"EXPERIMENTAL POPULATIONS" FINAL RULE: FWS' RESPONSE TO CLIMATE CHANGE THREATS

by Carol J. Miller

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Climate change and invasive species are jeopardizing already endangered and threatened species, prompting the U.S. Fish and Wildlife Service (FWS) to finalize its 2023 rule allowing experimental populations to be introduced outside their historical range to further conservation of the species.[1] Some areas outside of the historical range are now capable of supporting a population because of climate change.[2] So far, designated experimental populations have not been classified as "essential" experimental populations, constricting the ability of FWS to designate habitat necessary for survival of the species.[3]

I. Climate Change Impact on Species

The summer of 2023 was the hottest on record (since global records began in 1880), according to the National Aeronautics and Space Administration's (NASA's) Goddard Institute for Space Studies,[4] eclipsing 2020 and 2016, which were previously tied for the high.[5] The National Oceanic and Atmospheric Administration (NOAA) reported that 2010-2020 had nine of the 10 hottest years on record.[6] Records continue to be broken since the Intergovernmental Panel on Climate Change (IPCC) reported that the period of 1995-2006 included 11 of the 12 warmest years.[7]

Rising temperatures increase the frequency and severity of storms and extreme weather. There have been record high temperatures for multiple days in Arizona,[8] flooding in New England,[9] fires in California,[10] tornados in the southeastern United States,[11] and stronger and more frequent hurricanes in recent years.[12]

The everyday impact of climate change on endangered and threatened species is especially concerning. The National Fish, Wildlife, and Plants Climate Adaptation Strategy Network's 2021 Climate Adaptation Strategy report observes:

> Climate change continues to impact species and populations in significant and observable ways. Terrestrial, freshwater, and marine organisms are responding to climate change by altering individual characteristics, the timing of biological events, and their geographic ranges. Local

1. *See* Summary, Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642 (July 3, 2023).
2. *Id.* at 43644 (FWS response to comment 1).
3. Erin H. Ward & Benjamin M. Barczewski, Congressional Research Service, IF12407, Experimental Populations Under the Endangered Species Act (2023), https://sgp.fas.org/crs/misc/IF12407.pdf.
4. Press Release, NASA, NASA Announces Summer 2023 Hottest on Record (Sept. 24, 2023).
5. *See* NASA Global Climate Change, *Vital Signs: Global Temperature*, https://climate.nasa.gov/vital-signs/global-temperature/ (last updated Nov. 30, 2023).
6. *2022 Was World's 6th-Warmest Year on Record*, NOAA (Jan. 12, 2023), https://www.noaa.gov/news/2022-was-worlds-6th-warmest-year-on-record.
7. Yuwei Zhang, *"Warming of the Climate System Is Unequivocal": Highlights of the Fourth IPCC Assessment Report*, 44 UN Chron. (2007), https://www.un.org/en/chronicle/article/warming-climate-system-unequivocal-highlights-fourth-ipcc-assessment-report; *see also* National Research Council, Advancing the Science of Climate Change 286 (2010), https://doi.org/10.17226/12782 (discussing report of the IPCC, formed by the United Nations and World Metrological Organization).
8. *Phoenix Hit 110 Degrees on 54 Days in 2023, Setting Another Heat Record*, PBS (Sept. 10, 2023), https://www.pbs.org/newshour/nation/phoenix-hit-110-degrees-on-54-days-in-2023-setting-another-heat-record (noting that scientists blame climate change and El Niño for the warming temperatures and that Maricopa County, Arizona, alone had 425 heat-related deaths in 2022, with more expected in 2023).
9. *See* Tevin Wooten, *Here's How Climate Change Is Making Flooding Events More Likely*, NBC Bos. (Sept. 12, 2023), https://www.nbcboston.com/weather/heres-how-climate-change-is-making-flooding-events-more-likely/3133954/ (noting that "[a] changing climate affects the intensity and frequency of precipitation"); Peter Banacos, *The Great Vermont Flood of 10-11 July 2023: Preliminary Meteorological Summary*, Nat'l Weather Serv. (Aug. 5, 2023), https://www.weather.gov/btv/The-Great-Vermont-Flood-of-10-11-July-2023-Preliminary-Meteorological-Summary.
10. California Department of Fish and Wildlife, *Science: Wildfire Impacts*, https://wildlife.ca.gov/Science-Institute/Wildfire-Impacts (last visited Jan. 12, 2024); *see also What Do Wild Animals Do in Wildfires?*, Nat'l Geographic (Sept. 7, 2020), https://www.nationalgeographic.com/environment/article/150914-animals-wildlife-wildfires-nation-california-science.
11. National Weather Service, *Is Tornado Frequency Increasing in Parts of the U.S.?*, https://www.weather.gov/lmk/niu_tornado_frequency_study (last visited Jan. 12, 2024) (citing Vittorio A. Gensini & Harold E. Brooks, *Spatial Trends in United States Tornado Frequency*, Climate & Atmospheric Sci. (Oct. 17, 2018), https://www.nature.com/articles/s41612-018-0048-2.pdf) (finding "a decrease in the traditional 'Tornado Alley' of the Great Plains and an increase in the Southeast's 'Dixie Alley'").
12. Arianna Johnson, *Here's What "Rapid Intensification"—Like With Lee and Adalia—Means*, Forbes (Sept. 8, 2023), https://www.forbes.com/sites/ariannajohnson/2023/09/08/heres-what-hurricane-rapid-intensification-like-with-lee-and-idalia-means/ (noting that the Weather Channel points to increase in ocean temperatures due to climate change as a reason for rapid intensification).

> and global extinctions may occur when climate change outpaces the capacity of species to adapt.[13]

The rise in ambient temperature of the water and sand where eggs undergo embryonic development affects the gender distribution of reptile species such as the dusky gopher frog and gopher tortoise.[14] The gender distribution, in turn, affects the likelihood that the offspring will have an opportunity to reproduce. As an ectotherm, the gopher tortoise also depends on the environment to regulate its body temperature.[15]

The IPCC report *Climate Change 2022: Impacts, Adaptation, and Vulnerability* predicted with "high confidence" that an increase in the magnitude of heat extremes will result in losses of hundreds of species, with some of the trends being irreversible.[16] It also concluded with "very high confidence" that there will be mass mortality events, such as the loss of kelp forests.[17] The report stated:

> Climate change has altered marine, terrestrial and freshwater ecosystems all around the world (very high confidence). Effects were experienced earlier and are more widespread with more far-reaching consequences than anticipated (medium confidence). Biological responses, including changes in physiology, growth, abundance, geographic placement and shifting seasonal timing, are often not sufficient to cope with recent climate change (very high confidence). Climate change has caused local species losses, increases in disease (high confidence) and mass mortality events of plants and animals (very high confidence), resulting in the first climate-driven extinctions (medium confidence), ecosystem restructuring, increases in areas burned by wildfire (high confidence) and declines in key ecosystem services (high confidence).[18]

The impact of climate change and invasive species is already quite apparent. Corals on the Florida coast are bleaching with high mortality due to 100-degree water.[19] If sea levels rise beyond three feet, there is little that can be done for the little Florida Key deer, short of relocating it outside of its current habitat.[20]

Experimental populations have been established due to species depletion because of an invasive species. The brown tree snake, a likely stowaway on cargo ships, became so plentiful as an invasive species in Guam that survival of bird species is jeopardized by the snake's consumption of their eggs.[21] The predation of the brown tree snake caused the Guam rail and kingfisher (sihek) to become extinct in the wild, so FWS used captive birds to establish experimental populations on other islands outside their historical range.[22]

II. Introducing Experimental Populations Outside a Historical Range

To address the impact of climate change and invasive species, FWS finalized a rule change on July 3, 2023,[23] to allow "experimental populations" to be introduced into habitat outside the species' historical range "for conservation purposes," if the historical range is no longer capable of supporting the species due to climate change or invasive species[24] or other changes to the ecosystem. Experimental populations are authorized under the Endangered Species Act (ESA) §10(j).[25] Although the ESA does not directly address climate change motivations or other specific threats, ESA §10(j) does authorize the Secretary of the Interior to release listed species outside their current range if necessary to "further the conservation of" the

13. Douglas Lipton et al., *Ecosystems, Ecosystem Services, and Biodiversity*, *in* Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II, at 268, 269 (David Reidmiller et al. eds., U.S. Global Change Research Program 2018), https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf.
14. Interview with Jim Lee, Biologist, The Nature Conservancy, at Camp Shelby, Miss. (May 25, 2022) (on file with author) (noting that temperatures above 31 degrees Celsius produce all females and below 28 degrees Celsius produce all males). *See also* Alex Quinn, *How Is the Gender of Some Reptiles Determined by Temperature?*, Sci. Am. (June 25, 2007), https://www.scientificamerican.com/article/experts-temperature-sex-determination-reptiles/.
15. *See* Florida Fish and Wildlife Conservation Commission, Gopher Tortoise, https://myfwc.com/media/19512/gt-specprofile.pdf.
16. Hans-O. Pörtner et al., *Summary for Policymakers*, *in* Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change 3, 9 para. B.1.2 (Hans-O. Pörtner et al. eds., Cambridge Univ. Press 2022), https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf.
17. *Id.*
18. *Id.*
19. Eric Zerkel, *Florida Ocean Temps Surge to 100 Degrees as Mass Coral Bleaching Event Is Found in Some Reefs*, CNN (July 26, 2023), https://www.cnn.com/2023/07/25/us/florida-ocean-heat-coral-bleaching-climate/index.html.
20. *See* Center for Biological Diversity, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations 4 (Aug. 8, 2022), https://www.regulations.gov/comment/FWS-HQ-ES-2021-0033-0499; Animal Legal Defense Fund, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations 3 (Aug. 8, 2022), https://www.regulations.gov/comment/FWS-HQ-ES-2021-0033-0431; Defenders of Wildlife, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations 3 (Aug. 8, 2021 [sic]), https://www.regulations.gov/comment/FWS-HQ-ES-2021-0033-0482.
21. See discussion in Kelly Davis, *An Unlikely Climate Hero? Experimental Populations Outside Their Historical Range*, 53 ELR 10450, 10454-55 (June 2023), https://www.elr.info/articles/elr-articles/unlikely-climate-hero-experimental-populations-outside-their-historical-range. The Guam rail and kingfisher (sihek) have been relocated as experimental populations on the islands of Rota and Palmyra Atoll, respectively. Press Release, FWS, U.S. Fish and Wildlife Service Announces the Final Rule for the Experimental Population of Sihek on Palmyra Atoll (Apr. 13, 2023), https://www.fws.gov/press-release/2023-04/final-rule-experimental-population-sihek (noting that the sihek has been extinct in the wild since 1988, but has been maintained in captivity by The Nature Conservancy and FWS, and will be released on the island of Palmyra Atoll once the rule takes effect). This follows the 30-year success of the introduction of the Guam rail on the Rota island as an experimental population.
22. Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of the Guam Kingfisher, or Sihek, on Palmyra Atoll, USA, 88 Fed. Reg. 19880 (Apr. 4, 2023).
23. Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642 (July 3, 2023).
24. National Wildlife Federation, *Invasive Species*, https://www.nwf.org/Educational-Resources/Wildlife-Guide/Threats-to-Wildlife/Invasive-Species (last visited Jan. 12, 2024).
25. 16 U.S.C. §1539(j), ELR Stat. ESA §10(j).

listed species[26] based on "the best scientific and commercial data available."[27]

The key 2023 regulatory change deletes the restriction that the placement of experimental populations be in the historical range.[28] Now, if the new location is (a) "capable of supporting the experimental population" of an endangered or threatened species[29] and (b) will "further the conservation of the species,"[30] FWS can decide where it is appropriate to place the species. The updated version does not expressly authorize placement outside the historical range, but does authorize release into habitat outside the species' current range,[31] and it requires consideration of adverse effects to the ecosystem when an experimental population is being established outside its historical range.[32] The statutory authorization for ESA §10(j) experimental populations specifies that the release must "further the conservation of such species," but does not specify that the release must be within the historical range.[33]

Under the previous version of the regulation implementing ESA §10(j), however, if the Secretary of the Interior determined that releasing an experimental population outside the species' current natural range was warranted, the release needed to be within its "probable historical range."[34] The only exception under the pre-2023 regulation was if the Secretary determined that "primary habitat has been unsuitably and irreversibly altered or destroyed."[35] Previously, FWS was restricted to acting until formerly suitable habitat within the historical range had undergone or was undergoing irreversible decline or change. The 2023 regulatory change removes these restrictions, thus allowing the U.S. Department of the Interior (DOI) through FWS[36] to act with more flexibility before populations are severely depleted, lose important elements of genetic diversity, or are found only in captivity. Being able to act before situations are so dire that there is no remaining habitat within the historical range will improve the likelihood of species recovery and reduce the likelihood of extinction.

ESA §10(j), which authorizes experimental populations, is an important tool to help species adapt as habitats and ecosystems change. If the species is "unable to shift (its range) at a rate needed to survive climate change . . . transportation and introduction of populations in newly habitable areas might be crucial to those species' survival."[37] The International Union for Conservation of Nature (IUCN) lists nearly 700 mammals and birds on the "Red List of Threatened Species," including 27% of mammals.[38] The IUCN Red List classifies species in nine categories, assessing their extinction risk status.[39]

Under the 1982 Amendments to ESA §10(j), a statutory prerequisite to designation of critical habitat for an essential "experimental population" is that "such population is essential to the continued existence of an endangered species or a threatened species." The 1978 ESA Amendments define "critical habitat" (16 U.S.C. §1532(5)(A)) as:

> (i) physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and
>
> (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 1533 of this title, upon a determination by the Secretary [of the Interior] that such areas are essential for the conservation of the species.[40]

The FWS website explains the process for designating "critical habitat." When determining critical habitat, FWS first evaluates areas currently occupied by the species and considers what physical and biological features a species needs for life processes and successful reproduction. These features include (1) space for individual and overall population growth, and for normal behavior; (2) cover or shelter; (3) food, water, air, light, minerals, or other nutritional or physiological requirements; (4) sites for breeding and rearing offspring, germination, or seed dispersal; and (5) habitats that are protected from disturbances or are representative of the historical geographical and ecological distributions of the species.[41]

26. 16 U.S.C. §1539(j)(2)(A).
27. *Id.* §1533(b)(1)(A).
28. The summary section of the final rule provides that "We remove language generally restricting the introduction of experimental populations to only the species' 'historical range' to allow for the introduction of populations into habitat outside of their historical range for conservation purposes." Specifically, it removes the parenthetical in 50 C.F.R. §17.81(a) that stated, "(but within its probable historic range, absent a finding by the Director in the extreme case that the primary habitat of the species has been unsuitably and irreversibly altered or destroyed)." Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642 (July 3, 2023).
29. 50 C.F.R. §17.81(a) (2023). *See* Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642 (July 3, 2023).
30. 50 C.F.R. §17.81(b).
31. 50 C.F.R. §17.81(a).
32. A new subsection 5 is added to 50 C.F.R. §17.81(b) stating that "When an experimental population is being established outside of its historical range, any possible adverse effects to the ecosystem" must be considered.
33. *See* 16 U.S.C. §1539(j)(2)(A).
34. Pre-2023 version of 50 C.F.R. §17.81(a) (2022).
35. *Id.*
36. FWS is an agency under DOI.
37. Natural Resources Defense Council, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations 3 (Aug. 8, 2022), https://www.regulations.gov/comment/FWS-HQ-ES-2021-0033-0411.
38. IUCN Red List, *Background & History*, https://www.iucnredlist.org/about/background-history (last visited Jan. 12, 2024); Michela Pacifici, *Species' Traits Influenced Their Response to Recent Climate Change*, 7 Nature Climate Change 205 (2017); Press Release, Wildlife Conservation Society, Climate Change Impacts on Threatened and Endangered Wildlife Is Massively Underreported, Scientists Say (Feb. 13, 2017), https://newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/9848/Climate-Change-Impacts-on-Threatened-and-Endangered-Wildlife-is-Massively-Underreported-Scientists-Say.aspx.
39. IUCN, *IUCN Red List of Threatened Species*, https://www.iucn.org/resources/conservation-tool/iucn-red-list-threatened-species (last visited Feb. 5, 2024).
40. 16 U.S.C. §1532(5)(A) (corresponding to ESA §3).
41. *See* FWS, Critical Habitat: What Is It? (2017), https://www.fws.gov/sites/default/files/documents/critical-habitat-fact-sheet.pdf.

III. Essential Versus Nonessential Experimental Populations

Experimental populations are listed as "essential" or "nonessential." Critical habitat must be designated for "essential" experimental populations,[42] which are treated as "threatened" species.[43] ESA §10(j), however, does not allow designation of critical habitat for nonessential experimental populations.[44] FWS and the National Marine Fisheries Service (NMFS) have established more than 60 experimental populations.[45] However, all of the experimental population designations have been classified as "nonessential," thereby treating the experimental population as a species proposed to be listed for the purpose of ESA §7 consultation,[46] instead of treating it as a threatened species (even if the experimental population is derived from a population that is listed as an endangered species).[47]

The experimental population must be placed in an area that is "capable of supporting" this species,[48] implying that the habitat already exists in that location, so the designation of the experimental population as "essential" is important to the preservation of that habitat. For threatened species, critical habitat must be designated "to the maximum extent prudent and determinable."[49] Such designation means that the habitat and species could be protected on private land, not just public land, so advocacy groups emphasize that frameworks for consultation with private landowners need to be developed and safe-harbor agreements, conservation benefit agreements,[50] and best management practices need to be considered.[51]

The Center for Biological Diversity recently filed a lawsuit challenging FWS' decision to classify the world's last wild population of red wolves[52] as "nonessential."[53] The red wolf was listed as an endangered species in 1967.[54] According to the petition, there are only 13 red wolves remaining in eastern North Carolina, despite the fact that the species once roamed much of the eastern United States.[55] The redesignation of the red wolf as "essential" would facilitate "section 7 consultation with the Service on any agency action likely to jeopardize the continued existence of the red wolf, even outside of the National Wildlife Refuge System."[56] This would deny private landowners the right to kill the wolves in most circumstances.[57] Human activities, such as car strikes, shooting, trapping, and habitat destruction, have been the substantial reasons for deaths of red wolves and jeopardize the survival of this population.[58]

FWS has refused to "revisit the essentiality determination," averring that the nonessential determination provides "management flexibilities" that "were necessary to obtain public support for attempts to reintroduce red wolves."[59] FWS prefers the less formal "consultation" approach to assess the impact on the combined listed species.[60] However, as the petition asserts, "the determination of whether to designate any specific experimental population as essential is [to be] based on whether 'best available [scientific] information' shows that loss of that population 'would be likely to appreciably reduce the likelihood of the survival of the species in the wild.'"[61]

Where the species is so depleted that it qualifies for listing as an endangered[62] or threatened species,[63] and is further challenged by changes in its ecosystem that make it difficult to survive within its current or historical range, how can the determination to establish an experimental population not be an "essential" experimental population? An endangered species is already "in danger of extinction through all or a significant portion of its range" before it is listed as an endangered species.[64] FWS regulations define

42. Ward & Barczewski, *supra* note 3.
43. 16 U.S.C. §1539(j)(2).
44. *Id.*
45. Ward & Barczewski, *supra* note 3.
46. *Id. See* 16 U.S.C. §1539(j)(2)(C)(i).
47. *See* 16 U.S.C. §1539(j)(2)(C)(i).
48. 50 C.F.R. §17.81(b).
49. *See* Ward & Barczewski, *supra* note 3.
50. Endangered and Threatened Wildlife and Plants; Enhancement of Survival and Incidental Take Permits, 88 Fed. Reg. 8380 (proposed Feb. 9, 2023) (to be codified at 50 C.F.R. pts. 13, 17).
51. *See FLA Protecting Your Property Rights With Comments on USFWS Experimental Populations Proposed Rule*, Forest Landowners (Aug. 23, 2023), https://www.forestlandowners.com/fla-protecting-your-property-rights-with-comments-on-usfws-experimental-populations-proposed-rule/.
52. 50 C.F.R. §17.84(c) ("red wolf 10(j) rule") includes regulations that govern the red wolf experimental population.
53. Center for Biological Diversity v. Haaland, No. 2:23-cv-00058 (E.D.N.C. filed Oct. 4, 2023). The red wolf is listed as endangered under the ESA and is among the most imperiled species in the world. Just 13 known wild red wolves survive in eastern North Carolina.
54. *See* Native Fish and Wildlife: Endangered Species, 32 Fed. Reg. 4001 (Office of the Secretary Mar. 11, 1967).
55. Complaint at 4, ¶ 2, Center for Biological Diversity v. Haaland (E.D.N.C. Oct. 4, 2023) (No. 2:23-cv-00058).
56. *Id.* ¶ 14. ESA §7 consultations require a biological opinion, which provides mandatory conservation measures for the action agency to implement and must accompany any incidental take statement. 16 U.S.C. §1536(o)(2).
57. See *Red Wolf Coalition v. U.S. Fish & Wildlife Service*, 346 F. Supp. 3d 802, 815, 48 ELR 20190 (E.D.N.C. 2018), in which the court enjoined FWS "from taking red wolves, either directly or by landowner authorization, pursuant to 50 C.F.R. §§17.84(c)(4)(v) and (c)(10) without first demonstrating that such red wolves are a threat to human safety or the safety of livestock or pets." The Center for Biological Diversity's petition requests that the Service revise the red wolf 10(j) rule to remove the authorization for killing of non-offending red wolves by private landowners. Complaint at 11, ¶ 48, Center for Biological Diversity v. Haaland (E.D.N.C. Oct. 4, 2023) (No. 2:23-cv-00058).
58. See Complaint at 10, ¶ 43, Center for Biological Diversity v. Haaland (E.D.N.C. Oct. 4, 2023) (No. 2:23-cv-00058), noting that FWS' Red Wolf Recovery Program documented 457 red wolf deaths, of which 25% were caused by gunshot and 19% by vehicle strikes. In addition, the Service documented 25 red wolf deaths due to trapping between 2002 and 2020. *Id.* ¶ 48 recounts that FWS issued a permit in 2015 for a landowner to kill a red wolf that had not exhibited any problem behaviors. The private landowner shot and killed the wolf, a denning mother wolf who had previously mothered a total of 16 pups through four separate litters. No effort was made to locate her pups and their fate is unknown.
59. *See id.* ¶ 53.
60. *See* Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642, 42645 (July 3, 2023) (FWS response to comment 4).
61. Complaint at 13, ¶ 55, Center for Biological Diversity v. Haaland (E.D.N.C. Oct. 4, 2023) (No. 2:23-cv-00058) (citing 16 U.S.C. §1539(j)(2)(B); 50 C.F.R. §17.80(b)).
62. 16 U.S.C. §1532(6). A species is eligible to be considered for listing as "endangered" if the species "is in danger of extinction throughout all or a significant portion of its range."
63. *Id.* §1532(20). A species can be listed as "threatened" if the species "is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."
64. *Id.* §1532(6); 50 C.F.R. §17.80(b).

an "essential experimental population" as "an experimental population whose loss would be likely to appreciably reduce the likelihood of the survival of the species in the wild."[65] That is basically why an experimental population is established.

IV. *Weyerhaeuser* Complicates Designation of Critical Habitat

Designation of "critical habitat" has been complicated by the 2018 *Weyerhaeuser* decision,[66] in which the U.S. Supreme Court concluded that "critical habitat" must first be "habitat." This was the infamous dusky gopher frog case, in which the Court did not defer to FWS' designation of land in Louisiana (within the historical range, but outside of the current range) of the endangered frog.[67] The habitat would have needed modification to support the species. The Supreme Court interpreted 16 U.S.C. §1533(a)(3)(A)(i) as meaning that "[o]nly the 'habitat' of the endangered species is eligible for designation as critical habitat,"[68] and that "[e]ven if an area otherwise meets the statutory definition of unoccupied critical habitat because the Secretary finds the area essential for the conservation of the species, section 4(a)(3)(A)(i) does not authorize the Secretary to designate the area as *critical* habitat unless it is also *habitat* for the species."[69]

This is part of the reason that the 2023 rule change for 50 C.F.R. §17.81(a) specifies that the habitat is "capable of supporting" the experimental population outside the species' current range,[70] thereby making the requirement more consistent with *Weyerhaeuser*. The new rule specifies that "[t]he Secretary may designate as an experimental population a population of endangered or threatened species that will be released into habitat that is capable of supporting the experimental population outside the species' current range."[71] This implies that alternative suitable habitat already exists into which this experimental population can be placed.[72] There are no changes in the new rule affecting the determination of what constitutes critical habitat, so the new rule should not conflict with any interpretations imposed by the *Weyerhaeuser* decision.

The 1978 ESA Amendments define "critical habitat" (16 U.S.C. §1532(5)(A)) but do not separately define "habitat." The scope of "habitat" modification allowed was not clarified on remand of the *Weyerhaeuser* case.[73] The Donald Trump Administration finalized a definition of "habitat," which focused on current habitat in response to the *Weyerhaeuser* decision: "For the purposes of designating critical habitat only, habitat is the abiotic and biotic setting that currently or periodically contains the resources and conditions necessary to support one or more life processes of a species."[74] Areas not currently inhabited by the species ("unoccupied areas") could be considered critical habitat under this rule, only if the Secretary of the Interior or Commerce determines that the occupied areas alone are inadequate to conserve the species.[75]

Under the Trump rule, FWS must determine that there is a reasonable certainty that the area will contribute to the conservation of the species and that the area contains one or more of the physical or biological features essential to the conservation of the species.[76] The Trump regulation became final shortly before President Joseph Biden took office.[77] In the summer of 2022, the Biden Administration's FWS and NMFS rescinded that definition of "habitat," without replacing it.[78]

Under the Biden Administration's 2022 proposed changes to the experimental populations rule, "suitable

65. 50 C.F.R. §17.80(b).
66. Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 368, 48 ELR 20196 (2018).
67. *See id.* at 361 (discussing dusky gopher frog habitat). For a more in-depth discussion, see Appendix I of Carol Miller et al., *"Experimental Populations" Outside Historical Range Proposal: Will It Get the Frog Out of Hot Water?*, 38 U. Or. J. Env't L. & Litig. 1, 51-70 (2023). Suitable habitat (longleaf pine forest ecosystem) had been reduced by 98% due primarily to logging and urbanization, so that the current habitat for the frog is limited to only three counties in southern Mississippi. The initial FWS plan proposed adding an unoccupied area on private land in Louisiana (Unit I) where the species once lived but no longer occupied. Unit I contains ephemeral ponds, but it would require modifications to reintroduce the longleaf pine. The open canopy is necessary habitat for the survival of the endangered frog and the threatened gopher tortoise (keystone species). The open canopy of a longleaf pine forest allows for the growth of savannah grass (the stable food source for the tortoise that builds long borrows in which some dusky gopher frogs reside), and female frogs attach their eggs to the savannah grass in the ephemeral ponds.

    The dusky gopher frog was designated as endangered in 2001, but critical habitat was not contemporaneously designated. Endangered and Threatened Wildlife and Plants; Final Rule to List the Mississippi Gopher Frog Distinct Population Segment of Dusky Gopher Frog as Endangered, 66 Fed. Reg. 62993 (Dec. 4, 2001). Protection of the frog's habitat is further compromised by the *Sackett v. Environmental Protection Agency*, 143 S. Ct. 1322, 53 ELR 20083 (2023), decision, narrowing the scope of "waters of the United States" (WOTUS) and taking ephemeral ponds that the frog needs out of U.S. Environmental Protection Agency (EPA) jurisdiction.
68. *Weyerhaeuser*, 139 S. Ct. at 368.
69. *Id.*
70. Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642 (July 3, 2023).
71. *Id.* at 42651.
72. *Id.* at 42645. FWS response to comment 3 specifies that FWS analyzes "whether the habitat is suitable to support that population and if the establishment of the population will be successful. This analysis is species-specific and is based on the best available scientific information."
73. *Weyerhaeuser*, 139 S. Ct. at 369. The Supreme Court remanded the case to the U.S. Court of Appeals for the Fifth Circuit to determine if FWS' decision not to "exclude" the Louisiana land from critical habitat was arbitrary and capricious. The Fifth Circuit remanded the case to the Eastern District of Louisiana. Consent Decree, Markle Interests, LLC v. U.S. Fish & Wildlife Serv., 919 F.3d 963, 964 (5th Cir. 2019). However, FWS and landowners entered into a settlement, removing the critical habitat designation from that Unit I Louisiana private land, so the district court issued a consent decree July 3, 2019, rather than ruling on the remanded issues.
74. 50 C.F.R. §424.02 (2021), *updated in* Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 85 Fed. Reg. 81411 (Dec. 16, 2020).
75. 50 C.F.R. §424.12(b)(2) (2021); *see also* Endangered and Threatened Wildlife and Plants; Regulations for Listing Species and Designating Critical Habitat, 84 Fed. Reg. 45020 (Aug. 27, 2019) (FWS and NOAA clarifying, interpreting, and implementing procedures and criteria for listing and removing species from endangered list).
76. FWS, *Critical Habitat*, https://www.fws.gov/project/critical-habitat (last visited Feb. 3, 2024).
77. Endangered and Threatened Wildlife and Plants; Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 85 Fed. Reg. 81411 (Dec. 16, 2020).
78. Endangered and Threatened Wildlife and Plants; Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. 37757 (June 24, 2022).

natural habitat" would have been replaced with "habitat that is necessary to support one or more life history stages" in the listing criteria.[79] This latter language was controversial and confusing. The Natural Resources Defense Council (NRDC), Sierra Club, and Defenders of Wildlife comments preferred retaining the term "suitable habitat," but NRDC recognized that "[s]pecies often use different habitats for breeding, foraging, nesting, overwintering, or other life stages." Ultimately, FWS decided not to include the "life history stages" and "suitable habitat" language in its final rule, but instead to simply require habitat that is "capable of supporting" the experimental population outside the species' current range.[80]

The new rule changes only apply to experimental populations "that will be released" and not to already reintroduced populations.[81] With regard to incidental take prohibitions, FWS will create species-specific plans to consider the unique situation for each experimental population.[82]

In the *Weyerhaeuser* decision, the Supreme Court emphasized that ESA "Section 4(b)(2) requires the Secretary to *consider economic impact and relative benefits* before deciding whether to exclude an area from critical habitat or to proceed with designation."[83] The section provides that the Secretary *may* (not shall) exclude an area from "critical habitat" if "benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that failure to designate such area as critical habitat will result in the extinction of the species concerned."[84] This will become important if an experimental population is designated as "essential," thereby allowing for designation of habitat.

V. Ecosystem Effects of Establishing an Experimental Population

As part of this final rule, FWS added a new subsection (50 C.F.R. §17.81(b)(5)), requiring consideration of any possible adverse effects to the ecosystem that may result from the establishment of the experimental population—a major concern expressed in comments to the proposed rule, especially from fish and wildlife agencies.[85] Predator-prey balance, impact on vegetation, and potential disease transportation are among the considerations.[86] As part of the management restriction and protective measures, the new language allows for the removal of an experimental population.[87] The "This Rulemaking Action" section of the final rule and responses to comments indicate that FWS follows the IUCN Guidelines for Reintroductions and Other Conservation Translocations, which recommend conducting ecological risk assessments where appropriate.[88]

The comments by the Alaska Department of Fish and Game (ADF&G) emphasize that steps must be taken to protect ecosystems from the introduction of diseases or parasites and other risks to indigenous species and habitat. The ADF&G includes a list of factors to be considered, ranging from impacts of predation, disease, or other adverse biological impacts, ecological risks, as well as costs of management, socioeconomic effects, and compatibility with goals of adjacent land managers.[89] The comments by Irrigation and Electrical Districts Association of Arizona recognize the ecological harm to native species that can occur when a non-native species is introduced outside of its historical range.[90]

Previously, 50 C.F.R. §17.81(b) provided the mandate that the Secretary "shall utilize the best scientific and commercial data available" to consider the effects on the recovery of the species and effects on the populations from which the experimental population was derived. FWS replaced the compulsory language "shall utilize" with "will use" in the proposed and final rule. In her *Environmental Law Reporter* comment on the proposed rule, Kelly Davis draws parallels to directives and policies of the National Park Service and U.S. Forest Service, under the National Forest Management Act (NFMA),[91] to use the "highest quality science" to combat and adapt to climate change.[92]

When considering placement of an experimental population, FWS will consult with state fish and wildlife agencies, as well as affected local governmental agencies, tribal governments, and other federal agencies in devel-

79. *Id.* (proposed change to 50 C.F.R. §17.81).
80. Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642 (July 3, 2023) (codified at 50 C.F.R. §17.81) ("that is capable of supporting" replaced "that is necessary to support" the experimental population in 50 C.F.R. §17.81(a)).
81. 50 C.F.R. §17.81(a).
82. *See* Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642, 42645 (July 3, 2023) (FWS response to comment 6).
83. Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 371, 48 ELR 20196 (2018) (emphasis added).
84. 16 U.S.C. §1533(b)(2).
85. *See* Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642, 42647 (July 3, 2023) (FWS response to comment 15).
86. *See* American Fisheries Society, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations 3-4 (Aug. 8, 2022), https://downloads.regulations.gov/FWS-HQ-ES-2021-0033-0543/attachment_1.pdf; *see generally* Liz Fuller-Wright, *How Do New Predators Change an Ecosystem? Watch the Prey, Say Princeton Researchers*, Princeton Univ. (June 10, 2019), https://www.princeton.edu/news/2019/06/10/how-do-new-predators-change-ecosystem-watch-prey-say-princeton-researchers [https://perma.cc/LCY6-7L5Z] (research supported by U.S. National Science Foundation grant).
87. *See* 50 C.F.R. §17.81(c)(3).
88. *See* IUCN, Guidelines for Reintroductions and Other Conservation Translocations §5.1.6 (ver. 1.0 2013), https://portals.iucn.org/library/efiles/documents/2013-009.pdf; Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642, 42646 (July 3, 2023) (FWS response to comment 13). The rule itself does not mandate that IUCN guidelines be followed, but it is the internal recommendation to FWS staff to consider those guidelines.
89. ADF&G, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations (Aug. 1, 2022), https://www.regulations.gov/comment/FWS-HQ-ES-2021-0033-0216.
90. Irrigation and Electrical Districts Association of Arizona, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations (July 22, 2022), https://www.regulations.gov/comment/FWS-HQ-ES-2021-0033-0044.
91. 16 U.S.C. §§1600-1687, ELR Stat. NFMA §§2-16. *See* U.S. Forest Service, *National Forest Management Act (NFMA)/Planning*, https://www.fs.usda.gov/emc/nfma/ (last visited Jan. 12, 2024).
92. See discussion in Davis, *supra* note 21, at 10461-64, 10458-59.

oping rules for implementing experimental populations.[93] Private landowners will also have input at appropriate public meetings.[94]

Environmentalists and ranchers have long sparred in court over the delisting and relisting of the Rocky Mountain gray wolf and Mexican wolf.[95] The reintroduction of the endangered Rocky Mountain gray wolf into its historic territory has improved the riparian vegetation along streams since deer and elk fled to higher ground and no longer overgraze trees and shrubs in valley bottoms.[96] Pursuant to a new 2023 rule, FWS has finalized introduction of a new experimental population of the gray wolf in Colorado.[97] Cattle and sheep ranchers in western states are particularly opposed to allowing FWS to expand the range of experimental populations of wolves beyond their historic range. They believe that the reintroduction of the gray wolf and Mexican wolf pose a danger to their livestock and their economic livelihood.[98]

Extreme measures have been adopted, such as the Idaho Wolf Depredation Control Board's 2023 authorization for private contractors to shoot wolves from helicopters, jeopardizing survival of the population, even on public lands.[99] Wildlife groups petitioned the U.S. Forest Service in November 2023 to prohibit such activity on/over national forests.[100] Such conflicts should not devolve to the point that property owners assume that eradication of an endangered species vital to the ecosystem is the only option. In February 2024, DOI announced a nationwide recovery plan for the gray wolf, which includes "a national dialogue around how communities can live with gray wolves to include conflict prevention, long-term stability and community security."[101]

VI. *Chevron* Deference

Chevron deference has long been a guiding principle that has upheld agencies' reasonable interpretations of ambiguities in environmental laws.[102] It has allowed the agencies flexibility in adapting to changing components of the environment and ecosystems they regulate. In her *Environmental Law Reporter* comment on the proposed experimental populations FWS rule, Davis discusses the courts' deference to agency legislative rules,[103] and concludes that the new experimental population rule allowing placement of species outside their historical range will "likely warrant deference from the courts."[104]

The current majority of the Supreme Court, however, is likely to revise or abolish *Chevron* deference in the 2024 pending cases of *Relentless* and *Loper Bright*.[105] If Justice Clarence Thomas' view prevails, the Court will abrogate the *Chevron* doctrine. In a 2015 case, Justice Thomas' concurrence contends that *Chevron* deference creates an unconstitutional delegation of interpretation to government agencies. According to Thomas, "*Chevron* deference precludes judges from exercising that judgment, forcing them to abandon what they believe is 'the best reading of an ambiguous statute' in favor of an agency's construction."[106] Recent Supreme Court cases have not abolished deference, but in practice, they have not given deference to environmental agencies' regulatory interpretations.

To survive judicial scrutiny under the Supreme Court's invention of the "major questions doctrine," the Court must believe that the U.S. Congress gave "clear congressional authorization," especially if issues of major political and economic significance are delegated to executive agencies.[107] In *Massachusetts v. Environmental Protection Agency* in 2007,[108] the Supreme Court held that the U.S. Environmental Protection Agency (EPA) had authority under the Clean Air Act (CAA)[109] to regulate carbon dioxide as a greenhouse gas that contributed to climate change, but in subsequent cases has limited the extent of that regulatory

93. 50 C.F.R. §17.81(d).
94. *Id.*
95. See discussion in Miller et al., *supra* note 67.
96. Living With Wolves Museum, *Wolves and Our Ecosystems*, https://www.livingwithwolves.org/about-wolves/why-wolves-matter/ (last visited Jan. 12, 2024).
97. Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of the Gray Wolf in Colorado, 88 Fed. Reg. 77014 (Nov. 8, 2023).
98. Colorado Wool Growers Association, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations 4 (Aug. 4, 2022), https://www.regulations.gov/comment/FWS-HQ-ES-2021-0033-0262; Benjamin Segovia, Public Comment on Proposed Rule: Endangered and Threatened Species: Designation of Experimental Populations (July 22, 2022), https://www.regulations.gov/comment/FWS-HQ-ES-2021-0033-0045.
99. Center for Biological Diversity, Petition to Prohibit Aerial Gunning of Wolves on Idaho's National Forests (Nov. 28, 2023), https://www.biologicaldiversity.org/species/mammals/northern_Rocky_Mountains_gray_wolf/pdfs/Idaho-Aerial-Gunning-Petition-11-27-23.pdf. The Idaho Wolf Depredation Control Board is tasked with directing and managing funds for the purpose of wolf killing within the state of Idaho. Idaho Code §22-5306.
100. Center for Biological Diversity, *supra* note 99.
101. Press Release, FWS, U.S. Fish and Wildlife Service Completes Status Review and Finding for Gray Wolves in the Western United States; Launches National Recovery Plan (Feb. 2, 2024), https://www.fws.gov/press-release/2024-02/service-announces-gray-wolf-finding-and-national-recovery-plan.
102. Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837, 14 ELR 20507 (1984).
103. See discussion in Davis, *supra* note 21, at 10454-55.
104. *Id.* at 10460-64.
105. Relentless, Inc. v. U.S. Dep't of Com., 62 F.4th 621 (2023), *cert. granted*, 217 L. Ed. 2d 154 (2023) (challenging an NMFS rule that requires the fishing industry to pay for the costs of observers who monitor compliance with fishery management plans). The *Relentless* case was argued in tandem with *Loper Bright Enterprises v. Raimondo* (No. 22-451) on January 17, 2024.
106. Michigan v. Environmental Prot. Agency, 576 U.S. 743, 761, 45 ELR 20124 (2015) (Thomas, J., concurring). The majority in this case recognized *Chevron* deference, but remanded the case for EPA to consider costs in determining whether the power plant emission limits were "necessary and appropriate," despite the fact that EPA had already done a cost-benefit study. See Justice Elena Kagan's dissent. *Id.* at 765.
107. West Virginia v. Environmental Prot. Agency, 142 S. Ct. 2587, 2616, 52 ELR 20077 (2022). See Justice Neil Gorsuch's concurrence: "To resolve today's case the Court invokes the major questions doctrine. Under that doctrine's terms, administrative agencies must be able to point to '"clear congressional authorization"' when they claim the power to make decisions of vast '"economic and political significance."'" *See also* Biden v. Nebraska, 600 U.S. 477 (2023) (Barrett, J., concurring) (explaining the major questions doctrine).
108. 549 U.S. 497, 37 ELR 20075 (2007).
109. 42 U.S.C. §§7401-7671q, ELR Stat. CAA §§101-618.

authority over greenhouse gases.[110] The 2022 *West Virginia v. Environmental Protection Agency* Court used the major questions doctrine to further restrict the ability of EPA to address climate change issues related to power plant emissions through CAA §111(d).[111]

Even where it was very clear that Congress intended a very broad definition of "waters of the United States" (WOTUS) when enacting the Clean Water Act (CWA)[112] in 1972, the majority of the Supreme Court in *Sackett v. Environmental Protection Agency* purported to apply a textual approach to significantly restrict the WOTUS definition to include only relatively permanent bodies of water and adjoining wetlands.[113] Wetlands only fall within EPA WOTUS jurisdiction if they are "indistinguishable" from these relatively permanent bodies of water due to their "continuous surface connection."[114]

Justice Brett Kavanaugh also would have included wetlands "separated from a covered water only by a man-made dike or barrier, natural river berm, beach dune, or the like."[115] In addition, he emphasized that "in the years since 1977, no one has seriously disputed that the Act covers adjacent wetlands. And in light of the text of the Act, eight consecutive Presidential administrations have recognized that the Act covers adjacent wetlands and that adjacent wetlands include more than simply adjoining wetlands."[116] Justice Elena Kagan criticizes the majority approach, concluding that the Court has appointed itself as the "national decision-maker on environmental policy," and "will not allow the Clean [Water] Act to work as Congress instructed."[117]

Wetlands are important, not only as habitats for species, but also for mitigating climate change.[118] Wetlands are critical to many bird species as the habitat in which they "raise their young, congregate in winter, and rest during migration—and which filter out pollutants and buffer communities from flooding and storm surges."[119] The National Parks Conservation Association believes that this decision will have devasting implications on the U.S. National Park System, where two-thirds of the waters are already impaired by upstream pollution.[120]

In their *Sackett* amici curiae brief, the outdoor recreation and conservation organizations emphasized that the degradation of the health of wetlands and other waters will cause catastrophic harm to the fish and wildlife that depend on these resources, and have enormous economic consequences.[121] Narrowing of the WOTUS jurisdiction makes it more difficult for EPA to regulate wetlands.[122] It is estimated that the *Sackett* decision's requirement of continuous surface connection removes more than one-half of the wetlands (more than 60 million acres) in the United States from EPA jurisdiction.[123] The *Sackett* decision, along with the 2018 *Weyerhaeuser* decision,[124] make it difficult for both EPA and FWS to protect ephemeral ponds[125] as suitable habitat that is capable of supporting species.

If the Supreme Court decides to abandon *Chevron* deference in favor of only *Skidmore* deference[126] (as the fishers' attorney advocated in the *Relentless/Loper Bright* oral

110. Utility Air Regul. Grp. v. Environmental Prot. Agency, 573 U.S. 302, 44 ELR 20132 (2014).
111. 142 S. Ct. at 2613 (majority opinion concluding that "[w]e also find it 'highly unlikely that Congress would leave' to 'agency discretion' the decision of how much coal-based generation there should be over the coming decades").
112. 33 U.S.C. §§1251-1387, ELR Stat. FWPCA §§101-607.
113. 143 S. Ct. 1322, 1336, 53 ELR 20083 (2023) (Alito, J., majority) (citing Justice Antonin Scalia's plurality opinion in *Rapanos v. United States*, 547 U.S. 715, 739, 36 ELR 20116 (2006): under the narrow interpretation of CWA §1362(7) (33 U.S.C. §1362), waters fall within federal CWA jurisdiction only if they are "relatively permanent, standing or continuously flowing bodies of water 'forming geographic[al] features' . . . [such] as 'streams, oceans, rivers, and lakes'"). In their concurrences in result only, Justices Kagan and Kavanaugh both argue that adjacent wetlands include, but are not limited to, adjoining wetlands. *Id*. at 1362, 1367-68.
114. *See id*. at 1340-41 (Alito, J., majority).
115. *Id*. at 1362 (Kavanaugh, J., concurring in judgment only, joined by Sotomayor, Kagan & Jackson, JJ.).
116. *Id*. at 1367.
117. *Id*. at 1359 (recognizing that the "Clean Water Act was a landmark piece of environmental legislation, designed to address a problem of 'crisis proportions'"). Justice Kagan recognizes that in *West Virginia v. Environmental Protection Agency*:

> [T]he majority's non-textualism barred the EPA from addressing climate change by curbing power plant emissions in the most effective way. Here, that method prevents the EPA from keeping our country's waters clean by regulating adjacent wetlands. The vice in both instances is the same: the Court's appointment of itself as the national decision-maker on environmental policy.

Id. at 1361-62.
118. *See* Washington State Department of Ecology, *Wetlands & Climate Change*, https://ecology.wa.gov/water-shorelines/wetlands/tools-resources/wetlands-climate-change (last visited Jan. 12, 2024). Wetlands can help with carbon sequestration and in absorbing some of the impact of hurricanes, but are also vulnerable to sea-level rise.
119. Andy McGlashen, *"Devastating" Supreme Court Decision Leaves Wetlands Unprotected*, Nat'l Audubon Soc'y (May 26, 2023), https://www.audubon.org/news/devastating-supreme-court-decision-leaves-wetlands-unprotected.
120. Press Release, National Parks Conservation Association, Supreme Court Ruling Caters to Polluters, Makes Waters Dirtier for People and Parks (May 25, 2023), https://www.npca.org/articles/3523-supreme-court-ruling-caters-to-polluters-makes-waters-dirtier-for-people. *See also* Brief of Outdoor Recreation and Conservation Organizations as Amici Curiae Supporting Respondents at 26, Sackett v. Environmental Protection Agency, 143 S. Ct. 1322 (No. 21-454).
121. *See* Brief of Outdoor Recreation and Conservation Organizations as Amici Curiae Supporting Respondents at 23, Sackett v. Environmental Protection Agency, 143 S. Ct. 1322 (No. 21-454).
122. *See also* County of Maui v. Hawaii Wildlife Fund, 140 S. Ct. 1462, 50 ELR 20102 (2020). This Supreme Court case would allow regulation of a wetland if direct discharge of a pollutant into or through an otherwise unprotected wetland flowed across the wetland to reach a WOTUS water and that was deemed to be the "functional equivalent of a direct discharge" into a WOTUS.
123. Brief of Outdoor Recreation and Conservation Organizations as Amici Curiae Supporting Respondents at 8, Sackett v. Environmental Protection Agency, 143 S. Ct. 1322 (No. 21-454) (estimating that EPA jurisdiction over 59% of wetlands would be/is lost by the *Sackett* decision); *see also* Allyson Chiu, *Biden Rule, Heeding Supreme Court, Could Strip Over Half of U.S. Wetlands' Protections*, Wash. Post (Aug. 29, 2023), https://www.washingtonpost.com/climate-environment/2023/08/29/epa-new-wetland-rule/ (referencing FWS mapping that shows loss of jurisdiction over 63% of wetlands).
124. Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 48 ELR 20196 (2018).
125. Brief of Outdoor Recreation and Conservation Organizations as Amici Curiae Supporting Respondents at 9, Sackett v. Environmental Protection Agency, 143 S. Ct. 1322, 1336 (No. 21-454) (estimating that in the Southwest, more than 80% of all streams are intermittent or ephemeral); *see also* Chiu, *supra* note 123 (referencing an EPA official who estimated that there are 1.2 million to 4.9 million miles of ephemeral ponds and streams).
126. *See* Skidmore v. Swift & Co., 323 U.S. 134 (1944).

arguments),[127] *Skidmore* deference only would be given to agency regulations that are consistent from the beginning (not flip-flopping from administration to administration), and where the agency's arguments are based on valid reasoning and are "persuasive."[128] According to Justice Neil Gorsuch, *Skidmore* allows due weight to the agency's view as a coequal branch of government, but the judges do not abdicate their responsibility to interpret the law.[129] Even if deference to agency decisions survives in some form, courts will still scrutinize the decisionmaking process to assess whether an agency decision is arbitrary or capricious.

Most judges and members of Congress are not scientists; this is why Congress delegates authority to government agencies (with the internal staff and review boards of scientists) that can make educated determinations based on "the best scientific and commercial data available"[130] on when, how, and where species need to be placed or protected for their survival. As Justice Kagan recognized in the *Loper Bright* and *Relentless* oral arguments, Congress delegates authority to agencies to resolve questions because they have staff with greater expertise and are in a better position (than Congress or the courts) to keep up with rapidly changing and evolving circumstances (such as developments in climate change and artificial intelligence).[131] Furthermore, Justice Ketanji Brown Jackson sees "*Chevron* as doing the very important work of helping courts stay away from policymaking."[132] In most situations, judges should defer to the agency's interpretation instead of substituting their philosophies with policy decisions, but the line between what is a policy decision versus interpretation of the law is sometimes a thin line.

The 2023 FWS regulatory change has expanded options for the conservation of an endangered or threatened species by allowing experimental populations to be placed outside of their historical ranges—especially when climate change or invasive species are threatening the destruction, modification, or curtailment of its habitat or range.[133] This is especially important where formerly suitable habitat within the historical range has undergone, is undergoing, or is anticipated to undergo irreversible decline or change.[134] It is uncertain whether the courts will defer to this interpretation.

Because the statutory authorization for experimental populations under ESA §10(j) did not require the experimental population to be placed within the species' historical range,[135] the decision of FWS to delete language in its own regulation (that imposed that historical range restriction) might be construed as a minor change. Even though there was not express replacement language authorizing placement of experimental populations outside the historical range, the regulatory change does require consideration of adverse effects to the ecosystem when an experimental population is being established outside its historical range. Therefore, FWS should receive *Auer* deference to place an experimental population outside of its historical range, since doing so is not "plainly erroneous or inconsistent with the regulation."[136] If *Skidmore* deference is used, however, the courts will be dictating the policy decision.

VII. Conclusion

The 2023 FWS regulatory change facilitates FWS' placement of an experimental population outside its current or historical range, as long as the areas are capable of supporting the experimental population of endangered or threatened species. The determination that the ecosystem is already "capable of supporting" the species should satisfy *Weyerhaeuser* habitat requirements. This regulatory change is necessary to further the conservation of the species, in light of existing and imminent threats to endangered species and their habitats posed by climate change or invasive species.[137] Judges should defer to the environmental agencies, which base their determinations on "the best scientific and commercial data available."[138] The extent to which the Supreme Court upholds or restricts *Chevron* deference, however, will significantly affect interpretation of this regulation and all environmental regulations.

Species that are already listed as endangered or threatened are in imminent danger of extinction. Therefore, if they are further challenged by effects of climate change or invasive species and the decision is made that it is necessary to establish an experimental population, the experimental population should be presumed to be "essential," reversing FWS' current policy of designating it as "nonessential." This would allow for habitat designation to enhance the survivability of this species.

127. Transcript of Oral Argument at 16, 24, 25, Relentless, Inc. v. U.S. Dep't of Com., No. 22-1219 (U.S. argued Jan. 17, 2024).
128. *Skidmore*, 323 U.S. at 140; *see* Transcript of Oral Argument at 40, Loper Bright Enters. v. Raimondo, No. 22-451 (U.S. argued Jan. 17, 2024).
129. Transcript of Oral Argument at 22, Relentless, Inc. v. U.S. Dep't of Com., No. 22-1219 (U.S. argued Jan. 17, 2024).
130. 16 U.S.C. §1533(b)(1)(A).
131. Transcript of Oral Argument at 43-46, Relentless, Inc. v. U.S. Dep't of Com., No. 22-1219 (U.S. argued Jan. 17, 2024).
132. Transcript of Oral Argument at 25, Relentless, Inc. v. U.S. Dep't of Com., No. 22-1219 (U.S. argued Jan. 17, 2024).
133. See 16 U.S.C. §1533(a)(1)(A), one of the factors considered in listing a species as endangered or threatened; see also the rationale discussed in Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642 (July 3, 2023).
134. *See* Summary, Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42642 (July 3, 2023).
135. 16 U.S.C. §1539(j)(2)(A).
136. See *Auer v. Robbins*, 519 U.S. 452, 461 (1977), which gives deference to an agency when it is interpreting an ambiguity in its own regulation (rather than an ambiguity in the statute).
137. *See* 50 C.F.R. §17.81(b)(5). Subsection 5 was added to the requirements in the 2023 revisions, requiring placement of an experimental population to also consider any possible adverse effects to the ecosystem that may result from the establishment of the experimental population.
138. 16 U.S.C. §1533(b)(1)(A).