

Connie Barlow's **Summary of Key Institutional Comments** re the proposed USFWS regulation change that will offer more flexibility for "recovery" than "historical range" loci

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Barlow's interest: As founder of **Torreya Guardians in 2005**, she has documented the first citizen use of the **plants-only "exception" in the ESA**. The group acquired seeds of the subcanopy, glacial relict tree *Torreya taxifolia* from horticultural plantings well beyond its "historical range" in northern Florida. They then transported those seeds onto private lands (and some botanical gardens) into many northward states east of the Mississippi River. Seeds were planted in both full-sun, mowed sites for accelerated seed production and within deciduous forests for the purpose of "rewilding" the species into poleward habitats. This effort is well known as the first example of intentional and successful long-distance assisted migration of an endangered plant. For more information visit: [Torreya taxifolia wikipedia page](#), [Torreya Guardians website](#), and [Torreya Guardians wikipedia page](#).

Barlow (Torreya Guardians) submitted a 5-page pdf supportive comment on the proposed regulatory change. Her main suggestion is for the agency to create IMPLEMENTING guidelines distinct for PLANTS. For a variety of reasons she lists, climate-weakened plants (notably, glacial relicts) can be recovered using far more flexible and less expensive methods than those necessary for listed animals. (It appears that only one other institutional comment focused on plants: Nevada Division of Natural Heritage Botany Program.)

SUMMARIES OF KEY INSTITUTIONAL COMMENTS are grouped below into **Supportive, State Agencies Supportive, State Agencies Against**, and brief mention of **Business and Industry Against**. Some western county commissions filed comments; from what I sampled, those appear to focus on the gray wolf and Mexican gray wolf reintroductions that affected ranchers.

ACCESS EACH COMMENT IN FULL by going to this USF&WS url and inserting the institutional name into the Search box:

<https://www.regulations.gov/document/FWS-HQ-ES-2021-0033-0001/comment>

Two general observations:

1. Most comments **support the Tribal addition**; none viewed by this author are against it. (So no comments on that topic are excerpted here.)

2. NRDC, SIERRA CLUB, WILD EARTH GUARDIANS and SOUTHERN ENVIRONMENTAL LAW CENTER, while supportive, all have **concern that changing the existing regulation from "suitable" habitat to "necessary"** weakens recovery.

SUPPORTIVE COMMENTS

• NATURAL RESOURCES DEFENSE COUNCIL [long and well worth reading]

Supportive. Uniquely gives a helpful history of the ESA, incl 1982 amendments for experimental populations.

"The Service's proposal to clarify its ability to authorize EPs outside species' historical range falls squarely within its statutory mandate and better fulfills the agency's overarching duty to use its authority to conserve species. NRDC, therefore, encourages the agency to finalize this change as proposed."

"The Service's proposal to allow for introduction of EPs outside of species' historical range facilitates conservation of listed species by enhancing the Service's ability to help species adapt to climate change. *See* 87 Fed. Reg. 34625 (explaining circumstances in which the Service might exercise its authority to allow for EPs to be introduced outside species' historical range). We are already witnessing effects of climate change, including rising temperatures and increased incidence of extreme weather events and accompanying fires, floods, and droughts. These changes directly impact species and their habitat. Species' ranges are shifting in response to changing climates, often poleward or upward in altitude. Nevertheless in many circumstances, populations are unable to shift at the rate needed to survive climate change. In other cases, geographic barriers prevent them from moving to more suitable ranges. These populations are especially vulnerable to extinction. For species that are unable to shift their range in response to a changing climate, transportation and introduction of populations in newly habitable areas might be crucial to those species' survival."

• SIERRA CLUB

"supports" the proposal. mentions "climate change" but points to several language problems, notably, "Replacing the term "suitable natural habitat" with "habitat that is necessary to support one or more life history stage" introduces confusion and the potential for unnecessary restrictions."

• WILD EARTH GUARDIANS

"We write in support of most of the proposed updates to the § 10(j) regulations —in particular removal of the "probable historic [sic] range" requirement. But as we discuss below, the proposed rulemaking creates ambiguity by replacing the term "natural suitable habitat" in 50 C.F.R. § 17.81(a) with "necessary to support one or more life history stages." We request the Service change the word "necessary" to "able" or "capable," or alternatively retain the phrase "suitable natural habitat." We also encourage the Service to more fully address the importance of species migration, expansion, and connectivity."

The “probable historic range” requirement sits in direct tension with an ever-growing scientific understanding of how climate change is altering the natural world and shifting species’ habitat. A 2011 meta-analysis of over a thousand species found that range boundaries moved, per decade, an average of 16.6 kilometers towards the poles and 11.1 meters upward in elevation. As temperatures rise, “most species will either need to disperse to remain within their current niche for maximum temperatures or else shift their niches substantially to survive under . . . warmer conditions.” Many species will not be able to disperse quickly enough to avoid extinction. Assisted migration will be a necessary tool to help species adapt and thereby fulfill the central goal of the ESA to conserve threatened and endangered species.

When the Service first promulgated § 10(j) regulations in 1984, the agency simply did not understand the magnitude of climate change and its effect on imperiled species and their habitat. ... Moreover, neither the purpose and policy of the ESA nor the statutory language of § 10(j) limits the ability of the Service to introduce species outside of historical range. To the contrary, the Act directs the Service to “conserve” of listed species, and defines “conservation” as “the use of *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 [the ESA] are no longer necessary.” This includes “propagation, live trapping, and transplantation” without geographic constraints. ... The proposed revision also addresses the reality that we don’t know for certain what “historical habitat” was for many species. Many plants and animals have shrunk in range or gone extinct before the scientific community could delineate their historical range. MENTIONS THAT **NEPA (EIS)** ALREADY MUST BE DONE FOR ALL 10J INTRODUCTIONS.

- **TORREYA GUARDIANS** (submitted by Connie Barlow)

A 5 page PDF in support of the regulatory change was submitted, with overall suggestions that the citizen effort of Torreya Guardians be used as CASE STUDY for drafting implementing guidelines. Suggestions were in 4 categories:

1. Create implementation frameworks and policies that are distinct for plants.
2. Encourage nongovernmental entities to use the ESA "exception" for plants.
3. Follow the lead of the USDA Forest Service.
4. Facilitate respectful dialogue and understandings of worldview differences.

- **REWILDING INSTITUTE** (Dave Parsons, Mexican gray wolf lead recovery scientist)

"We are generally supportive of the proposal ..." climate change. A lot of details on the Mexican gray wolf reintroduction experience.

- **ENVIRONMENTAL POLICY INNOVATION CENTER**

"strongly in support" ... "As described in the report linked to our comments, EPIC has been advocating for this shift in policy for more than a year. Experimental population designation was among the best new authorities added to the Endangered

Species Act by Congress in 1982 and the FWS and states have made effective use of this tool in a number of cases."

Unique important contribution is **their 2021 report, "Reintroduction: An Assessment of Endangered Species Act Experimental Populations" (34 pp PDF)**, where they found:

"The FWS' use of experimental population designations has fallen since 2010, and we also encourage the agency to make more frequent use of this tool. Whereas nearly 70 species or populations were the focus of experimental population designation before 2010, fewer than 20 have been affected by designations since that time. We have previously documented the fact that nearly half of designations do not result in an attempted introduction."

... "In the face of climate change, it makes even more sense for the FWS to carry out even more speculative designations for species that may face significant future range contractions. Establishing those experimental introduction areas in advance of their need would eliminate a bureaucratic step in what could be emergency circumstances created by extreme flooding, fire or drought that necessitate rapid action to rescue species. In such situations, a previously approved experimental population would serve as a lifeboat that could minimize or eliminate any time that rescued species need to spend in captivity."

• **CENTER FOR BIOLOGICAL DIVERSITY**

"The Center supports the Proposed Rule which would strengthen the implementation and use of experimental populations as a key conservation tool for species recovery by removing the regulatory language restricting the Service from reintroducing experimental populations outside of a species' historical range. The Endangered Species Act imposes no such statutory restriction, and indeed the Act gives the Service broad flexibility to establish an experimental population in areas outside of a species' current range as long as the Secretary determines that "such release will further the conservation of such species. Further, as climate change, habitat loss, invasive species, and other threats cause many species' suitable habitat to shift, it will become increasingly necessary and appropriate to establish experimental populations outside of a species' historical range to provide for their conservation and help them adapt to the habitat-related impacts of such threats. Therefore, for the reasons outlined in more detail below, the Center supports the Proposed Rule and urges the Biden administration to finalize it as soon as possible."

"... The Center, however, urges the Service to retain the conservation of species in their native ecosystems as the primary goal consistent with statutory directive. Introduction of species outside their historical range should only be used as a last resort when measures to conserve species in their native range have been exhausted or have no chance of success. In no case should introduction of species outside of their historic range be used to allow ongoing destruction of habitat in their native range that could otherwise be prevented. We ask that the Service include language to this effect in the final rule."

"Because of the overwhelming political pressure felt by career scientists at the Service, proactive efforts to conserve our most critically imperiled species to date have been inadequate. For example, the FWS has become extremely timid when it comes to embarking upon intensive conservation actions such as translocations under section 10(j) of the Endangered Species Act. Despite the authority existing since 1988, the FWS has *never* established an "essential" experimental population to enhance the conservation of any species, not even a species only in captivity. Given the extreme urgency of the extinction crisis, this failure is unacceptable."

Several section heads: 1. Climate Change Will Necessitate the Translocation of Species from Their Historic Range to New Habitat. 2. Most Species Have Lost Extensive Areas of their Historic Range

- **SOUTHERN ENVIRONMENTAL LAW CENTER** - Coalition of 24 conservation groups in southeastern USA." [Well worth reading in full.]

"We applaud the Service's forward-thinking proposal to look outside species' historic ranges when considering the best places to establish experimental populations. Such a change will enable the Service to better fulfill its duties to conserve and recover species in the face of accelerating threats, including those from climate change."

32 species in SE already have "experimental populations" — mostly freshwater invertebrates and fish; no plants. Summarizes the history of the 1984 amendments about looking for extra habitat within historic range because "The Service also previously expressed concerns about releasing species beyond their historic range based on an assumption that such areas would represent unsuitable habitat or would subject the reintroduced population to "doubtful survival chances"—ideas that no longer apply to a human-altered and climate-changed landscape where such reintroductions may actually be necessary to support the goals of the ESA. *See id.* Even then, the agency's own 1984 regulations envisioned a need to authorize reintroductions beyond species' probable historic range in the "extreme case" if that habitat had become unsuitable."

GOOD QUOTE: "Unfortunately, a lack of suitable habitat has become less an "extreme case" and more an accelerating global norm in the years since FWS first promulgated regulations under section 10(j). As the Service acknowledges in its preamble to the Proposed Rule, "it did not anticipate the impact of climate change on species and their habitats," which it has "since learned ... is causing, or is anticipated to cause, many species' suitable habitat to shift outside of their historical range." "Species adapt as quickly as possible to their changing environments, but the rate of current change is so rapid—and the movement of species so hampered by existing habitat fragmentation—that intervention in the form of species reintroduction into new, previously uninhabited areas may become increasingly necessary to facilitate the migration of species ranges and ultimately prevent species extinction."

SUPPORTIVE, BUT RECOMMENDS DETAILED NEW RESEARCH AND MONITORING REQUIREMENTS (so would make the new reg very costly)

• **THE WILDLIFE SOCIETY** - (an organization of professional biologists)

Novel suggestions are the extent of detailed professional reviews that should be required prior to using the new tool and the extent of professional monitoring needed afterward. "Fundamentally though, when do the risks of no action (i.e., this species is virtually certain to go extinct unless introduced outside the historical range) outweigh the possible risks to the recipient system?" Another detail is how would recovery in an experimental population but not the historic range affect "delisting"?

STATE AGENCIES GENERALLY SUPPORTIVE BUT STRONG STATE'S RIGHTS:

• **MISSOURI DEPARTMENT OF CONSERVATION**

"We agree that such circumstances are likely to occur for many species, particularly those limited to narrow climate conditions and/or small and isolated habitat patches. These species may persist only by moving to suitable habitat outside of their known historic range, and some species may be unable to do so without human assistance. However, we are concerned that introducing a species to habitat outside its historic range could cause significant impacts to species native to the introduction site, and we strongly advise careful consideration of potential impacts prior to considering such an introduction. ... **For example, in Missouri the introduction of woodland crayfish, a Missouri native, to a nearby watershed outside of its native range, has led to the decline of two crayfish species native to that watershed** (Big River crayfish and St. Francis River crayfish), such that they have been proposed for listing as threatened under the ESA. ... We posit that allowing one species to become extinct in the wild is, in most case, preferable to causing the endangerment of multiple species.

• **NORTH CAROLINA WILDLIFE RESOURCES COMMISSION:**

"The NCWRC supports the need to consider introductions of species outside their probable historic range. The proposed change would benefit species especially if the primary habitat of the species were unsuitably and irreversibly altered or destroyed by factors like climate change, invasive species, and urban sprawl. However, the NCWRC cannot support the proposal as written. We request that a requirement for concurrence from the state fish and wildlife agency be added. We understand the intent of consultation is to ensure that state concerns about any potential restoration efforts are incorporated, but there is a substantial difference between consultation

and concurrence. The introduction of a species outside its historic range may have serious repercussions on other species by increasing competition for resources, threatening genetic fitness, altering habitats, and ultimately harming native, state trust species that NCWRC is responsible for conserving."

• **FLORIDA FISH & WILDLIFE CONSERVATION COMMISSION**

Really concerned about invasion of recipient ecosystems, so the "support" is in the abstract. Use IUCN Guidelines. "Although we agree with the proposal in principle, we are concerned about the potential for serious unintended consequences for species and ecosystems. For freshwater fishes alone, there are numerous examples of introduced fishes decimating populations of other native fishes, hybridizing with related species, and significantly disrupting native communities and ecosystems. We view introduction outside of a species' historical range as a method of last resort to be applied when it is clear that the historic range can no longer support the species, and when potential adverse impacts to other species have been thoroughly evaluated. We recommend including safeguards against unintended consequences and urge caution in how the proposed rule is applied. ... the Service engage with State wildlife agencies and other stakeholders in a formal decision analysis process (e.g., structured decision-making) when determining whether to proceed with an introduction outside of the species' historical range."

• **OREGON DEPT FISH AND WILDLIFE**

Lukewarm owing to concern for recipient ecosystems and trouble for state and tribal land rights. "burden of proof should fall on those advocating conservation."

• **ALASKA DEPT FISH & GAME**

Mentions "animals" so no consideration of plants. Unique in its emphasis that the state is against "critical habitat" designations; but because "experimental populations" can't have that designation, they are okay with the proposed changes.

"In the interest of furthering recovery and delisting of species threatened by climate change, the State of Alaska cautiously supports the concept of the proposed revision, but we are cognizant of the potential for unforeseen negative consequences of species introductions. Previous experience with injudicious introductions of species into previously unoccupied habitat has exposed substantial potential for impacts to extant populations from poorly understood ecological, genetic, and behavioral interactions among species, as well as introductions of diseases. Alaska recommends strongly that the Service go forward with any revisions to this regulation only if the revised regulation contains a strict requirement that any decision to establish an experimental population must be based on a thorough, scientifically defensible assessment of the benefits and risks, including the likelihood of success, bounded by rigorous sidebars and guidelines for analyses to avoid any foreseeable and unforeseen consequences, ecological and otherwise." ... "an affected state must assent to the proposed action."

"The State of Alaska supports the proposed revision to the regulations subject to development of adequate scientific guidelines and sidebars to avoid detrimental consequences to existing populations of fish and wildlife and their habitats. In the Appendix, we provide examples of State of Alaska policies and guidelines for introductions of fish and wildlife species that we recommend the Service consider in revising the regulations. We would happily work with the Service on this issue."

• NEVADA DIVISION OF NATURAL HERITAGE **BOTANY** PROGRAM

SUPPORTS: "The threat from climate change to Nevada's rarest plant species is pervasive and concerning; many of Nevada's critically imperiled plant species (rounded state conservation status rank S1) are currently experiencing non-analogous to extremely different climatic conditions compared to a baseline period from 1960-1990 (McClinton et al., unpublished data). This includes Nevada's ESA-listed Threatened species *Astragalus phoenix* Barneby, *Enceliopsis nudicaulis* var. *corrugata* Cronq., *Grindelia fraxinipratensis* Reveal & Beatley, *Ivesia kingii* var. *eremica* (Coville) Ertter, *Mentzelia leucophylla* Brandeg., and ESA-listed Endangered species *Eriogonum ovalifolium* var. *williamsiae* Reveal and *Nitrophila mohavensis* Munz & Roos. Other listed species in Nevada [e.g., *Zeltnera nemophila* (Reveal, Broome & Beatley) G. Mans. (syn: *Centaurium namophilum*) (S2), *Ivesia webberi* Gray (S2), and *Spiranthes diluvialis* Sheviak (S1)] are likely experiencing similar changes."

"... rare plant species inhabiting mountaintops and valley bottoms (as many of these do) tend to be particularly vulnerable. High elevation species experience habitat loss as their bioclimatic envelopes rise because mountaintops decline in area with increasing elevation, until there is no land left to ascend; species on valley floors often have no suitable habitat available at higher elevations, and few topographical refugia available to help buffer increasing temperatures and changes in precipitation (Ackerly et al., 2010; Caicco et al., 2012; Corlett and Westcott, 2013). In both cases, movement among patches of potentially suitable habitat to track climate change may be impossible due to natural dispersal limitations (Damschen et al., 2012). Establishing experimental populations of such species in suitable habitat at more climatically appropriate locations outside their historical range may be crucial to conserving that biodiversity in the wild as climate change progresses and should absolutely be available as a management option."

"With that said, we would like to re-emphasize the importance of conserving non- experimental populations in place wherever possible, and request that language be added that clarifies what types of threats are considered "appropriate circumstances" for experimental populations to be established outside of their historical range. Specifically, *only non- development-related pressures* (e.g. threats that are impossible to abate through protection of originally designated critical habitat, like climate change) *should be considered as appropriate reasons to establish experimental populations of rare plants outside of their historical range*. Care must be taken not to allow impacts within original critical habitat that would prematurely degrade its ability to support one or more life stages of the species, thereby necessitating establishment

of experimental populations to conserve the species. Similarly, successful establishment of experimental populations should not justify allowing impacts within original critical habitat areas, even if they are unoccupied. Many rare plant species are slow growing, long-lived on the order of decades, and have intermittent reproduction and establishment events that necessitate long-term monitoring before a determination can be made as to whether a new, self-sustaining experimental population with evolutionary potential has truly been created, or whether an originally extant population has truly been extirpated with no hope of recovery."

RECIPIENT ECOSYSTEMS: "The same traits that lead many plant species to be naturally rare, such as adaptation to challenging substrates, reduced competitiveness, limited dispersal, and low seed viability, make most rare plants unlikely to become invasive or have other negative impacts in new habitats."

STATE AGENCIES AGAINST:

• NEW MEXICO DEPARTMENT OF GAME & FISH

"The Department opposes the unnecessary and potentially harmful change of removing the requirement to analyze suitability of historic habitat prior to establishing experimental populations outside of their historic range. The proposed rule lacks a clear purpose and need, instead relies upon the potential future need to release species outside of historic range for unforeseen threats to species habitats. The Department urges the Service to provide empirical examples where the current regulations pertaining to establishing experimental populations has hindered species recovery prior to considering this proposed change."

• ARIZONA GAME & FISH [many unique arguments; well worth reading]

"The Department strongly opposes the unnecessary and potentially harmful changes in language to this rule as proposed. The proposed rule lacks a clear purpose and need, instead relying on nebulous mention of non-specific future changes to the niches of listed species. The current regulation already provides the flexibility and responsiveness that this proposed rule purports to fix. Most troubling is the potential for unintended and irreversible ecological consequences from the proposed language as a result of hybridization and competition with other listed and non-listed entities. Additionally, the legislative history to the 1982 amendments adding Section 10(j) clearly indicate this proposed rule language is inconsistent with congressional intent."

"In 1984, the Service acknowledged that a geographic restriction was necessary to comply with the purposes and policies of the Act and to remain consistent with a long-standing policy "*that the relocation or transplantation of native listed species outside their historical range will not be authorized as a conservation measure*" (Endangered and Threatened Wildlife and Plants; Experimental Populations, 49 FR 33885-33894, see page 33890). The Service further stated (page 33890) "...the

purposes and policies of the Act would be violated if the Service were to regularly permit the introduction of listed species into new habitat areas as exotic species.”

"If planning for recovery outside of historical range is deemed necessary by best available science, current rule language already allows for such actions. Attempting to recover endangered species in places where they never existed, or have not for thousands of years, would be potentially harmful without the limits afforded by the current language. The original 10(j) language requires the Service to fully evaluate historical habitat and document -- presumably with best scientific and commercial data available -- if recovery cannot be successful within the limits of historical range. Whereas, the proposed new language significantly lowers the bar in terms of scientific standards required and removes important safeguards needed to assure due diligence before deciding to attempt recovery of a species outside of its historical range. ... Attempting recovery outside of the evolutionary pressures under which a species evolved is inappropriate and poses unacceptable risks without adequate justification.

"... While there is discussion of climate change or invasive species affecting historical habitat, until it is well documented that historical range has been altered to the extent that it no longer supports recovery, there is little support for reintroductions outside of historical range."

BUSINESS AND INDUSTRY AGAINST (but well worth reading; important nuances)

NATIONAL ENDANGERED SPECIES ACT REFORM COALITION

National Alliance of Forest Owners (NAFO)

EUREKA COUNTY BOARD OF COMMISSIONERS (NEVADA) - well worth reading for its emphasis on recent SCOTUS decisions.

US CHAMBER OF COMMERCE

This SUMMARY of many/most of the INSTITUTIONAL COMMENTS (conservation organizations and state agencies primarily) is contributed by one of the commenters of a conservation organization: Connie Barlow, Torreya Guardians. For information on Barlow:

- Barlow publications ([personal webpage](#))
- Barlow publications on [Researchgate](#)