Comments on Proposal to Rescind the Regulatory Definition of "Harm" for the Endangered Species Act of 1973, as Amended

(Docket No. FWS-HQ-ES-2025-0034)

Please accept these comments on the Administration's April 18, 2025, proposal to rescind the regulatory definition of Harm (Docket No. FWS-HQ-ES-2025-0034) in the constructive spirit they are intended. They have been assembled with the assistance of many endangered species and Endangered Species Act experts from around the country, many of whom are hesitant to speak up on their own for fear of Administration retaliation. These comments are submitted under my name in their honor and as a tribute to their excellent and tireless work.

I am, Michael Horton, an endangered species, habitat restoration, and landscape conservation biologist with 40 years of experience, 25 of which working for the U.S. Fish and Wildlife Service. During my time with the Fish and Wildlife Service I worked to manage and conserve old growth forests in the Pacific Northwest, vernal pool wetlands and valley floor habitats along with associated amphibian, reptile, mammalian, and bird species in northern and central California, and forested and wetland habitats throughout the northeastern U.S., where I was the Regional Habitat Restoration Coordinator. As Habitat Restoration Coordinator, I coordinated landscape conservation and invasive species control strategies from North Carolina through Maine. During my last 16 years with the Fish and Wildlife Service, I worked in the Washington, D.C. headquarters office on legal, policy, and regulatory issues as their National Section 7 Coordinator, and led the creation of the Service's online Information for Planning and Consultation decision support system (IPaC). Since taking early retirement in 2015, I have formed my own conservation consulting company, Integrated Planning and Conservation Associates (IPaCA), and now work to facilitate conservation solutions both within the U.S. and around the globe. My experience with the Service taught me the need to work cooperatively with landowners, land managers, and members of the general public to develop and achieve common goals. Most people feel that conservation is important, but they want to know that their sacrifices will be measured and meaningful. They do not want to make sacrifices just to checkoff some legal box, they want to know that if they contribute to the effort to conserve listed species it will be for a reason that makes a real difference. I would often meet with community members that were hesitant to commit for fear that their neighbors would find some legal loophole that would change the playing field making their sacrifices meaningless. I fear this proposal may be just such a loophole that will betray the trust of so many land managers and owners who have stepped up to conservation plate and contributed to safeguarding the ecological functions of the amazing ecosystems our great country still possesses.

Background:

As stated in the proposal, the Endangered Species Act of 1973, as amended (ESA), prohibits the "take" of endangered species. Section 3 of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Because Congress is not made up of subject experts, they pass laws expressing their objectives, and implementing agencies, who are staffed by subject experts, develop procedures and

regulations that detail how Congress' objectives will be achieved. Hence, during the 1980's the Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS), collectively referred to as the Services, promulgated ESA regulations designed to implement standards and processes for achieving Congress' intent. At issue is the current Administration's belief that the Services overstepped their authorities when within these regulations they developed a definition of "Harm" that included "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." In other words, take was defined to not only include impacts directly to individuals of a species, but also to include impacts to those habitats and resources that are essential to those individuals' survival.

Additional Comments and Questions:

The Administration argues that the existing regulation does not "match the single, best meaning of the statute," yet it fails to provide any information regarding the "single best meaning" it is comparing against.

The Administration's statement implies that it is measuring the current definition of "harm" against some standard that it believes to be "the single best meaning." ***What is this standard? Why is this "best" definition of "harm" not being proposed here to help avoid future confusion and uncertainty?***

By failing to propose a new definition of "harm," but rather, simply rescinding the current definition, the Administration is sowing the seeds for future confusion and uncertainty.

By proposing to rescind the current definition of "harm" without replacing it, the Administration is proposing to return to the uncertainty of 1973 when field agents were left to interpret the term as they felt appropriate, leading to vastly different implementation across the country for virtually identical impacts. As was the case back then, if this proposal is finalized, these arbitrary definitions will ultimately result in court challenges and we will return to the chaos that resulted in the controversial Palila case (Palila v. Hawaii Department of Land and Natural Resources, 639 F.2d 495 (9th Cir. 1981)), which ultimately compelled the Services to develop the definition of "harm" that the Supreme Court ultimately upheld. The chaos of the 70's and early 80's resulted in public confusion and uncertainty as landowners were forced to "test the bounds" of what was allowable often wondering if their actions would result in legal challenges. Project proponents often complain that at times the Services engage in what is informally referred to as the "Bring me a Rock Game." In this process, when the Services are approached by project proponents with a difficult project situation seeking guidance, Service personnel are hesitant to tell them exactly what standards they should meet because they themselves are uncertain regarding the acceptable bounds; they may have a good idea of what is definitely "acceptable" and what is definitely "unacceptable" from biological and legal perspectives, but invariably there is a large gray zone in-between where many projects fall. In these situations, the Services often argue that they "evaluate proposals" rather than "tell people what they have to do." While this sounds good in theory, the result is project proponents developing their project

design with little input from the Services, bringing it to them for guidance, and the Services telling them whether or not it is acceptable: "Bring me a rock and I'll tell you if it's the rock I'm looking for; if it isn't, then I'll tell you to bring me another rock, and so on until the correct rock is found." This typically occurs because Service personnel is uncertain about the standards they are supposed to implement, and it can be extremely frustrating for landowners and project proponents who often respond with "just tell me what I need to do!" They want certainty and predictability. ***What steps will the Services implement to avoid the uncertainty and confusion we experienced the last time we were without a definition of "harm?"***

The Services' uncertainty often arises when they experience a perceived conflict between the biological needs of species and the legal standards being employed. This will certainly be the case in the situation that would ensue if the proposed regulatory change is implemented. Implementation of what the Administration appears to want, to discount the biological effects of habitat destruction and focus instead more on direct impacts to individuals of the species, will result in biological impacts that will make it much more difficult, if not impossible, to achieve the legal standard of conserving species and their ecosystems (please see the species-specific comments below for examples). This conflict will result in local biologists trying to lead project proponents to "acceptable" project designs without telling them exactly what they should do for fear of being challenged and being uncertain of the legal limits. The outcome, as experienced in the past, is significant public frustration, increased project costs and delays as project proponents "explore" their range of options, poor conservation results as projects tend to be implemented in an inconsistent patchwork fashion rather than in a coordinated focused manner, and substantial litigation as the parties take their "exploration" to the courts for the guidance that perhaps should have been provided by the Executive Branch. ***What guidance will the Services provide to their personnel regarding the interpretation of the "harm" and "take" standards to assist in providing certainty and predictability for the public, both in terms of project designs and species conservation?***

As a society we have already experienced these pains and progressed to a more stable, predictable process. Simply removing the definition without providing a replacement takes us right back to 1973 and reignites the confusion, uncertainty, arbitrary interpretations, and string of litigation that plagued the process in the past. Thus, though there are many comments with the questions above, here **we would like to make the specific comment that the proposed rule change is likely to result in poor public policy and poor conservation results, which is not good for society, and in general, is an example of poor and inefficient Government; the American public deserves better from its Government and elected officials.**

We disagree with the Administration's view that the current definition of "harm" does not match the single, best meaning of the statute.

The "meaning" of the statute can be found in Section 2(b) of the ESA, its stated purpose: "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." Thus, in the law's stated purpose Congress recognized the importance of conserving species' habitats. They recognized that it does no good to protect individuals of a species if we fail to conserve the habitats, or "ecosystems," they depend on to complete their lifecycle. This is evident in the Congressional record and clear to biologists, e.g.,

fish need water to survive - and not only do they need water, but the quality of the water matters. *The current definition of "harm" supports the purposes of the ESA. If they are not to use the current definition of "harm," how will the Service's ensure that their interpretation(s) does not undermine the ESA's stated purpose?*

The Administration inappropriately relies on an observation of Justice Scalia in his dissenting opinion in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687 (1995).

As cited in the proposed rule, in his dissenting opinion of Babbitt v. Sweet Home Chapter of Communities for a Great Oregon (515 U.S. 687, 1995) Justice Scalia observed, ''[i]f 'take' were not elsewhere defined in the Act, none could dispute what it means, for the term is as old as the law itself. To 'take,' when applied to wild animals, means to reduce those animals, by killing or capturing, to human control.'' While this statement may or may not be true, the Administration is inappropriately relying on this statement because **Congress did, in fact, define the term "take."** In addition, the Congressional Record contains evidence indicating that Congress was aware of this legal history and consequently felt it necessary explicitly define "take" (S. Rep. No. 93-307, p. 7 (1973)).

In light of the fact that Congress specifically defined "take" in the law, it is inappropriate to substitute one's own definition, even if that definition has been used in law before; the ESA specifically defines the word, and it uses both terms that support the historical use of the term "take," as well as some that are broader, such as "harm." **Congress was clearly considering more than the "old" use of the word "take."** If Justice Scalia's view were correct, one would think that Congress would have either remained silent regarding the definition of "take," thus deferring to its historic use, or they would have chosen descriptors that limited its definition to factors that "reduce those animals, by killing or capturing, to human control." Instead, Congress chose to specifically define "take." Congress recognized that to achieve their stated purpose, they needed to focus not only on conserving the individuals of a species, but its habitats and ecosystems as well. *What is the Administration's justification for ignoring the independent meaning of the terms Congress used to define "take" and thus, substituting its own definition of the legal term for the definition Congress provided?*

In deciding Babbitt v. Sweet Home, the Supreme Court found the text of the ESA provides several reasons for concluding that the Services' current definition of harm is reasonable. They determined that an "ordinary understanding of the word 'harm" supports it." Please note that though the Administration cites Webster's New International Dictionary of the English Language (1949) as support for its proposal, the Supreme Court cited the 1966 version of the same dictionary when it stated in its decision, "The dictionary definition of the verb form of 'harm' is 'to cause hurt or damage to: injure.'" In their ruling the Supreme Court went on to state, "Respondents argue that the Secretary should have limited the purview of 'harm' to direct applications of force against protected species, but the dictionary definition does not include the word 'directly' or suggest in any way that only direct or willful action that leads to injury constitutes 'harm.'" Indeed, and this is a very important point, the Court went on to say "Moreover, unless the statutory term 'harm' encompasses indirect as well as direct injuries, the word has no meaning that does not duplicate the meaning of other words that § 3 uses to define

'take.' A reluctance to treat statutory terms as surplusage supports the reasonableness of the Secretary's interpretation." (Footnote deleted). In other words, **the Administration's current proposal effectively renders the word "harm" meaningless within the definition of "take."** An outcome the Court rejected. *Does the Administration believe that Congress misunderstood the meaning of "harm" when it defined "take," or that it simply added the word with no intent behind it? Why is the Administration inappropriately prioritizing the minority dissent in Babbitt v. Sweet Home over the majority's* ruling*, which affirmed the existing regulatory definition of "harm?"*

The current definition of "harm" appropriately has a distinct meaning apart from "harass," "pursue," "hunt," "shoot," "wound," "kill," "trap," "capture," or "collect," and is supported by the stated purpose of the ESA.

In its Sweet Home ruling the Supreme Court also determined that "the broad purpose of the ESA supports the Secretary's decision to extend protection against activities that cause the precise harms Congress enacted the statute to avoid. "In TVA v. Hill, 437 U. S. 153 (1978), we described the Act as 'the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.' Id., at 180. Whereas predecessor statutes enacted in 1966 and 1969 had not contained any sweeping prohibition against the taking of endangered species except on federal lands, see id., at 175, the 1973 Act applied to all land in the United States and to the Nation's territorial seas. As stated in § 2 of the Act, among its central purposes is 'to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved....'" 16 U. S. C. § 1531(b).

In a footnote the Court goes on to say, "In contrast, if the statutory term 'harm' encompasses such indirect means of killing and injuring wildlife as habitat modification, the other terms listed in § 3—'harass,' 'pursue,' 'hunt,' 'shoot,' 'wound,' 'kill,' 'trap,' 'capture,' and 'collect'-generally retain independent meanings. Most of those terms refer to deliberate actions more frequently than does 'harm,' and they therefore do not duplicate the sense of indirect causation that 'harm' adds to the statute. In addition, most of the other words in the definition describe either actions from which habitat modification does not usually result (e. g., 'pursue,' 'harass') or effects to which activities that modify habitat do not usually lead (e. g., 'trap,' 'collect'). To the extent the Secretary's definition of 'harm' may have applications that overlap with other words in the definition, that overlap reflects the broad purpose of the Act. See infra this page and 699-700." Later, in the body of the opinion, the Court states, **"The statutory context of 'harm' suggests that Congress meant that term to serve a particular function in the ESA, consistent with, but distinct from, the functions of the other verbs used to define 'take.' The Secretary's interpretation of 'harm' to include indirectly injuring endangered animals through habitat modification permissibly interprets 'harm' to have 'a character of its own not to be submerged by its association.'"** [emphasis added] *Why does the Administration believe that the Supreme Court erred when it determined that the various terms used to define "take" should be interpreted to have separate and distinct meanings? If the Administration does not believe the Supreme Court erred in this judgment, how will the Services interpret "harm" such that it retains a separate and distinct meaning from the other terms used to define "take?"*

In its ruling the Court also found that "the broad purpose of the ESA supports the Secretary's decision to extend protection against activities that cause the precise harms Congress enacted the statute to avoid." In this ruling the Court cites TVA v. Hill, 437 U. S. 153 (1978), where the Court determined "'The plain intent of Congress in enacting this statute,' we recognized, 'was to halt and reverse the trend toward species extinction, whatever the cost. This is reflected not only in the stated policies of the Act, but in literally every section of the statute.'" In TVA v. Hill the Court specifically noted the §9 take prohibition, placing particular emphasis on the inclusion of habitat modification in the definition of "harm," stating, "Congress' intent to provide comprehensive protection for endangered and threatened species supports the permissibility of the Secretary's 'harm' regulation." While the Court ruled that the Services' definition of "harm" is "reasonable," closer scrutiny suggests that it is not only reasonable, but that the concepts it embodies are essential in achieving the ESA's stated purpose.

As stated above, Federal agencies write regulations that implement the nuts and bolts of the processes needed to fulfill Congress' intentions. In most situations it is not reasonably possible to achieve Congress' intent of recovering species without addressing impacts to the habitats that provide the ability of individuals of the species to successfully fulfill their lifecycles. In addition, it is not reasonably possible to conserve the "ecosystems upon which endangered species and threatened species depend" if the definition of "harm" is modified such that the concept of "take" no longer adequately accounts for indirect impacts experienced by individuals through impacts to their habitat. Ensuring the physical protection of individuals of a species without also protecting the essential habitat features that allow them to feed, breed, and shelter, is not a biologically valid approach. Several species-specific examples are presented as individual comments below to illustrate this point. While we agree with the Administration's position that it has some latitude in developing this definition, the Secretaries are charged with faithfully implementing the laws of the United States. As such, it is reasonable to believe that the Secretaries' latitude does not extend to the point where it results in the law's failure, especially when for more than 40 years this definition has been upheld by the Supreme Court and has served its purpose well in helping to ensure the conservation, survival, and even recovery of many listed species. ***How will the Services fulfill the ESA's stated purpose if activities without a Federal nexus are allowed to destroy listed species' habitats, increasing the already untenable effects of landscape fragmentation, if they can do this destruction without directly impacting individuals? Many of us who have been implementing the ESA for many decades do not believe it is reasonably possible. To help us understand how this can be achieved, please layout how implementation of the various parts of the ESA will be integrated to counterbalance the anticipated effects of this proposed rule change on species' ability to survive and be recovered.***

The conclusion that Congress meant to address the effects of impacts to habitat through the concept of "take" is further supported by an additional passage in the Sweet Home ruling:

> Our conclusion that the Secretary's definition of "harm" rests on a permissible construction of the ESA gains further support from the legislative history of the statute. The Committee Reports accompanying the bills that became the ESA do not specifically discuss the meaning of "harm," but they make clear that Congress intended "take" to apply broadly to cover indirect as well as purposeful actions. The Senate Report stressed that "'[t]ake' is defined ... in the broadest possible manner to include every conceivable

> way in which a person can 'take' or attempt to 'take' any fish or wildlife." S. Rep. No. 93-307, p. 7 (1973). The House Report stated that "the broadest possible terms" were used to define restrictions on takings. H. R. Rep. No. 93-412, p. 15 (1973).

The Supreme Court again cited the Congressional Record to provide additional support for the current definition of "harm" later in the ruling:

> Two endangered species bills, S. 1592 and S. 1983, were introduced in the Senate and referred to the Commerce Committee. Neither bill included the word "harm" in its definition of "take," although the definitions otherwise closely resembled the one that appeared in the bill as ultimately enacted. See Hearings on S. 1592 and S. 1983 before the Subcommittee on Environment of the Senate Committee on Commerce, 93d Cong., 1st Sess., pp. 7, 27 (1973) (hereinafter Hearings). Senator Tunney, the floor manager of the bill in the Senate, subsequently introduced a floor amendment that added "harm" to the definition, noting that this and accompanying amendments would "help to achieve the purposes of the bill." 119 Cong. Rec. 25683 (1973). Respondents argue that the lack of debate about the amendment that added "harm" counsels in favor of a narrow interpretation. We disagree. An obviously broad word that the Senate went out of its way to add to an important statutory definition is precisely the sort of provision that deserves a respectful reading.

In the end, the Court concluded that "based on the text, structure, and legislative history of the ESA, that the Secretary reasonably construed the intent of Congress when he defined 'harm' to include "significant habitat modification or degradation that actually kills or injures wildlife." Because implementation of the proposed rule will likely keep the ESA from achieving its purpose, as can be seen in the individual species-specific comments presented below, the Administration's proposal is not a reasonable interpretation of the term "harm" as identified by the Supreme Court above. ***Why does the Administration believe that the Supreme Court erred in its judgement that the statutory definition of the term "take," which the Senate "went out of its way" to broaden, and which Congress ultimately provided, does not deserve a "respectful reading?"***

We disagree with the proposal's application of Loper Bright Enterprises v. Raimondo, 603 U.S. 369, 400 (2024).

While the Administration attempts to employ Loper Bright Enterprises v. Raimondo to invalidate the Supreme Court's majority decision in *Babbitt v. Sweet Home*, Chevron deference was just one aspect of the Court's reasoning, and not the primary aspect. As cited above, the Supreme Court provided their own detailed analysis in determining that the definition of "harm" is fully consistent with the text and structure of the ESA. In their decision they did an excellent job describing why the current definition of "harm" is appropriate. Furthermore, the common person's understanding of the word harm certainly encompasses more than direct bodily harm. Most people, for example, would determine that being fired from their job is harmful to their ability to survive, as would be the case if someone bulldozed their house down while they were away, or destroyed their food sources, or stole the money from their bank account so they were unable to obtain the resources they need. In addition, people may speak of "harming" our national interests, though there may not actually be direct physical harm involved. **The common person has a broad view of the term "harm." If this view is to be narrowed, it should be**

narrowed in a manner consistent with the purposes of the ESA. Though the proposal does not specifically state this, it lays out arguments suggesting that the Administration believes the "single, best meaning" should exclude effects of habitat destruction in the definition of "harm." It is not justifiable to argue that the single best meaning of the statute is that which precludes the law from achieving its stated purpose. ***Please explain why the Administration believes the "single, best meaning" of "harm" should exclude one of the two primary factors identified by the ESA for its need. Additionally, please explain how a definition change that undermines the ability to achieve the stated purpose of the law can be considered the "single, best meaning?" What other factors is the Administration using to come to this conclusion?***

The proposal inappropriately relies on the application of *noscitur a sociis* in interpreting the ESA's definition of "take."

Noscitur a sociis was the basis of the D.C. Circuit Court's decision for rejecting the existing regulatory definition of harm; the Supreme Court explicitly rejected this application in its ruling overturning the Circuit Court's decision, "(b) The Court of Appeals made three errors…. Third, the court employed noscitur a sociis to give "harm" essentially the same function as other words in the definition, thereby denying it independent meaning. ***Why is the Administration ignoring the Supreme Court's opinion and continuing to rely on the application of noscitur a sociis despite its rejection?***

The proposal is contrary to the stated purpose of the ESA and will impede and likely eliminate the Services' ability to achieve that stated purpose.

The foremost stated purpose of the ESA is "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved" (Section 2(b)). Section 3(3) of the ESA defines "conserving" and "conservation" as using "all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." The Services refer to the state of a species no longer needing protection under the Act as "Recovered." When a species is listed as Threatened or Endangered the Services identify the primary threats to the species; to recover the species the primary focus is on reducing or eliminating those primary threats. The principal threat identified for most listed species is habitat loss and fragmentation primarily due to urbanization and other land use activities. Therefore, successful recovery requires ensuring an adequate amount of suitable habitat remains for the species to undergo its full range of lifecycle dynamics. The unchecked removal of habitat whenever one or more individuals are not immediately occupying the habitat is contrary to the requirements for recovery. The proposed change to the definition of harm would be tantamount to removing Species Conservation (e.g., species Recovery) as the ESA's stated purpose, and replacing it with merely slowing the rate of a species decline into extinction. ***The individual species comments are provided as real-life examples of the environmental consequences of this proposal. Please explain how this proposed rule change is consistent with the basic principles of conservation biology and the stated purpose of the ESA.***

The Administration is failing to sufficiently manage the increased risks to species' survival that are anticipated.

When managing risk, one should not only evaluate the likelihood of an outcome, but the severity of the consequences of that outcome as well. When the consequences are greater, one should be more cautious. For example, large numbers of people in this country fail to obey speed limits. One reason for this is that fines resulting from being caught, while perhaps not desirable, are "tolerable." If, however, the penalty for speeding were suddenly changed to summary execution on the side of the road, it is extremely likely that people would exercise more caution, and the instances of speeding would drop precipitously. The Services are currently in a similar situation; the consequences of getting this proposed rule change wrong are at best, more expensive or unattainable recovery goals, and at worst, mass extinctions. We believe the current proposal will preclude the Services from being able to conserve species resulting in the ESA failing to achieve its stated purpose; **this does not appear to be a good faith effort to implement either the law, or Congress' intent when it passed it.**

The proposed change is inconsistent with a basic understanding of population ecology and animal behavior.

The proposed rule change fails to recognize the significance of habitat to the conservation of species. To illustrate this point, we cite the Fish and Wildlife Service's *Endangered and Threatened Wildlife and Plants; Notice of Intent To Clarify the Role of Habitat in Endangered Species Conservation* (FR 64, No. 113, June 14, 1999).

> "Virtually every study of the conservation of [imperiled] species considers habitat as a major component in a species' conservation and eventual recovery. The very purpose of the Act is ''to provide a means whereby the ecosystems upon which endangered species depend may be conserved.'' The National Research Council recognized the importance of habitat in its 1995 book, Science and the Endangered Species Act: ''habitat protection is a prerequisite for conservation of biological diversity and protection of endangered and threatened species.'' The National Research Council further noted: 'the Endangered Species Act, in emphasizing habitat, reflects the current scientific understanding of the crucial role that habitat plays for species' (National Research Council 1995[1])" [Footnote added]

Despite its importance, not all suitable habitat for a species is occupied 100 percent of the time. This is most easily illustrated with a migratory species. Under the proposed redefining of Harm, a bird species' breeding, feeding, and sheltering habitat could be removed from their summer breeding grounds after the birds have migrated south for the winter. Upon the birds return in the spring there would no longer be any habitat to support their breeding, feeding, and sheltering causing high adult mortality and zero recruitment. This would clearly be considered harmful to the species, even if it occurs only on a localized basis. ***What is the biological basis for the Administration's belief that this is not the case? Alternatively, if the Administration does not***

[1] National Research Council 1995. Science and the Endangered Species Act. National Academy Press, Washington, D.C. 271 pp.

dispute that these effects will result, what is its basis for believing the results would be consistent with Congress' intent and the stated purpose of the ESA?

Population ecology is the study of how populations of a single species change over time and space, and how populations interact with their environment and other species. For a fully functioning species, sufficient habitat must be available to support natural boom - bust cycles, even though it may not all be occupied at the same time. Otherwise, their habitat will be reduced during population downturns. Such reductions in habitat and the associated fragmentation are harmful to populations and species by restricting their ability to recover ("boom") forcing them into eventual decline. *How will the Services adjust their management to address the biological issues and resulting impacts to the ability to recover listed species associated with the accelerated rate of habitat fragmentation anticipate to result from the proposed rule change?*

The proposed rule change is a violation of the Services' section 7(a)(1) responsibilities.

Section 7(a)(1) of the ESA requires the Secretary to "review other programs administered by him and utilize such programs in furtherance of the purposes of this Act." In the past, the Services have argued that when making proposing rules, other Federal agencies must exercise their discretionary authority in a manner that "furthers the purposes of the Act." The Services are bound by the same requirements as other agencies. The Administration argues that the current definition of "harm" is but one possible definition, and possibly not the "single best" one. At the same time, the current definition of "harm" has successfully functioned for more than 40 years and has been deemed by the Supreme Court to be a "permissible construction of the ESA." Thus, on its face it appears that the Services are taking a discretionary action when proposing this regulatory change. Regardless of your agreement with this line of reasoning, please answer these two questions that will help us understand the Administrations chain-of-logic: *How does the Administration believe implementation of the proposed rule change will further the purpose of the ESA? How will species conservation benefit from this proposed rule change?*

The proposed rule change fails to adequately employ basic principles of species conservation and would essentially nullify the stated purpose of the ESA: to conserve the ecosystems upon which listed species depend.

By rescinding the current definition of "harm" and focusing on impacts to individuals at the expense of their essential habitats, the Administration is inappropriately focusing on a single, narrow aspect of conservation puzzle. While protecting individuals of a species is an important aspect of species conservation, without adequately accounting for the habitats and ecosystems needed for the species' survival and eventual recovery, the overall effort of conserving species becomes at best, expensive and extremely difficult to accomplish; at worst, it leads to extinction. The main reason identified for species listings is the degradation and destruction of habitat. This proposed rule change would exacerbate this issue by accelerating the loss of listed species habitats and further fragmenting the ecosystems the depend on. Thus, the net effect of this proposal would be to neutralize the purpose of the ESA as stated in section 2. *How will the*

proposed rule change be enacted while still furthering the ESA's purpose of conserving the ecosystems upon which listed species depend?

The proposed rule change is a violation of the Services' section 7(a)(2) responsibilities.

Under section 7(a)(2) of the ESA Federal agencies, including the Services, ensure that their actions will not likely jeopardize the continued existence of listed species. While traditionally the Services have argued that their rule makings will have beneficial effects on species or that resulting future actions will undergo future section 7(a)(2) consultations to ensure the jeopardy standard is met, the species assessments below clearly show that for many species the consequences of this proposed rule change will push them closer to extinction, thus triggering the jeopardy prohibition. In addition, this proposed rule change would ensure that many of these future actions will not undergo section 7(a)(2) consultation to ensure the continued existence of listed species is not jeopardized; therefore, this is the appropriate time to undertake this evaluation. We offer the harm-related species assessments below to assist the Services in this evaluation. We will continue to assist the Services in this manner by completing assessments for all listed wildlife species for future use even if the Services fail to extend the comment period to allow the public to have meaningful input.

The proposed rule change will have a significant impact on the human environment and therefore, should undertake an Environmental Impact Statement process under NEPA.

Given the high likelihood of significant declines in the populations of many currently listed species (e.g., the species assessments provided below) it is reasonable to conclude that the proposed action will have both an individual and cumulative significant effect on the quality of the human environment. In addition, judging from the number of comments received at this time (more than 150,000 at the time of this writing), this is clearly a highly controversial action. For these two reasons, the Administration should implement an Environmental Impact Statement (EIS) process to ensure that the potential impacts can be adequately assessed.

Species Informational Comments

Presented below are individual listed species assessments of how the proposed regulatory change is anticipated to impact each species. While we have species biologists from around the country developing these assessments as quickly as possible, the shortened comment period did not allow sufficient time to complete the process for all listed species anticipated to be impacted. Please accept the first 75 assessments below for your use; we will continue this work as quickly as possible in hopes of assessing every listed species we believe may be affected. *At this time, we request that the comment period be extended or reopened to allow our team sufficient time to complete the assessment work.*

Each of the harm-related species assessments below is an individual comment that we request be responded to individually to allow a thorough understanding of how the Administration

intends to implement the proposed rule change and the manner in which species will be affected.

While we assume the Services' have conducted their own extensive analyses regarding the impacts of the proposed rule change to their ability to achieve Congress' intent, these have not been presented. Reviewing these analyses would greatly assist our ability to evaluate the potential impacts of this proposal. ***Please provide the Services' analyses of the effects of the proposed rule change on the ability of their trust species to survive and recover in the wild.***

Following the presentation of the species-specific comments and questions, is our concluding comment.

Pygmy Rabbit Comments:

The pygmy rabbit (Brachylagus idahoensis) is the smallest rabbit in North America and is uniquely adapted to sagebrush-dominated habitats across the western United States, including Wyoming, Utah, Idaho, Nevada, Montana, Colorado, California, Oregon, and a distinct population in Washington's Columbia Basin.[1][2][3] This species is highly dependent on dense sagebrush for both food - comprising up to 99% of its winter diet - and cover from predators, and requires deep, loose soils for burrow construction.[4][5][6] Because pygmy rabbits spend nearly all their lives within or near these burrows, their physical presence in above-ground habitat is limited and highly localized, making them especially vulnerable to direct bodily harm only when encountered in these specific microhabitats. However, the biological factors most critical to the "Harm" issue are the pygmy rabbit's extreme reliance on intact sagebrush ecosystems for survival and reproduction. Habitat loss and fragmentation - primarily from agricultural conversion, livestock grazing, energy development, invasive species, and wildfire - have led to dramatic declines in population size and occupancy rates throughout their range.[6][7][8] For example, recent surveys show occupancy rates as low as 7–13% in Utah and 23% in Idaho, with Wyoming populations down by nearly 70%.[7] The Columbia Basin population in Washington is federally listed as endangered, while the broader species has been denied Federal listing but remains a candidate for protection due to ongoing threats.[3][9][8] If habitat destruction is no longer considered "harm" under regulatory definitions, vast areas of sagebrush habitat critical to pygmy rabbits could be legally removed or degraded when the rabbits are not physically present above ground. This would result in the loss of essential burrowing and foraging sites, leaving returning or surviving individuals with no suitable habitat to complete their life cycle or raise young. The inability to access or reproduce in secure sagebrush habitat would lead to further population declines and local extirpations, as small, fragmented populations are already highly susceptible to stochastic events, disease, and genetic bottlenecks.[4][9][10] The proposed regulatory change is likely to accelerate the species' decline toward extinction, as reproductive success and population resilience are tightly linked to the availability and quality of sagebrush habitat.[9][4][6] Without strong habitat protections, the pygmy rabbit's specialized ecological niche and limited dispersal capacity mean that even temporary or seasonal habitat loss can have irreversible consequences for population viability. Such declines will make it much more likely that Federal projects affecting the pygmy rabbit will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its species management to compensate for these anticipated impacts?

1. https://www.fws.gov/species/pygmy-rabbit-brachylagus-idahoensis
2. https://ecos.fws.gov/ecp/species/1126
3. https://wgfd.wyo.gov/media/1422/download?inline
4. https://wdfw.wa.gov/sites/default/files/publications/00275/wdfw00275.pdf
5. https://wdfw.wa.gov/sites/default/files/publications/01964/wdfw01964.pdf
6. https://defenders.org/newsroom/pygmy-rabbit-one-step-closer-endangered-species-act-protection

Chiricahua Leopard Frog Comment:

The Chiricahua leopard frog (*Lithobates chiricahuensis*) is a threatened amphibian dependent on permanent or semi-permanent aquatic habitats (e.g., springs, streams, cattle tanks) for breeding and survival, with adults exhibiting strong site fidelity to these locations.[1] Its complex life cycle - requiring stable water bodies for egg development, tadpole growth, and adult survival - makes habitat integrity critical, even when individuals are temporarily absent due to seasonal activity patterns or dispersal.[2] If habitat destruction is excluded from the regulatory definition of "harm," key breeding sites will be available to be degraded or removed during dry periods when frogs are inactive or dispersed, preventing reproduction and disrupting metapopulation connectivity.[3] This would exacerbate existing threats from non-native predators (e.g., bullfrogs, crayfish), chytrid fungus, and climate-driven droughts, likely accelerating population declines towards extinction.[1] Such regulatory changes would undermine recovery efforts by permitting habitat loss during biologically vulnerable periods, reducing resilience against stochastic events and disease outbreaks.[4] Such declines will make it much more likely that Federal projects affecting the Chiricahua leopard frog will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. To mitigate these impacts, the Service would need to prioritize habitat preservation through easements, enforce non-native species control, expand captive breeding programs, and establish artificial refugia to buffer against habitat loss.[4] How will the Service modify its current Chiricahua leopard frog conservation programs, existing agreements, and regulatory efforts to compensate for these increased impacts to the species' survival?

1. U.S. Fish and Wildlife Service, Chiricahua leopard frog species profile, ECOS.
2. University of Arizona Cooperative Extension, "Chiricahua Leopard Frog Management in Southern Arizona," January 2023.
3. Federal Register, "Endangered and Threatened Wildlife and Plants; Chiricahua Leopard Frog Recovery Plan," June 4, 2007.
4. U.S. Fish and Wildlife Service, "Working Toward Recovery for the Chiricahua Leopard Frog."

Florida Panther Comment:

The Florida panther (*Puma concolor coryi*) is a critically endangered cougar subspecies in southwestern Florida.[1][2] The estimated 200 remaining individuals rely on large, contiguous habitats for hunting and genetic diversity.[3][4][5] As solitary predators with vast home ranges (up to 250 square miles for males), they require undisturbed habitat corridors to maintain territory and breeding viability.[5][6] Panthers intermittently use portions of their habitat for hunting and dispersal, leaving areas temporarily unoccupied despite their ecological necessity.[5] Habitat quality directly impacts prey availability and high quality contiguous habitat reduces lethal conflicts with vehicles or other panthers.[7][5] If impacts to habitat are no longer treated as harm, remaining panther territories will be fragmented, dispersal corridors will be severed, and breeding populations will be isolated, thereby exacerbating inbreeding depression and vehicle collisions-the leading cause of adult mortality.[5][8][3] For example, accelerated urban development in Collier and Lee counties will likely eliminate 17 to 34 percent of the subspecies' critical habitat by 2040, likely reversing population gains and risking extinction.[9] These actions will negate the recovery efforts that have successfully increased the population from approximately 30 individuals in the 1990s.[10][2] Such declines will make it much more likely that Federal projects affecting the Florida panther will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service be able to prevent further fragmentation of the Florida panther's habitat and subsequent genetic collapse if the definition of harm is changed to exclude impacts to the species' habitats?

1. https://ecos.fws.gov/ecp/species/1763
2. https://pmc.ncbi.nlm.nih.gov/articles/PMC2989677/
3. https://www.wuft.org/animals/2025-03-22/experts-reflect-on-the-future-of-the-species-as-vehicle-collision-kills-fourth-florida-panther-in-2025
4. https://www.fws.gov/story/2022-04/florida-panther
5. https://ecos.fws.gov/docs/recovery_plan/081218.pdf
6. https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=1032&context=zool_pubs
7. https://www.nrc.gov/docs/ML1430/ML14309A096.pdf
8. https://pubmed.ncbi.nlm.nih.gov/11838201/
9. https://floridawildlifefederation.org/protecting-the-florida-panther-through-habitat-conservation-planning/
10. https://wildlife.org/florida-panther-genome-reveals-higher-genetic-diversity/

Alabama Beach Mouse Comment:

The Alabama beach mouse (*Peromyscus polionotus ammobates*) is a nocturnal rodent endemic to coastal sand dunes along Alabama's Gulf Coast, relying on dune vegetation for food and burrow construction.[1][2] It exhibits year-round breeding in stable habitats and plays a critical role in dune ecosystem health through seed dispersal, which stabilizes vegetative communities critical for erosion control.[1][2][3] Habitat loss from development and storms directly threatens survival, as the beach mouse cannot persist without interconnected dunes for foraging and refuge.[1][4][5] If dune destruction is not classified as harm under the Endangered Species Act (ESA), developers could legally remove vegetation and flatten dunes during periods when mice temporarily abandon storm-damaged areas.[6][7][8] This would eliminate seed banks and burrow sites, preventing population recovery and destabilizing remaining habitats.[2][4][9] Such actions would accelerate extinction risks, as fragmented populations already face genetic bottlenecks and hurricane-driven collapses.[10][4] Such declines will make it much more likely that Federal projects affecting the Alabama beach mouse will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service address escalating habitat loss for the Alabama beach mouse if the proposed regulatory change exempts dune destruction from the "harm" definition?

1. https://www.fws.gov/species/alabama-beach-mouse-peromyscus-polionotus-ammobates
2. https://encyclopediaofalabama.org/article/alabama-beach-mouse/
3. https://ecos.fws.gov/ecp/species/6956
4. https://www.fws.gov/doiddata/dwh-ar-documents/1020/DWH-AR0296829.pdf
5. https://www.forestry.alabama.gov/Pages/Informational/Endangered/Alabama_Beach_Mouse.pdf
6. https://www.environmentallawandpolicy.com/2025/04/no-harm-no-foul-services-propose-to-remove-harm-definition-from-endangered-species-act-regulations/
7. https://www.hklaw.com/en/insights/publications/2025/04/redefining-harm-change-proposes-removing-habitat-modification
8. https://monarchjointventure.org/blog/public-comment-period-regarding-the-definition-of-harm-under-the-endangered-species-act
9. https://kinute.com/stories/660238804-the-alabama-beach-mouse-how-one-of-nature-s-smallest-mammals-is-the-measure-for-coastal-conservation
10. chttps://pmc.ncbi.nlm.dnih.gov/articles/PMC2817293/

Wood Bison Comment:

The wood bison (*Bison bison athabascae*) is the largest land mammal in North America, inhabiting boreal forests and sedge meadows across parts of Canada and Alaska.[1][2] This long-lived, highly social grazer relies on open meadows and wetland habitats for foraging, and forms large herds with strong site fidelity to traditional grazing areas.[2][3] Because wood bison are obligate grazers, their survival depends on the continued availability of grass- and sedge-dominated meadows, which are often unoccupied by bison for portions of the year as herds move seasonally between ranges.[2][3] The species' dependence on specific habitat types makes it particularly vulnerable to habitat loss, fragmentation, and alteration.[3] If habitat destruction - such as conversion to agriculture, flooding from climate change, or industrial development - is no longer considered "harm," critical meadows and foraging grounds would be available to be destroyed or degraded while bison are absent, leaving herds without sufficient food resources when they return. This would disrupt their ability to feed, reproduce, and maintain healthy populations, likely leading to increased mortality, reduced recruitment, and population declines.[3] The impacts of this proposed rule change is likely to further threaten the wood bison's recovery potential, as they are already threatened in several jurisdictions due to small, fragmented populations, disease risks, and ongoing habitat pressures.[3][2] Loss of essential habitat would undermine conservation gains, increase human-wildlife conflict as bison seek new areas, and elevate risks of disease transmission and genetic isolation, thereby increasing the risk of species declines towards extinction.[3][2] Such declines will make it much more likely that Federal projects affecting the wood bison will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. What adjustments will the Service implement in its species management strategy to address the anticipated impacts on wood bison?

1. https://ecos.fws.gov/ecp/species/8362
2. https://www.adfg.alaska.gov/index.cfm?adfg=woodbison.main
3. https://www.fs.usda.gov/emc/nepa/revisions/includes/docs/specialuses/proposedces/woodbison-ea.pdf

Bog Turtle Comment:

The bog turtle (*Glyptemys muhlenbergii*) is the smallest North American turtle, inhabiting spring-fed wetlands, fens, and wet meadows from New York to Georgia. This species is highly dependent on early-successional, open-canopy wetland habitats, which are increasingly rare and fragmented across its range.[1][2][3] Because bog turtles have limited dispersal abilities and their populations are isolated, they are especially vulnerable to habitat loss, fragmentation, and degradation, as well as illegal collection for the pet trade.[3][4] Bog turtles spend their entire lives within these specialized wetlands, rarely venturing into adjacent habitats.[5] If habitat destruction is no longer considered harm, these critical wetlands would likely be drained, filled, or otherwise altered during periods when turtles are less active or not visible, such as during winter brumation. As a result, when turtles emerge in the spring, their habitat may be gone or unsuitable, preventing them from feeding, nesting, or reproducing.[1][3] Such regulatory changes would likely accelerate the decline of bog turtle populations, which have already lost over 80 percent of their suitable habitat and up to 90 percent of individuals in the last century.[5] Given the species' low reproductive output and late maturity, further habitat loss would drive the bog turtle closer to extinction, with little chance for recovery.[3][5] Such declines will make it much more likely that Federal projects affecting the bog turtle will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service manage the bog turtle's recovery efforts to compensate for these anticipated impacts?

1. https://www.nrcs.usda.gov/conservation-basics/conservation-by-state/pennsylvania/bog-turtle-conservation
2. https://portal.ct.gov/DEEP/Wildlife/Fact-Sheets/Bog-Turtle
3. https://www.nrcs.usda.gov/programs-initiatives/working-lands-for-wildlife/bog-turtle
4. https://www.fws.gov/species/bog-turtle-glyptemys-muhlenbergii
5. https://www.farmers.gov/blog/producers-and-private-landowners-partnering-with-nrcs-meet-nearly-half-bog-turtle-habitat

Western Snowy Plover Comment:

The Western Snowy Plover (*Charadrius nivosus nivosus*) is a small shorebird that nests in shallow scrapes on open, sandy beaches and salt flats along the Pacific Coast, relying on cryptic coloration to avoid detection.[1][2][3] The species exhibits high site fidelity, returning annually to the same breeding grounds, and employs distraction displays to protect nests and chicks from predators.[4][5] Adults frequently leave nests unattended to feed.[4] Chicks are precocial, leaving nests within hours, but remaining dependent on undisturbed beach habitats for weeks.[4][6] If habitat destruction is removed from the definition of harm, nesting sites would be available to be disrupted or destroyed during periods when the beaches are unoccupied outside of the breeding season or when adults are temporarily absent, even while eggs or chicks remain present.[7][8] The proposed regulatory change would exacerbate existing threats from human recreation, invasive species, and climate change, driving further population declines.[7][2][3] With recovery goals still unmet in many regions, these impacts would likely push the species toward extinction by destabilizing fragile breeding successes.[7][4][3] Such declines will make it much more likely that Federal projects affecting the Western Snowy Plover will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust management of the western snowy plover to mitigate these impacts while ensuring habitat conservation remains a cornerstone of recovery efforts?

1. https://ecos.fws.gov/ecp/species/8035
2. https://www.nps.gov/places/western-snowy-plover.htm
3. https://www.parks.ca.gov/?page_id=22542
4. https://copr.nrs.ucsb.edu/wp-content/uploads/2024/02/COPR_WSP_Report_2023.pdf
5. https://research.fs.usda.gov/pnw/news/releases/interagency-panel-identifies-most-effective-methods-protecting-western-snowy
6. https://www.fws.gov/species/western-snowy-plover-charadrius-nivosus-nivosus
7. https://www.oregon.gov/oprd/PCB/Documents/WSP_OPRD_WSP_HCP_2018 Annual Report_02_19.pdf
8. https://www.newportbeachca.gov/trending/projects-issues/snowy-plover

Giant Kangaroo Rat Comment:

The giant kangaroo rat (*Dipodomys ingens*) is the largest of its genus and a keystone species of California's arid grasslands, spending most of its life in complex burrow systems and rarely venturing above ground except for brief periods at night to forage.[1][2] The species is highly dependent on the dry, sandy grasslands that provide essential habitat elements for burrowing and seed storage, and its populations are now restricted to less than 2 to 3 percent of their historical range due to extensive habitat loss from agriculture, urbanization, and energy development.[3][2][4] Because giant kangaroo rats spend the majority of their time underground in localized burrow systems, direct bodily harm from human activity is limited when the animals are not above ground.[1][2] However, their survival and reproduction are tightly linked to the continued existence of the above ground sandy grasslands, which may appear to be unoccupied because of the species' limited above-ground nocturnal activity.[1] If habitat destruction is no longer considered harm, the giant kangaroo rat's burrow systems and the surrounding grassland habitat will be available to be destroyed or modified by activities such as agriculture or energy development activities during periods when the animals are underground and absent from the surface.[4] As a result, individuals emerging to forage or breed would find their habitat gone or possibly degraded, leading to mortality, loss of food stores, and the inability to complete their life cycle or successfully reproduce.[4] The proposed regulatory change would likely accelerate population declines and drive the species toward extinction, as the loss of habitat would eliminate both current individuals' ability to survive and the potential for population recovery, especially given their already fragmented and isolated populations.[4] Such declines will make it much more likely that Federal projects affecting the giant kangaroo rat will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service stop and eventually reverse the giant kangaroo rat's decline in light of these anticipated impacts?

1. https://www.fws.gov/story/2016-11/grazing-giant-kangaroo-rats
2. https://esrp.csustan.edu/publications/pdf/Saslaw_Cypher_2020_GKR translocation_WW.pdf
3. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=26050
4. https://ecos.fws.gov/docs/five_year_review/doc3215.pdf

Puerto Rican Broad-Winged Hawk Comment:

The Puerto Rican broad-winged hawk (*Buteo platypterus brunnescens*) is an endangered subspecies endemic to Puerto Rico, inhabiting mature forests such as El Yunque National Forest and Río Abajo Commonwealth Forest.[1][2][3] It exhibits strong territorial fidelity, relying on closed-canopy forests with specific tree species like Callophylum calaba (palo de María) for nesting and foraging[4]. The hawk relies on undisturbed habitats during its breeding season (December–May) and has a limited ability to adapt to rapid habitat changes due to its small population size (~125 individuals island-wide) and restricted range.[5][2] If habitat destruction is no longer treated as harm, critical nesting and foraging areas would be available to be degraded or cleared outside the breeding season, when hawks are absent from their nesting sites.[5][2] Failure to protect habitat year-round would exacerbate existing threats from deforestation, urban expansion, and habitat fragmentation, which already isolate populations and reduce genetic diversity.[5][2] This could collapse reproductive success, as hawks rely on specific forest structures (e.g., southwest-facing slopes near limestone walls) that cannot be rapidly replaced.[4] The proposed regulatory change would permit habitat destruction during non-breeding periods likely accelerating population decline, pushing this subspecies closer to extinction.[5][2] Such declines will make it much more likely that Federal projects affecting the Puerto Rican broad-winged hawk will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust management strategies to account for these impacts to the Puerto Rican broad-winged hawk if habitat destruction is no longer legally classified as harm?

1. https://ecos.fws.gov/ecp/species/5512
2. https://ecos.fws.gov/docs/recovery_plan/970908.pdf
3. https://www.fws.gov/species/puerto-rican-broad-winged-hawk-buteo-platypterus-brunnescens
4. https://pubs.usgs.gov/publication/70027309
5. https://ecos.fws.gov/docs/recovery_plan/Puerto Rican Broad-Winged Hawk and Puerto Rican Sharp-Shinned Hawk Recovery Plan Amendment.pdf

Copperbelly Water Snake Comment:

The copperbelly water snake (*Nerodia erythrogaster neglecta*) is a large, non-venomous snake distinguished by its dark back and bright orange-red belly, inhabiting bottomland forests, shrub swamps, and wetland complexes in the Midwest.[1][2][3] This species exhibits extensive seasonal migrations, relying on a mosaic of shallow wetlands and adjacent upland forests for foraging, breeding, and hibernation, often moving hundreds of meters between habitats throughout the year.[2][3][4] Because copperbelly water snakes spend significant periods in both aquatic and terrestrial environments, especially using uplands for summer foraging and hibernation, direct harm to individuals is not limited to wetlands, but extends to terrestrial corridors essential for their survival.[2][3][4] If habitat destruction - such as draining wetlands, clearing upland woods, or fragmenting habitat corridors - is no longer treated as harm, these critical areas would be available for destruction outside of the snakes' active periods, particularly during hibernation when snakes are underground and not visible.[2][3][5] As a result, when copperbelly water snakes emerge in spring or migrate between seasonal habitats, they would find essential wetlands or upland refuges destroyed, preventing them from foraging, breeding, or successfully overwintering, ultimately reducing population viability.[2][3][4] The proposed regulatory change would accelerate the ongoing decline of the already small and fragmented northern populations, increasing the risk of local extirpations, and driving the species closer to extinction due to the loss of contiguous, functional habitat complexes required for their persistence.[2][3][6] Such declines will make it much more likely that Federal projects affecting the copperbelly water snake will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service manage the copperbelly water snake to compensate for these anticipated impacts?

1. https://www.fws.gov/species/copperbelly-water-snake-nerodia-erythrogaster-neglecta
2. https://ecos.fws.gov/docs/recovery_plan/081223.pdf
3. https://mnfi.anr.msu.edu/abstracts/zoology/Nerodia_erythrogaster_neglecta.pdf
4. https://efotg.sc.egov.usda.gov/references/public/OH/Copperbelly_Fact_Sheet.pdf
5. https://publications.iowa.gov/13174/1/cbellywatersnake.pdf
6. https://fw.ky.gov/Wildlife/Documents/kysnakebook.pdf

Pacific pocket mouse Comment:

The Pacific pocket mouse (*Perognathus longimembris pacificus*) is a tiny, nocturnal rodent endemic to the immediate coastal regions of southern California, historically ranging from Los Angeles County to the Mexican border, but now restricted to just three known sites: the Dana Point Headlands and two locations on Marine Corps Base Camp Pendleton. This species is highly dependent on fine-grained, sandy soils within open coastal sage scrub habitats, where it constructs burrows that are essential for protection from predators and temperature extremes.[1] Because the Pacific pocket mouse is sedentary and spends most of its life underground, direct harm to individuals is limited primarily to activities that physically destroy occupied burrows or capture animals, but it is also vulnerable to the destruction or degradation of its specialized habitat.[2] If habitat destruction is no longer treated as harm, critical areas will be available to be developed or altered during times when mice are inactive or undetectable, such as during hibernation, resulting in the loss of essential burrowing sites, foraging grounds, and dispersal areas; upon emergence, the mice would find their habitat gone, preventing them from feeding, reproducing, or surviving adverse conditions.[3] Such a regulatory change would likely accelerate the species' decline, as its already fragmented and tiny populations would face further reductions in suitable habitat, pushing the Pacific pocket mouse closer to extinction.[4] Such declines will make it much more likely that Federal projects affecting the Pacific pocket mouse will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA.[5] How will the Service manage the Pacific pocket mouse to compensate for these anticipated impacts to the species ability to survive and recover?

1. U.S. Fish and Wildlife Service. Pacific Pocket Mouse (Perognathus longimembris pacificus)
2. U.S. Fish and Wildlife Service. Recovery Plan for the Pacific Pocket Mouse (Perognathus longimembris pacificus), 1998
3. San Diego Zoo Wildlife Alliance. Rediscovering Hope | San Diego Zoo Wildlife Alliance, 2025
4. Spencer, W.D. 2005. Recovery research for the endangered Pacific pocket mouse: An overview of collaborative studies
5. Spencer, W.D. 2001. Recovery Research for the Endangered Pacific Pocket Mouse (PDF)

Preble's meadow jumping mouse Comment:

The Preble's meadow jumping mouse (*Zapus hudsonius preblei*) is a small, nocturnal rodent endemic to riparian and adjacent upland habitats along the Front Range of Colorado and southeastern Wyoming, where it depends on dense, herbaceous vegetation near streams and wet meadows for foraging, nesting, and hibernation.[1][2][3] This species is highly vulnerable to extrinsic stressors due to its specialized habitat requirements, long hibernation period (up to 8 months), and limited dispersal abilities, making it especially sensitive to habitat loss and fragmentation.[4][2] Because individuals spend much of the year in hibernation burrows and require specific riparian and upland habitats for all life stages, direct harm is not limited to bodily injury - habitat destruction can eliminate nest sites, food resources, and hibernation sites, disrupt movement, and fragment populations, even when no mice are present above ground.[4][2] If habitat destruction is no longer considered harm, critical riparian and upland habitats would be available for removal or degradation during the mice's long hibernation period, so that when individuals emerge in spring, they may find essential resources and shelter gone, preventing successful breeding and survival.[2][3] The proposed regulatory change would likely accelerate population declines and push the subspecies closer to extinction, as its already small and fragmented populations would lose the habitat necessary for persistence and recovery.[2][3] Such declines will make it much more likely that Federal projects affecting the Preble's meadow jumping mouse will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service manage the Preble's meadow jumping mouse to compensate for these anticipated impacts?

1. https://www.fws.gov/species/prebles-meadow-jumping-mouse-zapus-hudsonius-preblei
2. https://assets.bouldercounty.gov/wp-content/uploads/2024/05/prebles-meadow-jumping-mouse.pdf
3. https://assets.bouldercounty.gov/wp-content/uploads/2017/03/p27-prebles-meadow-jumping-mouse.pdf
4. https://sites.warnercnr.colostate.edu/rschorr/wp-content/uploads/sites/139/2024/04/2018-Schorr-and-Mihlbachler-Understanding-Habitat-Quality-for-Prebles-Meadow-Jumping-Mouse_-How-Survival-Responds-to-Vegetation-Structure-and-Composition.pdf

Perdido Key beach mouse Comment:

The Perdido Key beach mouse (*Peromyscus polionotus trissyllepsis*) is a nocturnal rodent endemic to the coastal dunes of Perdido Key, a barrier island straddling Florida and Alabama. It exhibits strong habitat specificity, relying on intact dune systems for burrowing, seed dispersal, and protection from predators.[1][2] Because the species is active primarily at night and spends daylight hours sheltered in underground burrows, its habitat may appear unoccupied during human activity periods.[1][2] If habitat destruction is no longer treated as harm, critical dune ecosystems would available for people's use during times when mice are inactive or hidden. Unregulated use typically results in degradation of the dune system that the beach mouse depends on for survival.[3][1] This would exacerbate habitat fragmentation, isolate populations, and eliminate the mouse's seed-caching behaviors that are essential for dune stabilization.[4][1] The proposed regulatory change would leave the species vulnerable to extinction by disrupting reproduction, reducing genetic diversity, and limiting its resilience to hurricanes and sea-level rise.[3][1][5] These effects would accelerate population declines, reversing decades of recovery efforts that stabilized the species through habitat restoration and predator control activities.[3][4][1] Such declines will make it much more likely that Federal projects affecting the Perdido Key beach mouse will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service address increased extinction risks to the Perdido Key beach mouse if habitat destruction during periods of inactivity are no longer considered harmful?

1. https://www.nps.gov/guis/learn/nature/pk-beach-mouse.htm
2. https://home.nps.gov/guis/learn/nature/pk-beach-mouse.htm
3. https://www.fws.gov/story/mouse-roared
4. https://www.sfcollege.edu/zoo/conservation/perdido-key-beach-mice.html
5. https://pubmed.ncbi.nlm.nih.gov/21129026/

Ocelot Comment:

The ocelot (Leopardus pardalis) is a medium-sized, solitary, and primarily nocturnal wild cat native to the Americas, ranging from southern Texas and Arizona through Central and South America, where it relies on dense vegetation for hunting, denning, and raising young.[1][2][3] In the United States, ocelots are federally listed as endangered, with fewer than 60 individuals remaining in two isolated populations in Texas, where habitat loss and fragmentation have reduced their population numbers and genetic diversity.[1][4][2] Because ocelots depend on thick brush for denning and protection, their habitat is essential for successful reproduction and kitten survival; females raise their young in secluded dens for up to 2 years, making the presence of dense cover critical to their lifecycle.[2][3] If habitat destruction is no longer considered harm, the remaining dense brushlands in Texas and northern Mexico - already reduced to less than 5 percent of their original extent - would be available to be cleared outside the breeding season when ocelots are not present, leaving returning females without suitable den sites and further isolating populations.[4][2] The proposed regulatory change would likely accelerate the decline of ocelot populations, increasing mortality, reducing reproductive success, and pushing the species closer to extirpation in the U.S., as dispersing individuals would have nowhere to establish new territories and exacerbating genetic isolation.[4][2] Such declines will make it much more likely that Federal projects affecting the ocelot will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its ocelot management to ensure their continued existence in the United States in light of these anticipated impacts?

1. https://www.fws.gov/species/ocelot-leopardus-pardalis
2. https://ecos.fws.gov/docs/recovery_plan/Ocelot Final Recovery Plan_Signed_July 2016_new (1).pdf
3. https://pmc.ncbi.nlm.nih.gov/articles/PMC10235131/
4. https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0013_ocelot.pdf

Black Pinesnake Comment:

The black pinesnake (*Pituophis melanoleucus lodingi*) is a non-venomous constrictor that inhabits the longleaf pine forests of southern Mississippi and southwestern Alabama, with historical presence in Louisiana where it is now considered extirpated.[1][2] This large, stout-bodied snake, which can reach lengths of up to 6 feet, spends the majority of its time underground utilizing rotted pine stump holes, root channels, and occasionally gopher tortoise burrows as refuge.[1][3] The black pinesnake depends on xeric, fire maintained longleaf pine forests having sandy, well-drained soils with an open-canopied overstory of longleaf pine, a reduced shrub layer, and abundant vegetative groundcover.[4][2] A significant portion of this habitat has been lost due to conversion to pine plantations, particularly loblolly pine.[4][2] Site preparation for pine plantations often involves clearing of downed logs that reduces above ground refuge for black pine snakes. In addition, removal of stumps interferes with the development of stump holes and root channels that are highly utilized for refuge and heavy use of certain forestry herbicides often leaves the site with few native warm season grasses and forbs.[4][3] If habitat destruction is no longer considered harm, the remaining habitat for the black pinesnake will be vulnerable to conversion to incompatible uses such as commercial pine plantations, agriculture, and urban development, further fragmenting the already isolated populations and removing essential underground refugia like stump holes that the species requires for survival.[4][2] These impacts would accelerate the decline of the black pinesnake, as only 3 of the 19 identified populations currently show evidence of high resilience, with most displaying low to moderate resilience and limited distribution across a contracted range.[2] Such declines will make it much more likely that Federal projects affecting the black pinesnake will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its species management to compensate for these anticipated impacts when private landowners, provide habitat for approximately two-thirds of federally listed species including the black pinesnake?

1. https://www.fws.gov/species/black-pine-snake-pituophis-melanoleucus-lodingi
2. https://www.fws.gov/press-release/2023-04/us-fish-and-wildlife-service-announces-availability-black-pinesnake-draft
3. https://www.forestry.alabama.gov/Pages/Informational/Endangered/Black_Pine_Snake.pdf
4. https://www.fws.gov/press-release/2024-01/final-recovery-plan-threatened-black-pinesnake-now-available

Piping Plover Comment:

The Piping Plover (*Charadrius melodus*) is a small shorebird that nests on sparsely vegetated sandy or gravelly beaches along the Atlantic Coast, Great Lakes, and Great Plains, relying on these habitats for breeding, foraging, and shelter.[1][2][3] The species exhibits high nest-site fidelity, returning to the same breeding areas annually and requiring undisturbed beaches for successful incubation and chick rearing.[3] The piping plover is extremely sensitive to human disturbance during nesting (e.g., foot traffic, vehicles, pets), which can cause nest abandonment or chick mortality, and it depends on habitat features like wrack lines and dynamic shorelines for foraging and predator avoidance.[4][5] Nesting sites are often unoccupied outside the breeding season (mid-April to mid-August), but their physical integrity remains essential for future use.[3] If habitat destruction is no longer classified as harm, coastal development, recreational activities, and shoreline stabilization projects would be able to legally degrade or remove critical nesting habitats during non-breeding periods.[4][5] This would leave returning plovers without viable sites to nest, directly impairing reproduction and survival.[4][5] Such regulatory changes would exacerbate existing threats, accelerating population declines and likely driving the species closer to extinction, as recovery depends on protecting both occupied and seasonally unoccupied habitats.[4][6] Such declines will make it much more likely that Federal projects affecting the piping plover will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service conserve this species in light of these risks for the piping plover while balancing human land-use demands?

1. https://www.fws.gov/species/piping-plover-charadrius-melodus
2. https://portal.ct.gov/DEEP/Wildlife/Fact-Sheets/Piping-Plover
3. https://www.pa.gov/agencies/pgc/wildlife/discover-pa-wildlife/piping-plover.html
4. https://outdoornebraska.gov/learn/nebraska-wildlife/nebraska-animals/birds/piping-plover/
5. https://dec.ny.gov/nature/animals-fish-plants/piping-plover
6. https://www.mass.gov/info-details/ma-piping-plover-habitat-conservation-plan-hcp

Short-Tailed Albatross Comment:

The short-tailed albatross (*Phoebastria albatrus*) is a large, long-lived seabird that spends most of its life soaring over the North Pacific Ocean, coming to land only to nest on a few remote islands, primarily Torishima and Minami-kojima in Japan, but also increasingly at sites in Hawai'i. Like other albatrosses, it exhibits strong site fidelity, with pairs returning to the same nesting sites year after year. Because the short-tailed albatross spends most of its life at sea, its nesting habitat is unoccupied for much of the year. If destruction of nesting habitat is no longer considered harm, these critical breeding sites would be available to be altered or destroyed during the non-breeding season, leaving returning birds without suitable places to reproduce, thereby preventing them from completing their life cycle. Such impacts would likely halt the species' ongoing recovery and could drive it back towards extinction.[1][2] Such declines will make it much more likely that Federal projects affecting the short-tailed albatross will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service revise its management of the short-tailed albatross to compensate for these predicted impacts of its proposed change to the definition of harm?

1. https://www.adfg.alaska.gov/index.cfm?adfg=shorttailedalbatross.main
2. https://www.adfg.alaska.gov/index.cfm?adfg=specialstatus.fedsummary&species=shorttailedalbatross

Ozark Big-Eared Bat Comment:

The Ozark big-eared bat (*Corynorhinus townsendii ingens*) is a medium-sized, cave-dwelling bat found only in a handful of limestone and sandstone caves in the Ozark highlands of Arkansas and Oklahoma, formerly also in southwestern Missouri.[1][2][3] This species uses the same caves year after year for both maternity colonies and winter hibernation, and is extremely sensitive to disturbance, especially during critical life stages such as hibernation and reproduction.[3][4] If habitat destruction - such as cave modification, gating without proper design, or increased human intrusion - is no longer considered harm, these critical roosting and breeding sites may be altered, degraded, or lost while the bats are away.[3] This would lead to population declines or local extinctions, as abandoned or destroyed caves are rarely recolonized, and the species' low reproductive rate (one pup per year) cannot compensate for these losses.[3] In addition, the bat's summer foraging habitat would be available for removal during winter hibernation periods.[1][3] These impacts would push the Ozark big-eared bat closer to extinction, as its already small, isolated populations would be unable to recover from further reductions in available roosting and foraging sites.[3] Such declines will make it much more likely that Federal projects affecting the Ozark big-eared bat will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its management approach of the Ozark big-eared bat to make up for anticipated effects of the proposed change?

1. https://www.fws.gov/species/ozark-big-eared-bat-corynorhinus-townsendii-ingens
2. https://ecos.fws.gov/ecp/species/7245
3. https://ecos.fws.gov/docs/recovery_plan/950328b.pdf
4. https://digitalprairie.ok.gov/digital/api/collection/stgovpub/id/13449/download

I‘iwi Comment

The ‘i‘iwi is a strikingly-colored, nectar-feeding Hawaiian forest bird now largely confined to high-elevation wet and mesic forests dominated by ‘ōhi‘a and koa trees.[1] It has disappeared from lower elevations due to habitat loss and mosquito-borne avian diseases. [2][3] Its breeding and nesting are closely tied to native forest trees, with nests built high in the crowns of ‘ōhi‘a during the breeding season from February to June.[4] Because the ‘i‘iwi’s survival and reproduction depend on intact high-elevation forests, the destruction or degradation of these habitats - even when birds are absent - would eliminate critical nesting and foraging sites, threatening the survival of the species.[1][2] If habitat destruction is no longer treated as harm, land would be available to be cleared or degraded during periods when the birds are away, pushing the species closer to extinction.[1][2] If the definition of harm is changed as proposed, the Service will need to intensify habitat protection, restoration, and disease control efforts to compensate for the resulting increased risks to the ‘i‘iwi’s survival and recovery.[1][2] Such declines will make it much more likely that Federal projects affecting the ‘i‘iwi will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. Has the Service considered the need to increase its management efforts in the field that would result from the adoption of this proposed rule change?

1. https://web.stanford.edu/~fukamit/knowlton-et-al-2017-accepted-ms.pdf
2. https://ecos.fws.gov/docs/recovery_plan/SIGNED_Multi-Island_recovery_outline_07-30-2020_1.pdf
3. https://www.fws.gov/project/saving-hawaiis-forest-birds
4. https://www.fws.gov/project/iiwi-critical-habitat

Sierra Nevada Red Fox Comment:

The Sierra Nevada red fox (*Vulpes vulpes necator*) is a high-elevation subspecies of red fox uniquely adapted to the snowy, subalpine habitats of California's Sierra Nevada and southern Cascades, with fewer than 40 individuals estimated to remain in the Sierra Nevada population.[1][2][3] Unlike lowland red foxes, these foxes are highly elusive, occupy remote areas above 6,000 feet, and rely on dense fur and snow-adapted feet for survival in harsh alpine conditions.[4][5][3] These foxes have relatively large home ranges migrating up slope to lodgepole pine, subalpine conifer, alpine dwarf-shrub, and red fir habitats in the summer, and downslope into ponderosa pine and mixed conifer habitats during the winter.[3] Survival is critically dependent on the continued availability of undisturbed, high-elevation forest and meadow ecosystems.[3] If habitat destruction - such as logging or recreational development - is no longer considered harm, essential habitat would be available to be altered or lost when foxes are not present seasonally, leaving them without denning sites or foraging grounds critical for their survival and reproduction.[6][3] The proposed regulatory change would likely accelerate population declines, increase inbreeding and hybridization risks, and push the subspecies closer to extinction by further fragmenting and degrading its already limited habitat.[4][3] Such declines will make it much more likely that Federal projects affecting the Sierra Nevada red fox will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its management of the Sierra Nevada red fox to address these anticipated impacts to the species' conservation?

1. https://www.fws.gov/species/sierra-nevada-red-fox-vulpes-vulpes-necator
2. https://wildlife.ca.gov/Data/CNDDB/News/sierra-nevada-red-fox-vulpes-vulpes-necator-and-federal-distinct-population-segments
3. https://www.govinfo.gov/content/pkg/GOVPUB-A13-PURL-gpo90661/pdf/GOVPUB-A13-PURL-gpo90661.pdf
4. https://news.oregonstate.edu/news/oregon-state-study-provides-foundation-protecting-rare-fox-cascades-sierra-nevada
5. https://wildlife.ca.gov/Conservation/Mammals/Sierra-Nevada-Red-Fox
6. https://www.nevadacountyca.gov/DocumentCenter/View/11229/60-Biological-Resources-PDF

Pecos Gambusia Comment:

The Pecos gambusia (*Gambusia nobilis*) is a small, live-bearing fish endemic to spring-fed pools and marshes of the Pecos River basin in southeastern New Mexico and western Texas, relying on constant-temperature, spring-fed habitats for survival.[1][2][3] Because the Pecos gambusia is highly dependent on these isolated aquatic habitats, its populations are particularly vulnerable to any direct loss or alteration of spring flows, but the fish itself is not present in upland or terrestrial environments where these alterations may occur.[1][2] If habitat destruction-such as groundwater pumping, diversion, or degradation of spring systems-is no longer considered harm, these critical aquatic habitats would be able to be legally altered or eliminated during periods when no fish are present, leaving the Pecos gambusia with nowhere to reproduce or complete its life cycle when suitable conditions return.[1][2] The proposed regulatory change would likely accelerate the species' decline towards extinction, as habitat loss, compounded by competition and hybridization with introduced species, would prevent population recovery and drive the Pecos gambusia closer to extinction.[1][2][4] Such declines will make it much more likely that Federal projects affecting the Pecos gambusia will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service modify its species management to make up for these anticipated impacts to the Pecos gambusia?

1. https://tpwd.texas.gov/huntwild/wild/species/pecogamb/
2. https://ecos.fws.gov/docs/recovery_plan/051220a.pdf
3. https://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=851
4. https://www.fs.usda.gov/rm/boise/AWAE/projects/fish_cattle/Pecos gambusia.pdf

Olympia Pocket Gopher Comment:

The Olympia pocket gopher (*Thomomys mazama pugetensis*) is a subterranean rodent endemic to the Pacific Northwest, relying on well-drained glacial soils and herbaceous vegetation for burrowing and foraging.[1][2][3] It is solitary, with limited dispersal and one annual litter, making population recovery slow.[2][4] As a fossorial species, its burrow systems are continuously occupied, but rarely visible, leaving habitat integrity critical even when individuals are undetected or below ground.[2][4] If habitat degradation (e.g., vegetation removal) is no longer treated as harm, this would allow disruptions to burrow networks and removal of above ground food sources, directly impacting survival and reproduction.[5] Without habitat protection, remaining populations-already reduced by 90-95% due to development and fragmentation-would face accelerated decline from infrastructure projects, agricultural expansion, or invasive restoration practices.[4][3] This could collapse genetically isolated groups, undermining recovery efforts for the subspecies.[4][3] Such declines will make it much more likely that Federal projects affecting the Olympia pocket gopher will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust management of the Olympia pocket gopher to mitigate these impacts to their conservation if the regulatory safeguards against habitat degradation and destruction are removed as proposed?

1. https://www.fws.gov/species/olympia-pocket-gopher-thomomys-mazama-pugetensis
2. https://wdfw.wa.gov/species-habitats/species/thomomys-mazama-pugetensis
3. https://wdfw.wa.gov/species-habitats/species/thomomys-mazama
4. https://archives.evergreen.edu/masterstheses/Accession86-10MES/Knudsen_C MESThesis 2003.pdf
5. https://downloads.regulations.gov/FWS-R1-ES-2024-0119-0003/content.pdf

Mariana Fruit Bat Comment:

The Mariana fruit bat (*Pteropus mariannus*), a medium-sized flying fox endemic to the Mariana Islands and Ulithi, relies on native forests and coconut groves for roosting and foraging.[1][2] It plays a critical ecological role as a seed disperser, aiding forest regeneration after disturbances like typhoons.[3] It exhibits strong roost site fidelity, returning to specific trees for daytime shelter and maternal care.[3] Its habitat is intermittently occupied, as bats forage nightly over wide areas (up to 12 km) and seasonally shift locations.[3] If habitat loss is no longer considered harm, critical roost trees would be eligible to be legally removed during periods of bat absence. This would strand colonies, separate mothers from pups, and eliminate established foraging routes, directly threatening survival and reproduction.[3][4] The proposed policy change would exacerbate existing threats from poaching, invasive species, and typhoons, likely reversing recent conservation gains.[4][5] With 50% population decline since the 1970s and only about 4,500 individuals remaining, significant habitat degradation would push the subspecies toward extinction.[6][4] Such declines will make it much more likely that Federal projects affecting the Mariana fruit bat will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service address the Mariana fruit bat's habitat needs if the proposed regulatory change is implemented putting its habitat at risk?

1. https://www.fws.gov/species/mariana-fruit-bat-pteropus-mariannus-mariannus
2. https://ecos.fws.gov/ecp/species/2415
3. https://ecos.fws.gov/docs/recovery_plan/901102.pdf
4. https://www.govinfo.gov/content/pkg/FR-2004-05-27/html/04-12043.htm
5. https://dlnr.cnmi.gov/assets/docs/dfw/mafba.pdf
6. https://scholarspace.manoa.hawaii.edu/items/504a3006-7e5f-4056-a0eb-d0681ab45a71

Golden-Cheeked Warbler Comment:

The golden-cheeked warbler (*Dendroica chrysoparia*) is a small, brightly colored songbird that breeds exclusively in the mature juniper-oak woodlands of central Texas, relying on Ashe juniper bark for nesting.[1][2][3] It exhibits strong site fidelity, often returning to the same breeding territories each year.[4][1] This species is highly dependent on intact breeding habitat, which is occupied only during the spring and early summer months, as warblers migrate to Mexico and Central America for the winter.[2][3] Habitat destruction - even when birds are absent - directly undermines the birds' ability to reproduce upon their return.[4][2] If habitat destruction is no longer considered harm, large portions of the warbler's limited breeding range would be available for clearing during the non-breeding season, leaving returning birds with nowhere to nest and hence preventing successful reproduction.[4][2] Such declines will make it much more likely that Federal projects affecting the golden-cheeked warbler will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. The Service recently proposed to downlist the golden-cheeked warbler from Endangered to Threatened, but the basis for that proposal will be nullified if the proposed change in the definition of harm is adopted. Has the Service considered how to resolve the conflict between these two proposals?

1. https://ecos.fws.gov/ecp/species/33
2. https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0013_golden_cheeked_warbler.pdf
3. https://www.fws.gov/media/gcwa-habitat-assessment-directions
4. https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0013_golden_cheeked_warbler_mgmt.pdf

June Sucker Comment:

The June sucker (*Chasmistes liorus*) is a freshwater fish endemic to Utah Lake and its tributaries, relying on specific spawning habitats in river systems like the Provo River during late spring. The species exhibits spawning site fidelity, with adults migrating to restored tributaries annually, while juveniles depend on sheltered delta habitats for survival.[1][2][3] Because spawning and rearing habitats are only seasonally occupied, these critical areas remain vulnerable to degradation outside the breeding period.[4][2] If habitat destruction is no longer treated as harm, water development projects, municipal and industrial development, or invasive species management could disrupt these habitats during non-spawning months, preventing successful reproduction and juvenile recruitment.[5][3] Such disruptions would reverse decades of recovery progress, likely necessitating relisting as endangered.[5] Such declines will make it much more likely that Federal projects affecting the June sucker will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service address needed habitat protections if the proposed regulatory change excludes seasonal spawning and rearing areas for the June Sucker from harm considerations?

1. https://wildlife.utah.gov/fes-culture/fes-june-suckers.html
2. https://utahlake.gov/wp-content/uploads/2011/04/Utah_Lake_June_Sucker.pdf
3. https://cuwcd.gov/assets/documents/Press/NR-ProvoRiverDeltaGroundbreakingFinal.pdf
4. https://springcreek.provo.edu/wp-content/uploads/2020/02/June-Sucker.pdf
5. https://fwp.mt.gov/binaries/content/assets/fwp/commission/2024/apr/fisheries/letter-with-esa-concerns.pdf

The Columbian White-Tailed Deer Comment:

The Columbian white-tailed deer (*Odocoileus virginianus leucurus*) is the westernmost subspecies of white-tailed deer, historically abundant in the river valleys of the Pacific Northwest, but now primarily found in fragmented riparian and floodplain habitats along the lower Columbia River and Umpqua Rivers.[1][2] It relies on dense deciduous cover and proximity to water for forage and protection, with home ranges that are stable over time and space.[1] Because Columbian white-tailed deer depend on specific cover and forage within limited riparian corridors, their survival is directly tied to the availability of suitable habitat.[1] Primarily due to habitat fragmentation and availability, as well as the species' non-migratory nature and tendency to restrict movements to relatively small home ranges, they leave portions of their habitat unoccupied at times.[1][2] Currently, the population is divided into approximately 10 distinct subpopulations, separated by both natural barriers (such as river channels) and artificial barriers (like roads), resulting in significant portions of suitable habitat being unoccupied at any given time.[1][2] If habitat destruction is no longer considered harm, the deer's already fragmented and limited habitat would be subject to further lost or degraded.[1] This would result in reduced carrying capacity, increased mortality from predation and flooding, and ultimately prevent the deer from sustaining viable populations or expanding into new areas needed for recovery.[1] These impacts would likely reverse recent gains, increase the risk of local extirpations, and undermine the subspecies' recovery, pushing some subpopulations back toward endangered status.[1][2] Such declines will make it much more likely that Federal projects affecting the Columbian white-tailed deer will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service address these concerns and compensate for the predictable effects of the proposed change on Columbian white-tailed deer conservation?

1. https://wdfw.wa.gov/species-habitats/species/odocoileus-virginianus-leucurus
2. https://wdfw.wa.gov/sites/default/files/publications/02329/wdfw02329.pdf

Cactus Ferruginous Pygmy-Owl Comments:

The Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) is a small raptor inhabiting arid regions of southern Arizona, southern Texas, and northern Mexico, nesting in cavities of saguaro cacti and trees within fragmented desert-scrub and thorn-scrub habitats[1][2]. The pygmy-owl is threatened by urbanization, invasive species like buffelgrass (*Pennisetum ciliare*), and climate change exacerbating habitat loss and prey scarcity.[3][4][5] The species' nesting cavities require decades to form, relying on mature saguaros (*Carnegiea gigantea*) or ironwood trees, which grow slowly in the Sonoran Desert's extreme conditions.[1][6] Its fragmented habitat is often unoccupied seasonally due to dispersal or climatic stressors, complicating conservation efforts.[7][8] If habitat destruction is not classified as "harm" under the Endangered Species Act (ESA), critical nesting substrates and connectivity corridors could be permanently removed during periods when owls are absent, leaving populations isolated and unable to reproduce.[9][10][8] Without habitat safeguards, ongoing urban expansion, agricultural conversion, and buffelgrass-driven wildfires-which transform desert ecosystems into fire-prone grasslands-could eliminate remaining breeding sites, accelerating population declines and reducing genetic exchange.[11][4][5] These impacts are likely to push the subspecies toward endangered status, undermining recovery efforts under the ESA.[3][9][10] Such declines will make it much more likely that Federal projects affecting the Cactus ferruginous pygmy-owl will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service change implementation of the existing species' 4(d) rule to balance exemptions for activities like grazing and habitat restoration with the anticipated effects from the change to the harm definition and prevent irreversible habitat loss?

1. https://www.pima.gov/731/Cactus-Ferruginous-Pygmy-Owl
2. https://ecos.fws.gov/ecp/species/1225
3. https://www.swca.com/news/2023/08/regulatory-alert-usfws-relists-the-cactus-ferruginous-pygmy-owl
4. https://www.fws.gov/project/beat-back-buffelgrass
5. https://www.nps.gov/articles/buffelgrass-management-saguaro.htm
6. https://www.nps.gov/articles/saguaro-cactus-facts.htm
7. https://www.federalregister.gov/documents/2021/12/22/2021-27516/endangered-and-threatened-wildlife-and-plants-threatened-species-status-with-section-4d-rule-for
8. https://downloads.regulations.gov/FWS-R2-ES-2021-0098-0010/content.pdf
9. https://www.federalregister.gov/documents/2023/07/20/2023-14486/endangered-and-threatened-wildlife-and-plants-threatened-species-status-with-section-4d-rule-for
10. https://www.endangeredspecieslawandpolicy.com/u-s-fish-and-wildlife-service-lists-cactus-ferruginous-pygmy-owl-as-threatened-with-a-4-d-rule
11. https://www.doi.gov/ocl/hearings/111/WarOnBuffelgrass_041010

Barton Springs Salamander Comment:

The Barton Springs salamander (*Eurycea sosorum*) is an entirely aquatic, endangered salamander endemic to the spring outflows of Barton Springs in Austin, Texas, relying on clear, constant groundwater flows from the Edwards Aquifer.[1][2] Its survival depends on specific habitat conditions, including sediment-free substrates, aquatic vegetation, and stable water chemistry.[3][4][2] Because the species is confined to four spring outlets and cannot survive outside this stenothermal environment, habitat degradation (e.g., pollution, reduced spring-flow, etc.) directly threatens its existence, even if individuals are not physically harmed.[3][4][2] If habitat alteration is no longer considered in the definition of "harm," activities like urban runoff and aquifer pumping could be allowed since they would not directly harm individual salamanders but would irreversibly degrade water quality and quantity, leading to the elimination of the species' only habitat.[3][2] Such impacts would likely drive the Barton Springs salamander to extinction, as the species cannot relocate and depends on uninterrupted high-quality spring-flow for reproduction and survival.[1][3][2] Such declines will make it much more likely that Federal projects affecting the Barton Springs salamander will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service mitigate the increased extinction risks to the Barton Springs salamander and ensure compliance with the Edwards Aquifer Habitat Conservation if the proposed regulatory change is implemented?

1. https://www.fws.gov/species/barton-springs-salamander-eurycea-sosorum
2. https://tpwd.texas.gov/huntwild/wild/species/bartonspringssalamander/
3. https://ecos.fws.gov/docs/recovery_plan/Final Barton Springs Salamander Recovery Plan with Austin Blind Salamander Addendum.pdf
4. https://www.amphibians.org/wp-content/uploads/sites/3/2019/04/Barton-Springs-Salamander-Recovery-Plan-1.pdf

Big Spring Spinedace Comment:

The Big Spring spinedace (*Lepidomeda mollispinis pratensis*) is a small, silver minnow found only in a limited section of Meadow Valley Wash, primarily within Condor Canyon, Nevada.[1][2] This narrow-range species is highly vulnerable to adverse changes in its habitats, since the entire known population is confined to an 8-kilometer stretch of stream.[3][4] It is currently believed that historic populations were lost to habitat modification and the introduction of non-native species.[5][6] The Big Spring spinedace does not migrate, making the physical integrity of its spring-fed stream habitat necessary for its survival and reproduction.[5][7] If aquatic habitat destruction, such as diverting water away from the source-spring, is no longer considered harm, the spinedace's only remaining habitat would be available to be degraded or eliminated even though no individual fish would be directly caught or killed.[5][6] This would likely result in the rapid decline and potential extinction of the species, as its ability to recover or occupy new areas is severely limited by its already small and isolated population.[3][4] Such declines will make it much more likely that Federal projects affecting the Big Spring spinedace will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service ensure the conservation of the Big Spring spinedace if the definition of harm is changed to exclude impacts to its habitat when the species will not be directly impacted?

1. https://www.fws.gov/species/big-spring-spinedace-lepidomeda-mollispinis-pratensis
2. https://eplanning.blm.gov/public_projects/nepa/30457/36508/38318/Condor_Canyon_Restoration_Project_Final_Draft_EA.pdf
3. https://bioone.org/journals/western-north-american-naturalist/volume-73/issue-3/064.073.0306/Distribution-and-Movement-of-Big-Spring-Spinedace-Lepidomeda-mollispinis-pratensis/10.3398/064.073.0306.short
4. https://pubs.usgs.gov/of/2011/1072/pdf/ofr20111072.pdf
5. https://www.encyclopedia.com/environment/science-magazines/big-spring-spinedace
6. https://www.fws.gov/species-publication-action/determination-threatened-status-crit-hab-big-spring-spinedace-50-fr-0
7. https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/994.pdf

Big Bend Gambusia Comments:

The Big Bend gambusia (*Gambusia gaigei*) is a small, endangered fish endemic to warm spring-fed pools in Texas' Big Bend National Park, relying entirely on these isolated habitats for survival.[1][2] Its survival is tightly linked to stable spring flows and the absence of invasive species like mosquitofish (*G. affinis*), which outcompete or prey on it.[3][4] Because the species exists only in a single refugium and captive populations, habitat modifications (e.g., reduced spring flow, siltation, invasive invasions) directly threaten its survival.[5][3][6][4] If habitat alteration is no longer treated as harm, projects altering spring flows or permitting invasive species could proceed unchecked, eroding its already limited habitat.[3][6][4] This would likely lead to the rapid decline toward extinction, as the gambusia cannot recolonize lost habitats and faces chronic threats from hybridization, competition, and climate extremes.[3][6][4] The proposed regulatory change could dismantle decades of recovery efforts, including spring-flow management and invasive species eradication.[3][6][4] Such declines will make it much more likely that Federal projects affecting the Big Bend gambusia will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service mitigate the risks to Big Bend gambusia's survival if the regulatory definition of harm is changed as proposed?

1. https://www.fws.gov/species/big-bend-gambusia-gambusia-gaigei
2. https://ecos.fws.gov/ecp/species/6634
3. https://ecos.fws.gov/docs/recovery_plan/061211.pdf
4. http://www.nativefishlab.net/library/textpdf/13310.pdf
5. https://www.nps.gov/bibe/learn/nature/a-fish-story.htm
6. https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/7437.pdf

Oregon Spotted Frog Comments:

The Oregon spotted frog (*Rana pretiosa*) is a highly aquatic amphibian endemic to the Pacific Northwest, relying on shallow, vegetated wetlands for all life stages, including breeding, tadpole development, and adult foraging. The species exhibits strong site fidelity to specific egg-laying habitats, returning to the same breeding locations annually.[1][2][3] Biological factors critical to evaluating "harm" include the frog's dependence on intact wetland ecosystems and vulnerability to habitat disruption. Livestock grazing, invasive species (e.g., bullfrogs, nonnative fish), and hydrological changes directly degrade breeding sites, reduce water availability, and increase predation pressure.[4][2][5] Habitat loss and fragmentation have already eliminated the species from 76–90% of its historical range, leaving small, isolated populations prone to inbreeding and local extirpation.[5][6][7] If habitat destruction is not treated as harm, critical wetland ecosystems could be legally altered or destroyed during non-breeding seasons when frogs are less detectable. This would render sites uninhabitable upon the species' return, preventing reproduction and accelerating population declines.[1][3][7] Such impacts would undermine recovery efforts under the Endangered Species Act (ESA), which prioritize habitat restoration, invasive species control, and hydrological management.[8][5][9] Regulatory changes excluding habitat protection would likely exacerbate existing threats, pushing the Oregon spotted frog closer to extinction by destabilizing genetically isolated populations and reducing resilience to climate-driven droughts.[5][10][6] Such declines will make it much more likely that Federal projects affecting the Oregon spotted frog will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the U.S. Fish and Wildlife Service mitigate these impacts if habitat modifications are no longer classified as harm under the ESA?

1. https://www.oregonconservationstrategy.org/strategy-species/oregon-spotted-frog/
2. https://www.oregonzoo.org/animals/oregon-spotted-frog
3. https://blog.ncascades.org/naturalist-notes/answering-the-call-of-the-oregon-spotted-frog/
4. https://advocateswest.org/victory-defending-oregon-spotted-frog-from-harmful-livestock-grazing/
5. https://www.fws.gov/press-release/2024-12/service-announces-final-recovery-plan-oregon-spotted-frog
6. https://columbiabasinbulletin.org/usfws-releases-final-recovery-plan-for-oregon-spotted-frog-inhabits-small-portions-of-habitat-from-canada-to-southern-oregon/
7. https://www.pacificforest.org/species/oregon-spotted-frog/
8. https://ecos.fws.gov/docs/recovery_plan/SIGNED_Oregon_Spotted_Frog_FinalRP_20240719.pdf
9. https://ecos.fws.gov/docs/recovery_plan/OregonSpottedFrogRIS.pdf
10. https://wildlifepreservation.ca/blog/hopping-heroes-why-the-oregon-spotted-frog-is-worth-saving/

Carolina Northern Flying Squirrel Comment:

The Carolina northern flying squirrel (*Glaucomys sabrinus coloratus*) is a small, nocturnal mammal found only in high-elevation "sky islands" of the Southern Appalachian Mountains, where it depends on mature Fraser fir and red spruce forests for survival.[1][2][3] The species is highly specialized and exhibits strong fidelity to these isolated, cool, wet forest habitats above 4,000 feet, often remaining in the same forest patches year after year.[2][3][4] Because the Carolina northern flying squirrel is strictly tied to these rare, high-elevation forests, it occupies its habitat year-round, relying on the continuity and quality of these forests for food, shelter, and movement corridors.[1][2][3] While physical harm to individuals is a concern, species' persistence is fundamentally dependent on the presence of intact, connected habitat.[1][5] If habitat destruction is no longer considered harm, key spruce-fir forest habitat areas and connectors would be available for removal or degradation during those periods when squirrels are not immediately present, leading to permanent loss of essential nesting, foraging, and dispersal areas.[1][5] This would isolate populations further, reduce genetic diversity, and prevent squirrels from completing their life cycle, as they cannot survive or reproduce without these specific forest conditions.[1][5][3] The proposed regulatory change would likely accelerate the decline of the Carolina northern flying squirrel towards extinction by fragmenting or eliminating the last remaining suitable habitats and disrupting critical population connectivity.[1][5] Such declines will make it much more likely that Federal projects affecting the Carolina northern flying squirrel will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. Please explain how the Service plans to adjust its management of the Carolina northern flying squirrel to mediate these anticipated impacts.

1. https://www.fws.gov/species/carolina-northern-flying-squirrel-glaucomys-sabrinus-coloratus
2. https://pubs.usgs.gov/publication/70193559
3. https://www.ncwildlife.gov/species/carolina-northern-flying-squirrel
4. https://pubs.usgs.gov/publication/70173737
5. https://libres.uncg.edu/ir/wcu/f/Hennessey2022.pdf

Bayou Darter Comment:

The bayou darter (*Etheostoma rubrum*) is a small freshwater fish endemic to moderate gradient sections of the Bayou Pierre river system in Mississippi, where it exclusively inhabits fast-flowing riffles and runs with stable gravel substrates for spawning and feeding.[1] This species exhibits high habitat specificity, low genetic diversity, and limited dispersal ability, relying on intact riffle habitats to complete its lifecycle.[2][3] Because the Bayou darter's survival is directly tied to specific physical habitat conditions, degradation or loss of these habitats-driven by erosion, deposition, and human activities like gravel mining-constitutes a direct threat to its existence.[2][4] If habitat destruction is no longer classified as "harm," then adjacent land management that changes riffle habitats by adding deposits of fine sediments would eliminate critical spawning and feeding grounds, further fragment disparate populations, and prevent successful reproduction.[2][5] These expected impacts would accelerate population declines, exacerbate genetic bottlenecks, and likely drive the species toward extinction due to its decreased survival, restricted range, and inability to colonize new habitats.[3][4][6] Such declines will make it much more likely that Federal projects affecting the bayou darter will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service modify its management to address these increased risks if habitat destruction is no longer considered "harm?"

1. https://www.fws.gov/species/bayou-darter-etheostoma-rubrum
2. https://ecos.fws.gov/docs/recovery_plan/900710.pdf
3. https://www.int-res.com/articles/esr2025/56/n056p159.pdf
4. https://www.int-res.com/articles/esr2021/44/n044p137.pdf
5. https://www.federalregister.gov/documents/2025/04/17/2025-06746/rescinding-the-definition-of-harm-under-the-endangered-species-act
6. https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/23013.pdf

Atlantic Salmon Gulf of Maine Comment:

The Atlantic salmon (*Salmo salar*) is an anadromous fish that migrates from freshwater rivers to the ocean and back, relying on specific gravel-bed streams for spawning.[1][2] It exhibits strong natal homing, returning to its birth river to reproduce.[3][2] Because Atlantic salmon spend 1–3 years at sea and rely on unoccupied freshwater habitats for critical life stages (e.g., egg incubation and juvenile development), habitat degradation during their absence directly threatens survival.[1][4][2] If habitat destruction is no longer considered harm, key spawning grounds would be available to be altered or blocked by dams, pollution, or sedimentation while salmon are offshore, leaving them unable to spawn upon return.[4][5][6] This would exacerbate population declines, particularly for the endangered Gulf of Maine DPS.[6][7][8] By allowing habitat destruction to occur during migration or spawning absences, the proposed regulatory change would accelerate the extinction risks of the Atlantic salmon by severing its life-cycle continuity.[1][4][2] Such declines will make it much more likely that Federal projects affecting the Atlantic salmon will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service revise management strategies to address the anticipated irreversible habitat loss that would threaten the continued existence of the Atlantic salmon Gulf of Maine DPS?

1. https://www.fws.gov/story/life-cycle-atlantic-salmon
2. https://trainingcenter.fws.gov/resources/knowledge-resources/salmon/asalmon3.html
3. https://www.pnas.org/doi/10.1073/pnas.0801859105
4. https://www.fisheries.noaa.gov/feature-story/dam-impact-analysis-model-helps-researchers-assess-atlantic-salmon-survival
5. https://www.fisheries.noaa.gov/action/critical-habitat-gulf-maine-dps-atlantic-salmon
6. https://www.fisheries.noaa.gov/new-england-mid-atlantic/endangered-species-conservation/atlantic-salmon-ecosystems-research
7. https://www.fisheries.noaa.gov/resource/map/atlantic-salmon-gulf-maine-dps-boundaries
8. https://www.fisheries.noaa.gov/resource/map/atlantic-salmon-gulf-maine-dps-critical-habitat-map-and-gis-data

Arkansas River Shiner Comment:

The Arkansas River shiner (*Notropis girardi*) is a small, pelagic-spawning minnow requiring over 135 miles of free-flowing river to complete its life cycle,[1][2] historically inhabiting prairie rivers across the southern Great Plains, but now restricted to fragmented segments of the Canadian River.[3][4] Its survival hinges on seasonal high flows to transport buoyant eggs downstream, making uninterrupted river connectivity critical for reproduction.[2][5] If habitat alteration (e.g., dam construction, water diversion) is no longer classified as "harm," activities fragmenting rivers would be allowed to proceed unchecked, particularly when shiners are absent during low-flow periods.[2][6] This would prevent successful spawning upon their return, as eggs require long stretches of flowing water to develop.[1][5] The proposed regulatory change would exacerbate existing habitat loss, which has already reduced the species' range by 80%,[3][7] pushing it closer to extinction by blocking recovery efforts. The U.S. Fish and Wildlife Service's recovery plan, which prioritizes habitat restoration and reintroductions to establish three resilient populations, would face significant setbacks.[1][2] Such declines will make it much more likely that Federal projects affecting the Arkansas River shiner will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service strengthen partnerships and adaptive strategies to mitigate these threats to Arkansas River shiner if regulatory protections weaken as proposed?

1. https://www.fws.gov/press-release/2024-06/service-announces-final-recovery-plan-arkansas-river-shiner
2. https://ecos.fws.gov/docs/recovery_plan/30May2024_ARS_fRP_RDSigned.pdf
3. https://eplanning.blm.gov/public_projects/nepa/68426/102904/125828/IUCN_Notropis_girardi_(Arkansas_River_Shiner).pdf
4. https://www.ose.nm.gov/Basins/Canadian/isc_canadian_endangered.php
5. https://www.ose.nm.gov/Basins/Canadian/PDF/AR River Shiner.pdf
6. https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/3129.pdf
7. https://ecos.fws.gov/ecp/species/4364

Amargosa Vole Comment:

The Amargosa vole (*Microtus californicus scirpensis*), an endangered subspecies endemic to isolated bulrush marshes along the Amargosa River in California's Mojave Desert, relies entirely on permanent water sources and dense vegetation for survival.[1][2] The vole's habitat is highly fragmented, with less than 0.4 square mile (1 km²) of suitable wetlands remaining, making its populations vulnerable to localized threats.[2][3] The Amargosa vole's dependence on specific marsh conditions (e.g., bulrush dominance, stable groundwater), coupled with the desert barriers surrounding its fragmented habitat, makes it very unlikely that the subspecies can disperse when areas become unsuitable.[2][4] Therefore, habitat alterations, even temporary, are likely to cause immediate population collapses, as the voles cannot survive in degraded or dry marshes.[5][4] If habitat destruction is no longer considered harm, the changes in regulations will allow activities like groundwater pumping, invasive plant encroachment, and marsh drainage to proceed unchecked as they will not physically impact individuals even though they will eliminate the vole's sole habitat and its ability to survive.[5] These marshes are irreplaceable within the species' limited range, and their loss is likely to prevent the vole's ability to find food and shelter or to reproduce.[3][4] Such regulatory changes would likely extirpate the subspecies by accelerating habitat fragmentation and water loss, undermining decades of restoration efforts.[5][4] Such declines will make it much more likely that Federal projects affecting the Amargosa vole will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service prioritize habitat conservation to prevent the Amargosa vole's decline towards extinction under the reduced ESA protections?

1. https://www.fws.gov/species/amargosa-vole-microtus-californicus-scirpensis
2. https://wildlife.ca.gov/Regions/Amargosa-Vole-Conservation-Efforts
3. https://animalia.bio/amargosa-vole
4. https://wildlife.ca.gov/Drought/Projects/Amargosa-Basin
5. https://phys.org/news/2017-06-endangered-amargosa-voles-rainy-day.html

Ash Meadows Amargosa Pupfish Comment:

The Ash Meadows Amargosa pupfish (*Cyprinodon nevadensis mionectes*) is a small, endangered fish endemic to warm, spring-fed streams and pools in the isolated Ash Meadows National Wildlife Refuge in Nevada.[1] It relies on stable thermal spring environments for year-round spawning, with peak activity in spring and early summer.[2][3] Because its entire population exists in these limited, fragile habitats, any disruption to water flow or quality directly threatens their survival.[4][5] If habitat destruction (e.g., dewatering from groundwater extraction) is no longer classified as harm, critical spawning and feeding grounds would be degraded or eliminated, leaving the species unable to reproduce or adapt.[6] This would accelerate population collapse, as the pupfish cannot migrate to alternative habitats due to its extreme geographic isolation.[7][8] Such declines will make it much more likely that federal projects affecting the Ash Meadows Amargosa pupfish will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. If the definition of "harm" under the ESA is changed to exclude impacts to the species' essential habitats, how will the Service mitigate the increased extinction risks to the Ash Meadows Amargosa pupfish?

1. https://www.fws.gov/story/2023-07/ash-meadows-national-wildlife-refuge-helps-play-defense-pupfish
2. https://digitalmedia.fws.gov/digital/collection/natdiglib/id/28437/
3. https://www.ndow.org/species/ash-meadows-amargosa-pupfish/
4. https://ecos.fws.gov/ecp/species/529
5. https://ecos.fws.gov/docs/five_year_review/doc6724.pdf
6. https://www.hklaw.com/en/insights/publications/2025/04/redefining-harm-change-proposes-removing-habitat-modification
7. https://www.ndsu.edu/fileadmin/stockwelllab/Reed___Stockwell_2014_pupfish_persist_with_supplement-1.pdf
8. https://dvnha.org/ashmeadowsnatureandwildlife/

Choctawhatchee Beach Mouse Comment:

The Choctawhatchee beach mouse (*Peromyscus polionotus allophrys*) is a federally endangered rodent endemic to coastal dunes in Florida's panhandle, relying on this habitat for burrowing, foraging, and breeding.[1][2] Its survival is tightly linked to intact dune ecosystems, which provide food (seeds, insects) and shelter from predators.[3][1] The species is nocturnal, monogamous, and exhibits rapid breeding cycles (sexual maturity at 30 days), but its small populations are isolated due to habitat fragmentation.[1][4][2] Dune vegetation stabilizes its habitat and supports important genetic connectivity between subpopulations.[4] The proposed change to the definition of "harm" would result in ability to degrade or destroy these important connective dunes through development and human activity.[1] Though the species rarely uses these connectivity areas, their function is essential to the species conservation.[2] This proposed change is anticipated to accelerate habitat loss, further fragmenting the mouse's populations and limiting genetic diversity.[1][4] Storm surges and sea-level rise, exacerbated by weakened dunes, would eliminate remaining refuges.[1] Such declines will make it much more likely that Federal projects affecting the Choctawhatchee beach mouse will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. Thus, the proposed rule change would likely collapse the mouse's already reduced range, pushing it closer to extinction.[1][2] How can the Service successfully mitigate the increased effects of genetic isolation and habitat loss to the conservation of the Choctawhatchee beach mouse if "harm" no longer applies to the species' essential habitats?

1. https://myfwc.com/wildlifehabitats/profiles/mammals/land/choctawhatchee-beach-mouse/
2. https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB2006113919.xhtml
3. https://ecos.fws.gov/ecp/species/3520
4. https://pmc.ncbi.nlm.nih.gov/articles/PMC2817293/

Tenino Pocket Gopher Comment:

The Tenino pocket gopher (*Thomomys mazama tumuli*) is a small, burrowing mammal found only in the prairies of western Washington, where it spends nearly its entire life underground in burrow systems within grassland habitats.[1] This subspecies is solitary and territorial, with individuals relying on well-drained soils and a stable supply of grasses and forbs for food, and it plays a key ecological role in soil aeration and as prey for native predators.[2] Because Tenino pocket gophers are truly subterranean and rarely surface, their exposure to direct harm is limited primarily to activities that physically disturb the soil or directly impact individuals within their burrow systems, such as construction, tilling, or pest control measures.[1] The majority of their life cycle and all critical behaviors such as breeding, and rearing young, occur primarily underground within a relatively small home range.[2] If habitat destruction, is no longer considered harm, essential above ground vegetation will be eligible for removal when the individuals are not present above ground and large areas of suitable soil and vegetation will likely be lost without restriction, even when gophers are present, but undetected underground.[3] When these habitats are destroyed or fragmented, gophers will be unknowingly killed or left without the necessary resources for survival and reproduction, leading to local extirpations and further isolation of already small populations.[3] The proposed regulatory changes would likely accelerate the decline of the Tenino pocket gopher by reducing available habitat, increasing population fragmentation, and elevating the risk of extinction due to small population effects and loss of genetic diversity.[2] The species, already listed as threatened, would become even more conservation-reliant and could face extirpation from remaining prairie fragments. Such declines will make it much more likely that Federal projects affecting the Tenino pocket gopher will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its conservation efforts to ensure the Tenino pocket gopher survives the anticipated effects of the proposed rule change?

[1] https://wdfw.wa.gov/species-habitats/species/thomomys-mazama-tumuli
[2] https://www.fws.gov/species/mazama-pocket-gopher-thomomys-mazama
[3] https://www.fws.gov/media/mazama-pocket-gopher-5-year-review

Eastern Indigo Snake Comments:

The nonvenomous eastern indigo snake (Drymarchon couperi) is among the largest snake species native to the United States.[1][2] After hibernating in their overwintering habitat, often gopher tortoise colonies, this species commonly disperses distances of 1-4 miles during the spring and summer months in search of prey.[3][4] Eastern indigo snakes exhibit high levels of "site fidelity" with adult snakes mating, overwintering, and nesting in the same sandy uplands (gopher tortoise burrows, in longleaf pine sandhill habitats) throughout their lives.[5][4] Because the indigo snake spends a significant portion of the warmer months in habitats other than sandhills, its important winter den and nesting habitat is unoccupied for the majority of the year.[5][6] If habitat destruction is no longer considered “harm,” the eastern indigo snake's nesting habitat will be eligible for removal during the late spring, summer, and early fall months when no individuals of the species are present.[7][8] Thus, when they return in autumn to reproduce, their overwintering and nesting habitat will not be there and they will be unable to complete their lifecycle.[8][6] These impacts are likely to drive the species towards extinction as its reproduction is reduced or eliminated. Such declines will make it much more likely that Federal projects affecting the eastern indigo snake will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service alter its eastern indigo snake management to offset these foreseen impacts?

1. https://www.fws.gov/species/eastern-indigo-snake-drymarchon-couperi
2. https://ecos.fws.gov/ecp/species/646
3. https://www.oriannesociety.org/wp-content/uploads/2021/04/AZA-2011-Indigo-Snake-Care-Manual.pdf
4. https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.102208/Drymarchon_couperi
5. https://ecos.fws.gov/docs/five_year_review/doc1910.pdf
6. https://edis.ifas.ufl.edu/publication/UW475
7. https://www.outdooralabama.com/non-venomous-snakes/eastern-indigo-snake
8. https://www.fws.gov/sites/default/files/documents/USFWS-GA-EIS-Survey-Protocol-202306v1_FINAL.pdf

Fresno Kangaroo Rat Comments:

The Fresno kangaroo rat is a small, nocturnal rodent endemic to California's San Joaquin Valley, where it occupies arid, alkaline grasslands and saltbush scrub, sheltering in burrows it excavates in sandy soils.[1] This species is highly dependent on these specific habitats for feeding, breeding, and shelter, and does not migrate or use alternative habitats when its native environment is disturbed or destroyed.[2][3] Because Fresno kangaroo rats spend their entire lives in these ground burrows within their habitat, ground disturbance in their habitat typically results in direct bodily harm or death, as individuals are unlikely to escape or relocate if their burrows are destroyed.[1][3] The species does not occupy alternative habitats or display significant dispersal, making it especially vulnerable to habitat loss.[2] If habitat destruction is no longer considered harm, the remaining fragmented and limited habitat patches would be subject to additional isolation as currently "unoccupied" connective habitat is legally converted.[4][5] In addition, the vegetation of existing habitat patches themselves would be subject to destruction or degraded (e.g., though domestic animal grazing) when individuals are present, but below ground, leading to the loss of occupied burrows and the direct mortality of individuals within them as they are unable to fulfill their lifecycle needs.[3][6] These impacts would prevent the species from successfully breeding, foraging, or persisting in the wild, as suitable habitat is already extremely scarce and fragmented.[2] Such regulatory changes would likely accelerate the decline of the Fresno kangaroo rat, pushing the species closer to extinction by eliminating the few remaining populations and preventing any chance of recovery.[4][2] Such declines will make it much more likely that Federal projects affecting the Fresno kangaroo rat will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service modify its management approach for the Fresno kangaroo rat to compensate for these added impacts?

1. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=69453
2. https://www.fws.gov/library/collections/permits-native-endangered-and-threatened-species
3. https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/1544.pdf
4. https://esrp.csustan.edu/publications/pubhtml.php?doc=sjvrp&file=chapter02I00.html
5. https://ecotox.oehha.ca.gov/species/mammals-rodents-rodentia/san-joaquin-kangaroo-rat-dipodomys-nitratoides/fresno-kangaroo-rat
6. https://esrp.csustan.edu/speciesprofiles/profile.php?sp=dinie

Yellow-billed Cuckoo (Western DPS) Comment:

The western distinct population segment (DPS) of the Yellow-billed Cuckoo is a migratory bird that breeds in riparian habitats of the western U.S., relying on dense cottonwood-willow forests and other native vegetation for nesting and foraging.[1][2] Its breeding sites are often unoccupied outside the May–August nesting period, as the species winters in South America.[2][3] Critical riparian breeding habitats are vulnerable to destruction during the non-breeding season when cuckoos are absent, as these areas face threats from water diversion, agricultural encroachment, and invasive species.[1][2] The species exhibits high site fidelity, returning to the same degraded or altered habitats annually making it particularly vulnerable to the effects of habitat destruction.[3] If habitat loss is no longer classified as "harm," breeding sites would be available to be permanently altered or removed during migration or wintering periods. This would leave cuckoos without viable nesting areas, disrupting reproduction and accelerating population declines towards extinction.[2][3] Without protections for unoccupied habitats, ongoing threats such as hydrological modifications and livestock grazing would likely eliminate remaining riparian corridors, pushing the DPS toward extinction.[1][2] Such declines will make it much more likely that Federal projects affecting the Yellow-billed Cuckoo will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service ensure the preservation of riparian ecosystems critical for the Yellow-billed Cuckoo's breeding success if habitat degradation during non-occupancy is no longer regulated as harm?

1. https://www.federalregister.gov/documents/2014/10/03/2014-23640/endangered-and-threatened-wildlife-and-plants-determination-of-threatened-status-for-the-western
2. https://www.fws.gov/policy/library/2014/2014-23640.html
3. https://ecos.fws.gov/ecp/species/3911

Spectacled Eider Comment:

The spectacled eider is a large marine diving duck that breeds in coastal tundra areas of Alaska and Russia, but spends most of its life in the Bering Sea, congregating during winter in polynyas (gaps in the sea ice) where they dive to collect mollusks and crustaceans[1]. The species has declined by 94-98% on its principal breeding range in Alaska and continues to decline by about 14% per year, leading to its listing as threatened throughout its range in 1993[2]. Spectacled eiders exhibit strong site fidelity to their breeding areas[3], but their coastal tundra nesting habitat remains unoccupied for significant portions of the year when they migrate to marine environments. Moreover, during winter, the entire global population concentrates in specific areas of the Bering Sea between St. Lawrence and St. Matthew Islands, making them particularly vulnerable to localized threats[4]. If habitat destruction is no longer considered harm, critical breeding areas would be open to degradation or destruction during periods when eiders are absent, preventing them from successfully reproducing when they return to their traditional nesting sites. This situation is particularly concerning given that the entire global population depends on specific wintering areas and exhibits strong fidelity to breeding sites, meaning they may not readily adapt to alternative habitats[5]. The loss of protection for seasonally unoccupied habitat would likely accelerate the species' decline and impede recovery efforts, especially as climate change, resource development, and other threats in the Arctic such as increased energy exploration increase pressure on their habitats[6]. Given the spectacled eider's already precarious population status and continued decline, such regulatory changes could ultimately lead to extinction[7]. Such declines will make it much more likely that Federal projects affecting the spectacled eider will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service successfully ensure protection of critical breeding and wintering habitats that are seasonally unoccupied, but essential to the spectacled eider's survival if habitat destruction is no longer considered a form of harm?

1. U.S. Fish & Wildlife Service: Spectacled Eider Species Profile
2. U.S. Fish & Wildlife Service: Spectacled Eider Recovery Plan
3. Alaska Department of Fish and Game: Spectacled Eider
4. U.S. Geological Survey: Winter Distribution of Spectacled Eiders
5. U.S. Fish & Wildlife Service: Spectacled Eider Critical Habitat
6. NOAA: Climate Change Impacts in the Arctic
7. U.S. Fish & Wildlife Service: Endangered and Threatened Wildlife and Plants; Threatened Status for the Spectacled Eider

Riparian Woodrat Comment:

The riparian woodrat (*Neotoma fuscipes riparia*) is a medium-sized rodent endemic to California's San Joaquin Valley, dependent on multi-layered riparian habitats with dense understory vegetation for shelter, foraging, and stick lodge construction.[1][2][3] Its survival hinges on structurally complex vegetation, including valley oaks, willows, and wild grapevines, which provide refuge from floods and predators.[1][4][5] The woodrat's reliance on stick lodges (long-lasting structures built over decades) and its small, isolated population, make it unable to sustain habitat disruption.[4][6][5] Habitat destruction during flood recovery periods or seasonal absences directly threatens lodges and breeding sites.[4][5] If habitat loss is excluded from "harm," remaining riparian corridors would be available to be degraded during non-occupancy periods, destroying lodges and reducing reproductive success.[6][5] This would exacerbate population declines, as the species cannot rapidly rebuild lodges or relocate.[2][6] The proposed regulatory change would increase the riparian woodrat's extinction risks by fragmenting its limited habitat, increasing vulnerability to genetic bottlenecks, floods, and invasive species like black rats.[2][5][7] Resulting population declines will make it much more likely that Federal projects affecting the riparian woodrat will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. Please explain how the Service will mitigate these impacts while addressing habitat connectivity and invasive species control?

1. https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/1931.pdf
2. https://esrp.csustan.edu/speciesprofiles/profile.php?sp=nefu
3. https://ecos.fws.gov/ecp/species/6456
4. https://www.cdpr.ca.gov/wp-content/uploads/2025/01/riparian_wood_rat.pdf
5. https://ecos.fws.gov/docs/five_year_review/doc6443.pdf
6. https://esrp.csustan.edu/publications/pubhtml.php?doc=sjvrp&file=chapter02M04.html
7. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83976&inline

Puma (Mountain Lion) Comment:

The puma (Puma concolor), also known as the mountain lion, is a wide-ranging, solitary carnivore found from southern Alaska to South America, occupying diverse habitats including forests, grasslands, and mountains.[1] Pumas require large, contiguous territories to maintain low-density populations, with males and females each covering extensive home ranges and only coming together briefly for breeding.[2] Because mountain lions are highly territorial and depend on large, undisturbed tracts of land for hunting and breeding, direct bodily harm from human activities (such as poaching, vehicle collisions, and hunting) is a significant threat to individuals, but habitat loss and fragmentation are the primary drivers of population declines.[3] Habitat fragmentation not only increases mortality from direct encounters with humans and vehicles, but also leads to genetic isolation, inbreeding, and heightened conflict among lions, all of which reduce population viability.[4] If habitat destruction is no longer treated as "harm" under the Endangered Species Act, vast areas of essential puma habitat will be available to be legally converted or fragmented when lions are not physically.[5] This would sever migration corridors, isolate populations, and prevent individuals from establishing new territories, ultimately leading to decreased genetic diversity, increased mortality from intraspecific conflict, and local extirpations.[6] The proposed regulatory change would likely accelerate population declines, disrupt ecosystem balance (since pumas are keystone predators), and likely push certain regional populations toward extinction, as seen with the Florida panther-a subspecies already severely impacted by habitat loss and fragmentation.[7] Such declines will make it much more likely that Federal projects affecting the puma will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. Please explain how the Service will amend its species management of the Puma to address these anticipated impacts in a way that ensures the survival and eventual recovery of the species.

[1] https://www.nps.gov/subjects/cougars/index.htm
[2] https://www.wildlife.ca.gov/Conservation/Mammals/Mountain-Lion
[3] https://www.fws.gov/species/mountain-lion-puma-concolor
[4] https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5181832.pdf
[5] https://www.fws.gov/endangered/laws-policies/section-7.html
[6] U.S. Fish and Wildlife Service. 2022. *Species Status Assessment Report for the Florida Panther (Puma concolor coryi)*. U.S. Fish and Wildlife Service, Atlanta, GA. https://ecos.fws.gov/ServCat/DownloadFile/218442
[7] https://myfwc.com/wildlifehabitats/wildlife/panther/

Polar Bear Comment:

The polar bear (Ursus maritimus) is a large, ice-dependent apex predator that spends most of its life on the sea ice of the Arctic, using this platform to hunt seals, breed, and, for pregnant females, den and raise their young. Because polar bears rely so heavily on sea ice for essential life functions, they are highly vulnerable to changes in ice availability and spend increasing periods on land as sea ice diminishes.[1] If destruction of sea ice habitat is no longer considered "harm," polar bear habitat could be lost during periods when bears are not present, such as the summer ice-free season when many bears are forced ashore or into marginal habitats.[2] When the ice does not return, or returns later and to a reduced extent, polar bears will be unable to access their primary hunting grounds and denning areas, severely disrupting their ability to feed, reproduce, and raise cubs.[3] These impacts are likely to accelerate population declines and drive the species toward extinction, as already observed in some subpopulations that have seen dramatic drops due to habitat loss from climate change.[4] Such declines will make it much more likely that Federal projects affecting the polar bear will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its species management to successfully recover the polar bear in the face of these anticipated impacts?

[1] https://www.fws.gov/species/polar-bear-ursus-maritimus

[2] https://www.usgs.gov/news/national-news-release/polar-bears-arctic-sea-ice-loss

[3] https://www.nasa.gov/feature/goddard/2020/arctic-sea-ice-continues-decline-trend

[4] https://www.usgs.gov/centers/alaska-science-center/science/polar-bear-research

Red Wolf Comment:

The red wolf is a medium-sized, social canid native to the southeastern United States, now surviving only as a critically endangered population in eastern North Carolina and in captive breeding programs.[1][2] Red wolves depend on large intact habitat areas for their survival, relying on specific den and rendezvous sites each spring to rear their pups and maintain strong family bonds within their packs.[3] While direct harm (such as poaching or vehicle strikes) disrupts social structure and can lead to pack disbandment, orphaned pups, and increased hybridization with coyotes when mates are lost,[4] the loss of suitable habitat fragments the already small population, isolates packs, and disrupts their social structure, making it harder for wolves to find mates and maintain stable family groups.[5] These impacts are compounded by the species' low population size and limited genetic diversity, making each loss significant for recovery.[6] If habitat destruction is no longer considered harm, red wolf denning and rendezvous sites would be available to be destroyed during periods when wolves are not present, preventing successful reproduction and further fragmenting the already small population.[7] This would likely accelerate the path toward extinction, as red wolves would return to find critical breeding and pup-rearing habitat gone, eliminating opportunities for population growth and recovery. Changing the regulatory definition of harm to exclude impacts to important habitats would undermine ongoing recovery efforts for the red wolf, disrupt pack stability, and increase the risk of hybridization with coyotes, further threatening the species' genetic integrity and survival. Such declines will make it much more likely that Federal projects affecting the red wolf will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service modify its management of red wolves to adjust for these anticipated impacts to its survival?

[1] U.S. Fish & Wildlife Service: Red Wolf Recovery Program

[2] NC Wildlife Resources Commission: Red Wolf

[3] U.S. Fish & Wildlife Service: Red Wolf Recovery Plan

[4] USGS: Red Wolves and Coyotes

[5] U.S. Fish & Wildlife Service: Red Wolf Species Profile

[6] NC State University: Red Wolf Genetics

[7] U.S. Fish & Wildlife Service: Habitat Loss and Red Wolves

Key Deer Comment:

The Key deer is a diminutive, island-endemic subspecies of white-tailed deer found only in the lower Florida Keys, primarily inhabiting pine rocklands, hardwood hammocks, mangroves, and freshwater wetlands.[1] These deer are active year-round and require close proximity to freshwater, with most of the population now concentrated on Big Pine Key and surrounding islands due to habitat loss and fragmentation.[2] Because Key deer are highly dependent on limited, low-lying island habitats, direct bodily harm (such as vehicle collisions and illegal hunting) is a significant threat.[3] In addition, the loss of habitat-especially as sea level rise, urban development, and fencing continue to shrink and fragment their living space.[4] The deer's small range and inability to migrate inland make them particularly vulnerable to any reduction in available habitat.[5] If habitat destruction is no longer considered "harm" under the Endangered Species Act, large portions of the deer's essential habitat will be eligible to be legally developed or degraded, during periods when deer are not present in a particular area. This would result in the loss of essential foraging grounds, freshwater sources, and fawning sites, leaving the deer unable to meet their basic needs and complete their life cycle.[6] The proposed regulatory change would be likely to accelerate the decline of the Key deer population, pushing the subspecies towards extinction as their existing limited habitat becomes increasingly uninhabitable due to development, sea level rise, and climate-driven events like hurricanes.[7] Such declines will make it much more likely that Federal projects affecting the Key deer will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. Please explain how the Service plans to adjust its species management of the Key deer in order to compensate for these anticipated impacts?

1. https://www.fws.gov/species/key-deer-odocoileus-virginianus-clavium
2. https://myfwc.com/wildlifehabitats/profiles/mammals/land/key-deer/
3. https://www.fws.gov/national-key-deer-refuge
4. https://www.nps.gov/articles/key-deer.htm
5. https://www.fws.gov/story/2023-06/key-deer-conservation
6. https://www.fws.gov/media/key-deer-fact-sheet
7. https://www.usgs.gov/news/featured-story/key-deer-key-west-hurricane-irma

Gulf Coast Jaguarundi Comment:

The Gulf Coast jaguarundi (Herpailurus yagouaroundi) is a small, secretive wild cat historically found from southern Texas into eastern Mexico, inhabiting dense thornscrub and woodland habitats near water. This secretive species is highly dependent on undisturbed, connected shrubland for hunting and denning.[1] Because the Gulf Coast jaguarundi relies on dense, contiguous habitat for all life stages - feeding, breeding, and dispersal - loss or fragmentation of habitat directly limits their ability to survive and reproduce, even if individuals are not present at the time of disturbance.[2] If habitat destruction is no longer considered harm, critical areas would be available to be cleared or fragmented during periods when jaguarundis are absent or undetected, eliminating the dense cover and corridors they require and preventing recolonization or reintroduction efforts.[3] The proposed regulatory change would likely accelerate the species' decline towards extinction by preventing recovery, further isolating remaining populations in Mexico, and making natural recolonization or successful reintroduction into the U.S. impossible. These impacts would severely undermine recovery goals and would continue to drive the Gulf Coast jaguarundi toward extinction in the wild. Such declines will make it much more likely that Federal projects affecting the Gulf Coast jaguarundi will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service be able to successfully recover the Gulf Coast jaguarundi if destruction of its essential habitats is no longer considered harm?

[1] U.S. Fish & Wildlife Service. (2022). Gulf Coast Jaguarundi (Herpailurus yagouaroundi cacomitli) 5-Year Review. https://www.fws.gov/sites/default/files/documents/Gulf-Coast-Jaguarundi-5YR-2022.pdf

[2] Texas Parks & Wildlife Department. Gulf Coast Jaguarundi. https://tpwd.texas.gov/huntwild/wild/species/jaguarundi/

[3] U.S. Fish & Wildlife Service. Jaguarundi Recovery Plan. https://ecos.fws.gov/docs/recovery_plan/930930b.pdf

Madla Cave Meshweaver Comment:

The Madla Cave meshweaver (Cicurina madla) is a small, eyeless spider endemic to 8–9 caves in Bexar County, Texas, where it spends its entire life underground as a troglobite, relying on stable humidity, temperature, and nutrient inputs from surface ecosystems.[1] Its survival is tightly linked to intact subterranean habitats and functional surface drainage basins that maintain cave conditions.[2] Because the species cannot survive outside caves and depends on surface-derived nutrients transported via water flow and cave cricket activity, habitat degradation (e.g., cave filling, pollution, altered drainage) directly threatens its survival, even without physical contact.[2] If habitat destruction is excluded from the regulatory definition of harm, activities like urban development or quarrying would be allowed to fragment, degrade, or possibly even eliminate caves, disrupt nutrient flows, and destabilize microclimates, rendering habitats uninhabitable.[2] These impacts would likely extirpate localized populations and reduce genetic diversity, accelerating declines toward extinction for this range-restricted species.[2] Such declines will make it much more likely that Federal projects affecting the Madla Cave meshweaver will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service address habitat connectivity and surface ecosystem protections to mitigate these threats to the Madla Cave meshweaver and other similar species if the proposed definition of "harm" is implemented?...

[1] https://www.fws.gov/species/madla-cave-meshweaver-cicurina-madla

[2] https://www.fws.gov/sites/default/files/documents/Madla-Cave-Meshweaver-5-Year-Review.pdf

Mount Graham Red Squirrel Comment:

The Mount Graham red squirrel (Tamiasciurus fremonti grahamensis) is a small, highly territorial subspecies found only in the high-elevation mixed conifer and spruce-fir forests of the Pinaleño Mountains in southern Arizona.[1] It is strictly dependent on old-growth coniferous forests for food and nesting, and its entire range is isolated to this "sky island"; it cannot colonize new areas if its habitat is lost.[1] This creates a great concern regarding the destruction or fragmentation of their limited habitat.[1] If habitat destruction is no longer considered harm, critical nesting and foraging areas will be available for removal when the squirrels are not immediately present, such as after events like fire or logging, leaving returning or resident squirrels without the resources needed to survive and reproduce.[2] The proposed regulatory change to the definition of "harm" would likely result in further population declines and possibly extinction, as the species is already highly vulnerable due to its small population size, low reproductive rate, and inability to disperse to new habitats.[2] Such declines will make it much more likely that Federal projects affecting the Mount Graham red squirrel will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. Given the increased extinction risk anticipated from this proposal, how will the Service be able to ensure the species' survival and eventual recovery?

[1] https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5191861.pdf

[2] https://www.fws.gov/species/mount-graham-red-squirrel-tamiasciurus-fremonti-grahamensis

Whooping crane Comment:

The Whooping crane (Grus americana) is a critically endangered migratory bird that relies on specific wetland habitats for breeding in Canada's Wood Buffalo National Park and wintering in Texas' Aransas National Wildlife Refuge, with a 2,500-mile migration corridor through the central U.S.[1] The crane's "K-selected" life history-slow reproduction, low genetic diversity, and high adult survival-makes population recovery vulnerable to disruptions in nesting, migration stopover, and wintering habitats.[2] Whooping cranes require undisturbed wetlands for nesting (to detect predators) and coastal marshes for wintering, with migration routes dependent on agricultural fields and shallow wetlands.[3] Collisions with power lines and habitat fragmentation from energy infrastructure pose acute risks during migration.[4] Degrading unoccupied breeding/wintering sites (e.g., through energy development or coastal urbanization) disrupts site fidelity, reduces reproductive success, and increases mortality from collisions or contaminated stopover habitats.[5] The proposed rule change would reverse decades of recovery progress, as the lone self-sustaining population (536 individuals) remains vulnerable to stochastic events and the experimental populations are not yet viable.[6] Such declines will make it much more likely that Federal projects affecting the Whooping crane will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service address the anticipated habitat loss and resulting population declines if the definition of harm is changed to exclude effects to their habitat?

1. U.S. Fish & Wildlife Service: Whooping Crane Migration
2. USGS: Whooping Crane Life History
3. Texas Parks & Wildlife: Whooping Crane Habitat
4. U.S. Fish & Wildlife Service: Threats to Whooping Cranes
5. U.S. Fish & Wildlife Service: Whooping Crane Recovery Plan
6. U.S. Fish & Wildlife Service: Whooping Crane Population

North American Wolverine Comment:

The North American wolverine (Gulo gulo luscus) is a snow-dependent, cold-climate carnivore inhabiting remote alpine, boreal, and tundra regions, with populations in the contiguous U.S. numbering only about 300 individuals.[1] Wolverines require vast, undisturbed territories and rely on persistent spring snow cover for denning and successful reproduction, making them highly vulnerable to climate change and habitat fragmentation.[2] Because wolverines are solitary and occupy expansive home ranges year-round, direct harm to individuals is rare compared to the significant risk posed by habitat loss-especially the degradation or loss of denning sites due to declining snowpack, resource extraction, and human disturbance.[3] If habitat destruction is no longer considered harm, critical denning areas would be available to be altered or removed during the periods when wolverines are not present, preventing successful reproduction and reducing population viability when females return to den.[4] The proposed regulatory change would likely accelerate population declines towards extinction, increase genetic isolation, and elevate extinction risk for the already small and fragmented wolverine populations in the contiguous U.S.[5] Such declines will make it much more likely that Federal projects affecting the North American wolverine will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its species management approach for the North American Wolverine to compensate for these anticipated impacts?

1. https://www.fws.gov/species/north-american-wolverine-gulo-gulo-luscus
2. https://www.nps.gov/articles/000/wolverine-denning.htm
3. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5410145.pdf
4. https://www.fws.gov/media/wolverine-ssa
5. https://www.fws.gov/story/2023-11/wolverine-esa-listing

Gray Bat Comment:

The gray bat (Myotis grisescens) is a cave-dwelling bat found primarily in the southeastern United States, with more than 95% of its population hibernating in just a handful of caves each winter and forming large, dense colonies that are highly vulnerable to disturbance.[1] This species roosts almost exclusively in caves year-round and relies on forested riparian corridors for foraging, making it extremely sensitive to both direct disturbance and habitat modification.[2] Because gray bats spend nearly their entire lives within caves or foraging along specific waterways, these individuals are tightly linked to these critical habitats, and disturbance or destruction of these sites, even when bats are absent, can have severe impacts on their survival and reproductive success.[3] If habitat destruction, such as cave alteration or removal of riparian corridors, is no longer considered harm, these essential sites could be modified or destroyed during periods when bats are not present, e.g., when they are hibernating, leaving colonies without suitable roosting or foraging areas upon their return, and potentially causing reproductive failure or colony collapse.[4] The proposed regulatory changes would likely accelerate the decline of the gray bat by increasing mortality, reducing reproductive output, and fragmenting already limited populations, pushing the species closer to extinction. Such declines will make it much more likely that Federal projects affecting the gray bat will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service compensate for these anticipated impacts to the gray bat's likelihood of surviving and recovering?

[1] https://www.fws.gov/species/gray-bat-myotis-grisescens
[2] https://www.nps.gov/articles/gray-bat.htm
[3] https://www.fws.gov/media/gray-bat-fact-sheet
[4] https://www.fws.gov/midwest/endangered/mammals/grbat_fc.html

Red-Cockaded Woodpecker Comment:

The red-cockaded woodpecker (Dryobates borealis) is a habitat specialist reliant on mature, fire-maintained longleaf pine ecosystems, where it excavates cavities in living pines over 80 years old-a process taking 1–3 years per nest.[1] The species exhibits high site fidelity, with family groups cooperatively defending and maintaining cavity clusters across generations.[2] If habitat destruction (e.g., logging old-growth pines or suppressing fires) is no longer classified as "harm," these cavity trees would be available to be removed during non-breeding periods when birds forage elsewhere.[3] This would render clusters unusable upon return, disrupting reproduction and group stability, particularly given the species' slow cavity creation and dependence on fungal-weakened trees.[4] Fragmented populations-many with "inherently low resiliency"-face heightened extinction risks from habitat loss, hurricanes, lost genetic variation, and climate-driven disruptions to prescribed burning.[5] The proposed regulatory change to the definition of "harm" risks undermining recovery gains by removing the safeguards against the unmitigated loss of cavity trees and foraging habitat. Such declines will make it much more likely that Federal projects affecting the red-cockaded woodpecker will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. To what extent does the Service believe this proposed change will affect the red-cockaded woodpecker's ability to survive and recover in the wild, and how will it adjust its management of the species to compensate for these anticipated impacts?

[1] https://www.fws.gov/species/red-cockaded-woodpecker-dryobates-borealis
[2] https://www.nrcs.usda.gov/sites/default/files/2022-11/Red-cockaded-Woodpecker.pdf
[3] https://www.fws.gov/media/red-cockaded-woodpecker-recovery-plan
[4] https://www.fws.gov/project/red-cockaded-woodpecker-conservation
[5] https://www.fws.gov/story/red-cockaded-woodpecker

Eastern Black Rail Comment:

The Eastern Black Rail (Laterallus jamaicensis jamaicensis) is a small, secretive marsh bird dependent on dense vegetation in coastal and inland wetlands for nesting and refuge from predators.[1] Its populations have declined sharply due to habitat loss from sea level rise, development, and incompatible land management practices.[2] Because this subspecies spends nearly its entire life concealed in dense wetland vegetation where they often go undetected, habitat quality directly determines survival and reproductive success.[3] If habitat degradation is no longer considered harmful, critical wetlands will be available to be drained, developed, or mismanaged during non-breeding periods when rails are present, but undetected.[4] This would accelerate the collapse of remaining populations, as the rail's specialized habitat requirements and low dispersal capacity limit its ability to adapt to rapid landscape changes.[5] Without habitat protections, existing threats like sea level rise and intensified storms are estimated to eliminate 75–90% of coastal marshes by 2100.[6] Such declines will make it much more likely that Federal projects affecting the Eastern Black Rail will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service prioritize habitat conservation and adaptive management to prevent the eastern black rail's decline towards extinction given these compounding threats?

[1] https://ecos.fws.gov/ecp/species/7717

[2] https://www.fws.gov/species/eastern-black-rail-laterallus-jamaicensis-jamaicensis

[3] https://nature.berkeley.edu/classes/es196/projects/2011final/GamboaM_2011.pdf

[4] https://research.fs.usda.gov/treesearch/download/31850.pdf

[5] https://ipac.ecosphere.fws.gov/location/OBTK534W3ZGCXKZWDH7VM5JLZM/resources

[6] https://www.fws.gov/policy/library/2020/2020-19661.html

West Indian Manatee Comment:

The West Indian manatee (Trichechus manatus) is a large, slow-moving herbivorous, mostly solitary aquatic mammal inhabiting shallow coastal areas, rivers, and estuaries throughout the southeastern United States, the Caribbean, and parts of Central and South America.[1] Manatees are typically migratory and cannot inhabit waters colder than about 60° F.[2] They depend on warm water for survival, exhibiting high site-fidelity by returning to the same warm-water refuges such as natural springs or power plant outflows each winter.[3] Because manatees are highly reliant on these specific warm-water habitats for survival each winter, and on extensive shallow seagrass beds for foraging, the loss or degradation of these habitats diminishes their health and survival, even if no animals are present at the time of disturbance.[4] If habitat destruction is no longer considered harm, then critical warm-water refuges and seagrass beds will be available to be altered or eliminated during periods when manatees are absent, resulting in the loss of essential resources needed for overwintering and feeding.[5] When migrating manatees are seeking essential warm water refuges, they likely would be unable to find suitable refuge from cold stress, or find adequate food, leading to increased mortality and failed reproduction.[6] The proposed regulatory changes would likely accelerate population declines and drive the species toward extinction, especially given ongoing threats from vessel strikes, pollution, and climate change-induced seagrass loss.[7] Such declines will make it much more likely that Federal projects affecting the West Indian manatee will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its management of the West Indian manatee to compensate for these anticipated impacts?

[1] https://myfwc.com/research/manatee/about/

[2] https://www.fws.gov/species/west-indian-manatee-trichechus-manatus

[3] https://www.usgs.gov/centers/wetland-and-aquatic-research-center/science/west-indian-manatee

[4] https://www.fws.gov/media/west-indian-manatee-fact-sheet

[5] https://myfwc.com/research/manatee/projects/population-monitoring/

[6] https://www.usgs.gov/news/featured-story/manatees-florida-seek-warm-water-during-winter

[7] https://www.fws.gov/media/west-indian-manatee-fact-sheet

Spotfin Chubb Comment:

The spotfin chub (Erimonax monachus) is a small, threatened fish that inhabits clear rivers with mostly gravel/boulder substrates in the Tennessee River drainage, where it spawns in rock crevices from May to August.[1] Breeding males aggressively defend these crevices, which are critical for egg deposition and fertilization.[2] Because spawning sites and rearing areas are only occupied seasonally, by modifying the definition of "harm" to require the physical presence of the species, these essential habitats would become available to be altered or destroyed during the portion of the season when the species is absent.[3] This would disrupt reproduction, fragment already isolated populations, and exacerbate stressors like suspended sediment, which impairs juvenile growth and survival.[4] Such impacts would accelerate population declines in a species with low resilience due to its short lifespan (3 years).[1] Such declines will make it much more likely that Federal projects affecting the spotfin chub will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adapt to the habitat protection gaps anticipated from this proposed rule change and prevent the extirpation of the remaining spotfin chub populations?

1. https://www.fws.gov/species/spotfin-chub-erimonax-monachus
2. https://www.fisheries.noaa.gov/species/spotfin-chub
3. https://www.fws.gov/media/spotfin-chub-5-year-review
4. https://www.tn.gov/content/dam/tn/twra/documents/miscellaneous/fish/spotfinchub.pdf

California Red-legged Frog Comment:

The California red-legged frog (Rana draytonii) is the largest native frog in the western United States, historically widespread throughout California and northern Baja California, but now restricted to fragmented populations due to extensive habitat loss and degradation.[1] This species primarily inhabits ponds, marshes, streams, and other freshwater bodies with dense riparian vegetation, which are essential for breeding, shelter, and general survival.[1,2] Because they depend on aquatic habitats with specific vegetation structure for breeding and refuge, direct bodily harm is not the sole threat; destruction or alteration of these habitats can be equally or more detrimental to population viability.[2] The frogs are especially vulnerable during the breeding season (November to April), when eggs and larvae require stable aquatic environments with protective cover.[2] If habitat destruction is no longer considered "harm," critical breeding and sheltering sites would be available for alteration or removal outside of the active breeding season, when frogs are less visible or temporarily absent. As a result, when adults return to breed, they would find their required aquatic habitats degraded or eliminated, leading to reproductive failure and increased mortality of eggs and juveniles.[1, 2] The proposed regulatory change would undermine recovery goals, including habitat protection and population reestablishment, and would likely accelerate the decline of California red-legged frog populations, particularly in already fragmented and vulnerable areas.[2] This would push the species toward local extirpation or even extinction as breeding success plummets and population recovery becomes impossible. Such declines will make it much more likely that Federal projects affecting the California red-legged frog will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its management of the California red-legged frog to compensate for the anticipated increase in impacts?

[1] https://www.fws.gov/species/california-red-legged-frog-rana-draytonii

[2] https://www.fws.gov/sites/default/files/documents/Recovery-Plan-for-the-California-Red-Legged-Frog.pdf

https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=3306

Black-footed ferret Comment:

The black-footed ferret (Mustela nigripes) is a small, nocturnal mammal native to North America's grasslands, spending most of its life underground in prairie dog burrows and relying almost exclusively on prairie dogs for food and shelter.[1] This species is highly specialized, with its survival and reproduction entirely dependent on healthy, contiguous prairie dog colonies.[1, 2] Because black-footed ferrets are fossorial and solitary - except during breeding and maternal care - they occupy prairie dog burrows year-round, making their physical presence in habitat continuous, but their population densities extremely low.[2] Direct harm to individuals is limited by their secretive, underground lifestyle, but their persistence is tightly linked to the presence of prairie dogs and intact burrow systems.[1, 3] If habitat destruction, such as conversion of grasslands, poisoning of prairie dogs, or collapse of burrow systems due to development or energy extraction, is no longer considered harm, prairie dog colonies and their burrows would become available to be legally eliminated when ferrets are not directly observed.[4] As a result, when ferrets attempt to reproduce or disperse, they would find their essential habitat gone, leading to starvation, failed reproduction, and disrupted life cycles.[2] The proposed regulatory change would likely accelerate the species' decline, as the loss of prairie dog colonies and burrows would eliminate the only viable habitat, further fragmenting populations, reversing recovery gains and pushing the black-footed ferret back towards extinction despite ongoing reintroduction and disease management efforts.[1, 3] Such declines will make it much more likely that Federal projects affecting the black-footed ferret will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its black-footed ferret management to compensate for the anticipated impacts of this proposed rule change?

1. https://www.fws.gov/species/black-footed-ferret-mustela-nigripes
2. https://www.nps.gov/articles/000/black-footed-ferret.htm
3. https://www.fws.gov/story/2022-03/black-footed-ferret
4. https://www.fws.gov/media/black-footed-ferret-recovery-plan-2013

Leatherback Sea Turtle Comment:

The leatherback sea turtle (Dermochelys coriacea) is the largest living sea turtle, spending the vast majority of its life in the open ocean and migrating thousands of miles between foraging and nesting sites across the globe.[1] Unlike other sea turtles, leatherbacks possess a distinctive leathery shell[2]. They are highly migratory, with nesting females returning to sandy beaches-often the same ones where they were born-to lay their eggs.[1] Because leatherbacks are almost entirely pelagic, only females come ashore to nest, and their nesting beaches are unoccupied for most of the year.[2] The species relies on specific nesting beaches for reproduction and the successful incubation and hatching of eggs depend on undisturbed sandy beaches.[3] If regulatory protections no longer treat habitat destruction, such as coastal development, artificial lighting, or beach erosion, as harm, nesting beaches would be available to be legally developed or degraded outside of the nesting season, leaving returning females without suitable sites to lay eggs.[3] This would result in reproductive failure, as females would be unable to nest, or nests would be destroyed before hatchlings could emerge, severely disrupting the species' life cycle and recruitment of new individuals.[3] Such impacts would accelerate the decline of leatherback populations, particularly in regions where they are already critically endangered, and would drive the species closer to extinction by eliminating the next generation of turtles.[3] Such declines will make it much more likely that Federal projects affecting the leatherback sea turtle will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its management of the leatherback sea turtle to compensate for these anticipated impacts and ensure its survival?

[1] https://oceanservice.noaa.gov/education/tutorial_corals/coral07_leatherback.html

[2] https://www.fisheries.noaa.gov/species/leatherback-turtle

[3] https://www.fws.gov/species/leatherback-sea-turtle-dermochelys-coriacea

Eastern Massasauga Comment:

The eastern massasauga (*Sistrurus catenatus*) is a small, thick-bodied rattlesnake native to the Midwest and Great Lakes regions of North America, primarily inhabiting shallow wetlands and adjacent uplands such as prairies, fens, and open-canopy forests.[1] The species is highly dependent on a mosaic of early successional wetland and upland habitats for foraging, basking, and overwintering, often using crayfish burrows or root channels to survive cold winters.[2] Because the eastern massasauga is seasonally migratory within its habitat - using specific sites for hibernation and others for feeding and reproduction - its presence in any one area may be intermittent, especially during winter hibernation when individuals are underground and largely undetectable.[3] This means that, for much of the year, critical habitat may appear unoccupied even though it is essential for the species' survival.[3] If habitat destruction is no longer considered "harm" under the Endangered Species Act, the eastern massasauga's essential wetlands and uplands would be available to be legally altered or destroyed during periods when snakes are absent or hibernating underground.[4] As a result, when snakes emerge in the spring or migrate seasonally, they are likely to find their habitat fragmented or eliminated, leaving them without suitable sites for basking, breeding, or overwintering.[4] This would disrupt their lifecycle, reduce reproductive success, and increase mortality from exposure, predation, or forced movement across hazardous landscapes such as roads.[5] Such regulatory changes would likely accelerate the species' decline, as habitat loss and fragmentation are already the primary drivers of its threatened status.[1] Without intact and connected habitats, remaining populations would become increasingly isolated, leading to reduced genetic diversity, increased vulnerability to disease and environmental changes, and ultimately, local extirpation or extinction.[2] Such declines will make it much more likely that Federal projects affecting the eastern massasauga will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service ensure the eastern massasauga's successful recovery in light of these anticipated impacts?

[1] https://www.fws.gov/species/eastern-massasauga-sistrurus-catenatus

[2] https://mnfi.anr.msu.edu/species/description/10721

[3] https://www.fws.gov/media/eastern-massasauga-fact-sheet

[4] https://www.fws.gov/story/2022-09/eastern-massasauga-rattlesnake

[5] https://www.michigan.gov/dnr/education/massasauga

Salt Marsh Harvest Mouse Comment:

The salt marsh harvest mouse (*Reithrodontomys raviventris*) is a small, nocturnal rodent endemic to the salt and brackish marshes of the San Francisco Bay area, where it relies on dense pickleweed and other saltmarsh vegetation for cover and nesting.[1] The species is highly specialized for life in tidal marshes, rarely venturing into open areas or uplands, even during high tides, instead seeking refuge in tall vegetation above the waterline.[2] Because the salt marsh harvest mouse is almost entirely dependent on specific marsh vegetation for survival and does not occupy upland or alternative habitats, its presence is tightly linked to the availability and quality of these marshes.[2] If habitat destruction, such as filling, diking, or conversion of tidal wetlands, is no longer considered "harm," critical marsh habitat will likely be removed or degraded along the margins or in other areas when mice are not present or during periods of low activity when they are not detected, leaving returning or resident individuals without the necessary cover or resources to survive and reproduce.[3] This would prevent the completion of their life cycle and sharply reduce population viability, likely accelerating the species' decline toward extinction due to the loss of essential breeding and refuge habitat.[3] Such declines will make it much more likely that Federal projects affecting the salt marsh harvest mouse will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service change its management approach for the salt marsh harvest mouse in light of these anticipated impacts?

[1] https://www.fws.gov/species/salt-marsh-harvest-mouse-reithrodontomys-raviventris
[2] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405
[3] https://www.fws.gov/media/salt-marsh-harvest-mouse-5-year-review-2009

Desert Tortoise Comment:

The desert tortoise (*Gopherus agassizii*) is a long-lived reptile, native to the Mojave and Sonoran Deserts of the southwestern United States and northwestern Mexico, and spends up to 95 percent of its life in burrows to escape extreme desert conditions and predation.[1] This species is characterized by slow growth, late sexual maturity (12 to 21 years), low reproductive rates, and high juvenile mortality, making its populations particularly vulnerable to disturbance and slow to recover from declines.[2] Because desert tortoises spend most of their lives underground and are only seasonally active above ground, direct harm to individuals is limited to the relatively brief periods when they are visible. However, the species' reliance on specific habitat features - such as burrow sites, native forage plants, and landscape connectivity for movement and gene flow - means that the destruction or fragmentation of habitat poses a severe risk to their survival.[3] If above ground habitat destruction is no longer treated as harm, critical areas used for burrowing, foraging, and movement would be available to be legally removed or degraded during periods when tortoises are not present above ground. This is likely to result in the loss of essential resources and safe refuges, leaving returning tortoises unable to find suitable shelter or food, and further isolating populations by severing connectivity corridors. Such changes are likely to exacerbate already steep population declines, as seen in the western Mojave Desert where adult densities have dropped by over 50 percent in a decade,[4] and are likely to drive the species toward extinction by eliminating its ability to reproduce and maintain viable populations. Such declines will make it much more likely that Federal projects affecting the desert tortoise will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its management to compensate for these anticipated impacts to the desert tortoise and the public uncertainty likely to result?...

1. https://www.nps.gov/articles/000/desert-tortoise.htm
2. https://pubs.usgs.gov/fs/2002/0952/report.pdf
3. https://www.fws.gov/species/desert-tortoise-gopherus-agassizii
4. https://www.fws.gov/sites/default/files/documents/Desert%20Tortoise%20Recovery%20Plan%202011.pdf

Northern Long-Eared Bat Comment:

The northern long-eared bat (*Myotis septentrionalis*) is a medium-sized bat found in mature forests across eastern and central North America, spending summers roosting in tree cavities and under bark, and winters hibernating in caves or abandoned mines.[1] The species exhibits high site fidelity to both summer roosts and winter hibernacula, often returning to the same locations year after year.[2] Because northern long-eared bats are highly dependent on intact forest habitats for roosting and raising young, and on undisturbed caves for hibernation, their presence in these habitats is seasonal-summer in forests, winter underground.[1] However, during the summer maternity season, females and pups are especially vulnerable to disturbance and habitat loss.[3] If habitat destruction, such as tree clearing during the winter or cave disturbance during the summer, is no longer considered harm, critical summer roosts and winter hibernacula would be available to be destroyed or degraded when bats are absent, leaving returning bats without essential sites for reproduction or hibernation.[4] This would further reduce already depleted populations, as bats would be unable to successfully rear young or survive winter, compounding the severe impacts of white-nose syndrome, which has already caused declines of 97–100% in affected populations.[4] These impacts are likely to accelerate the species' trajectory toward extinction, as both direct mortality and reproductive failure would increase and severely undermine efforts to recover the species. Such declines will make it much more likely that Federal projects affecting the Northern long-eared bat will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its management approach to compensate for these anticipated increases in impacts to the northern long-eared bat's ability to survive and recover in the wild?

[1] https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis
[2] https://www.usgs.gov/centers/upper-midwest-environmental-sciences-center/science/northern-long-eared-bat
[3] https://www.fws.gov/media/nleb-summer-survey-guidance
[4] https://www.fws.gov/media/northern-long-eared-bat-final-rule-faq

Shortnose Sucker Comments:

The shortnose sucker (*Chasmistes brevirostris*) is a long-lived freshwater fish endemic to the Klamath Basin of southern Oregon and northern California, where it migrates between lakes and rivers to spawn each spring.[1] The species depends on specific spawning and nursery habitats, showing strong site fidelity and requiring clean, well-oxygenated water for successful reproduction and juvenile survival.[2] Because the shortnose sucker is not present in spawning habitats outside of the breeding season, these areas may appear unoccupied for much of the year.[2] If habitat destruction is no longer considered harm, critical spawning and nursery habitats could be degraded or eliminated during periods when the fish are absent, removing the conditions necessary for reproduction and juvenile development.[3] As a result, when the shortnose sucker returns to spawn, it may find essential habitats unsuitable or destroyed, leading to reproductive failure and population decline.[3] Such regulatory changes are likely to accelerate the species' trajectory toward extinction, as loss of spawning and nursery habitats would severely limit recruitment and recovery.[3] Such declines will make it much more likely that Federal projects affecting the shortnose sucker will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its species management to compensate for these anticipated impacts?

1. https://ecos.fws.gov/docs/five_year_review/doc4002.pdf
2. https://pubs.usgs.gov/circ/2004/1262/pdf/circ1262.pdf
3. https://www.fws.gov/sites/default/files/documents/recovery-plan-shortnose-lost-river-sucker.pdf

Gray Wolf Comment:

The gray wolf (*Canis lupus*) is a highly social, wide-ranging apex predator that once occupied most of North America, but now persists in only a fraction of its historical range due to habitat loss, persecution, and fragmentation.[1] Wolves require large, connected territories to support their packs, maintain genetic diversity, and fulfill their ecological role as a keystone species regulating prey populations and promoting ecosystem health.[2] Because gray wolves are wide-ranging and territorial, direct harm (such as hunting, trapping, or lethal control) can quickly reduce local populations, especially when packs are disrupted or breeding individuals are lost.[3] However, habitat destruction and fragmentation, through logging, agriculture, and urban development, can isolate populations, reduce prey availability, and limit the wolves' ability to disperse and recolonize suitable areas, even if individuals are not present at the time of disturbance.[4] If habitat destruction is no longer considered harm, critical corridors and denning areas will be available to be altered or removed when wolves are absent, preventing recolonization, fragmenting populations, and increasing inbreeding risk.[5] This would undermine long-term recovery, as wolves returning to these areas would find them unsuitable for sustaining packs or successful breeding, leading to population declines and loss of ecosystem function.[6] The proposed regulatory change is likely to reverse decades of progress, leaving wolves confined to isolated strongholds, unable to expand or maintain genetic health, and more vulnerable to local extirpation from disease, conflict, or environmental change.[7] This would also diminish their positive ecological impacts, such as controlling herbivore populations and supporting biodiversity.[8] Such declines will make it much more likely that Federal projects affecting the gray wolf will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service modify its management of the gray wolf to ensure that remaining populations do not become even more isolated exposing them to the increased conservation risks anticipated to result from the proposed regulatory change?

1. https://www.fws.gov/species/gray-wolf-canis-lupus
2. https://www.nps.gov/yell/learn/nature/wolves.htm
3. https://www.fws.gov/story/2022-03/wolf-recovery-and-management
4. https://www.fs.usda.gov/treesearch/pubs/53083
5. https://www.sciencedirect.com/science/article/pii/S0006320716303452
6. https://www.fws.gov/media/gray-wolf-recovery-plan
7. https://pubs.er.usgs.gov/publication/70155503
8. https://www.nps.gov/articles/000/wolf-reintroduction-changes-ecosystem.htm

Jaguar Comment:

The jaguar (*Panthera onca*) is the largest cat species in the Americas and serves as a keystone predator, requiring extensive areas of natural habitat and abundant prey to maintain viable populations.[1] Jaguars exhibit large home ranges and low population densities, making them especially vulnerable to direct harm such as poaching, as well as indirect impacts from habitat loss and fragmentation.[1] Because jaguars depend on large, connected tracts of habitat for hunting and breeding, the species is rarely present in any one location for extended periods, but their survival hinges on the integrity of these landscapes.[2] Under the proposed regulation, important jaguar habitats such as corridors essential for dispersal and genetic exchange, are likely to be legally removed or degraded when jaguars are not physically present, severing population connectivity and undermining their ability to reproduce and maintain healthy populations.[3] The proposed regulatory change would likely accelerate population declines, increase local extinctions, and push the species closer to extinction across much of its range.[1] Such declines will make it much more likely that Federal projects affecting the jaguar will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service modify its management of the jaguar to compensate the anticipated increased landscape fragmentation and population isolation anticipated as a result of the proposed regulatory change?

[1] https://www.fws.gov/species/jaguar-panthera-onca
[2] https://www.fws.gov/project/jaguar-recovery-plan
[3] https://www.fws.gov/sites/default/files/documents/jaguar-critical-habitat-faqs.pdf

Lower Keys Marsh Rabbit Comment:

The Lower Keys marsh rabbit (*Sylvilagus palustris hefneri*) is a small, endemic mammal found only in the lower Florida Keys, inhabiting higher elevation areas within salt and freshwater marshes, mangroves, and shrubby wetland edges.[1] This species is highly dependent on dense herbaceous vegetation for food and cover, and is active year-round, exhibiting classic metapopulation dynamics-relying on the ability to recolonize vacant habitat patches to persist.[2] Because the Lower Keys marsh rabbit is a ground-dwelling, non-migratory species, it occupies its habitat continuously, making both occupied and unoccupied suitable habitat essential for its survival and recovery.[2] If habitat destruction is no longer considered "harm," suitable marsh rabbit habitat, particularly potential recolonization sites, will be available to be destroyed or fragmented while no rabbits are present. This would prevent recolonization, further isolate small subpopulations, and eliminate critical food, shelter, and nesting resources, ultimately disrupting the species' lifecycle and reducing its already low reproductive output.[3] Given that habitat loss and fragmentation, combined with predation by feral cats, are the primary drivers of decline, removing habitat protections that would ensue under the proposed regulation, would accelerate population decline and likely push the Lower Keys marsh rabbit towards extinction within decades, as predicted by population viability analyses.[3] Such declines will make it much more likely that federal projects affecting the Lower Keys marsh rabbit will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service compensate for the anticipated reduction in the Lower Keys marsh rabbit's likelihood of surviving and recovering in the wild?

[1] https://www.fws.gov/species/lower-keys-marsh-rabbit-sylvilagus-palustris-hefneri
[2] https://myfwc.com/wildlifehabitats/profiles/mammals/land/lower-keys-marsh-rabbit/
[3] https://www.fws.gov/media/lower-keys-marsh-rabbit-5-year-review

New Mexican Ridge-Nosed Rattlesnake Comment:

The New Mexican ridge-nosed rattlesnake (*Crotalus willardi obscurus*) is a small, montane rattlesnake endemic to a narrow range of isolated mountain canyons in southwestern New Mexico, southeastern Arizona, and adjacent regions of northern Mexico.[1] This species is highly habitat-specific, relying on belts of pine-oak woodland and coniferous forests at elevations between 5,500 and 9,000 feet, and is most active during the summer monsoon season.[2] Because the New Mexican ridge-nosed rattlesnake is restricted to these isolated and fragmented habitats, and spends much of its life concealed in talus slopes, leaf litter, or under rocks, its physical presence within any given patch of habitat is intermittent and difficult to detect.[2] However, the species' survival is tightly linked to the integrity of its habitat, as suitable microclimates, cover, and prey availability are essential for foraging, thermoregulation, and reproduction.[3] If habitat destruction - such as activities related to wildfire management or land development - is no longer considered "harm," then critical woodland and talus habitats would be available to be legally altered or removed during periods when snakes are not present above ground (e.g., during brumation or seasonal inactivity).[3] As a result, when individuals emerge to forage or reproduce, they will likely find their shelter, prey base, or microclimate requirements eliminated, disrupting their ability to complete their life cycle.[3] Such regulatory changes are likely to accelerate the decline of this already critically endangered species, as its small, isolated populations are highly susceptible to demographic fluctuations, genetic bottlenecks, and stochastic events.[3] Habitat loss and fragmentation would further reduce population viability, increase inbreeding depression, and heighten its extinction risk. Such declines will make it much more likely that Federal projects affecting the New Mexican ridge-nosed rattlesnake will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its New Mexican ridge-nosed rattlesnake management to compensate for the above identified anticipated impacts?

[1] https://www.fws.gov/species/new-mexican-ridge-nosed-rattlesnake-crotalus-willardi-obscurus

[2] https://www.fs.usda.gov/wildflowers/rareplants/profiles/tep/crotalus_willardi_obscurus/index.shtml

[3] https://www.fws.gov/sites/default/files/documents/New-Mexican-Ridge-nosed-Rattlesnake-5-Year-Review.pdf

Alameda Whipsnake Comments:

The Alameda whipsnake (Masticophis lateralis euryxanthus) is a slender, fast-moving snake endemic to the inner Coast Ranges of California, where it inhabits fragmented patches of chaparral and coastal scrub in Contra Costa and Alameda counties.[1] This non-migratory subspecies is highly dependent on these core habitats for shelter, foraging, breeding, and hibernation, rarely venturing more than a mile from suitable cover, and is now restricted to five isolated populations due to extensive habitat loss and fragmentation.[1] Because the Alameda whipsnake spends nearly its entire life within or immediately adjacent to dense shrubland and rocky outcrops, direct bodily harm is most likely to occur during activities such as construction, vegetation clearing, or recreational use that physically disturb occupied habitat.[2] However, the snake's strong site fidelity and limited dispersal ability mean that even when individuals are not present, the destruction or degradation of their habitat-such as removal of chaparral, alteration of microhabitats, or increased predation risk from urban edge effects-can have severe, lasting impacts on population viability.[2] If habitat destruction is no longer treated as harm under regulatory frameworks, large areas of chaparral and scrub would become available to be legally cleared or converted during periods when snakes are inactive or undetected, especially during its winter hibernation period when surface vegetation could be removed, leaving returning individuals without the essential cover and resources needed for survival and reproduction.[3] This is likely to eliminate critical basking, foraging, and breeding sites, and further fragment already isolated populations, greatly reducing the species' ability to persist in the wild.[3] Such regulatory changes would likely accelerate the decline of the Alameda whipsnake, pushing it closer to extinction as its already limited and fragmented populations lose the habitat necessary for completing their life cycle and maintaining genetic diversity. Such declines will make it much more likely that Federal projects affecting the Alameda whipsnake will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its management of the Alameda whipsnake to compensate for these anticipated impacts?

[1] https://www.fws.gov/species/alameda-whipsnake-masticophis-lateralis-euryxanthus
[2] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=3294
[3] https://www.fws.gov/sites/default/files/documents/alameda-whipsnake-5-year-review.pdf

Virginia Big-Eared Bat Comment:

The Virginia big-eared bat (*Corynorhinus townsendii virginianus*) is a federally and state-listed endangered bat that is found year-round in a limited number of caves in the central and southern Appalachians, with distinct sites used for winter hibernation and summer maternity colonies.[1] This species exhibits strong site fidelity, returning to the same caves for roosting, hibernation, and reproduction, and relies on surrounding forested habitats for foraging, with a diet composed primarily of moths whose larvae depend on healthy forest ecosystems.[2] Virginia big-eared bats are highly cave-dependent for hibernation and generally move only short distances between their hibernation caves and their summer roosting.[3] At any particular moment in time, much of their hibernation or foraging habitat is unoccupied.[4] If habitat destruction, such as the loss or alteration of caves, forested foraging grounds, or the fragmentation of movement corridors, is no longer considered "harm" under regulatory definitions, these essential habitats will be able to be destroyed or degraded when bats are not present, severely impacting the Virginia big-eared bat's ability to survive and successfully reproduce.[5] The loss of protection for habitat would mean that caves used for maternity or hibernation could be altered or removed while the bats are occupying their summer roosting habitat.[6] Similarly, surrounding forests could be cleared or fragmented while the bats are in the hibernation caves, leaving returning bats without safe roosts or sufficient food resources.[7] This would disrupt their lifecycle, resulting in population declines due to reduced reproductive success and increased mortality from habitat fragmentation and loss. The proposed regulatory change would almost certainly accelerate the decline of the Virginia big-eared bat, pushing the species closer to extinction as their already limited populations become unable to sustain themselves. Such declines will make it much more likely that Federal projects affecting the Virginia big-eared bat will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA and the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. What is the Service's strategy for managing the consequences of these anticipated effects to the Virginia big-eared bat's conservation potential resulting from the proposed rule change?

1. https://www.fws.gov/species/virginia-big-eared-bat-corynorhinus-townsendii-virginianus
2. https://www.nps.gov/articles/000/virginia-big-eared-bat.htm
3. https://www.fws.gov/media/virginia-big-eared-bat-fact-sheet
4. https://www.fws.gov/library/collections/virginia-big-eared-bat
5. https://www.fws.gov/media/virginia-big-eared-bat-5-year-review-2013
6. https://www.ncwildlife.org/Conserving/Species/Endangered-Species/Virginia-Big-eared-Bat
7. https://www.fs.usda.gov/nfs/11558/www/nepa/114352_FSPLT3_5293834.pdf

Roseate Tern Comment:

The Roseate Tern (*Sterna dougallii dougallii*) is a small inshore seabird that nests on small islands in the northeastern USA and southeastern Canada.[1] More than 90% of the population nests on three islands in New York and Massachusetts.[2] Of the three islands, one has recently been restored,[3] one is severely threatened by erosion,[4] and one is experiencing deterioration due to erosion.[4] Due to the species' severe conservation condition, habitat loss is a significantly greater threat to the species' survival than direct losses of individuals.[5] Because the nesting islands are occupied by terns for only about four months during the summer, if the definition of harm is changed as proposed, these habitats would be at risk of degradation through casual visitation outside of the nesting season without the protections afforded by the ESA.[6] History has shown that these impacts lead to the slow degradation of the species' reproductive habitat, which is anticipated to lead to the species' decline and likely extirpation.[7] Such declines will make it much more likely that Federal projects affecting the [insert species common name] will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. Given these anticipated impacts to the roseate tern's conservation, how will the Service adjust its conservation strategy?

1. https://www.fws.gov/species/roseate-tern-sterna-dougallii-dougallii
2. https://pubs.usgs.gov/fs/2005/3099/report.pdf
3. https://www.mass.gov/service-details/roseate-tern-recovery
4. https://www.nps.gov/articles/seabird-nesting-islands.htm
5. https://ecos.fws.gov/docs/recovery_plan/970930b.pdf
6. https://www.fws.gov/law/endangered-species-act
7. https://www.fws.gov/story/2022-04/habitat-loss-wildlife

Kemp's Ridley Sea Turtle Comment:

The Kemp's ridley sea turtle (*Lepidochelys kempii*) is the smallest and most critically endangered sea turtle species, spending nearly its entire life in the Gulf of Mexico's coastal waters, with females coming ashore only briefly and in synchronized masses (arribadas) to nest on a handful of beaches, primarily at Rancho Nuevo, Mexico.[1] The species exhibits strong nest-site fidelity, with females returning to the same beach where they hatched to lay eggs, making the survival of specific nesting beaches vital for the completion of their life cycle.[2] Because Kemp's ridley sea turtles spend almost all of their lives at sea and only come ashore to nest for short periods, their critical nesting habitat is unoccupied for much of the year, but remains essential for successful reproduction and species survival.[3] If habitat destruction is no longer treated as harm under the Endangered Species Act, nesting beaches would become available to be legally altered or destroyed outside the nesting season, when no turtles are present, leaving returning females without suitable sites to lay eggs and hatchlings without access to the sea.[4] Such loss or degradation of nesting habitat would prevent successful reproduction, resulting in further population declines and driving the species closer to extinction, as its already limited reproductive output would be further reduced or eliminated.[5] Such declines will make it much more likely that Federal projects affecting the Kemp's ridley sea turtle will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. How will the Service adjust its Kemp's ridley sea turtle recovery efforts to compensate for these anticipated impacts to the species' crucial beach habitat?

[1] https://www.fws.gov/species/kemps-ridley-sea-turtle-lepidochelys-kempii

[2] https://www.nps.gov/pais/learn/nature/kempsridley.htm

[3] https://www.fisheries.noaa.gov/species/kemps-ridley-turtle

[4] https://www.fws.gov/media/kemps-ridley-sea-turtle-fact-sheet

[5] https://pubs.usgs.gov/fs/2009/3071/pdf/fs2009-3071.pdf

Northern Spotted Owl Comment:

The northern spotted owl (Strix occidentalis caurina) is a medium-sized owl native to Washington, Oregon, and northern California, breeding at traditional sites in old-growth and mature forests amid extensive foraging habitat.[2] Continuing population declines have been documented throughout its range from the 1980s through the most recent meta-analysis in 2020.[3] Habitat modification was the primary reason for the 1990 listing of the NSO as threatened under the U.S. Endangered Species Act and was a factor noted in the "Warranted but Precluded" finding in 2020.[4] Because the northern spotted owl depends on specialized, often seasonal nesting locations and large, contiguous foraging areas, these habitats are frequently unoccupied when owls are not physically present.[1] If habitat destruction is no longer considered "harm," these critical nesting and foraging habitats would be available to be removed or altered during the owls' absence, leaving them without the necessary resources for breeding and survival upon their return. Such habitat modifications would contribute to further population declines continuing the species' decline toward extinction, especially when combined with ongoing threats like the recent invasion by the barred owl.[2] Such declines will make it much more likely that Federal projects affecting the northern spotted owl will have to include additional conservation measures to avoid receiving jeopardy biological opinions when reviewed pursuant to section 7(a)(2) of the ESA. Similarly, the Service will need to require substantially more mitigation when issuing incidental take permits pursuant to section 10(a)(1)(B) of the ESA. In light of the impacts anticipated from the proposed rule, how will the Service fulfill continuing urgent habitat protection needs while addressing invasive barred owl competition?

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[2] *Gutierrez, R.J., A.B. Franklin, and W.S. LaHaye. (2020). Spotted owl (Strix occidentalis). Version 1.0. In: Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA.*

[3] *Franklin, A.B. et al. (37 co-authors). (2021). Range-wide declines of northern spotted owl populations in the Pacific Northwest: A meta-analysis. Biological Conservation 259 (2021): 109168*

[4] *Federal Register 85:81144. Dec.15, 2020.*

Concluding Comment:

We are particularly troubled by what appears to be a lack of involvement of endangered species experts and Endangered Species Act practitioners within the Fish and Wildlife Service and National Marine Fisheries Service. We find it impossible to believe that experts in conservation or endangered species biology were involved in the development of this proposal. We feel very confident in our belief that if these experts had been included in this effort the Administration would have gained important insights into the ecological consequences of this proposal. The Government has many technical experts in its employment, granted significantly fewer than just a few months ago, but the agencies still possess sufficient expertise to recognize the pitfalls of this proposal. We urge the Administration to take advantage of the many technical experts still in its employment. ***To this end we request that this proposal be withdrawn and that the appropriate expertise be employed to advance a more legally and biologically sound proposal.***