWS has identified system modifications that are needed to the U.S. Army Corps of Engineers RIBITS database to track in-lieu fee programs, but it has not fully implemented its plan to make these modifications and improve monitoring and oversight of its in-lieu fee programs.

FWS has posted information about the conservation banks it approves to the U.S. Army Corps of Engineers' RIBITS website since 2011, according to an agency official. FWS monitors the number and location of conservation banks through the RIBITS database. According to FWS officials, the agency uses this information for a variety of management activities, such as providing project proponents with information on available mitigation options and facilitating incidental take authorizations and permit compliance when conservation banks are used. Table 4 shows the distribution of FWS-related conservation banks across regions. Information about the number of credits available and sold is accessible to the public through the RIBITS website.[25]

Table 4: U.S. Fish and Wildlife Service Active Conservation Banks by Region As of September 2016

Region	Number of active conservation banks
Region 1 (Pacific)	3
Region 2 (Southwest)	12
Region 3 (Midwest)	0
Region 4 (Southeast)	14
Region 5 (Northeast)	0
Region 6 (Mountain-Prairie)	6
Region 7 (Alaska)	0
Region 8 (Pacific Southwest)	82
Total	**117**

Source: GAO analysis of U.S. Fish and Wildlife Service data from the Regulatory In-lieu fee and Bank Information Tracking System. | GAO-17-154

Note: Conservation banks are a strategy used by the U.S. Fish and Wildlife Service for compensatory mitigation whereby conservation bank sponsors make up-front investments to conserve a species and then sell credits to project proponents (public or private entities) who need to mitigate potential adverse impacts on the species that may occur from their construction or other projects. Active conservation banks have credits available for sale to project proponents.

[25]See the RIBITS homepage at https://ribits.usace.army.mil/.

As of September 2016, there were also 21 conservation banks that had sold all of their credits and, therefore, were no longer a mitigation option for project proponents. In addition, FWS can suspend a conservation bank if the sponsors of that bank fail to comply with agreed upon parameters, such as how land will be managed for a species. As of September 2016, there were two suspended conservation banks that cannot sell credits at this time.

According to FWS's National Conservation Banking Coordinator, the agency's regional and field offices do not consistently enter certain information about conservation banks into RIBITS. Specifically, that official stated that some offices do not consistently upload parts of the conservation bank instruments, such as financial assurances or annual monitoring reports. In addition some offices do not enter information on "pending" conservation banks—those close to receiving FWS approval—while others do. Furthermore, this official stated that the agency has not issued standard operating procedures on the information FWS field offices are to enter into RIBITS. This official acknowledged the need to improve how the agency's regional and field offices enter data in RIBITS to make it more consistent in order to assist with monitoring and oversight of conservation banks. According to FWS officials, the agency intends to develop standard operating procedures after it finalizes its ESA compensatory mitigation policy.

In contrast to conservation banks, according to FWS headquarters officials, the agency has not tracked the use of in-lieu fee programs across regions and field offices because its focus has been on the conservation banks. Without data on these programs, FWS may be unable to respond to inquiries from the public and private sectors, or to track administrative and ecological compliance by in-lieu fee program sponsors, among other things. In addition, FWS is limited in its ability to evaluate whether in-lieu fee programs are an effective strategy for conservation. However, FWS headquarters officials we interviewed said that FWS recognizes the need to track and monitor its in-lieu fee programs to provide better oversight. In February 2016, FWS signed an interagency agreement, which will be in effect for 5 years, with the U.S. Army Corps of Engineers to, among other things, modify its RIBITS database so FWS can track all in-lieu fee programs across regions and field offices. According to an FWS official, although making modifications in RIBITS to track in-lieu fee programs is an identified need, the agency has not obligated funds for these modifications and does not have a timeline for doing so. As a result, it is not clear when FWS will be able to use the RIBITS database to track its in-lieu fee programs.

Federal government standards for internal control provide that management should design control activities to achieve objectives and respond to risks.[26] To accomplish this, according to federal internal control standards, management should define the time frames for achieving the objectives. However, because it is unclear when modifications will be made to RIBITS, it is also unclear when regions and field offices will be able to enter information on in-lieu fee programs so that FWS can use the RIBITS database to track these programs. Until FWS establishes a timetable with milestones for modifying the RIBITS database to incorporate in-lieu fee program information, the agency will not have reasonable assurance that it will obtain relevant and reliable data on its in-lieu fee programs, which will impact its ability to effectively evaluate its in-lieu fee programs and determine the most effective strategy for conservation.

FWS Has Used Three In-Lieu Fee Programs to Allow Project Proponents to Compensate for Potential Impacts on the ABB in Several States

Since listing the ABB as endangered in 1989, FWS has used three in-lieu programs to provide compensatory mitigation to help conserve the ABB in Nebraska, Oklahoma, and elsewhere in its Midwest Region.[27] The Nebraska Ecological Services Field Office and FWS's Midwest Regional Office began using in-lieu programs for the ABB in 2012 and 2013, respectively. Both of these programs were operating at the time of our review. The Oklahoma Ecological Services Field Office established an in-lieu fee program in 2009 but terminated the program in 2012.

[26]GAO, *Standards for Internal Control in the Federal Government,* GAO-14-704G (Washington, D.C.: September 2014) and GAO, *Standards for Internal Control in the Federal Government,* GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999).

[27]According to officials from the Department of the Interior's Office of the Solicitor, the agreements for these programs were authorized by the Fish and Wildlife Coordination Act. 16 U.S.C. § 661. The law authorizes the Secretary of the Interior to provide assistance to, and cooperate with, state agencies, private organizations, and others in the development and protection of species of wildlife and their habitat, among other things. In addition, since fiscal year 2010, the Secretary of the Interior has been authorized to enter into cooperative agreements with states, political subdivisions of states, or not-for-profit organizations if the agreement will serve a mutual interest in carrying out a program administered by the Department of the Interior. 43 U.S.C. § 1457b. According to officials from the Department of the Interior's Office of the Solicitor, this statute also serves as authorization for in-lieu fee programs established and conservation banks approved after its enactment.

Nebraska

In January 2012, FWS's Nebraska Ecological Services Field Office and the Nebraska Game and Parks Commission, a state agency, worked with two organizations—the Rainwater Basin Joint Venture and the Nebraska Community Foundation—to establish the Nebraska Habitat Projects Fund.[28] The fund is an in-lieu fee program that uses funding it receives for conserving ABB and other species, such as migratory birds, and their habitats. In their discussions on mitigation options, FWS and project proponents may discuss making voluntary contributions to this fund as one option to mitigate potential adverse impacts on the ABB from projects in Nebraska. If FWS and the project proponent agree that making a contribution to the fund is an appropriate mitigation strategy, FWS and the project proponent prepare a written agreement that outlines what contributions will be made and for what purpose. These written agreements are then used to develop contracts between the project proponent and the Nebraska Community Foundation, which manages the funds.

The Rainwater Basin Joint Venture works in partnership with the Nebraska Community Foundation to complete the planning, design, and implementation of conservation activities and to conduct research and monitoring activities. FWS does not have oversight responsibility for the Nebraska Habitat Projects Fund, and FWS does not determine how mitigation funds will be used for the ABB under this in-lieu fee program. However, FWS is a member of a work group composed of representatives from state agencies, such as the Nebraska Game and Parks Commission, and nongovernmental organizations, such as The Nature Conservancy and Audubon Nebraska, who work with an ABB species work group to establish criteria that are used to evaluate proposals for funding. According to FWS officials and Rainwater Basin Joint Venture documentation, in an effort to develop landscape-scale mitigation, a minimum threshold of $150,000 must be met before the Nebraska Community Foundation can expend funds for ABB conservation activities. As of October 2016, the $150,000 threshold had not been met, and therefore no expenditures have been made from the fund, according to FWS officials.

[28]The Rainwater Basin Joint Venture is a self-directed collaborative comprising agencies, organizations, corporations, and private landowners. The Nebraska Community Foundation is a nonprofit organization.

Midwest Region

In July 2013, FWS's Midwest Regional Office entered into a memorandum of understanding with Enbridge Pipelines to implement conservation measures, including compensatory mitigation, to minimize or offset the impacts to the ABB and other species resulting from construction of the Flanagan South Pipeline, which runs through parts of Illinois, Missouri, Kansas, and Oklahoma. In July 2013, FWS also entered into a memorandum of agreement with The Conservation Fund, a nonprofit conservation organization, to manage the Enbridge Pipelines' funds for species conservation and habitat restoration. The Conservation Fund is to use the funds to undertake mitigation projects approved by FWS or award the funds to others to undertake FWS-approved mitigation projects. Once FWS approves a project, The Conservation Fund is to enter into a funding agreement with those entities or undertake the project to conserve the ABB and other endangered species, such as the Indiana bat, as well as to protect migratory birds. Under this program, The Conservation Fund has provided funds to The Nature Conservancy, a nonprofit organization involved in ABB conservation efforts, to purchase land at its Tallgrass Prairie Preserve in Oklahoma to conserve ABB habitat.

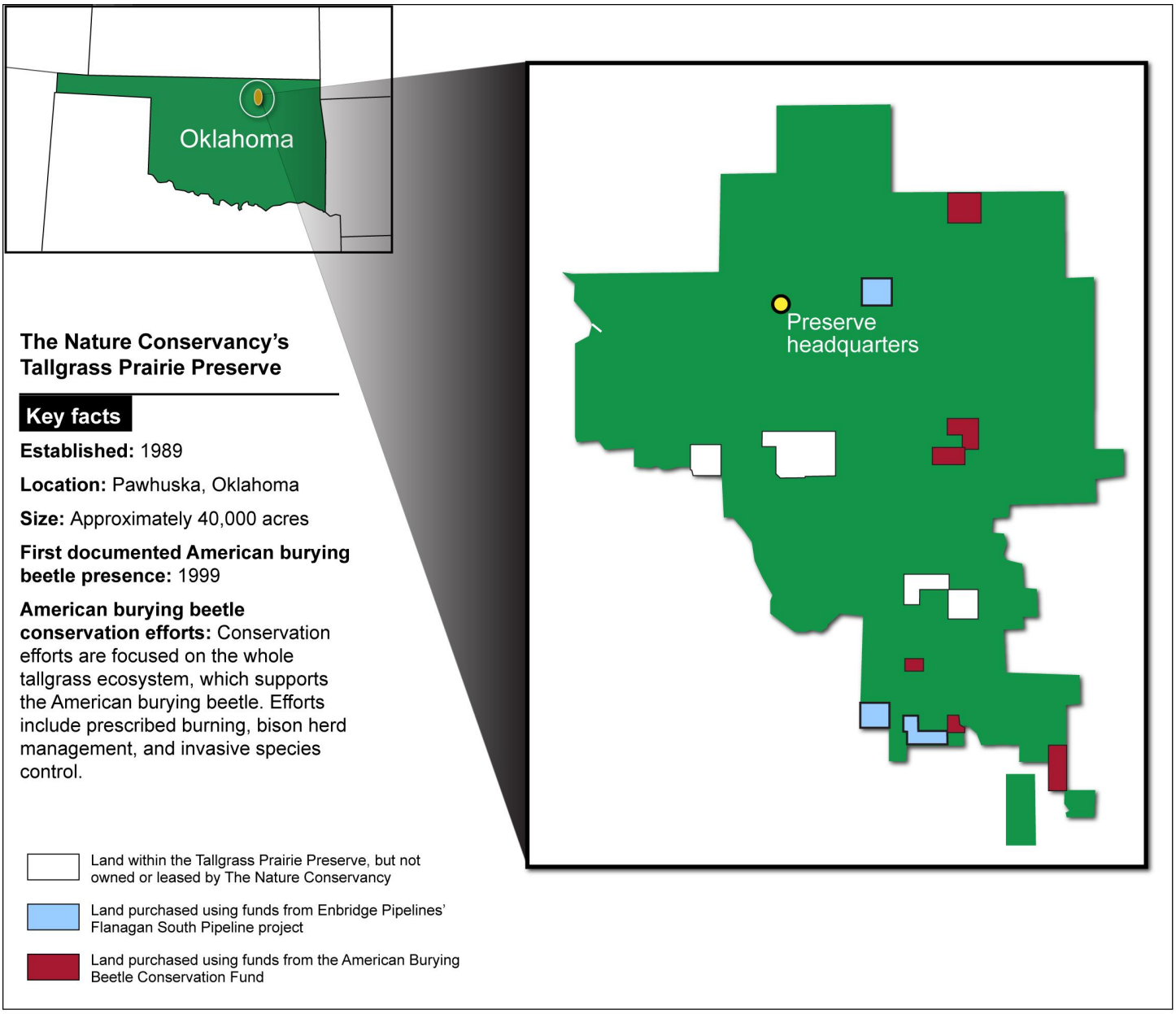
Oklahoma

In February 2009, the Oklahoma Ecological Services Field Office entered into a memorandum of agreement with The Nature Conservancy creating an in-lieu fee program called the American Burying Beetle Conservation Fund. Under this program, funds from multiple sources, such as federal agencies and private companies, were to be used to acquire lands or easements within priority conservation areas, restore or manage potential ABB habitat, and support research to monitor conservation areas for the ABB.

With FWS approval, The Nature Conservancy used contributions to the American Burying Beetle Conservation Fund to conduct conservation activities at its Tallgrass Prairie Preserve in Oklahoma, purchase land to expand the Preserve, and support ABB monitoring at the Preserve. According to representatives of The Nature Conservancy, it preserves the Tallgrass Prairie Preserve as a native tallgrass prairie habitat through the management of a bison herd that serves as a keystone species to restore the ecosystem. The Nature Conservancy manages the preserve to conserve all native species, but the representatives stated that the ABB benefits from this protected, heterogeneous grassland habitat. According

to representatives from The Nature Conservancy, it used the American Burying Beetle Conservation Fund for various habitat management activities, including conducting prescribed burns to manage the grasslands and controlling invasive species, such as feral pigs. Representatives from The Nature Conservancy said that ABB populations have increased in both size and distribution across the preserve since ABBs were first found at the Tallgrass Prairie Preserve in 1999. Figure 4 shows a map of The Nature Conservancy's Tallgrass Prairie Preserve, including land purchased with funding from FWS-approved in-lieu fee programs for the ABB.

Figure 4: Map and Key Facts about The Nature Conservancy's Tallgrass Prairie Preserve



Sources: Tony Brown, The Nature Conservancy (map); GAO analysis of The Nature Conservancy's documents. | GAO-17-154

According to FWS officials, conservation banks offer a more consistent conservation effort for the ABB than the American Burying Beetle Conservation Fund because conservation bank sponsors must agree to both conduct conservation in advance of a project's potential adverse

effect on a species and conserve the land in perpetuity. However, conservation banks can take several years for bank sponsors to develop and for FWS to approve. FWS officials told us they used the American Burying Beetle Conservation Fund as an interim compensatory mitigation measure and that it contributed more to ABB conservation than previous minimization measures.

The American Burying Beetle Conservation Fund operated from 2009 until July 2012, when FWS terminated it for various reasons, including concerns that the 2009 memorandum of agreement was not the appropriate mechanism to ensure effective oversight and adequate documentation of the conservation activities and fund expenditures. The total contributions and expenditures from the fund were about $1 million each. For additional information about the cash receipts and expenses of the American Burying Beetle Conservation Fund, see appendix III.

Since 2014, FWS Has Used Two Conservation Banks to Allow Project Proponents to Compensate for Potential Impacts on the ABB in Oklahoma

The Oklahoma Ecological Services Field Office approved two conservation banks for the ABB in an effort to allow project proponents to compensate for the potential adverse impacts of their projects on the ABB and to provide long-term conservation for the species, according to agency officials. FWS approved the Muddy Boggy Conservation Bank in 2014. Bank representatives told us they began working with FWS to establish the bank in 2012, purchased the land in 2013, and received approval to sell credits in 2014. The Muddy Boggy Conservation Bank is approximately 3,300 acres. FWS also approved the American Burying Beetle Conservation Bank in 2014. This bank manages approximately 3,300 acres, including approximately 900 acres that it manages as part of a permittee-responsible mitigation arrangement. Customers for the banks include oil and gas companies and the Oklahoma Department of Transportation.

Since they began operating in 2014, these conservation banks have submitted annual performance reports to FWS, and the agency has conducted annual on-site inspections, according to agency documentation. Representatives for both of the banks told us that they undertake activities to manage ABB habitat, rather than specifically managing for the species. For example, they said they use prescribed burns and control invasive species, such as eastern red cedar and red

imported fire ants, which, if not managed, can reduce quality habitat for the ABB.

According to FWS officials, the process of approving and establishing a conservation bank can take several years and requires up-front investments from bank sponsors. These officials told us FWS only reviews and approves applications and does not propose or initiate conservation banks. Conservation banks are private enterprises that are proposed by potential conservation bankers. Officials also told us that conservation banks are used in places where there is a strong demand for compensatory mitigation. FWS requires that offsets occur within a designated service area.[29] Therefore, project proponents use conservation banks within the approved service area for the project or impact site. However, according to FWS officials, in Oklahoma, if there are no conservation banks in a project's service area, project proponents can purchase credits at other conservation banks. As of November 2016, Oklahoma was the only state where conservation banks existed for the ABB. According to FWS officials, this is due to the market created by the relatively high density of the ABB population; large areas of suitable habitat; and numerous development projects, such as oil and gas well drilling and pipelines.[30]

According to representatives of the oil and gas industry in Oklahoma, companies prefer to purchase conservation bank credits rather than conduct their own permittee-responsible mitigation to avoid project delays and minimize long-term liabilities. However, representatives of the oil and gas industry we interviewed said they are concerned about the high costs of the conservation bank credits, which the conservation banks set on the basis of changing market conditions. Oil and gas industry representatives noted that from 2009 to 2012, FWS recommended contributions to the American Burying Beetle Conservation Fund that were significantly less than the current cost of credits from either of the two approved conservation banks. According to FWS officials, FWS has no control over

[29]FWS's draft ESA compensatory mitigation policy defines a service area as the geographic area assigned to a compensatory mitigation site within which credits for a specific resource (e.g., a species) are utilized. The impacts for which mitigation is sought must be located within the designated service area for the species, unless otherwise approved by FWS.

[30]According to FWS officials, potential conservation bankers could submit applications for banks in other states and FWS would consider them, but no applications had been received for conservation banks for the ABB in other states as of October 2016.

the cost of conservation bank credits. Those costs are negotiated between the conservation bank and the purchasers. In contrast, the contributions to the American Burying Beetle Conservation Fund were based on expected survey costs, which were not always commensurate with the cost of mitigating impacts of a proposed project. According to oil and gas industry officials, the high cost of bank credits is one major reason they supported a petition to delist the ABB. According to conservation bank officials, the petition to delist the ABB has created uncertainty regarding the market for bank credits, since project proponents would no longer have a need to mitigate potential harm to the ABB to move forward with their projects if FWS delisted the ABB.

Conclusions

FWS does not track information about its in-lieu fee programs across regions and field offices. As a result, FWS has limited ability to evaluate the effectiveness of these programs. FWS acknowledges this issue, and making modifications in RIBITS to track in-lieu fee programs is an identified need for the agency. However, it has not yet obligated funds to make the necessary modifications or established a timetable with milestones for modifying the RIBITS database to incorporate in-lieu fee program information. Until FWS collects relevant and reliable data on its in-lieu fee programs, the agency will not be able to evaluate the effectiveness of its programs and determine the most effective strategy for conservation.

Recommendation for Executive Action

To help improve FWS's ability to evaluate the effectiveness of its compensatory mitigation strategies and ensure that the agency appropriately plans the obligations necessary for this purpose, we recommend that the Director of the U.S. Fish and Wildlife Service establish a timetable with milestones for modifying the RIBITS database to incorporate FWS's in-lieu fee program information.

Agency Comments

We provided a draft of this report for review and comment to the Department of the Interior. The GAO audit liaison for the Department of the Interior responded via e-mail that the U.S. Fish and Wildlife Service

concurred with our recommendation. In addition, the agency provided technical comments on our draft report, which we incorporated 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 that time, we will send copies to the appropriate congressional committees, the Secretary of the Interior, the Director of the U.S. Fish and Wildlife Service, and other interested parties. In addition, the report will be available at no charge on the GAO website at http://www.gao.gov.

If you or your staff members have any questions about this report, please contact me at (202) 512-3841 or fennella@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in appendix IV.

Sincerely yours,

Anne-Marie Fennell
Director, Natural Resources and Environment

Appendix I: Objectives, Scope, and Methodology

Our objectives were to examine (1) how the Department of the Interior's U.S. Fish and Wildlife Service (FWS) has sought to avoid and minimize potential adverse impacts on the American burying beetle (ABB) from construction and other projects and (2) what is known about FWS's compensatory mitigation strategies and how FWS has used two of these strategies, in-lieu fee programs and conservation banks, for the ABB. In addition, you asked us to review the contributions and disbursements for a specific in-lieu fee program for the ABB. We briefed your office on the results of that review on August 30, 2016 (see the briefing slides in app. III).[1]

To conduct our work, we reviewed and analyzed relevant laws, agency policies, guidance, and other documentation related to the Endangered Species Act (ESA), compensatory mitigation strategies, and conservation efforts for the ABB.[2] We also reviewed our prior reports on endangered species issues and the use of compensatory mitigation strategies.[3] We interviewed FWS officials from headquarters, the Office of Law Enforcement, and the regional offices and Ecological Services field offices in states with an ABB presence, including Region 2 and the Oklahoma Ecological Services Field Office; Region 3 and the Columbia and Ohio Ecological Services Field Offices; Region 4 and the Arkansas Ecological Services Field Office; Region 5 and the New England Ecological Services Field Office; and Region 6 and the Kansas, Nebraska, and South Dakota Ecological Services Field Offices. We also interviewed officials from other relevant federal agencies, including the Department of the Interior's Bureau of Land Management, the U.S. Army Corps of Engineers, the Federal Energy Regulatory Commission, and the Environmental Protection Agency; representatives from The Nature Conservancy, a nonprofit conservation organization involved in ABB conservation efforts; as well as representatives from the oil and gas industry, including representatives from private oil and gas companies, the Oklahoma Oil and Gas Association, and the Oklahoma Independent Petroleum Association.

[1]For specific information about the objectives, scope, and methodology for the briefing, see the briefing slides in appendix III.

[2]See, for example, Endangered Species Act, Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. §§ 1531-1544) and Department of the Interior, *U.S. Fish and Wildlife Service Mitigation Policy*, 46 Fed. Reg. 7644 (Jan. 23, 1981).

[3]See GAO-09-550, GAO-08-688T, GAO-05-898, and GAO-01-287R.

To determine how FWS has sought to avoid and minimize potential adverse impacts on the ABB, we reviewed FWS biological opinions and other official correspondence with federal and nonfederal project proponents.[4] In addition, we reviewed the draft ESA compensatory mitigation policy that FWS issued in September 2016. We also analyzed data from FWS's Tracking and Integrated Logging System (TAILS) on the number of consultations with FWS that have occurred about the ABB across FWS regions for fiscal years 2008 through 2015.[5] To assess the reliability of the data in TAILS, we reviewed agency documentation about TAILS and interviewed agency officials, discussing limitations related to how specific consultation types are reported. We determined that the TAILS data on formal consultations were sufficiently reliable for our purposes.

To determine what is known about FWS's compensatory mitigation strategies and how FWS has used two of these strategies, in-lieu fee programs and conservation banks, for the ABB, we reviewed agency documentation related to compensatory mitigation, including agency guidance and policies.[6] We conducted a site visit in April 2016 at FWS's Oklahoma Ecological Services Field Office, which is FWS's lead field office for the ABB, and the Tallgrass Prairie Preserve in Oklahoma, where The Nature Conservancy conserved ABB habitat. We requested data from FWS regarding all current FWS in-lieu fee programs for endangered and threatened species, but we determined that the data FWS provided were not sufficiently reliable for our purposes because of missing information and other errors. For example, we determined that the data FWS provided included information on some in-lieu fee programs that had been terminated, included information on some compensatory mitigation strategies that are not in-lieu fee programs, and excluded at least one in-lieu fee program that is currently in operation. We also reviewed related documentation from FWS and other federal agencies, including the

[4]See, for example, U.S. Fish and Wildlife Service, Oklahoma Ecological Services Field Office, *Oil and Gas Industry Conservation Plan Associated with Issuance of Endangered Species Act Section 10(a)(1)(B) Permits for the American Burying Beetle in Oklahoma* (Tulsa, OK: May 21, 2014).

[5]TAILS is a field office activity tracking system that is part of FWS's Environmental Conservation Online System. It records ESA section 7 consultations related to listed species, among other things.

[6]See, for example, Department of the Interior, U.S. Fish and Wildlife Service, *Guidance for the Establishment, Use, and Operation of Conservation Banks* (Washington, D.C.: May 2, 2003).

Bureau of Land Management, the U.S. Army Corps of Engineers, the Federal Energy Regulatory Commission, and the Environmental Protection Agency; the Oklahoma Department of Transportation; and conservation organizations involved in the in-lieu fee programs, such as The Nature Conservancy and The Conservation Fund. FWS officials said that when conservation banks or in-lieu fee programs have been available, nearly all project proponents choose these arrangements over other compensatory mitigation strategies. Therefore, we focused on in-lieu fee programs and conservation banks for this report.

We interviewed representatives from the American Burying Beetle Conservation Bank and the Muddy Boggy Conservation Bank, both of which operate for the conservation of the ABB. We also analyzed FWS data on the use of conservation banks for all species listed under the ESA, which is reported in the U.S. Army Corps of Engineers' Regulatory In-lieu fee and Bank Information Tracking System (RIBITS).[7] To assess the reliability of data in RIBITS, we interviewed agency officials and reviewed agency documentation about RIBITS, such as user manuals, and determined that the data in RIBITS were sufficiently reliable for our purposes.

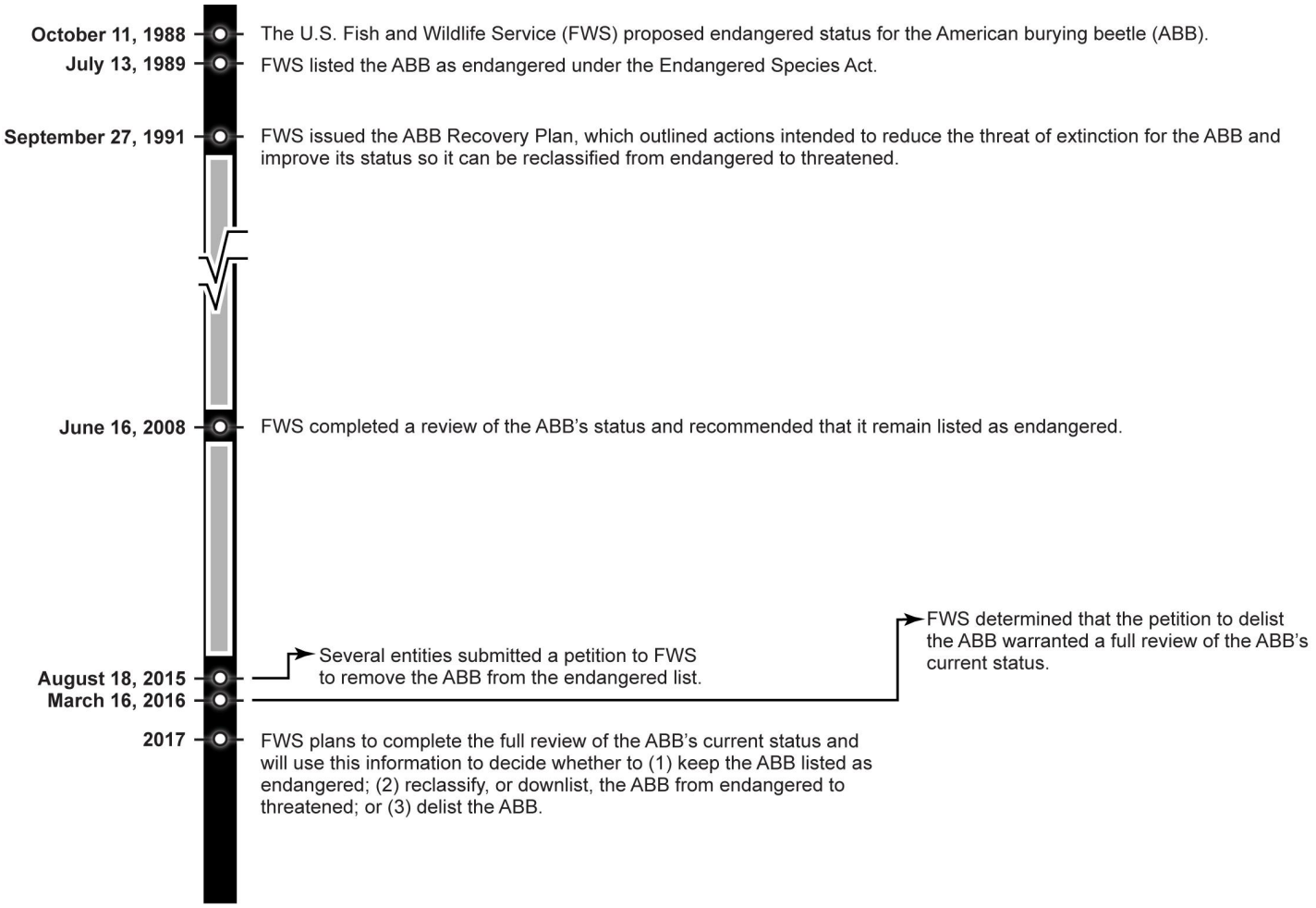
We conducted this performance audit from November 2015 to December 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[7]RIBITS is an Internet-based tracking system developed by the U.S. Army Corps of Engineers to provide information on mitigation banking and in-lieu fee programs across the country. FWS and the National Marine Fisheries Service also use RIBITS to report information on conservation banks they have approved for conserving species listed under the ESA.

Appendix II: Timeline of FWS's Conservation and Recovery Activities for the ABB and Information on the ABB Population

The Department of the Interior's U.S. Fish and Wildlife Service (FWS) has taken several steps to conserve and recover the American burying beetle (ABB) since it proposed listing the ABB as endangered in 1988. These steps range from developing a recovery plan for the ABB in 1991 to planning to determine, in 2017, whether FWS will (1) keep the ABB on the endangered species list; (2) reclassify the species' status from endangered to threatened, also known as downlisting; or (3) delist the ABB. Figure 5 provides a timeline of key activities related to ABB conservation.

Figure 5: Timeline of Key American Burying Beetle Conservation Activities



Source: GAO analysis of U.S. Fish and Wildlife Service documents. | GAO-17-154

Note: The purposes of the Endangered Species Act include providing a means whereby the ecosystems upon which endangered and threatened species depend may be conserved and to

provide a program for the conservation of such species. Under the Endangered Species Act, endangered species receive greater protection than threatened species; however, the Secretary of the Interior is required to issue regulations to provide for the conservation of threatened species and may issue a regulation to prohibit take of threatened species. Delisting a species removes protections under the Endangered Species Act for that species.

As of October 2016, the ABB was known or believed to occur naturally in seven states: Arkansas, Kansas, Nebraska, Oklahoma, Rhode Island, South Dakota, and Texas. In addition, FWS has attempted to reintroduce the ABB into three states where it was found historically: Massachusetts, Missouri, and Ohio. Table 5 provides information about the current status of the ABB in states with known ABB presence, by FWS region and field office.

Table 5: Status of American Burying Beetle (ABB) Populations in U.S. Fish and Wildlife Service (FWS) Regions with Known ABB Presence, as of October 2016

FWS region	FWS field office	Field office location	Number of counties where the ABB is known or believed to occur
Region 2, Southwest	Oklahoma Ecological Services Field Office	Tulsa, OK	31 counties throughout Oklahoma
	Arlington Ecological Services Field Office	Arlington, TX	2 counties in northeast Texas[a]
Region 3, Midwest	Columbia Ecological Services Field Office	Columbia, MO	4 counties in southwestern Missouri, as a result of a non-essential, experimental reintroduction program
	Ohio Ecological Services Field Office	Columbus, OH	8 counties in Ohio, as part of an active reintroduction program that has not yet been successful[b]
Region 4, Southeast	Arkansas Ecological Services Field Office	Conway, AR	8 counties in western Arkansas
Region 5, Northeast	New England Ecological Services Field Office	Concord, NH	1 county in Rhode Island 1 county in Massachusetts, as a result of a reintroduction program
Region 6, Mountain-Prairie	Kansas Ecological Services Field Office	Manhattan, KS	5 counties in southeast Kansas
	Nebraska Ecological Services Field Office	Grand Island, NE	26 counties throughout Nebraska
	South Dakota Ecological Services Field Office	Pierre, SD	4 counties in southeast South Dakota

Source: GAO review of U.S. Fish and Wildlife Service's Environmental Conservation Online System, as of October 2016. | GAO-17-154

[a]According to FWS biologists, FWS has not documented the presence of ABB in Texas since 2008; however, Texas is on the edge of the ABB's current known range, so presence or absence could fluctuate there over time. FWS biologists stated that it is possible that the ABB population could naturally reestablish itself in Texas, especially in cooler or wetter years.

[b]FWS has not been able to document a successful overwinter of the ABB in Ohio. As a result, FWS biologists do not consider Ohio to be a state where ABB are known to or believed to occur. However, ABB could occur in Ohio during the active season at locations near reintroduction sites, according to FWS biologists.

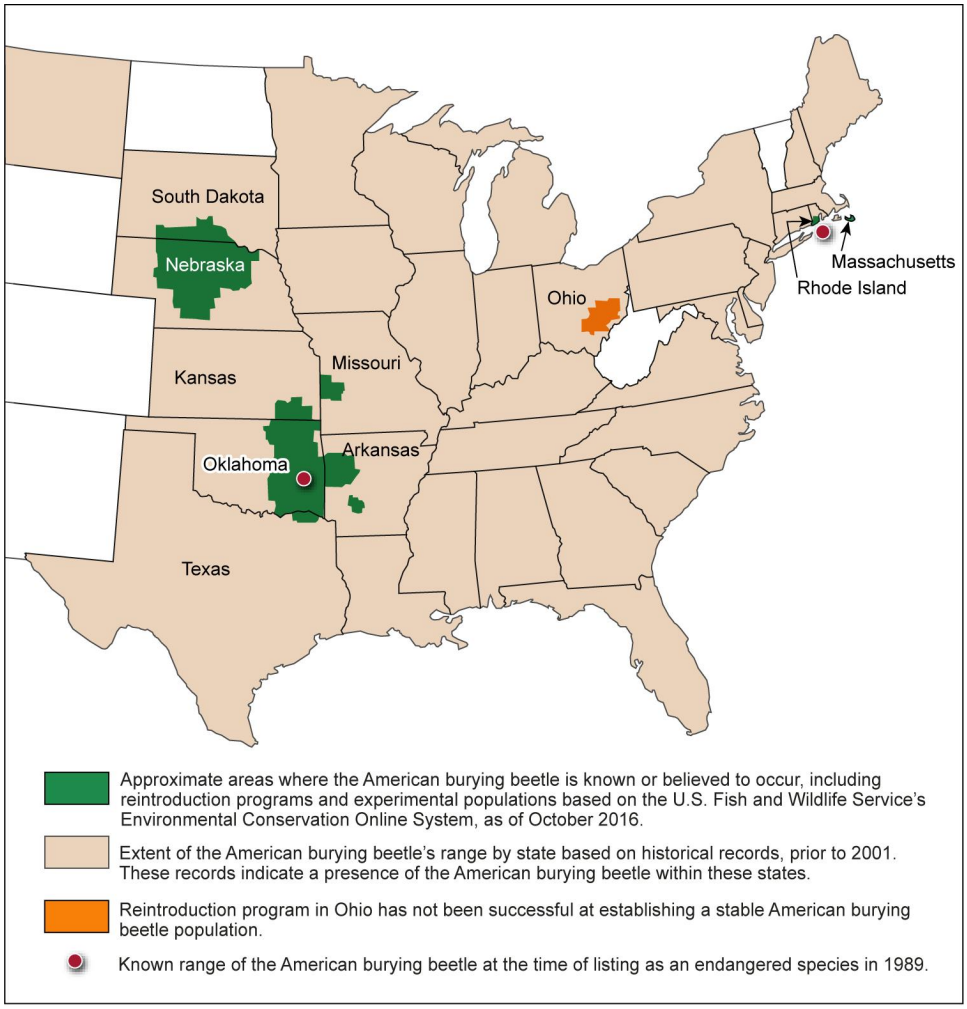
To reintroduce the ABB to locations where it once occurred, FWS either breeds the species in captivity or transports ABB from locations with naturally occurring populations and releases them in other states. In conjunction with state and nonprofit partners, FWS began efforts to reintroduce the ABB to Nantucket Island in Massachusetts in 1994. FWS used captive-bred ABB for this effort and FWS officials said that they currently consider the Nantucket ABB population to be stable. In Ohio, FWS has attempted to reintroduce the ABB since 1998, when it began transporting naturally occurring ABB from Arkansas for release in Ohio. FWS officials said that their reintroduction efforts in Ohio have been unsuccessful, in part, because the ABBs from Arkansas that were used in the reintroduction program may not be adapted to conditions that occur further north in Ohio. FWS is now using ABB from Nebraska instead of Arkansas to test if these ABB are more accustomed to colder winters, according to FWS officials. In Missouri, FWS has transported and released a non-essential, experimental ABB population in the southwestern part of the state since 2012.[1] FWS has documented an increasing number of ABB in Missouri each year since the reintroduction program began.

FWS has not designated critical habitat for the ABB, in part, because the species is a habitat generalist, and it is still unknown what habitat type is essential for ABB conservation, according to FWS officials.[2] FWS officials said that the agency improves its knowledge about the ABB's current range when FWS biologists, researchers from universities and nonprofit organizations, project proponents, or others conduct surveys to detect or monitor the presence of ABBs in locations where they are known or believed to occur. Consequently, the ABB's range in the United States changes over time. Figure 6 depicts the ABB's range as of October 2016 in relation to its known range at the time of its listing in 1989 and its reported historical range.

[1]Section 10(j) of the Endangered Species Act (ESA) authorizes the Secretary of the Interior to release and transport non-essential, experimental populations of a listed species outside their current range for the purpose of furthering conservation for the species.

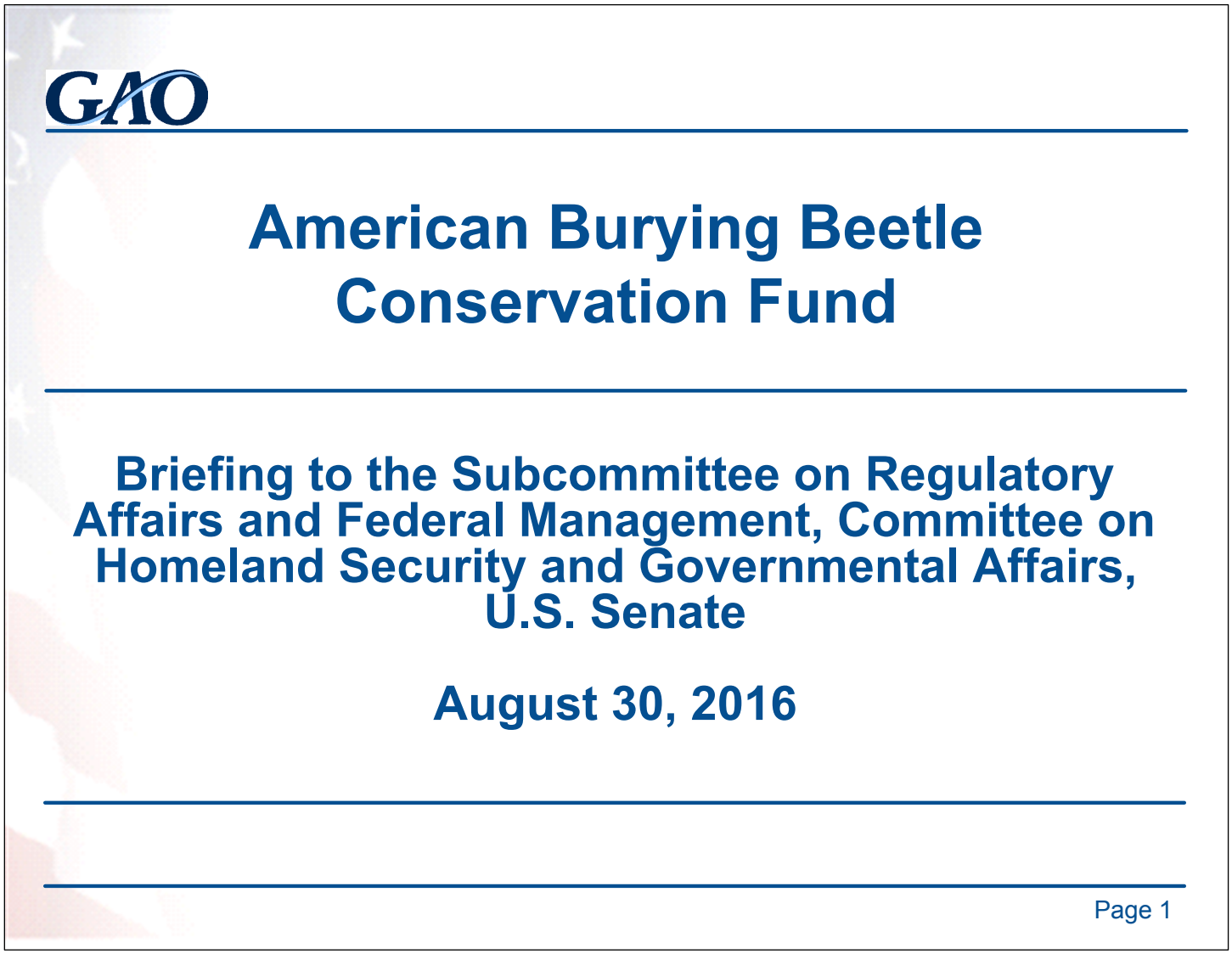
[2]The ESA defines critical habitat as (1) the specific area(s) within the geographical area occupied by the species at the time it is listed on which are found those physical or biological features essential to the conservation of a threatened or endangered species and which may require special management and protection and (2) specific areas outside the geographic area occupied by the species at the time it is listed upon a determination of the Secretary of the Interior that such areas are essential for the conservation of the species.

Figure 6: Current and Reported Historical Range of the American Burying Beetle in the United States, as of October 2016



Sources: GAO analysis of U.S. Fish and Wildlife Service documents; Map Resources (map). | GAO-17-154

Appendix III: American Burying Beetle Conservation Fund Briefing Slides



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Background
Endangered Species Act of 1973

- The Endangered Species Act of 1973 (ESA) places a variety of responsibilities on federal agencies, private entities, and individuals to ensure that planned actions do not adversely affect species listed as threatened or endangered.
- Among other things, federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or destroy or adversely modify their critical habitats. Even if a federal agency does not authorize, fund, or carry out an action, the ESA generally prohibits any person from taking endangered species.[1]
- Under the act, the Department of the Interior's U.S. Fish and Wildlife Service (FWS) has primary responsibility for terrestrial and freshwater organisms, including the American Burying Beetle (ABB).

[1]Take means to harass, pursue, hunt, shoot, wound, kill, trap, capture, collect, or harm. Harm includes significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing breeding, feeding, sheltering, or other essential behavioral patterns.

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Background (continued) American Burying Beetle

- According to an FWS assessment, the ABB once lived in over 30 states but has drastically declined in numbers and in July 1989 was listed as endangered. FWS has not established any critical habitat for the beetle.
- As of March 2016, populations were known or believed to occur in 10 states: Arkansas, Kansas, Massachusetts, Missouri, Nebraska, Ohio, Oklahoma, Rhode Island, South Dakota, and Texas.[2]
- According to an FWS Fact Sheet, carrion beetles, like the ABB, recycle carcasses, ultimately returning valuable nutrients to the soil. In addition, this beetle might be an "indicator species," or one that provides information on whether its environment is healthy.[3]

[2]The Missouri population is experimental/nonessential; it is not covered by the endangered listing.

[3]U.S. Fish and Wildlife Service, *Endangered Species: American Burying Beetle Fact Sheet* (July 19, 2016), accessed August 2, 2016, https://www.fws.gov/midwest/endangered/insects/ambb/abb_fact.html.

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Background (continued)
ABB Conservation Fund

- On February 12, 2009, FWS's Oklahoma Ecological Services Field Office established the ABB Conservation Fund (Fund) through a memorandum of agreement (MOA) with The Nature Conservancy (TNC).
- According to the MOA, FWS was to provide leadership for the planning, implementation, and monitoring of work undertaken as part of the MOA, and TNC was responsible for managing the Fund, among other things.
- Under the MOA, the Fund was to be used to (1) acquire lands or easements within priority conservation areas, including a stewardship fund for long-term maintenance of the lands acquired; (2) restore or manage potential ABB habitat; and (3) support research on ABB conservation needs. The MOA also stated that cooperative agreements may be developed by TNC and FWS with third parties as deemed appropriate.

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Background (continued)
ABB Conservation Fund

- Multiple sources, including federal agencies and private companies, contributed financially to the Fund.
- The MOA was to be in effect for 5 years; however, FWS terminated it early on July 31, 2012.
- Separately, a private company submitted a conservation bank proposal to the Oklahoma Ecological Services Field Office for review and approval in October 2012 to provide an alternative for conservation of the ABB and its habitat. A conservation bank is a site that provides ecological functions and services expressed as credits that are conserved and managed in perpetuity for particular species and are used expressly to offset impacts occurring elsewhere to the same species.[4] The first ABB conservation bank for Oklahoma was approved in January 2014.

[4]81 Fed. Reg. 12380, 12391 (Mar. 8, 2016). The analysis of these ABB conservation banks is part of a larger GAO effort evaluating the conservation measures for the ABB and the operation of conservation funds.

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Background (continued)

Other Agreements Related to the ABB Conservation Fund

- FWS and the Oklahoma Department of Transportation (ODOT) entered into an interagency agreement in 2009 wherein ODOT agreed to provide financial support to FWS to further the conservation of the ABB while ODOT retained the ability to implement new and routine maintenance and upgrade activities to the transportation network in Eastern Oklahoma. FWS and TNC subsequently signed a cooperative agreement to allow TNC to utilize ODOT funds for ABB conservation efforts. The cooperative agreement stated that ODOT funds were to be used to acquire land or easements within ABB priority areas in Oklahoma, restore or manage potential ABB habitat, or support recovery research, as described in the MOA. The period of performance of the agreement was to extend through September 30, 2013.

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Background (continued)

Other Agreements Related to the ABB Conservation Fund

- Additionally, the Bureau of Land Management (BLM) consulted with FWS regarding the impact of its Wild Horse and Burro Program on ABB habitat and proposed contributing funds to TNC for ABB conservation to address the program's impact on ABB habitat.[5] In September 2008, this arrangement was formalized through a grant agreement between BLM and TNC; it ended in September 2013. TNC officials stated that they considered the Wild Horse and Burro Program grant receipts and disbursements to be separate from the Fund since they received the money as a grant from BLM, which was governed by a grant agreement and not the MOA. However, FWS considered the grant from BLM's Wild Horse and Burro Program to be part of the Fund since the grant was awarded to TNC for ABB conservation efforts as a result of FWS's consultation with BLM.

[5]Under the Wild Free-Roaming Horses and Burros Act of 1971, BLM protects and manages wild free-roaming horses and burros on land under its jurisdiction.

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Objective

- You asked us to review the use of moneys collected into the Fund, including contributions to and disbursements from the Fund.
- Our objective was to determine the amounts and sources of funds received and disbursed by the Fund for each fiscal year from 2008 through 2014, as well as the extent to which adequate documentation exists to support the validity of such amounts.

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Scope and Methodology

To address our objective, we did the following:

- Interviewed FWS and TNC officials to obtain an understanding of the policies and procedures related to the management of the Fund.
- Reviewed the MOA between FWS and TNC to determine the requirements within the MOA regarding cash received and disbursements made by the Fund. We also reviewed other related agreements, such as the Wild Horse and Burro Program grant agreement, and information regarding cash received and disbursements made by the Fund.
- Reviewed FWS, TNC, ODOT, and BLM documentation to the extent available to identify the types and amounts of cash received and disbursements made by the Fund for each fiscal year from 2008 through 2014.

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Scope and Methodology (continued)

- Analyzed all of the Fund's transactions identified and information provided to determine whether adequate documentation exists in accordance with requirements of the MOA, related agreements, and *Standards for Internal Control in the Federal Government* to validate the amounts of cash receipts and disbursements.[6] Specifically, to validate amounts, we reviewed transaction documentation, such as invoices, project proposals and approvals, checks, or other documents, to confirm that transactions took place and the amounts were consistent.

[6]GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999). *Standards for Internal Control in the Federal Government* was revised in September 2014 and became effective beginning with fiscal year 2016. Our review addresses the activities of the Fund for fiscal years 2008 through 2014; therefore, we reference the November 1999 version of *Standards for Internal Control in the Federal Government* throughout these slides.

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Scope and Methodology (continued)

- Confirmed cash received by the Fund from private companies to the extent possible, given that (1) some companies were no longer in business, (2) could not be reached, or (3) did not respond to our confirmation letters.
- Compiled data about the Fund's cash receipts and disbursements activity from multiple sources, such as FWS, TNC, and ODOT, by interviewing knowledgeable officials and obtaining relevant documentation, and tested the data by reviewing supporting documentation.
- Summarized the Fund's cash receipts and disbursements by fiscal year.

We conducted this performance audit from November 2015 to September 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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Summary Observations

Our review of the transactions and documentation related to the Fund resulted in the following overall observations:

- The Fund received cash receipts totaling $1,004,281 from three main sources—private companies, ODOT, and BLM.
- The Fund disbursed $1,004,204 for ABB research projects, ABB habitat maintenance, and land acquisitions, among others.
- Amounts were generally supported with documentation from sources other than FWS.
- We identified several issues with the documentation provided as support.

Given the Fund's termination in July 2012, we are not including recommendations in this briefing. This work is part of a larger, ongoing GAO effort to evaluate FWS's conservation funds that will provide a broader understanding of the operation of these types of funds, including current conservation measures specific to the ABB.

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Identified Amounts and Sources of Cash Received by the American Burying Beetle Conservation Fund (Fund), Fiscal Years 2008 through 2014

	Fiscal years							
	Before the MOA's establishment	During the MOA's active period				After the MOA's termination		
	2008/2009[a]	2009[a]	2010	2011	2012	2013	2014	Total
Cash receipts								
Private companies contributions								
For drilling without approval	$32,500	$5,000	--	--	--	--	--	**$37,500**
After discussions with FWS related to proposed projects	71,980	50,020	$8,500	$65,273	--	--	--	**$195,773**
Total received from private companies	**$104,480**	**$55,020**	**$8,500**	**$65,273**				**$233,273[b]**
ODOT								
Reimbursed through FWS	--	--	$236,070	$79,460	--	--	--	**$315,530**
Less: Overhead charged by FWS	--	--	(42,570)[c]	(14,329)[c]	--	--	--	**$(56,899)[c]**
Funds received by TNC	**--**	**--**	**$193,500**	**$65,131**	**--**	**--**	**--**	**$258,631**
Funds received directly from ODOT	--	--	--	--	--	--	$312,377	**$312,377**
Total received from ODOT Funds	**--**	**--**	**$193,500**	**$65,131**	**--**	**--**	**$312,377**	**$571,008**
BLM								
Wild Horse and Burro Program	--	$40,000	$40,000	$40,000	$40,000	$40,000	--	**$200,000**
Total cash received by the Fund	**$104,480**	**$95,020**	**$242,000**	**$170,404**	**$40,000**	**$40,000**	**$312,377**	**$1,004,281**

Source: GAO summary of U.S. Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), Oklahoma Department of Transportation (ODOT), and The Nature Conservancy (TNC) data.

Note: Cells with dashes (--) indicate that there were no funds received in these areas.

[a]Fiscal year 2008/2009 included receipts through February 11, 2009. Fiscal year 2009 included receipts from February 12, 2009, when the memorandum of agreement (MOA) establishing the Fund was signed, through September 30, 2009 (end of the fiscal year).

[b]We could not verify the completeness of cash receipts from private companies because we were unable to (1) confirm all of the amounts listed by FWS and TNC as some companies were no longer in business, could not be reached, or did not respond to our confirmation letters, and (2) determine whether there were receipts from additional private companies not included on the lists provided to us.

[c]FWS charged ODOT a 22 percent overhead rate on the amounts ODOT paid FWS. Consequently, ODOT paid FWS an additional $56,899 (22 percent of $258,631) that was not received by the Fund

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Cash Received by the ABB Conservation Fund

The Fund had cash receipts, including reimbursements from three sources:

1. **Private companies**:
   a. Private companies contributed directly to TNC for suitable conservation measures for drilling projects within the ABB's range in Oklahoma that occurred without prior approval from BLM and consultation with FWS.
      - When threatened or endangered species are involved, part of BLM's approval process for permitting drilling projects includes a consultation with FWS, as required by section 7 of the ESA.[7]

[7]Under the ESA section 7, a federal agency must consult with FWS when any action the agency carries out, funds, or authorizes—such as through a permit—may affect a listed endangered or threatened species or critical habitat. The consultations may be informal or formal. Formal consultations generally result in FWS issuing a biological opinion. A biological opinion contains a detailed discussion of the effects of the action on listed species or critical habitats and FWS's opinion on whether the agency action is likely to jeopardize the continued existence of the species.

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Cash Received by the ABB Conservation Fund (continued)

However, in 2008 BLM found that nine companies drilled wells within the ABB's habitat range in Oklahoma without requesting approval from BLM; therefore, BLM was unable to consult with FWS. After learning about these wells, BLM and FWS discussed ways to address the potential adverse effects that the wells could have or had on the ABB, resulting in an FWS memo to BLM recommending that such companies contribute to the Fund. After receiving the FWS memo, from June 2008 through April 2009 BLM sent letters to those companies recommending that a contribution be made to the Fund for BLM to continue working on permitting the companies' wells. Subsequently, BLM issued a policy document in February 2010 stipulating that a $2,500 stipend would be assessed from each company that drilled a well without following the application process for obtaining approval to drill.

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Cash Received by the ABB Conservation Fund (continued)

b. Private companies also contributed to the Fund after (1) federal agencies' ESA section 7 consultations (informal or formal) with FWS regarding their projects or (2) discussions with FWS of their projects in ABB habitat areas that did not involve authorization or funding from federal agencies. As a result of these discussions, FWS would recommend contributing to the Fund as one option for private companies seeking to carry out projects in ABB habitat areas.

Some FWS-issued biological opinions, prepared as a result of formal section 7 consultations, specifically mentioned making a contribution to the Fund or included it as a term or condition. In the cases involving other discussions with FWS that were not documented in a formal biological opinion, we were unable to determine the specific reasons why private companies ultimately made contributions to the Fund because FWS was unable to provide supporting documentation, as discussed further below.

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Cash Received by the ABB Conservation Fund (continued)

We could not verify the completeness of cash receipts from private companies because we were unable to (1) confirm all of the amounts on the lists provided by FWS and TNC because some companies were no longer in business, could not be reached, or did not respond to our confirmation letters and (2) determine whether there were receipts from additional private companies not included on the lists provided.

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Cash Received by the ABB Conservation Fund (continued)

2. ODOT:

ODOT reimbursed TNC through FWS to further the conservation of the ABB, while retaining ODOT's ability to implement new and routine maintenance and update activities to the transportation network in Eastern Oklahoma.

Under the cooperative agreement between FWS and TNC regarding ODOT funds, TNC proposed projects in writing, obtained FWS written approval, paid for the projects, and submitted to FWS a form for reimbursement from ODOT funds. FWS added an overhead charge of 22 percent of the cash disbursements TNC invoiced and submitted its own invoice to ODOT. Once ODOT paid FWS for the invoice, FWS retained the overhead charge and reimbursed TNC the net amount.

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Cash Received by the ABB Conservation Fund (continued)

3. BLM:

BLM reimbursed TNC directly under a grant agreement between BLM and TNC regarding the Wild Horse and Burro Program funds until the grant agreement expired in September 2013. As previously mentioned, TNC officials stated that they considered the Wild Horse and Burro Program grant receipts and disbursements to be separate from the Fund since they received the money as a grant from BLM, which was governed by a grant agreement and not the MOA.

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Cash Received by the Fund before the MOA Was Established or after It Was Terminated

The MOA establishing the Fund was in effect from February 12, 2009, until its early termination on July 31, 2012. However, we found the following:

- TNC received cash from private companies prior to the MOA's establishment because FWS provided private companies with the option to make contributions to the Fund during fiscal years 2008 and 2009, before it signed the MOA. According to TNC officials, FWS began drafting the MOA in 2007 and it was not finalized until 2009. However, none of these funds were expended until after the MOA was signed.
- TNC received cash from ODOT after the MOA's termination in 2012 because in June 2014 FWS requested that ODOT reimburse TNC directly for disbursements TNC made under the ODOT cooperative agreement prior to the termination of the MOA. This reimbursement appears as a receipt for $312,377 in fiscal year 2014. According to FWS officials, after the termination of the MOA in July 2012, the reimbursement process for ODOT funds was no longer available through FWS.

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Cash Received by the Fund before the MOA Was Established or after It Was Terminated (continued)

- BLM continued making annual payments under its grant agreement for the Wild Horse and Burro Program until fiscal year 2013 when the grant expired.

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Identified Amounts and Types of Cash Disbursed by the American Burying Beetle (ABB) Conservation Fund (Fund), Fiscal Years 2009 through 2013

	Fiscal years					
	During the MOA's active period				After the MOA's termination	
	2009[a]	2010	2011	2012	2013	Total
Cash disbursements						
Disbursements for ABB research projects from:						
Private companies' receipts	$5,962	--	--	--	--	**$5,962**
ODOT receipts	--	$12,285	$14,865	$28,020	--	**$55,170**
Total disbursements for ABB research projects	**$5,962**	**$12,285**	**$14,865**	**$28,020**	**$0**	**$61,132**
Disbursements for land acquisition and closing costs from:						
Private companies' receipts	--	$129,273	--	--	--	**$129,273**
ODOT receipts	--	246,346	--	$255,186	--	**$501,532**
Total disbursements for land acquisition and closing costs	**$0**	**$375,619**	**$0**	**$255,186**	**$0**	**$630,805**
Disbursements for stewardship endowments from:						
Private companies' receipts	--	$13,727	$60,840	$23,471	--	**$98,038**
ODOT receipts	--	--	--	14,229	--	**$14,229**
Total disbursements for stewardship endowments	**$0**	**$13,727**	**$60,840**	**$37,700**	**$0**	**$112,267**
Disbursements for ABB habitat maintenance from BLM's Wild Horse and Burro Program grant receipts	$40,000	$40,000	$40,000	$40,000	$40,000	**$200,000**
Total cash disbursed by the Fund	**$45,962**	**$441,631**	**$115,705**	**$360,906**	**$40,000**	**$1,004,204[b]**

Source: GAO summary of U.S. Fish and Wildlife Service, Bureau of Land Management (BLM), Oklahoma Department of Transportation (ODOT), and The Nature Conservancy (TNC) data.

Note: Cells with dashes (--) indicate that there were no funds disbursed in these areas.

[a]Fiscal year 2009 included disbursements from February 12, 2009, when the memorandum of agreement (MOA) establishing the Fund was signed, through September 30, 2009.

[b]Total disbursements shown for the Fund in this table are $77 less than total amounts received because we were unable to obtain support for a $77 difference on one TNC invoice from ODOT funds. Specifically, ODOT documentation showed that it reimbursed TNC $312,377 for multiple cash disbursements related to ABB transactions; however, TNC's support for disbursements totaled $312,300.

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Cash Disbursed by the ABB Conservation Fund

TNC made cash disbursements from the Fund for the following:

- Research to study the ABB population and the effects of conservation measures.
- Land acquisitions in Oklahoma to help ensure preservation of ABB habitat, which included the land purchase price and closing costs related to the purchase.
- Stewardship endowments to help provide for the long-term maintenance and management of the acquired lands.
- ABB habitat maintenance to pay for labor and supplies used to remove and exterminate invasive plants that degraded ABB habitat, build and maintain fences to contain animals that helped support ABB habitat in Oklahoma, and conduct prescribed burns, among other activities.

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Cash Disbursed by the Fund after the MOA Was Terminated

The MOA was terminated on July 31, 2012. However, under its grant agreement with BLM's Wild Horse and Burro Program, TNC continued making annual disbursements until the end of fiscal year 2013 when the grant agreement expired. As previously mentioned, TNC officials stated that they considered the Wild Horse and Burro Program receipts and disbursements to be separate from the Fund since they received the money as a grant from BLM, which was governed by a grant agreement and not the MOA.

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FWS Was Unable to Provide Supporting Documentation for Most of the Fund's Transactions, but Validity of the Amounts Was Generally Supported by Other Sources

During our review we found that FWS was unable to provide supporting documentation for most of the Fund's transactions, but we were able to obtain supporting documentation for most transactions from TNC, BLM, and ODOT for their projects. It is unclear whether FWS should have retained these documents under its record retention policy. When we requested the supporting documentation for the Fund's transactions, FWS officials stated that they could not find supporting documentation for the transactions and that officials who were involved with the Fund are no longer with the Oklahoma Ecological Services Field Office. *Standards for Internal Control in the Federal Government* provides that (1) entities should appropriately document transactions and internal controls—and such should be readily available for examination—and (2) control activities include the creation and maintenance of related records that provide evidence that these activities were executed as well as appropriate documentation.[8]

While we were able to support most amounts from sources other than FWS, we identified other issues in our review of the documentation, which are described further below.

[8]GAO/AIMD-00-21.3.1.

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Documentation of Private Fund Company Transactions

Receipts

FWS and TNC each provided a list of private companies' receipts. BLM and TNC provided supporting documentation, such as notification letters and acknowledgment of private company receipts and copies of checks for these transactions to support the validity of the amounts.

We also attempted to contact all of the private companies on the lists to verify that the amounts received from each company per the lists were accurate and complete. As noted previously, we could not verify the completeness of these cash receipts because we were unable to (1) confirm all of the amounts on the lists provided by FWS and TNC because some companies were no longer in business, could not be reached, or did not respond to our confirmation letters and (2) determine whether there were receipts from additional private companies not included on the lists provided.

Disbursements

TNC provided supporting documentation, such as the settlement statement for the land acquisition, to validate Fund disbursements made from private companies' receipts.

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Documentation of ODOT Transactions

Receipts

FWS could only provide summary documentation of ODOT receipts, but we obtained detailed documentation, such as disbursement reports and copies of warrants, from ODOT.

Disbursements

TNC generally provided supporting documentation, such as copies of project invoices, settlement statements for land acquisitions, and most project approvals. However, we were unable to obtain support for a $77 difference on one TNC invoice from ODOT funds. Specifically, ODOT documentation showed that it reimbursed TNC $312,377 for multiple cash disbursements related to ABB transactions; however, TNC's support for disbursements totaled $312,300. TNC officials stated that although they believe the additional $77 amount to be a valid expense made for an ODOT project, they could not account for it.

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Documentation of BLM Transactions for the Wild Horse and Burro Program

Receipts and Disbursements

BLM and TNC provided supporting documentation, such as copies of invoices, the financial assistance grant agreement and its supplements, Single Audit reports, and performance reports, for the $200,000 in receipts and $200,000 in disbursements related to the Wild Horse and Burro Program.

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Other Transaction Issues Identified

During our review of the documentation to support the validity of ABB receipts and disbursements, we found some instances in which the amounts were validated but the supporting documentation was deficient in other areas. Specifically, we found that three projects with disbursements lacked required FWS approval, FWS could not support the agreement to a 22 percent overhead charge imposed upon ODOT as part of their interagency agreement, and FWS incorrectly billed ODOT for one transaction as discussed below.

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Other Transaction Issues Identified (continued)

- Three Disbursements Lacked Required Approvals:

The MOA between FWS and TNC states that projects to be funded must be proposed in writing along with their funding levels—including any long-term maintenance costs—and that FWS should approve all proposed projects and funding levels in writing. Although TNC generally provided supporting documentation for the project disbursement amounts, neither FWS nor TNC could provide support for the written approval of three projects with disbursements totaling $27,867:

1. research project supplies paid from private companies' funds in 2009 for $5,962,
2. an ABB research project conducted with ODOT funds in 2010 for $12,285, and
3. an ABB research project conducted with ODOT funds in 2012 for $9,620.

According to TNC officials, because these projects were requested by FWS and not proposed by TNC, they did not obtain written approval from FWS.

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Other Transaction Issues Identified (continued)

- FWS Lacked Support for Agreement of 22 Percent Overhead Charge:

  FWS did not provide or could not locate documentation to support the agreement to a 22 percent overhead charge, resulting in $56,899 charged to ODOT for ABB-related activities under the interagency agreement with FWS. FWS officials stated that the authority for the charges is the Intergovernmental Cooperation Act; however, neither the rate nor the authority to charge the rate was contained in the interagency agreement. FWS officials also stated that personnel involved with acceptance of this agreement no longer work for FWS, but the officials assume that ODOT was aware of the 22 percent overhead rate charged because ODOT paid the charge as billed. However, the FWS invoices provided by ODOT showed nonitemized lump sums that included the overhead charges. ODOT officials told us that they were aware that an overhead cost was charged, but they were unaware of the rate actually charged.

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Other Transaction Issues Identified (continued)

- FWS's Billing Error:

  During our review of ODOT transactions, we also found that FWS incorrectly billed ODOT for $10,271 in March 2012 as evidenced by an unrelated invoice that referenced the ABB agreement number. FWS officials stated that upon further investigation, they discovered this error was the result of payroll that was erroneously accrued on this agreement causing the system to charge ODOT this amount. Subsequently, FWS reimbursed the full amount to ODOT in May 2016. This error is not included in the Fund's cash receipts and disbursements tables discussed previously.

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Agency Comments and Third-Party Views

- The Department of the Interior and The Nature Conservancy provided technical comments on a draft of these slides, which we incorporated as appropriate.

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Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact named above, Jeffery D. Malcolm (Assistant Director), Maria C. Belaval, Martin (Greg) Campbell, Joseph M. Capuano, Caitlin E. Cusati, Armetha (Mae) Liles, Edward (Ned) Malone, Elizabeth Martinez, Genna Mastellone, Steven R. Putansu, Anne K. Rhodes-Kline, Dan C. Royer, Jeanette M. Soares, and David A. Watsula made important contributions to this report.

Appendix V: Accessible Data

Data Tables

Text for Figure 1: U.S. Fish and Wildlife Service Regions, Including Ecological Services Field Offices in Areas with American Burying Beetle Presence

Map of the United States showing states divided into regions and the field offices in areas with American burying beetle presence.

The letter is used on the map to illustrate the location of that field office.

Region 2

- A-Arlington Ecological Services Field Office
- B-Oklahoma Ecological Services Field Office

Region 3

- C-Columbia Ecological Services Field Office
- D-Ohio Ecological Services Field Office

Region 4

- E-Arkansas Ecological Services Field Office

Region 5

- F-New England Ecological Services Field Office

Region 6

- G-Kansas Ecological Services Field Office
- H-Nebraska Ecological Services Field Office
- I-South Dakota Ecological Services Field Office

Figure 3: Key Stages of a Typical American Burying Beetle Life Cycle

Inactive period:	When nighttime temperatures consistently below 60ºF--the American burying beetle (ABB) is underground and inactive.	Generally October Through April
Active period:	When nighttime temperatures consistently above 60ºF.	Generally May through October

Active months	Active behaviors
Mid-May-Mid-June	Adult ABBs emerge at night, locate an animal carcass suitable for feeding their young, and compete for it with other ABBs until there are only one male and one female ABB.
Mid- June -Mid-August	The adult ABB pair buries the animal carcass in an underground chamber, removes its fur or feathers, and uses chemical secretions to preserve the carcass. The female ABB lays eggs near the carcass, and the adult ABB pair cares for the young ABBs after they hatch.
Mid-August-Late September	The adult ABB pair dies. Young ABBs fully develop and emerge at night for feeding. ABBs burrow up to 27 inches below ground and begin the inactive stage.

Text for Figure 4: Map and Key Facts about The Nature Conservancy's Tallgrass Prairie Preserve

Map of Oklahoma with blow up showing the preserve's boundary and headquarters location.

The Nature Conservancy's Tallgrass Prairie Preserve

- Established: 1989
- HQ Location: Pawhuska, Oklahoma
- Size: Approximately 40,000 acres
- First documented American burying beetle presence: 1999
- American burying beetle conservation efforts: Conservation efforts are focused on the whole tallgrass ecosystem, which supports the

American burying beetle. Efforts include prescribed burning, bison herd management, and invasive species control.

- Legend, preserve area identified in green which does not fit one of the following 3 categories.
- Legend, area in preserver identified with white color. Land within the Tallgrass Prairie Preserve, but not owned or leased by The Nature Conservancy
- Legend, area in preserver identified with light blue color. Land purchased using funds from Enbridge Pipelines' Flanagan South Pipeline project
- Legend, area in preserver identified with red color. Land purchased using funds from the American Burying Beetle Conservation Fund

Text for Figure 5: Timeline of Key American Burying Beetle Conservation Activities

October 11, 1988	The U.S. Fish and Wildlife Service (FWS) proposed endangered status for the American burying beetle (ABB).
July 13, 1989	FWS listed the ABB as endangered under the Endangered Species Act.
September 27, 1991	FWS issued the ABB Recovery Plan, which outlined actions intended to reduce the threat of extinction for the ABB and improve its status so it can be reclassified from endangered to threatened.
June 16, 2008	FWS completed a review of the ABB's status and recommended that it remain listed as endangered.
August 18, 2015	Several entities submitted a petition to FWS to remove the ABB from the endangered list.
March 16, 2016	FWS determined that the petition to delist the ABB warranted a full review of the ABB's current status.
2017	FWS plans to complete the full review of the ABB's current status and will use this information to decide whether to (1) keep the ABB listed as endangered; (2) reclassify, or downlist, the ABB from endangered to threatened; or (3) delist the ABB.

Text for Figure 6: Current and Reported Historical Range of the American Burying Beetle in the United States, as of October 2016

Map of United States.

Area in tan highlights extent of the American burying beetle's range by state based on historical records, prior to 2001. These records indicate a presence of the American burying beetle within these states.

Montana, and all states east of 104 degrees longitude, excluding North Dakota, West Virginia and Vermont.

Area in green highlights approximate areas where the American burying beetle is known or believed to occur, including reintroduction programs and experimental populations based on the U.S. Fish and Wildlife Service's Environmental Conservation Online System, as of October 2016.

- Arkansas
- Kansas
- Massachusetts
- Missouri
- Montana
  Nebraska
- Ohio
- Oklahoma
  Rhode Island
- South Dakota
- Texas

Area in orange highlights reintroduction program in Ohio which has not been successful at establishing a stable American burying beetle population.

Known range of the American burying beetle at the time of listing as an endangered species in 1989.

- Small location in Oklahoma

- Small location in Rhode Island

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