



**United States Department of the Interior**  
Fish and Wildlife Service  
Southeast Region



Endangered Species Act  
Section 7(a)(1)  
**INTERAGENCY COOPERATION**



**About the Cover Photo:** The federally endangered Interior Least Tern (*Sternula antillarum*), along with the endangered pallid sturgeon (*Scaphirhynchus albus*) and fat pocketbook mussel (*Potamilus capax*), is the subject of the largest Endangered Species Act section 7(a)(1) plan in the southeastern United States. This plan covers engineering activities of the U.S. Army Corps of Engineers' Channel Improvement Program along the Lower Mississippi River. The 955 mile river reach begins at the confluence of the Mississippi and Ohio Rivers and flows southward to Head-of-Passes, Louisiana. The Interior Least Tern has exceeded its recovery criteria due in large part to the success of this conservation strategy. For more information on this species and the U.S. Army Corps of Engineers' section 7(a)(1) conservation plan, see U.S. Army Corps of Engineers 2013, summarized in Appendix A of this document and available at: <http://www.fws.gov/mississippiES/pdf/LMR%20Conservation%20Plan%20Final%20USACE%20CIP%2023%20July%202013.pdf>. Photo courtesy of Bill Stripling.

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## EXECUTIVE SUMMARY

The conservation provisions of the Endangered Species Act (ESA; sections 2(c)(1), and 7(a)(1)) provide all Federal agencies with both the authority and the obligation to assist in the recovery of threatened and endangered species (TES) within the boundaries of their authorities. If appropriately implemented, these provisions can not only achieve conservation, but also minimize interagency conflicts, promote primary mission success, and document compliance with the ESA. However, there have been no regulations and little guidance developed regarding the implementation of this obligation.

Since the ESA was amended in 1978, the primary mechanism of Federal agency interactions regarding TES conservation efforts has been through the jeopardy provisions of section 7(a)(2). This has resulted in, at best, status quo or minimal improvement of species listed under the ESA, or, at worst, in the piece meal loss of habitat or conservation value of habitat. The utilization of this provision has fostered an interagency cultural environment that is reactive and minimizes collaboration between TES conservation agencies and Federal action agencies tasked with other legal and congressionally mandated primary missions. This environment may also spill over into interactions with State agencies, as well as with industries and private landowners, during permitting interactions with Federal action agencies.

Over the past two decades, legal challenges and judicial opinions have focused attention on the ESA conservation requirements. This attention has led to attempts to increase cooperative conservation planning at local levels. For example, in 2013 the Mississippi Field Office, U.S. Fish and Wildlife Service, engaged with the U.S. Army Corps of Engineers (USACE) Mississippi Valley Division, to develop and complete a section 7(a)(1) Conservation Plan for the endangered Interior least tern, pallid sturgeon and fat pocketbook mussel in the Lower Mississippi River. This plan demonstrates a paradigm shift in which the primary threat to all three species (channel engineering under the Lower Mississippi River Channel Improvement Program) has become the primary conservation tool in this portion of their ranges. This and other successes have demonstrated that section 7(a)(1) cooperative conservation can align expertise, capability, opportunities, and operations within Federal programs to cost-effectively achieve biological outcomes with existing resources and authorities.

Examples of successful cooperative conservation programs under the authority of section 7(a)(1) over the past decade have also demonstrated the ability to involve State conservation agencies, non-governmental organizations (NGO), and even the private sector into the collaborative paradigm (e.g., USACE, Mississippi River).

Section 7(a)(1) successes have primarily occurred at local levels, i.e., involving a single action agency and its partners. Taking the interagency cooperation concept to the next level, Federal action agency conservation programs and actions could be unified on a wider geographical or regional scale as a Federal Enterprise, with cumulative net gains for the species offsetting

unavoidable negative impacts by any single action agency. However, challenges to fully achieve collaborative conservation between governmental agencies on a larger scale include:

- A current unbalanced reliance on section 7(a)(2) consultations for conservation purposes;
- A lack of understanding, involvement, or commitment by Federal agencies in section 7(a)(1) conservation planning;
- A reactionary Federal agency culture; and,
- The lack of early integration of Federal action agencies in conservation planning.

Addressing these and other challenges to elevating and fully incorporating collaborative conservation into the Federal business model will require a change in the manner in which the section 7 provisions of the ESA are weighted. Section 7(a)(1) conservation commitments and resources should equal or exceed those devoted to section 7(a)(2). Currently, this is not the case. In order to affect change, regulations and policies may be needed to provide guidance to federal agencies on how to achieve section 7(a)(1) conservation. This cultural shift will require training, education and more importantly support from the highest levels of Federal action and conservation agencies.

Developing and implementing an inclusive TES interagency collaborative conservation concept complies with the original intent of the ESA, can significantly reduce current levels of conflict, and facilitate positive interagency collaboration and leverage with non-federal stakeholders. In addition, unified federal conservation action across a species range that results in an improved species baseline will benefit all federal agencies as the improved status will result in greater flexibility and fewer restrictions under future section 7(a)(2) consultations. This approach also benefits the taxpayer by providing a pathway to collaborative scoping, cost-sharing, cooperative monitoring, and adaptive management.

## I. Introduction

The purpose of the Endangered Species Act of 1973 (16 U.S.C. § 1531 *et seq.*) (ESA or Act) is to conserve threatened and endangered species (TES) and their ecosystems (ESA section 2(b)). The statutory framework of the ESA sets forth provisions to list species and plan their recovery in section 4. In addition, the ESA provides for the conservation and protection of listed species through land acquisition (section 5), cooperation with States (section 6), avoidance of jeopardy and adverse modification of critical habitats (section 7(a)(2)), various prohibitions (section 9), and permitting (section 10). However, it is only section 7(a)(1) of the ESA that identifies the role of Federal interagency cooperation in achieving recovery of listed species.

Section 7(a)(1) directs all Federal agencies to share the responsibility and cost of listed species recovery by *utilizing their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered and threatened species* (50 CFR 402.01). Rather than only considering individual Federal agency actions adversely affecting listed species (as with section 7(a)(2) consultations), section 7(a)(1) provides a path to identify and focus listed species conservation efforts across each Federal agency's entire authority and/or program footprint, which together will cumulatively promote proactive recovery of listed species.

### Box 1. Benefits of Section 7(a)(1) Implementation

- Cost-effective mechanism to use existing Federal programs and budgets to conserve listed species
- Listed species needs and potential conflicts considered early in action agency planning and budgetary processes
- Incorporates elements of adaptive management, incorporating new information as it becomes available and allowing modification of plans and actions as necessary
- Establishes a comprehensive administrative record demonstrating consideration, planning, commitments, and compliance with ESA by the Service and action agency
- Reduces regulatory impact of listed species on action agency missions
- Reduces interagency conflict and encourages cooperation

Despite decades of court cases and judicial reviews recognizing the affirmative conservation duty of all Federal agencies under section 7(a)(1), to date, there has been little guidance and few details on what the required programs should look like (Rohlf 2001; Wood 2004). Consequently, section 7(a)(1) has not realized its potential to achieve cooperative and proactive conservation programming (*sensu* Ruhl

1995). However, isolated cases of interagency cooperation in the U.S. Fish and Wildlife Service's (Service) Southeast Region have recently demonstrated the value and potential of the section 7(a)(1) consultation process to purposefully engage Federal action agencies in developing and implementing conservation strategies and programs for listed species affected by these agencies' actions (see examples in Appendix A). Utilizing the components and principles of the Service's Strategic Habitat Conservation (SHC) framework on a landscape level (see <http://www.fws.gov/landscape-conservation/shc.html>), these section 7(a)(1) programs have achieved measurable conservation of listed species and their ecosystems while reducing interagency conflicts. These programs have also shown that Service Ecological Services (ES) and Federal action agency personnel are poorly informed about the intended purpose and

potential of the section 7(a)(1) consultation process, and are hampered by the lack of guidance to its implementation.

The following information is provided to clarify the authorized purpose and scope of section 7(a)(1) of the ESA, summarize the legislative and judicial history surrounding its implementation, provide examples of successful interagency cooperation under the ESA, and identify benefits to listed species and their ecosystems, as well as benefits that may accrue to Federal action agencies resulting from section 7(a)(1) implementation. This information is intended to encourage and facilitate interagency discussion and development of proactive conservation reviews, programs, and/or actions. In the current absence of formal section 7(a)(1) guidance, there is substantial latitude and flexibility to address the variety of potential situations where conservation programs can be developed and implemented, and to accommodate the various means different Federal agencies might undertake to implement this important, but underutilized, provision of the ESA.

## II. What is section 7(a)(1) conservation?

Section 2(c)(1) of the ESA declares that it is “...the policy of Congress that *all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act*” (emphasis added). The primary mechanism for implementing this policy is identified under section 7 of the ESA, titled “Interagency Cooperation,” which **obligates** all Federal agencies and **provides** them the **authority** to reasonably modify their actions and conduct their missions in a manner that assists in the conservation (i.e., **recovery**) of species listed as endangered or threatened. Section 7, therefore, provides a mechanism to **share** the **responsibility and cost** of listed species recovery **among all Federal agencies**. Furthermore, section 7 also serves as a pathway to identify and focus conservation efforts across the agencies’ entire authorities and/or program footprints (Ruhl 1995).

Federal action agencies are intimately familiar with section 7(a)(2) of the ESA, which only requires Federal agencies to ensure that their actions *do not jeopardize* the continued existence of listed species or adversely modify their critical habitats *within action area footprints*. In contrast, section 7(a)(1)’s conservation mandate applies widely to *authorities*, not individual actions (cf. Ruhl 1995), *providing Federal agencies a mechanism to distribute conservation obligations program wide, as well as to make the most of conservation opportunities outside of defined action areas*.

Section 7(a)(1) conservation programs not only **benefit listed species**, but also have the potential to **benefit Federal action agencies** when successfully incorporated into agency operations. While the ESA intended Federal agencies to affirmatively develop programs to conserve listed species, implementation (i.e., timing and actions) is discretionary. The discretionary nature of implementation allows agencies to strategically commit resources, including type, timing, extent, and frequency of actions. It also allows opportunistic mitigation of past, present, or future adverse effects of agency actions, by raising the species’ population and/or habitat baselines. Therefore, utilizing Federal agency authorities to conserve endangered or threatened species has the potential to cost-effectively transform some Federal programs and actions from potential threats to listed species into resources and tools for their conservation, with little to no effect on

the congressionally authorized and mandated primary missions or their budgets. (see U.S. Army Corps of Engineers 2013 in Appendix A).

This is in contrast to the 7(a)(2) culture that has developed over the past few decades, under which many agencies view section 7(a)(2) consultation (i.e., avoiding jeopardy/adverse modification) as their only role in implementing the ESA. Although some non-discretionary actions implemented under section 7(a)(2) may help to locally maintain listed species, this subsection of the ESA was intended strictly to avoid jeopardy/adverse modification and minimize take, resulting in, at best, a “status quo” situation without any improvement to the species’ baseline (see Box 2).

**Box 2. Section 7(a)(1) vs. Section 7(a)(2)**

<b>Attribute</b>	<b>7(a)(1)</b>	<b>7(a)(2)</b>
<b>Consultation</b>	Mandatory	Mandatory
<b>Implementation</b>	Discretionary	Non-discretionary
<b>Scale</b>	Program-wide	Project Footprint
<b>Process</b>	Proactive	Reactive
<b>Flexibility</b>	Embraced	Inhibited
<b>Adaptive Potential</b>	High	Low
<b>Approach</b>	Cooperative	Regulatory
<b>Objective</b>	Recovery	Avoid Jeopardy

***Judicial and Statutory Background***

Judicial guidance for the conservation mandate of the ESA has been ambiguous. Several courts have recognized the mandatory and affirmative conservation obligations of Federal agencies under section 7(a)(1). In 1977, the U.S. District Court, District of Columbia, found that the Service failed to consider the mandatory nature of section 7 to “...utilize [its] programs in furtherance of the [conservation] purposes of [the ESA]” (*Defenders of Wildlife v. Andrus*, 428 F. Supp. 167, D.C. 1977). This was reaffirmed by the Supreme Court in 1978, which recognized that section 7 created two independent obligations: one to conserve and one to avoid jeopardy/adverse modification of critical habitats (*TVA v. Hill*, 437 U.S. 153, 1978). While noting that it was Congress’s intent for each and every Federal agency “...to take whatever actions are necessary to ensure the survival of each endangered and threatened species,” the court did not specify what an agency’s conservation program should look like. These cases strongly influenced the 1978 amendments to the ESA, which included separating section 7’s obligation to conserve (now section 7(a)(1)) from the obligation to avoid jeopardy/adverse modification (now section 7(a)(2)). The amendments also included an additional 15 subsections (b–p) under section 7 addressing various requirements, components, and exemptions to the 7(a)(2) consultation process.

Congress’s disproportionate attention to detail (i.e., a single sentence for section 7(a)(1) authority *versus* 15 subsections covering section 7(a)(2)) in the 1978 amendments to the ESA resulted in the focus of Service/Federal action agency interactions on the avoidance of jeopardy/adverse modification (i.e., maintaining the status quo of listed species). However, this culture continued to be challenged in the courts, with most rulings recognizing the mandatory nature of section 7(a)(1), as well its importance to the success of the ESA. For example, in 1994, the U.S. District Court, Southern Division, clearly noted that “Section 7(a)(1) of the ESA imposes an affirmative obligation on all federal agencies...” and that failure of any Federal agency to consider or



undertake conservation actions consistent with the “...mandatory obligations under Section 7(a)(1)...” is, therefore, “...in violation of that provision of the ESA” (Florida Key Deer v. Stickney, 864 F. Supp. 1222, S.D. Fla. 1994). Additionally, in 1998, the U.S. Court of Appeals for the 5<sup>th</sup> Circuit, found that “...[section] 7(a)(1) contains a clear statutory directive (it uses the word “shall”) requiring the federal agencies to consult and develop programs for the conservation of each of the endangered and threatened species listed pursuant to the statute” (Sierra Club v. Glickman, 156 F. 3d 606 5<sup>th</sup> Cir. 1998). The Court further clarified that “...under section 7(a)(1), each federal agency must consult with [the Service] and develop programs for the conservation of each endangered species that it can affect within its authorities.”

Other judicial findings, however, have concluded that duties under section 7 are only triggered by discretionary actions. In some cases the lack of explicit instruction for section 7(a)(1) has been interpreted as evidence of inadequate authority to force agency action, and the courts have deferred to an agency’s individual interpretation of the statute (e.g., Platte River Whooping Crane Critical Habitat Maint. Trust v. Fed. Energy Regulatory Comm’n, 962 F. 2d 27 [D.C. Cir. 1992]; Seattle Audubon Soc’y v. Lyons, 871 F. Supp. 1291 [W.D. Wash. 1994]; Nw. Env’tl. Advocates v. EPA, 268 F. Supp. 2d 1255 [D. Or. 2003]; Nat’l Ass’n of Homebuilders v. Defenders of Wildlife, 127 S. Ct. 2518 [2007]). Nevertheless, even when the duty to conserve imposed under section 7(a)(1) is ruled discretionary, it has been recognized that conservation programs must be developed and have some beneficial effect to the conservation of listed species (e.g., Pyramid Lake Paiute Tribe of Indians v. United States Dep’t of Navy 898 F. 2d 1410 [9<sup>th</sup> Cir. 1990]).

The conservation mandate of section 7(a)(1) has most recently been confirmed in the Service’s Southeast Region by a 2008 court finding that “...while agencies might have discretion in selecting a particular program to conserve...*they must in fact carry out a program to conserve, and not an ‘insignificant’ measure that does not, or is not reasonably likely to, conserve endangered or threatened species*” (emphasis added; Florida Key Deer v. Paulison, 522 F. 3d 1133 (11<sup>th</sup> Cir. 2008)). Therefore, while implementation of specific conservation actions under section 7(a)(1) may be discretionary, *the duty of all Federal agencies to develop programs and implement significant actions for the conservation of listed species is not discretionary.*

The legal challenges and opinions surrounding section 7(a)(1) have focused some attention on the ESA’s conservation requirements, and various attempts to increase use of section 7 conservation planning have been explored over the past two decades. For example, in 1994, fourteen Federal agencies entered into a Memorandum of Understanding to confirm the agencies’ common goal under section 7(a)(1) of the ESA to conserve endangered and threatened species (MOU; U.S. Department of Agriculture et al. 1994; see also MOU summary in Ruhl 1998, pp. 378-380). Although the MOU expired in 1999, several Federal programs have since been developed. Some of these programs were developed to improve coordination and facilitate potential future events (e.g., U.S. Coast Guard et al.’s 2001 interagency Memorandum of Agreement to ensure ESA compliance and increase cooperation and understanding among agencies involved in oil spill planning and response [Walko 2001]); while others have been developed to facilitate recovery of species, and/or influence consultations under section 7(a)(2) (e.g., U.S. Forest Service’s 2012 National Forest System Land Management Planning Rule [77 FR 21162]; U.S. Marine Corps’ 2012 red-cockaded woodpecker recovery and sustainment program; U.S. Army Corps of Engineers’ 2013 multi-species conservation plan for the Lower

Mississippi River). Additionally, numerous Federal agencies have established protocols and/or implemented conservation actions for listed species; many of these protocols/conservation actions however, were initiated and developed as products of section 7(a)(2) consultations.

### ***Regulatory Background***

Current regulations simply state: “Section 7(a)(1) of the Act directs Federal agencies, in consultation with and with the assistance of the Secretary of the Interior or Commerce, as appropriate, to utilize their authorities to further the purposes of the Act by carrying out conservation programs for listed species. Such affirmative conservation programs must comply with applicable permit requirements for listed species and should be coordinated with the appropriate Secretary” (50 CFR 402.01).

The *Endangered Species Act Consultation Handbook* (*Handbook*; U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998, Chapter 5.1: Proactive Conservation Reviews) provides some guidance on national implementation of section 7(a)(1) applicable to reviews of major national programs, or plans where project-specific information is lacking; however, such conservation reviews are confined to national programs (e.g., plans, regulations) and are conducted or coordinated by the Washington Offices of both the U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services). Development of avoidance and minimization measures so that “stepped-down” (programmatic) consultations can be expedited is described as one of the purposes of conservation review. In addition, other purposes described in the *Handbook* include the Services providing concurrence and/or recommendations for:

- a blueprint of conservation activities (including section 7(a)(2) consultations);
- section 10 permits;
- assistance in developing and implementing recovery plans; and
- assistance in candidate monitoring and management programs.

An example of such a conservation review is Bureau of Land Management’s Solar Energy Program (<http://blmsolar.anl.gov/program/laws/esa/>).

Generally, most Service ecological services biologists’ experience with section 7(a)(1) is limited to the discretionary Conservation Recommendation components of Biological Opinions developed under section 7(a)(2) consultations. However, while the regulatory guidance for implementation of section 7(a)(1) at the field level is very limited, the potential role of **interagency cooperation** in the conservation of endangered and threatened species is recognized throughout the *Handbook*. Examples of such potential opportunities to initiate section 7(a)(1) consultations at the field level are presented below in Section V (Opportunities to Initiate and Develop a Culture of Cooperation) of this document.

### **III. Promoting Interagency Cooperation**

Initiating negotiations to develop conservation programs under section 7(a)(1) and overcoming interagency reluctance and inertia to fully address “secondary” missions and discretionary conservation mandates imposed by the ESA, requires developing and fostering relationships through significant and sustained interagency communication, coordination, and encouragement. This process has been termed “interagency lobbying” (DeShazo and Freeman 2005) and is

recognized as an important mechanism for influencing delegated agency discretion. Interagency lobbying may be enhanced by expanding the negotiating partnership to include State conservation agencies, Tribal governments, industry groups, and/or appropriate conservation non-governmental organizations (NGOs). *Intra*-agency lobbying may also be necessary to develop and maintain a unified Service vision and foster support among multiple Field Offices and between the Field and Regional Office(s).

### ***Recognition of Federal Action Agency Mandates and Constraints***

The first step to developing or improving interagency cooperation is recognition of each action agency's unique mandates and constraints. Mandates imposed on Federal action agencies by Congress are important and are intended to meet the economic, infrastructure, safety, recreational, and/or other needs of the American public. Human infrastructure and actions have become a part of, not apart from, ecosystems (Alberti et al. 2003). Congress clearly recognized this fact in developing the ESA, noting that economic growth and development *untempered by adequate concern and conservation* had led to the extinction and endangerment of species of fish, wildlife, and plants, and without adequate consideration they can have serious effects on ecosystem diversity and function (see ESA sections 2(a)(1) and 2(b)). The ESA, therefore, is not intended to dismantle economic development or reverse economic growth, but, rather, is intended to find solutions, when and where possible, to their coexistence with biodiversity and ecosystems. This will become increasingly complicated with continued human population and economic growth and requires close coordination with and cooperation between agencies to avoid or minimize future conflicts.

#### **Box 3. Interagency Cooperation: Keys to Success**

1. Recognize **action agency** mandates and constraints
2. Focus on areas of **mutual benefit**
3. Recognize areas of expertise and **use expert input**

Constraints within Federal action agencies include conflicts between mission mandates and listed species conservation, budgetary limitations, and a historic perspective of endangered and threatened species conservation in conflict with the action agencies primary missions. These constraints are not trivial. Past conflicts have affected both the Service and action agencies by limiting our inclinations to cooperate, and by limiting management options to defined action areas; however, recognition of the limitations of the past and the potential to minimize and avoid future conflicts may also be used to encourage increased levels of interagency cooperation and conservation and comply with the original intent of the ESA.

Regardless of the size of the action agency or its budget, funding limitations and agency priorities affect all Federal agencies, including the Service. Additionally, availability of conservation resources for endangered and threatened species conservation appears to be strongly related to regional and national funding priorities. In the Service's 2011 expenditures report to congress, 90% of all expenditures to conserve listed species were directed to only 12% of the species (U.S. Fish and Wildlife Service 2011). In fact, 60% of the tracked species received <\$100,000/species out of a total expenditure of \$1.3 billion by all State and Federal agencies. Federal action agencies also expend disparate levels of conservation effort per species (e.g., Czech and Krausman 2001; Negrón-Ortiz 2014). In 2010, more than 92% of U.S. Army Corps of Engineers expenditures for TES conservation (\$213 million) were directed to only 19 species (Henderson 2013). The Budget Control Act of 2011 (Pub. L. 112-25, S. 365, 125 Stat. 240),

budget reductions resulting from the 2013 sequestration, and similar reductions projected through 2021 send a strong signal to all Federal agencies that resources are declining, and fulfilling primary missions will be difficult. These budget constraints and disparities that are beyond Service and Federal action agency control emphasize the need for interagency cooperation to increase cost-effectiveness of conservation efforts.

Frequently, both the Service and Federal action agencies have relied on section 7(a)(2) consultations for conservation/recovery purposes; however, reliance on section 7(a)(2) consultations alone, can lead to progressive decline of listed species and/or their habitats (e.g., Wood 2004). At its core, section 7(a)(2) consultation is strictly a process to ensure that any specific Federal action does not bring a listed species to or below a jeopardy threshold or adversely modify its critical habitat. The 1978 amendments further used the 7(a)(2) consultation process to “permit” Federal agencies for various forms of unavoidable “take” of listed species, and to recommend specific discretionary conservation actions to the action agency. In the absence of positive conservation action implementation, successive section 7(a)(2) consultations and any associated permitted take may erode a species baseline, progressively limiting action agency options, and potentially contributing to a future jeopardy call (Wood 2004). Service consultation biologists generally recognize this, and, in the absence of action agency conservation programs, they seek to use the non-discretionary components of 7(a)(2) consultations (i.e., Reasonable and Prudent Measures, Terms and Conditions) for conservation purposes. Rather than encouraging collaboration and cooperation, such consultations can result in adversarial negotiations with little room for compromise by either party. This may also lead to longer consultation times and increased staff commitments and costs.

Recognizing and utilizing the potential of section 7(a)(1) conservation programs to expand the type, timing, and area of conservation opportunities can reverse this cultural conflict and stimulate cooperative and proactive conservation and recovery of ESA-listed species. Action agencies involved in section 7(a)(1) conservation programs have found that designing projects compatible with conservation needs of listed species and their ecosystems can be effective in insuring an efficient section 7(a)(2) consultation process, as well as species recovery (e.g., USACE 2015).

### ***Focus on Areas of Mutual Benefit***

Multiple Federal laws, regulations, and policies require Federal agency consideration of Federal trust species (e.g., TES, migratory birds, marine mammals), which include coordination with the Service relative to sensitive species, habitats, and ecosystems (e.g., but not limited to: National Environmental Policy Act [NEPA; 42 U.S.C. 4231 *et seq.*]; Civil Works Ecosystem Restoration Policy [U.S. Army Corps of Engineers ER 1165-2-501]; Executive Order 13186 [66 FR 3853] under the Migratory Bird Treaty Act [MBTA; 16 U.S.C. 703-712]; 2012 Reinvigorated U.S. Army Corps of Engineers Environmental Operating Principles [<http://www.usace.army.mil/Missions/Environmental/EnvironmentalOperatingPrinciples.aspx>]; U.S. Army Corps of Engineers’ Procedures for Implementing NEPA [ U.S. Army Corps of Engineers ER 200-2-2]; and the Fish and Wildlife Coordination Act [16 U.S.C. 661-667e]). Guidance and goals are clearly defined for some of these regulations and policies; however, there is little guidance for implementing, or equally important, measuring success of others. All of these mandates are compatible with the purposes of section 7(a)(1) of the ESA, and may be addressed through cooperative conservation planning.

Foremost among the concerns Federal agencies have with listed species are the potential for conflicts that may arise between accomplishing their primary missions and complying with ESA's section 7(a)(2) directives. Such potential conflicts usually involve poorly studied species where Service biologists must use their best professional judgment to assess actions, determine action effects, and recommend modifications to these actions. In such cases, with no prior planning or commitments by the action agency, the Service must base its recommendations on the best available information, sometimes resulting in the imposition of mandatory actions with which the action agency may not agree. In addition, section 7(a)(2) consultation components provide an avenue for citizen lawsuits to slow or stop Federal actions perceived as arbitrary and capricious, further diverting limited resources away from the species at risk. The section 7(a)(1) process may address both of these problems through establishment of research programs strictly oriented to action agency information needs and by establishing an administrative record that documents decisions, supporting data, compliance with laws and regulations, and adaptive management.

Section 7(a)(1) programs have a visible and significant potential to benefit both the species and the Federal action agency. As noted previously, section 7(a)(1) mandates that Federal action agencies develop conservation programs and provides for strategic and practical commitment of resources in implementation of conservation actions. The discretionary nature of implementation allows agencies, in consultation with the Service, to determine the type and extent of project modifications necessary for conservation, timing and frequency of research and monitoring efforts, and even type and location of mitigation for future or past effects of agency actions to the species. Since there are few examples of section 7(a)(1) conservation programs, there is no template to guide either the action agency in its development or the Service in its review, providing Federal action agencies with the flexibility to identify and select research, management, and monitoring options for negotiation. Apart from flexibility, other potential benefits include:

- Reducing regulatory surprises and interagency conflicts by fostering open communication and transparency, and by consideration of listed species needs and potential conflicts to agency missions early in the planning and budgetary process.
- Fostering agency commitment to actions it is predisposed to undertake, contingent upon the agency's authority and ability to fund and implement such actions.
- Creating a path to seek and justify appropriation requests for conservation actions through the normal budgetary process; whether or not the funds are appropriated, the process demonstrates the agency's attempted compliance with the affirmative conservation duties imposed by the ESA.
- Providing an avenue for adaptive management and mitigation as new information is developed and made available.
- Providing a proactive coordinated strategy that resolves endangered species conflicts prior to litigation, thereby conserving resources and providing better legal service to Federal action agencies (e.g., Diner 1993).
- Creating an administrative record demonstrating the development and implementation of the section 7(a)(1) conservation program and showing consideration, planning, and commitments by the action agency in compliance with the ESA, should litigation occur. This administrative record may prevent both the action agency and the Service from appearing arbitrary and capricious in their decisions and actions.

- Supporting an increase in the baseline of the species within the action agency footprint, which diminishes or offsets the adverse effects of agency actions and, therefore, will facilitate section 7(a)(2) consultations and more importantly recovery of listed species.
- Increasing action agency control of the section 7(a)(2) consultation process, which can also be used to elevate realistic and cost-effective operational management commitments through the action agency funding process.
- Facilitating increased action agency awareness of the species baseline within and beyond the action area, thereby allowing the agency to predict early in the planning process if a project is likely to jeopardize the species. This provides the action agency the opportunity to consider and develop any reasonable and prudent alternatives prior to initiating the formal consultation process. Furthermore, if there are no reasonable and prudent alternatives and the action is essential to the agency's congressionally mandated mission, they will have the information necessary to seek an exemption under section 7(g) of the ESA.

Even where conservation programs achieve recovery goals, maintaining viable populations of listed species generally will require continuing adaptive management commitments prior to and following de-listing. Species requiring continuing management have been termed "conservation-reliant species" (Scott et al. 2005, 2010; Goble et al. 2012). Section 7(a)(1) conservation programs should be developed under a vision that **recovery can be achieved** and with the intent that the action agency management approach and actions identified and incorporated into the program will be institutionalized, regardless of the species' status under the ESA (i.e., the program can also serve as a post-delisting management program).

### *Recognize Expertise and Use Expert Input*

Section 7(a)(1) consultation should allow both the Service and action agency to use and share their expertise. The action agency is the authority on the agency mission, strategy, design, and execution, and must be considered the authority on how, where, when, and to what extent actions may be modified to provide conservation opportunities and benefits. The Service is the authority on biology, ecology, and habitats of the species, and can provide insight on potential responses of the species to proposed methods and actions. The Services regional species lead biologist should be aware of or involved in all levels of planning, as necessary. Utilizing outside experts, where appropriate, can help to alleviate and mediate conflicts. Developing mutual goals, objectives, and trust is essential to applying the full scope of interagency expertise.

## **IV. Conservation Program Framework**

Due to the nature of section 7(a)(1) implementation, the design of conservation programs is inherently flexible and adaptable. Such flexibility allows for development of conservation programs that can be as large as the Federal action agency deems feasible and inclusion of multiple species may also be pursued, if practicable. The goals of conservation programs should be to offset the anticipated adverse impacts from standard action agency operations and to achieve a net gain in listed species population and/or habitat baselines.

Basic conservation program objectives may also consider:

- 1) Reducing, removing, or quantifying identified threats to listed species;

- 2) Implementing recovery actions or part of a recovery action;
- 3) Acquiring information lacking on a listed species or an ecosystem response that will be affected by the program/action;
- 4) Acquiring information necessary to develop measures that would significantly increase the chance of recovery or avoid and/or minimize a threat (potential or ongoing) to a listed species.

Minimal conservation program considerations and components should include:

- 1) Defining action agency authorizations, primary missions, operations, and actions;
- 2) Defining the species' range-wide status baseline and data limitations;
- 3) Defining the species' baseline and data limitations relative to the agency's program action area/footprint, including a description of all applicable past, present, and future program actions that may affect the species or its habitats;
- 4) Identification and consideration of operations scenarios and potential conservation opportunities (including minimization, mitigation, and restoration actions);
- 5) Conducting an effects analysis (including cumulative); culminating in,

#### **Box 4. Elements of Adaptive Management: Deliberation with Analysis**

The Service's Strategic Habitat Conservation (SHC) approach uses an adaptive management framework (U.S. Fish and Wildlife Service 2008; Williams et al. 2009). Adaptive management is a collaborative, multidisciplinary approach that treats actions and policies as testable hypotheses from which learning derives, and which subsequently provides the basis for changes in actions and policies (Stankey et al. 2005). Developing a *sensu stricto* adaptive management program for listed species is seldom a realistic option (see Doremus 2001; Runge 2011). Reasons for this may include, but are not limited to:

- 1) lack of basic life history and habitat information for many listed species;
- 2) lack of dedicated funding for research and monitoring;
- 3) practical constraints due to action agency missions (e.g., maintaining public safety and infrastructure integrity); and
- 4) high levels of uncertainty in predicting or measuring species and/or habitat responses, and/or habitat response.

However, elements of adaptive management can be incorporated into section 7(a)(1) conservation programs under a decision support and learning process that has been termed "deliberation with analysis" (National Research Council [NRC] 2009). Deliberation with analysis is described as "an iterative process that begins with multiple participants to a decision working together to define objectives and other parameters, working with experts to generate and interpret decision-relevant information, and then revisiting the objectives and choices based upon that information" (NRC 2009, p. 73). Furthermore, deliberation with analysis's decision support framework explicitly considers "multiple actors with different objectives and partly conflicting values" (p. 78) while "emphasiz[ing] wide participation...among affected parties" (p. 80).

- 6) A programmatic process incorporating elements of *adaptive management* (see Box 4) to: address data needs; modify or implement actions to conserve the species and its habitats; and improve those baselines within the footprint of the program.

Additionally, the final design should be thoroughly integrated into the action agency's operations to an extent that it provides for post-recovery management/monitoring.

The resulting conservation design and strategy must have the complete support of both the action agency and the Service, and recognize that both agencies bring important components and expertise into the process. It must also be clearly understood and noted that Federal agency conservation programs developed under section 7(a)(1) of the ESA are intended to assist Federal agencies and their potential partners in planning and implementing actions to protect and recover endangered or threatened species that may be beneficially affected by agency activities. Conservation measures outlined within the plan serve as a guide for meeting the goals and objectives of the program and do not obligate any party, including the action agency, to undertake specific actions at specific times. Rather, implementation of these conservation measures is contingent upon opportunity and annual appropriations and/or other budgetary constraints.

### *Service Review of Conservation Programs*

**Section 7(a)(1) conservation programs do not, and were not intended to, take the place of section 7(a)(2) consultations.** If, as per to section 7(a)(2), actions proposed in a section 7(a)(1) conservation plan are not likely to adversely affect any endangered or threatened species, the Service's review and evaluation of the program may be transmitted by a formal letter of response. Any adverse effect to the species that may result from agency actions must be considered and addressed via the section 7(a)(2) consultation process (see U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998); however, this consultation process will be streamlined due to the overall net benefit that should accrue to a species under the section 7(a)(1) program. Additional information concerning components of a review is presented in Appendix C.

## **V. Opportunities to Initiate and Develop a Culture of Cooperation**

There are many potential avenues to pursue higher levels of interagency cooperation in the conservation of TES and other species at risk, and to initiate discussion of section 7(a)(1) conservation opportunities. Sustained interagency contact, coordination, and encouragement under any of these avenues may be required to overcome interagency inertia to fully addressing "secondary" missions and the conservation mandates of the ESA. These opportunities include:

- Existing Biological Opinions (e.g., see USACE 2017, Fat pocketbook mussel, Appendix A-3; USACE 2016, Interior least tern, Appendix A-4);
- Biological Assessments (e.g., U.S. Marine Corps 2012, Appendix A-2);
- National Environmental Policy Act documents;
- Fish and Wildlife Coordination Act Reports;
- U.S. Army Corps of Engineers Documents: Feasibility Studies; General and Detailed Design Reports; Operation, Maintenance, Repair, Replacement, and Rehabilitation



Manuals; Master Plans; Operational Management Plans; Water Control Manuals; and Shoreline Management Plans;

- Integrated Natural Resource Management Plans (e.g., see Camp Shelby burrowing crayfish, 2003, Appendix A-5);
- U.S. Forest Service Land Management Plans and individual Forest Management Plans (e.g., see Camp Shelby burrowing crayfish, 2003, Appendix A-5);
- Bureau of Land Management and Bureau of Reclamation Resource Management Plans;
- Federal Energy Regulatory Commission Licenses;
- Species Status Assessments (e.g., see Camp Shelby burrowing crayfish, 2003, Appendix A-5);
- 5-year Reviews (e.g., see USACE 2016, Interior least tern, Appendix A-4);
- Recovery Planning.

Seeking earlier and higher levels of involvement of Federal action agencies in the candidate assessment, listing, and recovery planning and implementation processes could also facilitate interagency cooperation. Early involvement in the candidate assessment and listing processes may result in Federal agency action modifications and management programs that alleviate threats prior to listing (e.g., Camp Shelby burrowing crayfish, Appendix A-5), or that can prepare the agency for action modification and collaborative conservation planning post-listing. More involvement in the recovery planning process could constitute early initiation of consultation under section 7(a)(1), facilitating the development of conservation programs by emphasizing Federal agency responsibilities under the statute, evaluating program effects on the species, identifying appropriate conservation goals and timelines, and initiating a logical institutional relationship between conservation and action agency activities as well as between the agency and the Service. The Service's SHC approach and strategy also offers opportunities to retroactively and purposefully engage Federal action agencies in developing and implementing conservation strategies for species where recovery planning has been completed (e.g., Lower Mississippi River Conservation Plan 2013, Appendix A-1).

## VI. Conclusion

Section 7(a)(1) is not intended to frustrate the agencies' accomplishment of their primary missions. Instead, section 7(a)(1) requires Federal agencies to review their authorities, and, in consultation with the Secretary, develop programs that will operate to conserve listed species in a manner consistent with the accomplishment of the agencies' mandates. Section 7(a)(1) conservation is not a novel approach, and its potential and under-utilization to create effective species recovery programs has been recognized by a variety of legal scholars (e.g., Eider-Orley 1978; Ruhl 1995; Wood 2004; Gersen 2009).

**Section 7(a)(1) is not an alternative to section 7(a)(2)**, but, rather, it has the potential to complement, streamline, and facilitate section 7(a)(2) consultations as it addresses cumulative and direct impacts and data gaps, mitigates the adversarial process between agencies, and fulfills legal obligations while reducing agencies' vulnerabilities to litigation. With section 7(a)(1), adverse actions can be cost-effectively compensated or mitigated, and conservation can be achieved. The reduction of interagency conflict that results from conservation planning, allows refocusing efforts towards the species as intended by the ESA, and recovery actions can be cost-effectively incorporated into an action agency's standard operations. Where successfully

implemented, section 7(a)(1) programs will lead to higher levels of Federal action agency stewardship, and result in improved species baseline status, recovery, and post-delisting management (see Appendix A).

While previous attempts to incorporate section 7 conservation into Service and action agency business models have met with mixed success, predicted recovery needs and costs are far outpacing Federal conservation budgets. Nationwide, between 2009 and 2011, over 700 species were petitioned for listing as threatened or endangered under the ESA, with more than 400 of these species occurring within the Service's Southeast Region; (e.g., Center for Biological Diversity 2010; Center for Biological Diversity et al. 2010, 2012). These numerous petitions have outpaced the Service's ability to comply with mandated listing deadlines and have strained the Service's ability to meet recovery objectives for species already listed (Jesup 2013, 2014). Additional listings will further strain action agencies' resources and abilities to comply with the ESA. Improved collaborative relationships between the Service and action agencies fostered by section 7(a)(1) consultations for currently listed species also have the potential to identify and address threats to candidate species and other at-risk species prior to listing. Interagency cooperation under section 7 presents a timely and viable option to reduce costs and improve conservation results. It is incumbent upon the Service's Ecological Services Program to promote a culture of interagency cooperation in the recovery of endangered and threatened species.

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*Note: These, other references, and pertinent excerpts from the ESA, Service policy and guidance, are available on the U.S. Fish and Wildlife Service's Section 7(a)(1) information website, available at: <https://sites.google.com/a/fws.gov/section-7-a-1/?pli=1>*

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## APPENDIX A – CASE STUDIES

**Case Study 1** – U.S. Army Corps of Engineers. 2013. Conservation plan for the interior least tern, pallid sturgeon, and fat pocketbook mussel in the Lower Mississippi River. Mississippi Valley Division, Vicksburg, MS.

### SUMMARY

For more than a decade, the U.S. Army Corps of Engineers (USACE) worked with the U.S. Fish and Wildlife Service (Service) and state conservation agencies under section 7(a)(1) of the Endangered Species Act (ESA) to identify and resolve endangered species and ecosystem management issues associated with USACE Lower Mississippi River (LMR) Channel Improvement Program (CIP). The primary mission of the CIP is to provide flood risk management infrastructure and to facilitate navigation. During this extended consultation process it became apparent to both the Service, USACE and their State partners that the activities conducted under the CIP could be the most important and cost-effective tools to maintain and enhance the ecological functions necessary for three endangered species: the interior least tern (*Sternula antillarum*), pallid sturgeon (*Scaphirhynchus albus*), and fat pocketbook mussel (*Potamilus capax*). This transformation was accomplished by considering and incorporating ecological engineering opportunities during the design phase of channel improvement and channel maintenance projects. Early consideration of conservation designs resulted in minimizing adverse effects as well as localized improvements in habitat function and value for the three species, with little to no effect on flood risk management, navigation, or project cost. The USACE also opportunistically implemented cost-effective secondary channel restoration actions in the LMR by sharing responsibilities and resources with partner agencies and NGOs. Cumulatively, both the site-specific engineering actions and the restoration opportunities have significantly benefitted the habitat and population baselines of the three endangered species, as well as benefitting other channel wildlife and enhancing recreational opportunities. The USACE subsequently adopted engineering practices beneficial to the species and the cooperative planning process as Best Management Practices of the CIP. As a result, the CIP of the Mississippi River and Tributaries project has become the primary mechanism to maintain and improve habitat values within the LMR for recovery of endangered and other trust species inhabiting the river channel. This section 7(a)(1) program also demonstrates compliance with USACE Environmental Operating Principles, Civil Works Ecosystem Restoration Policy (ER 1165-2-501), and the conservation intent of EO 13186 Responsibilities of Federal Agencies to Protect Migratory Birds.

The complete document and associated documents may be viewed and downloaded from <https://sites.google.com/a/fws.gov/section-7-a-1/fws-coordination-on-uas/policy>. Associated documents are available at <https://www.fws.gov/MississippiES/LMR.html>.

**Case Study 2** – U.S. Marine Corps. 2012. Red-cockaded woodpecker (*Picoides borealis*) recovery and sustainment program. Marine Corps Installations East, Marine Corps Base Camp Lejeune

**SUMMARY**

The primary purpose of the Red-cockaded Woodpecker (RCW) Recovery and Sustainment Program (RASP) was to develop an achievable process in compliance with the ESA that allowed Marine Corps Installations East – Marine Corps Base Camp Lejeune (MCB Camp Lejeune) Range and Training Area (RTA) to be developed or reconfigured in a timely manner to maintain and enhance operational and training flexibility. The RASP was developed by a team that included MCB Camp Lejeune personnel and U.S. Fish and Wildlife Service (Service) personnel with contractor support in the format of a Biological Assessment (BA) which was the basis for a Biological Opinion by the Service.

According to the 2003 RCW Recovery Plan, the CNCPC recovery objective is 350 RCW potential breeding groups distributed among MCB Camp Lejeune, Croatan National Forest, and the North Carolina Department of Wildlife Conservation Commission’s Holly Shelter Game Land. Attaining the recovery population size objective requires habitat restoration with RCW recruitment clusters to induce new RCW groups and to increase population size. The RASP established a process by which other spatially appropriate properties with the potential to increase the RCW population are being identified, evaluated, protected, and managed in perpetuity, thereby enhancing the recovery of the Coastal North Carolina Primary Core (CNCPC) RCW population. Under the RASP the Marine Corps enters into agreements or contracts with agencies, non-government organizations or private landowners to fund the management of RCW on off-base properties. This implementation may include purchase of conservation easements, and/or funding of short and long-term management costs directly or through a third party.

MCB Camp Lejeune continues to manage habitat to sustain and increase RCWs on the installation. During Section 7 evaluations of proposed MCB Camp Lejeune training actions, however, the affected baseline now includes all protected and managed habitat and future RCW clusters on RASP properties that provide a biological function to the CNCPC population, including off-base benefits that have accrued due to the program. This is in contrast to previous consultations, which were conducted entirely “within the fence” of MCB Camp Lejeune. This RCW conservation program is expected to benefit MCB Camp Lejeune by reducing restrictions on military training through effectively increasing the amount of the CNCPC population goal that is supported on other conservation land and reducing the goal on lands required for military training.

MCB Lejeune currently is in the process of securing management and funding to support two off-base RASP properties with a potential future RCW population segment of 54 potential breeding groups. As supported by spatially explicit individual-based RCW population and landscape modeling, the Service has concurred that both properties with future RCWs will function with and contribute to CNCPC population recovery.

The complete document may be viewed at and downloaded from <https://sites.google.com/a/fws.gov/section-7-a-1/?pli=1>.



**Case Study 3** – U.S. Army Corps of Engineers. 2017. Conservation Plan for the endangered fat pocketbook mussel in the St. Francis River Basin. Memphis District, Memphis, TN.

### SUMMARY

The science, information, and collaboration used to develop this conservation program was initiated through a series of formal and informal consultations under section 7(a)(2) of the Act. Over the past century, the St. Francis River system and watershed has been largely converted from a bottomland hardwood drainage ecosystem into an agricultural drainage system. USACE is congressionally mandated to work with local drainage districts to maintain drainage and flow through this network. Although modification has been on a landscape level, the drainage network continues to function as a riverine aquatic ecosystem supporting numerous native species, including the endangered fat pocketbook mussel (FPM), and to provide other important ecosystem services.

For more than a decade the USACE Memphis District (MVM) has worked with the U.S. Fish & Wildlife Service and other parties to resolve issues associated with construction and maintenance activities in the St. Francis River Basin and suspected impacts to the endangered FPM. This has primarily been accomplished through consultations under section 7(a)(2), as well as through collaborative efforts to identify and resolve information gaps and research needs. The information derived has led to a better understanding of local and Basin-wide patterns of FPM response to ditch construction and operations and maintenance actions.

The goal of this USACE-MVM conservation plan is to contribute to the conservation of the FPM through management of the network of ditches and floodways in the St. Francis River Basin. The objectives are to:

- utilize and continue to develop ecological and engineering data to increase understanding of FPM and the St. Francis River ecosystem;
- identify, implement, and when appropriate modify reasonable, prudent, and cost-effective channel maintenance, management, and monitoring practices that maintain or improve channel habitat values for the fat pocketbook and other native species;
- work with the drainage districts and other partners in developing and applying data and Best Management Practices; and,
- establish a management program that will continue to benefit the FPM, its ecosystem, and associated species regardless of the status of the species under the ESA.

This document is available at <https://www.fws.gov/MississippiES/LMR.html>.

**Case Study 4** – U.S. Army Corps of Engineers. 2016. Conservation Plan for the Interior Least Tern in the Arkansas, Canadian, and Red River Basins. Southwestern Division, Dallas, TX; Tulsa and Little Rock Districts.

## SUMMARY

For more than a decade the USACE Southwestern Division Tulsa and Little Rock Districts and Southwestern Power Administration have worked with Service under section 7(a)(2) of the Act to identify and resolve ecosystem management issues and endangered species conservation, associated with USACE civil works projects in the Arkansas, Canadian, and Red River systems within Arkansas, Oklahoma, and Texas. These projects provide flood risk management, hydropower, and facilitate navigation in the McClellan-Kerr Arkansas River Navigation System (MKARNS). In the 2013 5-year review of the status of Interior least tern, USFWS recommended removing the species from the Federal list of endangered and threatened species due to recovery. Prior to delisting, however, USFWS recommended developing conservation agreements with USACE Divisions within the range of the tern committing to post-delisting monitoring and management. The purpose of this ESA Section 7(a)(1) Conservation Plan is to identify and commit to continue operational modifications incorporated into USACE operations and navigation projects that benefit Interior least tern. The operational modifications identified in the conservation plan resulted from a series of formal consultations between USACE and the Service under section 7(a)(2) of the Act. This Southwestern Division plan commits to continue:

- The use of the use of reservoir storage and operational flexibility to reduce flooding of nesting habitats below dams during nesting season and for tern habitat restoration and maintenance off season,
- the maintenance dredge material to develop or improve nesting islands at appropriate locations within river channels,
- vegetation control on nesting habitats,
- targeted monitoring of terns during the nesting season,
- collaboration with the Service and other partners to periodically monitor and measure habitat,
- working with State and other partners to minimize human disturbance of nesting terns, and,
- working with other Federal and State agencies and NGOs in sharing restoration, research, and monitoring responsibilities and costs through partnerships.

The Southwestern Division Tulsa and Little Rock Districts commit to continued implementation of the strategies and actions outlined above, following removal of the Interior least tern from the protections of the ESA due to recovery, as opportunities within authority and funding allow.

This document is available at <https://www.fws.gov/MississippiES/LMR.html>.

**Case Study 5** – U.S. Army National Guard, U.S. Forest Service, U.S. Fish and Wildlife Service, Mississippi Department of Wildlife, Fisheries, and Parks. 2003. Candidate conservation agreement for the Camp Shelby burrowing crayfish. USFWS, Mississippi Field Office, Jackson, MS.

## SUMMARY

This Candidate Conservation Agreement (Agreement) for the Camp Shelby burrowing crayfish, *Fallicambarus gordonii* (CSBC), was developed as a cooperative effort between State and Federal resource agencies to identify and implement management measures and commitments necessary for the conservation of the species. Over the years, implementation of this Agreement has significantly reduced or eliminated known and potential threats to the CSBC and its habitat.

The CSBC has a small, naturally limited range, typical of most species of *Fallicambarus*, wholly within a localized portion of the Leaf River watershed in central Perry County, Mississippi, on properties of the DeSoto National Forest. All of this area is currently under lease to the Mississippi Army National Guard's (MSNG) Camp Shelby for troop and tank training grounds. Vulnerable to certain silvicultural activities by the USFS, as well as to entombment from MSNG tank and troop maneuvers, the goal of the Agreement was to define the distribution and habitats of CSBC, and to protect and improve these habitats such that any known or potential threats were eliminated or reduced to the degree that the species would not become threatened or endangered within the foreseeable future.

Surveys by MSNG and others since development of the plan have identified multiple locations supporting CSBC. All locations of occurrence are associated with pitcher plant bogs and adjacent wetlands, and densities of the species are directly correlated with the condition of the habitat. Pitcher plant bogs and wetlands are easily delineated, and there are well developed management actions that have been shown to maintain and improve the bog habitat (e.g., periodic burning, select timber removal, etc.). Therefore, the conservation actions have focused on protection, management and improvement of the pitcher plant bog and associated wetland habitats of the CSBC. Information obtained from surveys, habitat management, and monitoring has increased our understanding of the CSBC and its management needs, and this knowledge has been applied through periodic assessment and modification of conservation actions as appropriate. Continued monitoring indicates that CSBC populations have responded favorably to management, thus ensuring the conservation of the CSBC and precluding the need for its protection under the ESA. Management and monitoring commitments and efforts are being continued under the DeSoto National Forest Management Plan, and the Mississippi National Guard Integrated Natural Resource Management Plan.

This document is available at <https://www.fws.gov/MississippiES/LMR.html>.

## APPENDIX B – DEFINITIONS

**Conservation Action:** An action limited in scale, scope, and/or timing that is incorporated into a Federal project or program and designed to reach project or program objectives as well as conservation goals. Previously implemented actions may be combined to create a conservation plan or program as appropriate.

**Conservation Plan/Program:** Conservation Plans or Programs consist of goals, strategies, and actions to maintain and/or improve the population or habitat baselines of one or more endangered or threatened species within the scope of Federal agency authorities. Conservation Plans may also serve as the biological evaluation or assessment for section 7(a)(2) consultation on the program or plan.

**Conservation Review:** A Conservation Review is undertaken by the Service of any **Conservation Plan or Program** that is developed by a Federal agency under authority of section 7(a)(1) (see Appendix C).

**Recovery:** Improvement in the status of a listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act. Said another way, recovery is the process by which species' ecosystems are restored and/or threats to the species are removed so self-sustaining and self-regulating populations of listed species can be supported as persistent members of native biotic communities.

## **APPENDIX C – SERVICE REVIEW OF CONSERVATION PROGRAMS**

Section 7(a)(1) consultations and negotiations must include the Service’s lead biologist(s) for the target species as well as the appropriate consultation biologist(s) and may also include other entities as mentioned in Section III, Promoting Interagency Cooperation. If there are no adverse effects to the species that may result from implementation of the program, the Service’s review and evaluation may be transmitted in a formal letter of response. If adverse effects may occur (e.g., through monitoring) the review and evaluation must be transmitted in the form of a biological opinion authorizing the take, per section 7(a)(2). Regardless, the Service review must clearly show how we analyzed the effects of the conservation program and determined that the program will aid in the recovery of a listed species (i.e., something greater than an “insignificant effect” to the species baseline).

Minimal considerations and components of a conservation review should include:

1. How anticipated adverse impacts from an agency’s action or operations may be offset and a net gain in the baseline can be accomplished;
2. Documentation of any actions within the program that may not result in a net benefit to the species, as well as actions that will be less of a benefit than is suggested by the program;
3. Acknowledgment of any factors that determine the implementation of discretionary actions;
4. Adequacy of monitoring; and,
5. How program implementation and monitoring results will be transmitted to the Service (e.g., annual reports, routine interagency meetings, etc.).

Since the conservation program is developed in a cooperative environment (i.e., consultation) with the Service these considerations and components should be clear prior to Service review of the program. Any future section 7(a)(2) review or consultation on program actions must consider and should reference the action agencies conservation program.