

DEFENDERS OF WILDLIFE ESA POLICY WHITE PAPER SERIES

PROTECTING UNLISTED SPECIES

ASSESSING AND IMPROVING
CANDIDATE CONSERVATION
AGREEMENTS WITH ASSURANCES



ABOUT THIS PUBLICATION

This white paper is the third in a series laying out Defenders of Wildlife's vision for the Endangered Species Act (ESA) over the next 10 years. The ESA is the most important and far-reaching wildlife conservation law in the United States, and Defenders has long been a leading advocate for science-based, pragmatic interpretation and implementation of the law. Our endangered species policy and legal experts carefully evaluate the application of the ESA. We look for opportunities to promote innovative strategies and reforms to make the ESA more effective and efficient and pursue initiatives that are bold, transformational and strategic. Through the ESA Policy White Paper Series, we are presenting our ideas to foster collaboration with others who share our vision for the recovery of North America's imperiled plants and wildlife.

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Defenders of Wildlife is a national, nonprofit membership organization dedicated to the protection of all native wild animals and plants in their natural communities.

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COVER PHOTO: New England cottontail rabbit; courtesy Kait Gonzalez

BACK COVER PHOTO: spring pygmy sunfish; courtesy Conservation Fisheries, Inc.

When Congress passed the U.S. Endangered Species Act (ESA) in 1973, 392 species were listed as threatened or endangered. Within 30 years, that number had ballooned to 1,818. As of August 2012, 2,018 species were listed, 230 species were considered candidates for future listing, and 89 species were expected to be listed within the next year. Last year, the U.S. Fish and Wildlife Service (FWS) found that 374 additional species in the southeastern U.S. “may warrant” listing. By the end of the decade, the number of listed species could exceed 2,500.

The surge in ESA listings has not been matched with increased funding for endangered species conservation. As a result, the ESA has become an understaffed, overcrowded emergency room. For endangered species conservation to move beyond triage, other federal laws, state wildlife programs and private conservation efforts must become far more effective at preventing species from becoming imperiled. Candidate conservation agreements under the ESA can also help. Although the core protections of the act apply only to listed species, unlisted species can be protected through these voluntary agreements between the FWS and private landowners, state wildlife agencies and other federal agencies.

This white paper evaluates and makes recommendations for improving one type of these agreements: Candidate Conservation Agreements with Assurances (CCAAs). The intent of CCAAs is to conserve unlisted species by offering private and state landowners an important incentive to participate: legal assurance that if the species covered by the agreement is later listed, the landowner will not be required



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EASTERN MASSASAUGA RATTLESNAKE

to take any conservation measures beyond those identified in the agreement. Between 1999 (when FWS finalized the policy that created CCAAs) and 2013, 26 CCAAs have been issued (see list on page 14), but few people understand how these agreements have been used, whether they have achieved their conservation goals, and how they can be improved.

The first part of this white paper provides an overview of how and when the CCAAs issued to date have been used. It categorizes the types of land-use activities and species covered by the CCAAs, the number finalized each year, the duration of these CCAAs, and recommended directions for future research on CCAAs.

The second part describes recommended improvements to CCAA implementation. The CCAA final policy and draft handbook set parameters on how FWS implements the program but leaves regional and field offices with some discretion to adapt agreements to individual circumstances. Thus viewing the CCAA program as an evolving experiment, we looked at the CCAAs issued over the last 14 years for examples of FWS staff exercising this discretion and trying new approaches to implementing CCAA policy or improvising on existing approaches. The innovative approaches that we identified are the basis of the eight recommendations we encourage FWS to consider incorporating into its CCAA guidance documents. Because these approaches have already been implemented, they can readily be evaluated for inclusion in national CCAA policy.



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1 PROFILE OF CCAAs

To better understand how and when FWS uses CCAAs, we evaluated 26 agreements for 1) types of activities covered, 2) types of species covered, 3) number of agreements finalized per year, 4) number of programmatic agreements (applying to multiple participants rather than a single one), 5) duration of agreements, and 6) record of preventing species from being listed.

Types of Covered Activities

CCAAs authorize a variety of activities that can harm species. Some activities are designed to conserve species, but cause negligible harm in the process. For example, a landowner mowing vegetation to improve a species' habitat may accidentally injure a few individual animals in the process. Other activities, such as oil and gas development, are not designed to conserve species. The adverse impacts from these nonconservation activities can be extensive and are often minimized and offset through conservation measures under a CCAA.

To understand the types of activities the 26 CCAAs cover, we reviewed each agreement and assigned it to one of three categories based on the purpose of the activities authorized (Figure 1):

Category 1: Conservation-only

Category 1 agreements cover activities designed solely to conserve species. Because CCAAs in this category do not authorize nonconservation activities, we have high confidence that they will generate net benefits for species. Three agreements (12 percent of the CCAAs issued), all of which cover only habitat management or improvements, fall in Category 1.

Category 2: Reintroduction

Category 2 covers activities designed to restore species to their former range. Although reintroduction is a conservation activity, these CCAAs differ from Category 1 CCAAs because they also authorize nonconservation activities. Under Category 2 agreements, participants allow the covered species to be released onto their property. In return, participants receive legal assurance that if the species becomes listed, the only restrictions on the use of their property are those written in the CCAA. Usually, landowners can continue with timber harvesting, ranching and other ordinary activities that could harm the reintroduced plants or animals. It is important to note, however, that these adverse impacts exist only because the property owner has consented to the reintroduction. Without consent, there would be no species on the property and no impacts to speak of. From this perspective, both Category 1 and 2 agreements are typically self-limited in their ability to impair conservation progress. Three agreements (12 percent) fall into Category 2.

Category 3: Combined nonconservation and conservation

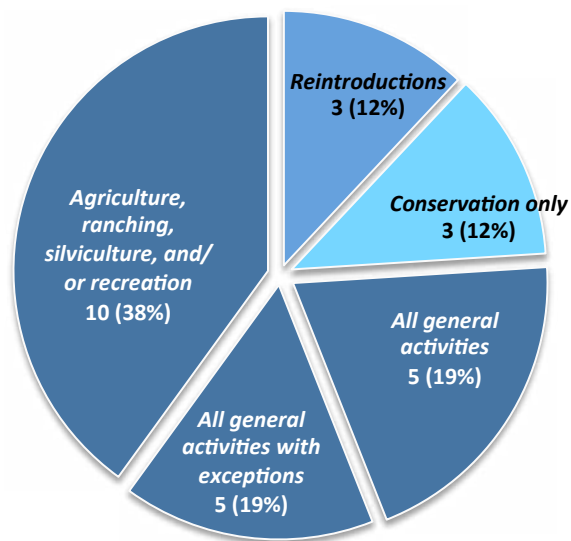
Category 3 covers activities designed to reduce threats to species by avoiding, minimizing and offsetting the adverse impacts of nonconservation activities. These conservation measures can take many forms, including invasive species control, wetland restoration and

vegetation removal. Category 3 agreements are the most common, consisting of 20 agreements (76 percent) of the 26 evaluated.

To better understand this largest category, we divided it into three subcategories based on a more nuanced assessment of the types of covered activities. Five agreements (19 percent) cover all general activities on the participating property, with insignificant or no restrictions on those activities. Another five agreements (19 percent) cover all general activities but with specific restrictions. For example, the Page springsnail CCAA excludes groundwater pumping and the New England cottontail CCAA excludes "development activities causing more than minimal impacts."¹ The remaining 10 agreements (38 percent) generally limit covered activities to agriculture, ranching, silviculture and/or recreation.

These three subcategories help us understand the types of activities that *can* occur on an enrolled property, but not necessarily the activities that *will* occur. This gap is explained by factors such as economic considerations, state environmental laws, and zoning ordinances, all of which can further restrict land-use activities. As a result, a CCAA that covers all general activities does not always lead to more adverse impacts than one limited to farming. To assess actual impacts, we would need to evaluate the periodic monitoring reports that participants submit, a task that is beyond the scope of this report but recommended for future research.

Figure 1. Types of activities covered under the 26 CCAAs evaluated.



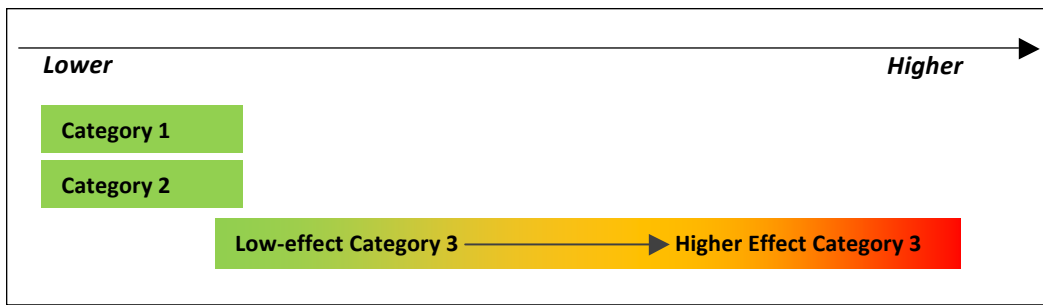


Figure 2. Risk of long-term, overall adverse impacts to species for each category of CCAA.

The three broad categories enabled us not only to group agreements by covered activities, but also to infer the level of risk they pose to species. Compared to Category 3 agreements, Category 1 and 2 agreements should pose a lower risk of long-term adverse impacts to species. As already noted, the adverse impacts from Category 1 and Category 2 agreements are unlikely to outweigh the beneficial impacts.

The same cannot be said of all Category 3 agreements. For one reason, the adverse impacts under Category 3 agreements can occur well before the conservation measures are completed. As a result, the possibility exists that the measures will be improperly implemented or unable to achieve their biological goals. After all, biologists can rarely predict with certainty the outcome of many conservation projects. And when conservation outcomes are not met, FWS is often unable to require participants to compensate for the shortfall because of the legal assurances that are the mainstay of any CCAA.

The adverse impacts from Category 3 agreements can also be far more significant and difficult to track. For example, the combined CCAA/habitat conservation plan (HCP) for the dunes sagebrush lizard in Texas authorizes up to 21,267 acres of adverse impacts, also known as “incidental take,” for activities such as oil and gas development and ranching.ⁱⁱ Other CCAAs also authorize incidental take across thousands of acres of habitat, making beneficial and adverse impacts more difficult to monitor and evaluate. As a result, it is more challenging to conclude with confidence that these agreements will always achieve strong net conservation benefits for affected species.

Our approach of categorizing CCAAs by their level of risk is similar to the one used to determine if an HCP is considered “low effect” and hence eligible for streamlined permitting. A low-effect HCP must have “minor or negligible” impacts on species “prior to implementation of the minimization and mitigation measures.”ⁱⁱⁱ Category 1 and 2 agreements are similar to low-effect HCPs because they do not depend on minimization or mitigation measures to achieve minor or negligible adverse impacts. Indeed, their impacts should always be positive. By contrast, Category 3 agreements vary substantially in their ability to reduce adverse impacts to only minor or negligible levels.

Some Category 3 agreements have minor impacts because, for example, they specifically exclude “development activities causing more than minimal impacts.” Other agreements, however, contain no such exclusions or specifically authorize large-scale impacts.

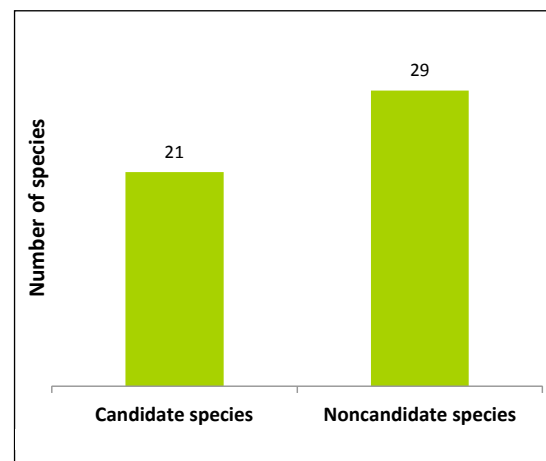
We thus view Category 3 CCAAs as falling along a spectrum of risk (Figure 2). On the low end are agreements that authorize only low-impact activities or cover landowners who already manage their property in an ecologically sound manner. On the high end are agreements that authorize large-scale impacts, offset only by unproven conservation measures that could require decades to complete. The negotiation, scrutiny and monitoring of these agreements should be more extensive than for agreements on the low end of the spectrum, because the risk of adverse impacts is higher. By considering this spectrum of risk, FWS could develop future CCAA policy that streamlines the approval of low-risk agreements but more closely scrutinizes high-risk agreements.

Types of Covered Species

CCAAs can cover not only candidate species but also proposed species and species likely to become candidates or proposed in the near future. All four types of species are unlisted, but their risk of extinction can vary greatly. Most notably, candidate species already warrant a proposal for listing as threatened or endangered, while species that are likely to become candidates may face a lower risk of extinction. CCAAs for candidate species can help fill some of the void left by the lack of ESA protection for those species, while CCAAs for noncandidate species can help prevent them from becoming candidates.

Figure 3 shows the legal status of the 49 unlisted species at the time the 26 CCAAs were finalized. Twenty species (41 percent)

Figure 3. Numbers of candidate and noncandidate species in the 26 CCAAs.



were candidates; the remaining 29 (59 percent) were not. This high ratio of noncandidate to candidate species is attributable partly to the CCAA for the Tagshinney Tree Farm in Washington state, which covers 12 noncandidate species but only one candidate. Ignoring this agreement, the ratio of noncandidate to candidate species for the remaining 25 agreements is 17:19.

A related question concerns the types of unlisted species covered by CCAAs.^{iv} An agreement can cover only candidate species, only noncandidate species or both. Sixteen agreements (62 percent) covered only candidate species, eight agreements (30 percent) covered only noncandidate species, and two agreements (8 percent) covered both types of species (Figure 4). Thus, approximately two-thirds of all CCAAs cover one or more candidate species.

Number of CCAAs Approved Annually

To determine if FWS has issued CCAAs with increasing frequency, we counted the total number of CCAAs approved each year after the policy that created CCAAs was finalized in 1999. Figure 5 shows that the number of agreements

Figure 4. Number of agreements that cover each category of unlisted species.

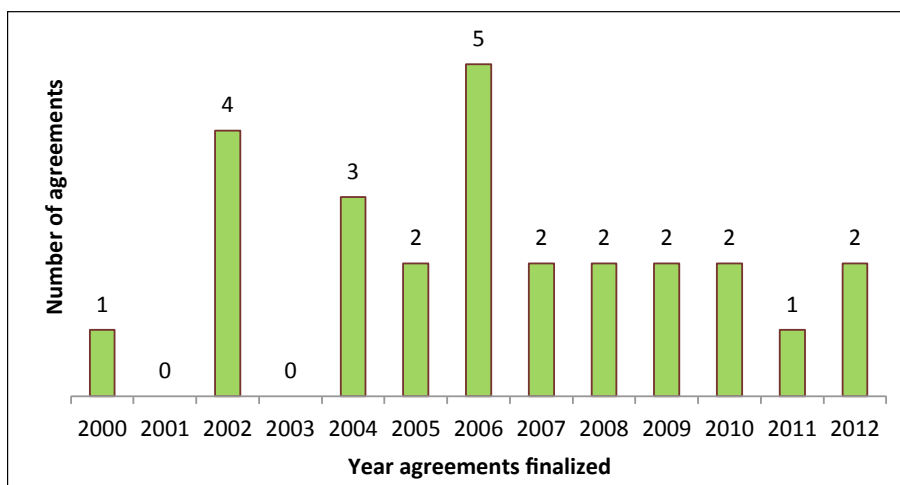
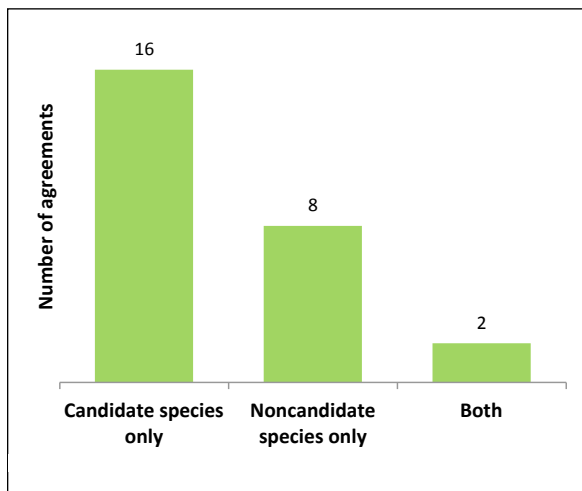


Figure 5. Number of agreements approved per year.

peaked in 2006 at five. Since then, FWS has approved one or two agreements per year.

Number of Programmatic CCAAs

CCAAs can be written as individual agreements covering one property owner or as programmatic agreements covering multiple property owners. Of the 26 agreements we evaluated, 12 are programmatic. Of those agreements, 10 covered only one species while the remaining two agreements covered two species each. By contrast, of the 14 nonprogrammatic agreements, five covered more than one species, with an average of 6.6 species per agreement. Thus, FWS did not necessarily use programmatic agreements to cover more species, but presumably used them to pursue other opportunities such as maximizing the number of participants in the covered area.

Duration of CCAAs

The CCAA draft handbook states that the duration of CCAAs may vary but must be enough to allow FWS to determine that the benefits of the CCAA conservation measures would meet the CCAA approval standard. As shown in Figure 6, the average duration of the 26 CCAAs is approximately 26 years, with agreements lasting 20 to 24 years being the most common. Many of the agreements did not explain the reasons for their specific duration. We were thus unable to determine whether the duration was tied to the conservation benefits of the CCAA or to other reasons such as feasibility for participants.

Ability to Preclude Listing

The approval standard for CCAAs is based on the ability of an agreement to preclude listing of the covered species. To better understand when CCAAs have precluded listing, we evaluated the six situations where FWS had to issue a proposed or final decision on whether to list a species covered by a CCAA. Of the species involved in these situations, three no longer warranted listing partly due to conservation measures taken under CCAAs: lesser Adams Cave beetle (*Pseudanophthalmus cataryctos*), greater

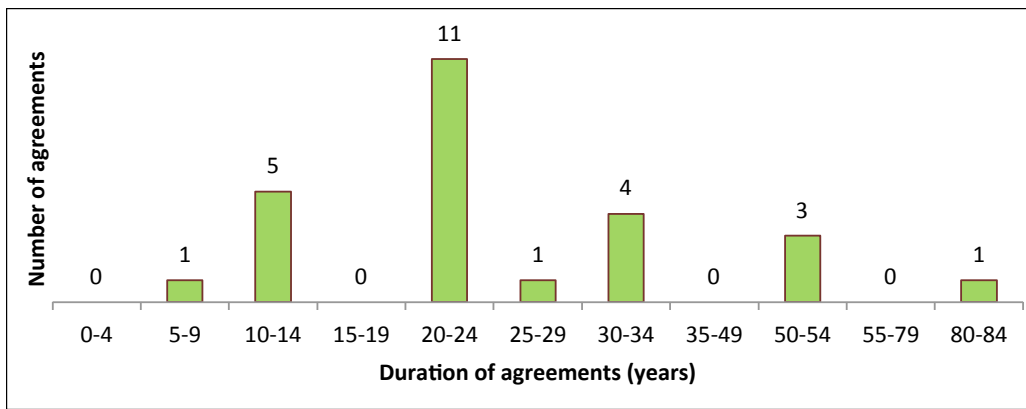


Figure 6. Number of agreements finalized, categorized by the duration of agreements.

Adams Cave beetle (*Pseudanophthalmus pholeter*), and dunes sagebrush lizard (*Sceloporus arenicolus*). The remaining three species are either listed or proposed for listing: the yellowcheek darter (*Etheostoma moorei*), listed as endangered in 2011, four years after FWS finalized the CCAA for the species; the spring pygmy sunfish (*Elassoma alabamae*), proposed for listing as threatened in October 2012; and the lesser prairie chicken (*Tympanuchus pallidicinctus*), proposed for listing as threatened in December 2012. The role of the CCAAs in the FWS decisions to list or not list these six species is explained below.

In the final rule to list the yellowcheek darter, FWS addressed the role of the CCAA in its analysis of “Inadequacy of Existing Regulatory Mechanisms” to conserve the species.^v The sole reference to the CCAA was that “the intended benefits of conservation measures agreed to by landowners in agreements such as Candidate Conservation Agreements with Assurances may never be realized.” The reason is that Arkansas law allows mineral rights to supersede surface rights. Thus, “[e]ven where private landowners agree to implement certain [best management practices (BMPs)] or conservation measures on their lands for yellowcheek darter conservation, there is no guarantee that these BMPs or conservation measures will be implemented by natural gas companies, their subsidiaries, or contractors that lease and develop the mineral rights for landowners.” In situations like this, it appears likely that CCAAs and other voluntary conservation measures may improve the status of a species but not to the point of preventing listing because key threats cannot be adequately reduced by those conservation measures.

The proposed rule to list the spring pygmy sunfish follows a similar pattern.^{vi} The species is protected by one CCAA, which covers approximately 24 percent of the habitat occupied by the only known population of the species and was finalized six months before FWS issued the proposed rule. Although the CCAA reduces the severity of certain threats to the species, FWS proposed to list the species because the remaining 76 percent of its habitat was either unprotected or of marginal quality. FWS also noted that “since this CCAA has been just recently enacted, there has yet to be long-term monitoring, which is needed to evaluate the overall effectiveness of these efforts.”

The lesser prairie chicken is the other species proposed for listing, despite three CCAAs and one candidate conservation

agreement (CCA) for the species.^{vii} The proposed rule to list the prairie chicken is peculiar, however, because it summarizes the status of the four agreements but never analyzes why they are inadequate to preclude listing. For example, FWS explains that the combined CCA/CCAA for the species in New Mexico has enrolled over 2,339,463 acres of federal, state, and private lands. But nowhere does FWS analyze what this enrollment means for the species’ status or risk of extinction. In this respect, the proposed rule is entirely unlike the final or proposed rule for any of the other five candidate species discussed in this section. This is problematic for several reasons, including inconsistency in agency decision-making and lack of information necessary for the public to properly understand the strengths and weaknesses of the four conservation agreements.

In contrast to the darter, sunfish and prairie chicken examples, FWS relied largely on one CCAA for both the lesser Adams Cave beetle and the greater Adams Cave beetle in declining to list these species.^{viii} Both species are restricted to the Adams Cave in Kentucky, which is only accessible through an entrance on a one-acre lot owned by a nonprofit land trust. Under the CCAA, which was finalized in 2005, the land trust committed to implement three conservation measures for the species, including maintaining metal gates at the cave entrance. The same year, FWS concluded that these and other measures had removed or substantially reduced the threats to the species’ habitat, and hence eliminated the need to list the beetles. Apparently FWS did not believe that the two species needed to expand their distributions or population sizes to avoid listing—threat reduction alone was sufficient. This case suggests that for naturally rare and endemic species facing a limited number of well-understood threats, FWS may be inclined not to list as a result of robust CCAAs and other prelisting conservation measures, even if they do not result in documented population increases.

The dunes sagebrush lizard, the third species that avoided listing, is covered by two candidate agreements: a combined CCA/CCAA for New Mexico and a combined CCAA/HCP for Texas. When FWS withdrew its 2010 proposed rule to list the species as endangered, it relied in part on the significant enrollment under both agreements. Ninety-five percent of the existing habitat for the species in New Mexico was enrolled under the CCA/CCAA

or protected by management restrictions on public lands, and 71 percent of the lizard's habitat in Texas (138,640 acres) was enrolled under the CCAA/HCP.^{ix} FWS concluded that both agreements, along with the Bureau of Land Management's Special Status Species Resource Management Plan Amendment, "have identified the threats to this species, and provide conservation measures to alleviate or lessen those threats, to restore degraded habitat, and to reduce fragmentation or restore connectivity."^x As with the lesser and greater Adams Cave beetles, the dunes sagebrush lizard was not listed because the CCAAs for the species had reduced threats to a level that FWS believed was adequate, not because the CCAAs had resulted in documented increases in the abundance of the species.

Some environmental groups, however, disagree that the Texas CCAA for the sagebrush lizard was robust enough to prevent listing, especially because many of the threat-reduction measures in the agreement appear discretionary and there were no data on the long-term effectiveness of the agreement. In fact, it is noteworthy that the CCAA was finalized only four months before FWS declined to list the species. Yet, in proposing to list the spring pygmy sunfish, FWS found it relevant that it could not evaluate the effectiveness of the CCAA for the species because the agreement was recently finalized and lacked long-term monitoring data.

Given the possibility of a successful legal challenge to the decision not to list the sagebrush lizard, the ESA status of the species may change in the future. In that case, the HCP portion of the Texas CCAA/HCP joint agreement could take effect. FWS, however, has never combined a CCAA with an HCP for a candidate species alone (these joint agreements have always covered a listed species as well). Consequently, the effectiveness of this approach remains to be seen.

Future Research on CCAAs

This profile of 26 CCAAs offers a starting point for understanding how FWS implements CCAA policy, a subject rarely formally analyzed. Key questions for future research include whether CCAAs are actually achieving their goals for species and participants and how consistently FWS has applied CCAA policy. To address these questions, the following should be evaluated:

CCAA annual reports and the results of compliance and biological monitoring

This information will help determine whether participants are implementing agreed upon conservation measures and whether those measures are actually achieving their expected biological goals. In particular, the data are crucial to understanding whether the continued implementation of a CCAA is furthering or impeding conservation goals for a species and whether changes to the conservation strategy would benefit the species. Unfortunately, this information is not easily accessible to the public, as it is often stored at field or regional offices that have the lead responsibility for a CCAA. A related source of valuable information is the "notification of take" that participants must provide to FWS at least 30 days before any activity that may result in take of a candidate species that becomes listed. Because only three candidate species with CCAAs have been listed or proposed for listing (yellowcheek darter, spring pygmy sunfish and lesser prairie chicken), this information is currently limited. In the future, however, it could become far more relevant, especially because a recent court settlement requires FWS to issue final listing decisions on over 250 candidate species within the next five years, and many of these species will likely be listed.

Certificates of inclusion for programmatic CCAAs

Programmatic CCAAs do not always prescribe specific conservation measures for participants to implement, leaving that gap to be filled through certificates of inclusion. For example, the Texas CCAA/HCP for the dunes sagebrush lizard states that "Specific Conservation Measures used by a Participant will be determined on a case-by-case basis as appropriate as part of the [certificate of inclusion] process..."^{xi} To identify the specific conservation measures that participants agree to implement, it is often necessary to review each certificate of inclusion. By reviewing these documents, FWS can identify patterns in the types of conservation measures that participants agree to implement, especially when there is no template certificate to use.

Level of participation in programmatic CCAAs

The conservation reach of programmatic CCAAs is determined partly by the number of participants. Thus, it is important to understand the extent of participation and motivations behind landowner enrollment.

Progress toward achieving species conservation goals

The approval standard for CCAAs is based on whether an agreement can reduce threats so as to preclude or remove the need for listing. Although we have identified three species for which CCAAs played an important role in preventing listing, we do not know the extent to which CCAAs for other species are helping to preclude listing. This is partly because information on the biological outcomes of CCAAs is not readily available. We encourage FWS to post CCAA monitoring reports and related information on its website and to evaluate the data to determine the extent to which the CCAA program is achieving its conservation goals.



YELLOWCHEEK DARTER

2 RECOMMENDATIONS FOR IMPROVING THE IMPLEMENTATION OF CCAAS

Based on our analysis of 26 CCAAs and in keeping with our view of the CCAA program as an evolving experiment, we offer the following recommendations for eight innovations in CCAA implementation. We encourage FWS to further evaluate these recommendations and consider incorporating them into CCAA guidance documents.

1. Use the fair-share model.

Under current CCAA policy, the standard for approving agreements is difficult to understand and apply: FWS “must determine that the benefits of the conservation measures implemented by a property owner under a CCAA, when combined with those benefits that would be achieved if it is assumed that conservation measures were also to be implemented on other necessary properties, would preclude or remove any need to list the covered species.”^{xii} This standard does not describe with any specificity the amount of conservation a property owner must agree to implement under a CCAA. To address this weakness, the CCAA for the greater sage grouse in the Western Planning Area uses a “fair-share model.” Under the model, FWS can objectively determine the minimum amount of habitat restoration needed for enrollment. A landowner whose property meets this minimum amount will not be required to restore additional habitat to enroll. If the minimum amount is not met, restoration will be required. By setting an objective standard, the model brings greater transparency and consistency to CCAA implementation.

Further, the CCAA draft handbook states that in some situations a participant need only maintain existing conditions to satisfy the CCAA approval standard, while in other situations the property must be improved. The fair-share model is one way to more objectively distinguish between these situations and to calculate the number of improvements needed for enrollment. The model also enables FWS to better quantify the expected benefits from each enrolled property and to describe how those benefits contribute to the broader habitat conservation goals within the CCAA planning area.

2. Adjust regulatory assurances to account for uncertainty.

The CCAA final policy states that FWS “will not require additional conservation measures nor impose additional land, water, or resource use restrictions *beyond those the property owner voluntarily committed* to under the terms of the original agreement,” assuming the agreement has been implemented in good faith.^{xiii} This provision allows FWS to ask if participants would voluntarily commit to additional conservation measures should certain unplanned events occur in the future, such as a wildfire that affects the enrolled property. By making these commitments, participants can share some of the additional responsibilities of conserving the species if unexpected events occur.

One recent example of accounting for uncertainty comes from the spring pygmy sunfish CCAA. The section on “Reevaluation of Status of the Covered Species” states that if a 15 percent decline in the status of the species is determined, there will be a reevaluation of the conservation measures set forth in the CCAA. If a reevaluation reflects a need to change the conservation measures, the CCAA participant must either implement the new or additional measures “notwithstanding the assurances” provided in the CCAA, or to terminate the CCAA and surrender the accompanying permit that provides incidental take coverage. A similar example comes from the CCAA for the Columbia spotted frog, in which the participant agreed to implement additional conservation measures specified in the CCAA if the artificial ponds managed under the agreement no longer provided suitable habitat.

These provisions for changed circumstances can be a critical safety net for responding to unexpected events that may prevent

a CCAA from fulfilling its conservation goals, particularly in cases of substantial scientific uncertainty. In developing CCAAs, we encourage FWS to identify important sources of scientific uncertainty and attempt to account for them by negotiating provisions similar to the ones in the pygmy sunfish and Columbia spotted frog agreements. Doing so should enhance FWS’s ability to adaptively manage for the needs of the species. It may also enable FWS to more rapidly finalize CCAAs by providing a clearer path to address scientific uncertainty.

3. Connect incidental take to conservation progress.

To evaluate the long-term conservation success of CCAAs, FWS must determine whether the adverse impacts that occur under a CCAA will impede efforts to conserve a species. For example, is an agreement authorizing such high levels of incidental take that it undermines recovery prospects for a species? The yellowcheek darter CCAA addresses this issue by including an adaptive management provision that requires FWS to determine if ongoing levels of incidental take under the agreement may be impeding recovery. If so, and if management activities need to be adjusted, FWS will alter future Property Owner Management Agreements under the CCAA, rather than existing agreements. This assessment is performed every five years as part of a major evaluation of whether the agreement is achieving its conservation goals.

The yellowcheek darter approach can be advantageous for two reasons. First, it reflects the fact that FWS cannot predict with confidence the level of future incidental take under most CCAAs and recognizes that at some point the level may begin to undermine recovery. At that point, the CCAA is no longer a conservation tool and needs to be recalibrated. Second, the approach places the burden of any additional conservation on future participants, not landowners who have already enrolled in the CCAA. In certain situations, this is one transparent way to balance the tension between regulatory predictability and adaptive management.

4. Assume all potentially suitable habitat is occupied in the absence of contrary data.

Because many candidate species are difficult to observe and poorly studied, biologists cannot determine with confidence whether they are present or absent from a given area. The Texas CCAA/HCP for the dunes sagebrush lizard addresses this issue in a precautionary manner that favors the species. When estimating the level of incidental take, the CCAA/HCP “considers potentially suitable shinnery oak dune complexes and buffers surrounding such complexes on the same basis as if that area were shinnery oak dune complexes occupied or potentially occupied by [lizard]...”^{xiv} Thus, conservation measures would be required on more areas than the lizard presumably currently occupies. This approach is similar to the one used to address significant data gaps in ESA section 7 consultations. The section 7 options are to perform more research before completing the consultation or to complete the consultation with the available information but act in a precautionary manner by giving the “benefit of the doubt” to the species.^{xv}

5. Limit incidental take coverage based on the scope of conservation measures.

Many CCAAs offer incidental take coverage for all activities that will occur on the enrolled property. We recognize that broad take coverage incentivizes landowner participation, but we also believe FWS should not offer coverage for significant threats that are not addressed through the CCAA. The CCAA for the Page springsnail, for example, expressly declines to authorize incidental take from groundwater pumping because the CCAA does not address that significant threat to the species’ survival. By explicitly connecting major threats to corresponding conservation measures, FWS can better demonstrate how an agreement will conserve a species.

One agreement that clearly depicts the relation between threats and conservation measures is the arctic grayling CCAA. Table 5 of the agreement (Figure 7) lists threats, conservation

Figure 7. Table of threats and conservation measures from Arctic Grayling CCAA.

Table 5. Summary of Threats to Fluvial Arctic Grayling in the Big Hole River Watershed, the Conservation Measures Proposed in the Agreement to Reduce These Threats, and the General Timeline for Implementation and Threat Reduction Under the Agreement.		
THREAT	CONSERVATION MEASURES TO ADDRESS THREAT	GENERAL TIMELINE FOR IMPLEMENTATION & THREAT REDUCTION UNDER THE AGREEMENT
HABITAT		
Water quantity (reduced instream flows)	Increased flows through: water rights compliance, improved irrigation management, less water intensive crops, instream flow leases, stock-water wells, etc.	<ul style="list-style-type: none"> • Immediate improvements through water rights compliance & installation of headgates/measuring devices to be installed within 5 years • Flow targets met 75% of time by year 10 & more frequently thereafter as the more complex site-specific plans reach full implementation
Riparian zone	Conservation & restoration of riparian habitats by fencing, off-channel livestock watering facilities, prescribed grazing plans, more active livestock management, etc.	<ul style="list-style-type: none"> • Frequency of livestock presence in riparian areas will decrease significantly during first 5 years leading to rapid improvement. • Steady riparian recovery thereafter with “sustainable” status achieved on 95% of enrolled lands by year 15.
WATER QUALITY		
<ul style="list-style-type: none"> • Thermal 	Increased flows, conservation & restoration of riparian habitats	<ul style="list-style-type: none"> • Immediate reduction in thermal loading in relation to increased streamflows. • Longer-term reductions in temperatures from riparian zone recovery & channel morphology adjustments

measures to address threats, and a general timeline for implementation and threat reduction under the agreement.^{xvi} We believe explanations like these will bring greater transparency to CCAAs and eventually help validate their conservation value.

6. Prioritize landowners for enrollment in programmatic CCAAs.

In some situations, FWS lacks the staff capacity to meet landowner demand for enrolling in programmatic CCAAs. To prioritize conservation efforts, the arctic grayling CCAA includes a quantitative system that ranks lands within the project area

based on their potential to provide the greatest benefit to the species and to minimize the level of incidental take that occurs during the development of site-specific plans. Figure 8 shows the worksheet used to rank properties.

The ranking system assigns a score to each of the five habitat management segments in the CCAA based on the conservation significance of each segment. The CCAA further describes the size of each segment and the number of property owners in each, including the number with streamside parcels (Figure 9). This is among the most strategic, science-based approaches we have seen to prioritizing enrollment under programmatic CCAAs.

Figure 8. Ranking criteria worksheet from arctic grayling CCAA.

1. Grayling Habitat Significance	POINT VALUE
a) Enrolled lands in historic spawning and juvenile rearing segments (Segments C and D)	50
b) Enrolled lands in adult feeding and wintering habitat (Segment E)	20
c) Enrolled lands in area of historic presence--habitat use unknown (Segments A and B)	10
2. Initial Entrainment Significance	
a) Entrainment of grayling has been documented in irrigation ditches on the enrolled lands	20
b) Entrainment of grayling has not been documented in the irrigation ditches on the enrolled lands <u>but</u> enrolled lands <u>include</u> at least one of the 296 points of diversion considered a likely site of entrainment	5
c) Entrainment of grayling has not been documented in the irrigation ditches on the enrolled lands <u>and</u> enrolled lands <u>do not include</u> any of the 296 points of diversion considered a likely site of entrainment	0
SUMMARY OF RANKING CRITERIA 1 AND 2	
A. Score	(max 50)
B. Score	(max 20)
TOTAL	(max 70)
SEQUENTIAL CRITERIA TO RESOLVE TIED SCORES	
3. Potential to Improve Instream Flows	
Acres of irrigated land on enrolled lands	Number of Acres
4. Riparian Habitat Significance	
Linear length of riparian habitat on enrolled lands (sum of both sides of channel)	Miles of Riparian Habitat

(Note: The above information will be used to establish a relative ranking list to prioritize implementation of the Agreement. Criteria 3 and 4 are only used to resolve any tied scores after Criteria 1 and 2 have been evaluated).

Figure 9. Summary of private lands in agreement project area from arctic grayling CCAA.

Management Segment	Number of Private Landowners*	Area of Private Land (acres)	Range of Parcel Size per Landowner (acres)	Number of Private Landowners Owning Streamside Parcels	Total Area of Private Land with Streamside Parcels (acres)
A	23	54,325	20 – 19,045	21	4,215
B	53	33,700	18 – 6,179	18	24,900
C	131	84,531	20 – 19,825	25	52,565
D	61	112,605	5 – 14,730	40	73,404
E	50	27,796	20 – 3,662	28	17,381
TOTAL	318	312,957		132	172,465

* Some landowners own parcels in multiple management segments, so the total of this column will be greater than the total number of individual landowners in the Project Area.

7. Implement CCAAs in different phases.

The arctic grayling CCAA includes another approach to address the shortage of staff capacity to meet landowner demand for enrollment. Through a phased schedule for implementing the CCAA, FWS believes it can provide immediate and long-term benefits to grayling, maximize landowner participation, develop meaningful site-specific plans for each property, and make the most efficient use of limited agency resources.

The CCAA creates three phases for each participant. Phase one lasts up to 90 days from the date of enrollment under the CCAA. It includes requiring landowners to remove immediate threats to the grayling and completing a rapid assessment of the property. Phase two lasts up to 30 months and includes the landowner implementing measures to remove threats to grayling that were identified during the rapid assessment, FWS reviewing and approving the certificate of inclusion that allows the landowner to enroll in the CCAA, and the development of a site-specific plan for the landowner. Phase three lasts at least 10 years and includes the landowner implementing the measures in the site-specific plan and FWS activating the ESA regulatory assurances for that landowner. One advantage of this phased approach is that it requires landowners to immediately begin reducing threats to grayling without having to first complete a site-specific plan, a process that can take almost three years. We believe this “triage” approach to implementation can benefit species in other CCAAs, particularly where the demand for enrollment far exceeds staff capacity. FWS has adopted a similar approach in recovery planning through the use of recovery outlines, which are designed to identify immediate threats that can be addressed while a more comprehensive recovery plan is developed.

8. Consider offering incidental take coverage to owners of neighboring properties.

Two of the 26 CCAAs we evaluated extend incidental take coverage to the neighbors of enrolled landowners under certain conditions. The Montana CCAA for the westslope cutthroat trout, which involves the reintroduction of the species, covers neighboring property owners if they accept the establishment of trout on their property. The CCAA explains that FWS expects approximately 10 property enrollments annually, two from properties where the reintroduction occurs and eight from neighboring properties that may be affected. Likewise, the CCAA for the Yellowcheek darter states that the parties to the agreement “will make every reasonable effort” to include the neighboring landowner as a signatory party to the management agreement for the enrolled property. The CCAA also allows FWS to grant incidental take coverage to neighboring



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PRESCRIBED BURNING OF HABITAT

Candidate conservation agreements and conservation plans for listed species may cover prescribed burns, which can improve habitat for fire-dependent species such as red-cockaded woodpeckers and gopher tortoises.

properties that become occupied by the darter due to conservation actions on enrolled property. Under the right situations, we believe that offering coverage for neighboring properties is important to consider in drafting CCAAs. We encourage FWS to include guidelines on this issue, such as setting minimum requirements for enrolling neighboring landowners, in the CCAA handbook. Neighboring landowners should consent to having their property surveyed for covered species and agree to not harm the species in a manner inconsistent with the terms of the agreement.

CONCLUSION

CCAAs are the main tool under the ESA that states and private landowners can use to conserve at-risk and candidate species. For CCAAs to reach their full potential, however, FWS must more closely evaluate if and how these agreements are meeting their conservation objectives. Thorough analysis will demonstrate how CCAAs can be most effectively implemented to achieve desired conservation outcomes. Our own analysis of 26 CCAAs identified the eight implementation improvements recommend to FWS in this white paper.

We urge FWS to revisit its CCAA policy and draft handbook with an eye toward these improvements and others that maximize conservation outcomes for unlisted species.

NOTE: Between the finalization and publication of this white paper, FWS issued its 27th CCAA. That 25-year programmatic agreement covers the lesser prairie chicken in Oklahoma and specifically prohibits many activities that are highly destructive to the prairie chicken and its habitat, including all oil and gas development, conversion of native rangeland to farmland, and wind turbine development.



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IDAHO SPOTTED FROG

ENDNOTES

- ⁱ Candidate Conservation Agreement with Assurances for the Page Springsnail, 2009, p. 25. Programmatic Candidate Conservation Agreement with Assurances for the New England Cottontail in Southern New Hampshire between the New Hampshire Fish and Game Department and the U.S. Fish and Wildlife Service, 2011, p. 18.
- ⁱⁱ Texas Conservation Plan for the Dunes Sagebrush Lizard, 2012, p. 61.
- ⁱⁱⁱ U.S. Fish and Wildlife Service and National Marine Fisheries Service, *Habitat Conservation Planning and Incidental Take Permit Processing Handbook*, 1996, p. 1-8.
- ^{iv} Because this report focuses on unlisted species, we did not count listed species covered in joint CCAAs/HCPs or CCAAs/safe harbor agreements.
- ^v U.S. Fish and Wildlife Service. 1993. Endangered and threatened wildlife and plants; final rule to list the cumberland darter, rush darter, yellowcheek darter, chunky madtom, and laurel dace as endangered species. Federal Register 76:48722.
- ^{vi} U.S. Fish and Wildlife Service. 2012. Endangered and threatened wildlife and plants; proposed rule to list the spring pygmy sunfish as a threatened species, and designation of critical habitat. Federal Register 77:60180.
- ^{vii} U.S. Fish and Wildlife Service. 2012. Endangered and threatened wildlife and plants; proposed rule to list the lesser prairie-chicken as a threatened species. Federal Register 77:73828.
- ^{viii} U.S. Fish and Wildlife Service. 2005. Endangered and threatened wildlife and plants; revised 12-month finding for the greater Adams Cave beetle (*Pseudanophthalmus pholeter*) and the lesser Adams Cave beetle (*Pseudanophthalmus cataryctos*). Federal Register 70:72973.
- ^{ix} U.S. Fish and Wildlife Service. 2012. Endangered and threatened wildlife and plants; withdrawal of the proposed rule to list dunes sagebrush lizard. Federal Register 77:36878.
- ^x *Id.* at 36894.
- ^{xi} Texas Conservation Plan for the Dunes Sagebrush Lizard, p. 39.
- ^{xii} U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1999. Announcement of final policy for candidate conservation agreements with assurances. Federal Register 64:32726.
- ^{xiii} *Id.* at p. 32733 (emphasis added).
- ^{xiv} Texas Conservation Plan for the Dunes Sagebrush Lizard, p. 58.
- ^{xv} U.S. Fish and Wildlife Service and National Marine Fisheries Service, *Section 7 consultation handbook: procedures for conducting consultation and conference activities under the Endangered Species Act*; 1998; p. E-2.
- ^{xvi} Candidate Conservation Agreement with Assurances for Fluvial Arctic Grayling in the Upper Big Hole River Between Montana Department of Fish, Wildlife and Parks and the U.S. Fish and Wildlife Service, 2006, p. 63.

LIST OF 26 CCAAS FINALIZED THROUGH 2012

TITLE OF CCAA	STATE(S) COVERED
CCAA for Columbia Spotted Frog at Sam Noble Springs, Owyhee County, Idaho	Idaho
CCAA for Columbian-Sharp Tailed Grouse Between the Oregon Department of Fish and Wildlife and the USFWS	Oregon
Southern Idaho Ground Squirrel CCAA for the Soulen Livestock Company, Inc.	Idaho
Programmatic Southern Idaho Ground Squirrel CCAA	Idaho
Tagshinny Tree Farm Conservation Plan	Washington
Multi-Species CCAA, Threemile Canyon Farms	Oregon
CCAA for Greater Sage Grouse in the West Central Planning Area Between the Idaho Department of Fish and Game Natural Resources Conservation Service and the USFWS	Idaho
CCAA for Lesser Prairie Chicken between Texas Parks and Wildlife Department and the USFWS	Texas
CCAA for the Page Springsnail	Arizona
Candidate Conservation Agreement for the Lesser Prairie Chicken and Sand Dune Lizard in New Mexico	New Mexico
Texas Conservation Plan for the Dunes Sagebrush Lizard	Texas
Eastern Massasauga Rattlesnake CCAA for Rome State Nature Preserve, Ashtabula County, Ohio	Ohio
Eastern Massasauga Rattlesnake CCAA for the Lower Chippewa River Bottoms, Buffalo and Pepin Counties, Wisconsin	Wisconsin
CCAA for the Greater Adams Cave Beetle and Lesser Adams Cave Beetle at Adams Cave, Madison County, Kentucky	Kentucky
CCAA for the Robust Redhorse, Ocmulgee River, Georgia	Georgia
Programmatic Safe Harbor Agreement and Programmatic CCAA for the Speckled Pocketbook and Yellowcheek Darter in the Upper Little Red River Watershed, Arkansas	Arkansas
CCAA for the Spring Pygmy Sunfish between Belle Mina Farm, Ltd. and the USFWS	Alabama
Programmatic CCAA for the New England Cottontail in Southern New Hampshire between the New Hampshire Fish and Game Department and the USFWS	New Hampshire
4W Ranch FLP CCAA	Wyoming
CCAA for the Lesser Prairie Chicken between Theodore R. Alexander and the USFWS	Kansas
CCAA for Fluvial Arctic Grayling in the Upper Big Hole River Between Montana Department of Fish, Wildlife and Parks and the USFWS	Montana
CCAA for Gunnison Sage-Grouse between the Colorado Division of Wildlife and the USFWS	Colorado
Umbrella CCAA between Montana Department of Fish, Wildlife & Parks and the USFWS for Westslope Cutthroat Trout Introductions/Reintroductions in Montana	Montana
CCAA for the Colorado River Cutthroat Trout between the Three Fork Ranch Corporation and the USFWS	Colorado and Wyoming
Green Diamond Resource Company Aquatic Habitat Conservation Plan and CCAA	California
CCAA for Fisher for the Stirling Management Area between Sierra Pacific Industries and the USFWS	California

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