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Experimental Populations Under the Endangered Species Act and Gray Wolves

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SUMMARY

Section 10(j) of the Endangered Species Act (ESA; 16 U.S.C. §§ 1531 et seq.) allows for the establishment of experimental populations of endangered or threatened species and delineates how experimental populations are to be regulated. An experimental population is a population of an endangered or threatened species that is released into the wild outside of the current range of the species with the aim of contributing to the conservation of the species. This report discusses the criteria and process for establishing experimental populations under the ESA, as well as how such populations are regulated, with a focus on how this authority has been used with gray wolves. The U.S. Fish and Wildlife Service (FWS) administers the ESA for gray wolves and is responsible for implementing policies and regulations for the species.

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To qualify as an experimental population, the specimens must be released into suitable habitat outside the current range of the species. The population, when released, must be *wholly geographically separate* from existing populations. In addition, FWS must determine that the experimental population will contribute to the conservation of the species in the wild. FWS considers whether removing specimens from other wild populations to establish the new population may negatively affect existing populations, whether the new population is likely to become well established and survive in the wild, and other factors. FWS must also designate the experimental population as *essential* or *nonessential* to the conservation of the species. These designations affect how consultation requirements apply to the population, and the FWS may designate critical habitat only for essential experimental populations.

With certain exceptions, experimental populations are treated as threatened species under the ESA, regardless of the designation of the listed species. Accordingly, an experimental population of a species that is listed as endangered—which is entitled to certain automatic protections upon listing—would instead be treated as a threatened species, which receives such protections only if they are extended to the population by regulation. This treatment allows FWS to tailor the protections and exceptions that apply to the population, providing for flexible management while contributing to the conservation of the species. For example, when introducing an experimental population of a predator species, FWS may allow some individual animals of that species to be taken or harmed, without a permit, if specific criteria are met.

FWS has listed various populations of gray wolves under the ESA since it was enacted. It has also released experimental populations of gray wolves on several occasions and has proposed to establish another experimental population in Colorado. The repeated use of this authority with respect to gray wolves illustrates how FWS applies the statutory criteria and uses the regulatory flexibilities included in the statute and how stakeholders respond to reintroducing a population into the wild. Congress has long shown interest in the regulation of gray wolves under the ESA, and it has introduced or enacted legislation affecting the listing status of gray wolf populations.

In the mid-1990s, FWS released two experimental populations of gray wolves in Idaho, Montana, and Wyoming. The combined population formed by these wolves was eventually delisted through administrative and legislative action. In 1998, FWS established an experimental population of Mexican gray wolves, a subspecies of the gray wolf, in Arizona and New Mexico to recover the subspecies in the wild. FWS continues to support this population through a captive breeding program to release additional Mexican gray wolves to support population growth and genetic diversity. Recently, in the wake of a Colorado state referendum on introducing a gray wolf population in the state and a subsequent court decision that vacated a 2020 gray wolf delisting rule, FWS has proposed establishing an experimental population in Colorado. Each of these efforts has encountered an array of stakeholder responses—from support for the conservation and ecosystem benefits gained by reintroducing members of the species to concerns about effects of gray wolves on local livestock and game.

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Introduction

Section 10(j) of the Endangered Species Act (ESA; 16 U.S.C. §§ 1531 et seq.) allows for the establishment of experimental populations of endangered or threatened species and delineates how experimental populations are to be regulated.[1] An *experimental population* is a population of an endangered or threatened species that is released into the wild outside of the current range of the species that will contribute to the conservation of the species. With certain exceptions, experimental populations are treated as threatened species under the ESA regardless of designation of the listed species.[2] This treatment allows the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) to tailor the protections and exceptions that apply to the populations, providing for flexible management while contributing to the conservation of the species.[3]

Section 10(j) was added to the ESA as part of the Endangered Species Act Amendments of 1982.[4] Before the 1982 amendments, FWS or NMFS could translocate members of listed species into unoccupied areas to assist in recovery, but the released population would be subject to the same prohibitions and protections as the rest of the listed species.[5] The amendments gave FWS and NMFS more flexibility and discretion in determining which prohibitions would apply to an experimental population, and they limited the extent to which the Section 7 consultation requirements apply to experimental populations that are not essential to the conservation of the species.[6] The legislative history of the 1982 amendments shows that some Members of Congress were concerned about political opposition to reintroduction efforts arising from some stakeholders' fears that a rigid application of ESA protections to experimental populations "would halt development projects."[7] Congress provided greater regulatory flexibility in the 1982 amendments to address this concern.

This report addresses experimental populations of species listed under the ESA, with a specific focus on experimental populations of gray wolves. FWS has released experimental populations of gray wolves on several occasions and has proposed to establish another experimental population in Colorado. Such efforts have encountered an array of stakeholder reactions—from support for the conservation and ecosystem benefits of introducing an experimental population to concerns about wolves harming local livestock. Some Members of Congress have shown interest in the regulation of gray wolves under the ESA, and Congress has introduced or enacted legislation affecting the listing status of gray wolf populations. With respect to experimental populations of gray wolves, Congress may be interested in the process for authorizing an experimental

[1] 16 U.S.C. § 1539(j).

[2] *Id.* § 1539(j)(2)(C). The ESA defines *endangered species* with limited exceptions as "any species which is in danger of extinction throughout all or significant portion of its range" and *threatened species* as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." *Id.* §§ 1532(6), (20).

[3] *See id.*; *see also* Endangered and Threatened Wildlife and Plants; Experimental Populations, 49 Fed. Reg. 33,885, 33,886 (Aug. 27, 1984).

[4] P.L. 97-304, § 6, 96 Stat. 1411 (1982).

[5] 49 Fed. Reg. at 33,886.

[6] *Id.* Section 7 of the ESA, 16 U.S.C. § 1536, requires that federal agencies consult with the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) to ensure that their actions are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

[7] H.R. Rep. No. 97-567, at 8 (1982); *see also* 49 Fed. Reg. 33,886, 33,886 (Aug. 27, 1984); Wyo. Farm Bureau Fed'n v. Babbitt, 199 F.3d 1224, 1231-32 (10th Cir. 2000).

population under the ESA, how designated experimental populations are regulated under the ESA, and how this process has been applied to gray wolves. In particular, Congress may consider the ongoing process to designate an experimental population of gray wolves in Colorado and legislative options available to affect whether the experimental population is established, how it is regulated, and whether to provide funding or oversight for managing the experimental population.

Criteria for Establishing an Experimental Population

Section 10(j) of the ESA provides the authority and lays out the criteria for establishing experimental populations. Section 10(j) authorizes the Secretary of the Interior or of Commerce, as delegated to FWS or NMFS, respectively, to release populations of endangered or threatened species into the wild outside the current range of the species, provided FWS or NMFS determines that the release will contribute to the conservation of the species.[8] Such populations qualify as *experimental populations* when they are wholly separate geographically from any non-experimental populations of the species.[9] FWS is responsible for administering the ESA with respect to gray wolves, which are listed as endangered under the act. This report focuses on FWS regulations for experimental populations.[10]

Outside the Species' Current Range

FWS regulations implementing Section 10(j) of the ESA provide a regulatory framework for designating experimental populations.[11] Under those regulations, the experimental population must be released into "suitable natural habitat."[12] The statute requires this suitable natural habitat to be outside the species' current range.

FWS regulations had established an additional requirement that experimental populations be released within the species' *historical* range under most circumstances. On July 3, 2023, however, FWS published a final rule eliminating the requirement that an experimental population be introduced in its historical range.[13] FWS noted that climate change is causing species' suitable habitats to shift outside their historical ranges and that invasive species potentially reduce the ability of habitat to support species within their historical ranges.[14] As a result, FWS anticipated that it may become necessary and appropriate to establish experimental populations outside the historical range, as well as outside the current range, of the listed species.[15] The revised regulations also require FWS to consider potential adverse effects to the ecosystem when an experimental population is to be released outside the species' historical range.[16]

[8] 16 U.S.C. § 1539(j)(2)(A).

[9] *Id.* § 1539(j)(1).

[10] NMFS, within the Department of Commerce, administers the ESA for marine and anadromous species and has its own regulations for experimental populations. 50 C.F.R. pt. 222, subpt. E. Though the two agencies' regulations generally contain identical or similar provisions, there are differences between them. For example, only FWS requires consideration of the impact on the ecosystem when an experimental population is to be released outside the species' probable historical range. *Compare* 50 C.F.R. § 17.81(a) (2022) *with id.* § 222.502(a) (2022).

[11] 50 C.F.R. pt. 17, subpt. H.

[12] 50 C.F.R. § 17.81(a).

[13] FWS, Endangered and Threatened Wildlife and Plants; Designation of Experimental Populations, 88 Fed. Reg. 42,642 (July 3, 2023).

[14] *Id.* at 42,643.

[15] *Id.*

[16] *Id.* at 42,651-52 (amending 50 C.F.R. § 17.81(b)).

Contribution to the Conservation of the Species

The ESA requires that an experimental population must contribute to the conservation of the listed species.[17] FWS's regulations include factors for the agency to consider when evaluating this criterion. Pursuant to its regulations, FWS must consider whether the experimental population is likely to become established and survive for the foreseeable future.[18] FWS must also examine the anticipated effects that establishing an experimental population will have on the species' recovery.[19] FWS must further consider whether removing individuals from existing populations to establish the experimental one will adversely affect those populations.[20] Finally, FWS must determine whether and to what extent existing or anticipated federal or state actions or private activities may be affected by establishing the experimental population.[21] Each of these factors must be determined based on the best commercial and scientific data available.[22]

Wholly Separate Geographically

When determining whether a released experimental population is or is expected to be wholly separate geographically from existing populations, FWS regulations focus on the population as a whole rather than individuals within the population.[23] The released population's separation from existing populations must be "reasonably predictable."[24] For example, fixed migration patterns or natural or manmade barriers may create sufficiently predictable separation between the experimental population and other populations.[25] Individuals from an experimental population that venture into an area of overlap with the non-experimental population are not recognized as part of the experimental population while they are intermixed with a non-experimental population.[26] This distinction between populations and roaming individuals becomes particularly relevant for species where individuals may venture far from their original or usual populations, such as gray wolves.

Essential and Nonessential Experimental Populations

When FWS designates an experimental population, Section 10(j) of the ESA also requires that FWS determine whether the experimental population is "essential to the continued existence" of the species.[27] Such experimental populations are designated as *essential experimental populations*, and all others are designated as *nonessential experimental populations*.[28] These determinations are made based on the "best available information."[29] Pursuant to its regulations, FWS considers an experimental population to be essential if losing the population would likely

[17] 16 U.S.C. § 1539(j)(2)(A).
[18] 50 C.F.R. § 17.81(b)(2).
[19] *Id.* § 17.81(b)(3).
[20] *Id.* § 17.81(b)(1).
[21] *Id.* § 17.81(b)(4).
[22] *Id.* § 17.81(b).
[23] *Id.*
[24] *Id.* § 17.80(a).
[25] *Id.*
[26] *Id.*
[27] 16 U.S.C. § 1539(j)(2)(B).
[28] 50 C.F.R. § 17.80(b).
[29] 16 U.S.C. § 1539(j)(2)(B).

"appreciably reduce the likelihood" of the species surviving in the wild.[30] To date, no experimental population of any species has been designated as essential.

Consequences of Designation

In general, even if a species is listed as endangered, experimental populations of that species are treated as threatened species under the statute.[31] The prohibitions in Section 9 of the ESA—such as on import, export, or "take" of species—apply to endangered species but do not automatically apply to threatened species.[32] These prohibitions may be extended to threatened species by regulations, generally referred to as 4(d) rules.[33] Section 9 prohibitions may similarly be extended to experimental populations pursuant to their treatment as threatened species by regulations, referred to as 10(j) rules.[34]

FWS must designate critical habitat for both endangered and threatened species to the maximum extent prudent and determinable.[35] Critical habitat generally consists of habitat that is essential to the conservation of the species.[36] Section 10(j) provides that critical habitat shall *not* be designated for nonessential experimental populations—only for essential experimental populations.[37]

The consultation requirements for federal agency actions in Section 7 of the ESA also apply equally to endangered and threatened species.[38] However, Section 10(j) provides that *nonessential* experimental populations are not treated as threatened species for consultation purposes. Instead, they are treated as species that are *proposed to be listed* unless the proposed federal agency action will be within the National Park System or the National Wildlife Refuge System.[39] For species that are proposed to be listed, Section 7 requires federal agencies to confer with FWS, but they may proceed with the proposed action in the meantime (i.e., they may irreversibly or irretrievably commit resources to the action, which may foreclose alternatives that may have avoided jeopardy to the species).[40] Accordingly, if *either* the experimental population is essential or if the proposed action will occur within the National Park System or National Wildlife Refuge System, then federal agencies must consult with FWS to ensure that their proposed actions will not jeopardize the continued existence of the experimental population or, for essential experimental populations, adversely affect its designated critical habitat (if any). Otherwise, federal agencies need only confer with respect to nonessential experimental populations.

[30] 50 C.F.R. § 17.80(b).

[31] 16 U.S.C. § 1539(j)(2)(C).

[32] *Id.* § 1538(a). *Take* means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19).

[33] *Id.* § 1533(d).

[34] 50 C.F.R. § 17.82.

[35] *Id.* § 1533(a)(3).

[36] *Id.* § 1532(5).

[37] *Id.* § 1539(j)(2)(C)(ii). No experimental populations have so far been designated as essential.

[38] 16 U.S.C. § 1536(a)(2). For a discussion of the ESA's Section 7 consultation requirements *see* CRS Report R46677, *The Endangered Species Act: Overview and Implementation*, by Pervaze A. Sheikh and Erin H. Ward.

[39] *Id.* § 1539(j)(2)(C)(i). Section 7 consultation requirements do apply to *essential* experimental populations.

[40] *Id.* § 1536(a)(4).

Process for Designating Experimental Populations and Promulgating 10(j) Rules Under the Administrative Procedure Act

FWS establishes experimental populations and protections for those populations through the federal rulemaking process. Federal agency rulemaking procedures are largely governed by the Administrative Procedure Act (APA).[41] FWS's designations and 10(j) rules are thus governed primarily by requirements established in the ESA, FWS's implementing regulations, and the APA.

Consulting with Interested Parties

FWS regulations require the agency to consult with relevant state fish and wildlife agencies and local governmental entities as well as with affected federal agencies and private landowners when developing and implementing experimental population regulations.[42] This consultation process may involve holding meetings with interested members of the public.[43] In its regulations, FWS states that any experimental population regulation shall reflect an agreement between the agency and the relevant stakeholders with which it consults "to the maximum extent practicable."[44]

Issuing Designation and 10(j) Rules

To begin the rulemaking process, FWS must first publish a proposed rule providing notice of its intent to designate an experimental population, to determine whether the population would be designated as essential or nonessential, and to consider a 10(j) rule for the population. In accordance with the APA, once FWS publishes the proposed rule, it must provide an opportunity for the public to comment on the proposal.[45] Typically, FWS accepts public comments for 60 days when proposing to establish an experimental population.[46] FWS also typically holds public hearings in various locations that could be affected by the establishment of an experimental population.[47] After FWS receives and considers any public comments, it may choose to complete the rulemaking process by publishing a final rule.[48] At the time FWS issues the final rule, it must provide a reasoned justification supporting its action.[49] FWS's justification for establishing the experimental population and any 10(j) rules for that population must generally address significant

[41] *See* 5 U.S.C. § 553; CRS In Focus IF10003, *An Overview of Federal Regulations and the Rulemaking Process*, by Maeve P. Carey.

[42] 50 C.F.R. § 17.81(d).

[43] *Id.*

[44] *Id.*

[45] *See* 5 U.S.C. § 553.

[46] *See, e.g.*, Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Population of the Gray Wolf in Colorado, 88 Fed. Reg. 10,258 (proposed Feb. 17, 2023); Endangered and Threatened Wildlife and Plants; Establishment of Nonessential Experimental Population Status for 15 Freshwater Mussels, 1 Freshwater Snail, and 5 Fishes in the Lower French Broad River and in the Lower Holston River, Tennessee, 71 Fed. Reg. 34,196 (Jun. 13, 2006); Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Population of the Mexican Gray Wolf in Arizona and New Mexico, 63 Fed. Reg. 1,752 (Jan. 12, 1998).

[47] *See, e.g., id.*

[48] *Id.*

[49] *Id.*

comments and whether or not FWS has changed the final rule in response.[50] Any changes in the final rule that differ from the proposed rule must be a "logical outgrowth" of the proposal.[51]

FWS must find in its rule that the release of the species as an experimental population will further the conservation of the species.[52] Also, the rule must provide a means to identify the experimental population, such as specifying the proposed location or anticipated migration. The rule must identify any special management concerns such as management restrictions or protective measures to isolate or contain the population from the rest of the species, and it must create a process for periodic evaluation of how effective the experimental population is at conserving the species.[53] For an experimental population that FWS designates as essential, the agency may also include critical habitat.[54] FWS may also choose to implement a 10(j) rule or designate critical habitat through a separate rulemaking process from the one designating the experimental population.

Judicial Review of Designation and 10(j) Rules

Both the ESA and the APA may provide a basis for judicial review of FWS's final rules, depending on the plaintiff's particular allegations.[55] The ESA provides that any person may bring a lawsuit in federal district court to, among other things, enjoin anyone, including government entities, from violating any provision of the ESA or its regulations.[56] The ESA, accordingly, provides an avenue to federal court to challenge FWS actions allegedly in violation of Section 10(j) or regulations issued pursuant to 10(j). In reviewing alleged violations, courts apply the arbitrary and capricious standard contained in the APA.[57] Furthermore, challenges to FWS's *administration* of the ESA through the rulemaking process—whether it has given adequate public notice or made a reasoned decision, for instance—must proceed pursuant to the APA itself, not the ESA.[58]

Under the APA, a court must set aside an agency rule if it finds that the rule is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[59] This standard is known as "arbitrary and capricious review" or "hard look review."[60] For example, a reviewing court might determine that an FWS rule is arbitrary and capricious if FWS has failed to rationally connect the facts before FWS to its decision, if FWS has failed to consider an important aspect of the problem, if FWS has relied on factors Congress did not intend for FWS to consider, or if the

[50] *See, e.g.*, Perez v. Mortg. Bankers Ass'n, 575 U.S. 92, 96 (2015) (citing Citizens to Preserve Overton Park Inc. v. Volpe, 401 U.S. 402, 416 (1971)).

[51] *See* Long Island Care at Home, Ltd. v. Coke, 551 U.S. 158, 174 (2007) (collecting cases). The "logical outgrowth" standard limits substantive changes in the final rule that deviate sharply from the proposed rule. *Nat. Black Media Coal. v. FCC*, 791 F.2d 1016, 1022 (D.C. Cir. 1986). The limitation ensures that stakeholders are given fair notice of what the agency intends to do and have a meaningful opportunity to comment on the substance of the rule. *Id.*

[52] 50 C.F.R. § 17.81(b)-(c).

[53] *Id.* § 17.81(c).

[54] 16 U.S.C. § 1539(j)(2)(C); 50 C.F.R. § 17.81(f). *See also* 16 U.S.C. § 1533(b).

[55] *See* 5 U.S.C. §§ 702, 704.

[56] 16 U.S.C. § 1540(g)(1); Bennet v. Spear, 520 U.S. 154, 174 (1997).

[57] Gerber v. Norton, 294, F.3d 173, 178 n.4 (D.C. Cir. 2002) (quoting Cabinet Mountains Wilderness v. Petersen, 685 F.2d 678, 685 (D.C. Cir. 1982)); W. Watersheds Project v. Kraayenbrink, 632 F.3d 472, 496 (9th Cir. 2011) (citing Village of False Pass v. Clark, 733 F.2d 605, 609-10 (9th Cir. 1984)).

[58] *Bennet*, 520 U.S. at 176.

[59] *Id.* § 706(2)(a).

[60] *See* Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983); Patrick M. Garry, *Judicial Review and the "Hard Look" Doctrine*, 7 NEV. L.J. 151, 152 (2008).

rule is not supported by the administrative record.[61] When a court overturns an agency rule, the court may either vacate the rule or leave the rule in place but remand it to the agency to address whatever shortcoming the court found.[62]

While many claims for review of agency action proceed under the arbitrary and capricious review standard set out in the APA, some claims turn on FWS's *interpretation* of the ESA. The most common standard of review for an agency interpretation of a federal statute it administers is known as *Chevron* deference, after the Supreme Court case *Chevron U.S.A. Inc. v. Natural Resources Defense Council*.[63] Under *Chevron*, a reviewing court would generally defer to FWS's reasonable interpretation of any provisions of the ESA that are ambiguous.[64] The Supreme Court, however, has not applied *Chevron* in recent administrative law cases, including at least one case under the ESA.[65]

Experimental Populations of Gray Wolves

FWS has released and designated three experimental populations of gray wolves—two in the greater Yellowstone area, where the species is now delisted, and one population of the Mexican gray wolf subspecies in New Mexico and Arizona.[66] Each of the rules establishing these experimental populations was litigated. Most recently, FWS issued a proposed rule to introduce a new experimental population of gray wolves in Colorado.[67] This section summarizes the experimental population rules, their implementation, and resulting litigation.

Yellowstone Experimental Population and 10(j) Rule and the Northern Rocky Mountain DPS

In 1978, FWS listed the gray wolf as endangered throughout the lower 48 states except for Minnesota, where it was listed as threatened.[68] In 1994, FWS finalized two rules establishing two nonessential experimental populations of gray wolves in (1) the greater Yellowstone area and (2)

[61] *State Farm,* 463 U.S. at 43.

[62] Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm'n, 988 F.2d 146, 151 (D.C. Cir. 1993) (noting that the normal rule when a regulation is found to be unlawful is to vacate and remand the rule, but remand without vacatur may be appropriate where vacating the rule would be "disruptive" and there is a serious possibility that the agency will be able to "substantiate" its decision if given the opportunity).

[63] 467 U.S. 837 (1984).

[64] *Id.* at 842-43.

[65] *See* Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 368 (2018) (considering the meaning of the ESA phrase *unoccupied critical habitat* without applying *Chevron*); *see also, e.g.*, CRS Report R44954, *Chevron Deference: A Primer*, by Benjamin M. Barczewski (tracking the Supreme Court's declining interest in applying *Chevron*); CRS In Focus IF12077, *The Major Questions Doctrine*, by Kate R. Bowers (noting that recently the Supreme Court has not applied or referred to *Chevron* in reviewing agency actions); Kristin E. Hickman & Aaron L. Nielson, *The Future of Chevron Deference*, 70 DUKE L.J. 1015, 1016 (2021) (noting the Supreme Court has been reluctant to apply *Chevron*).

[66] For more information on the history of the regulation of the gray wolf under the ESA, see CRS Report R46184, *The Gray Wolf Under the Endangered Species Act (ESA): A Case Study in Listing and Delisting Challenges*, by Erin H. Ward.

[67] Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Population of the Gray Wolf in Colorado, 88 Fed. Reg. 10,258 (proposed Feb. 17, 2023).

[68] Reclassification of the Gray Wolf in the United States and Mexico, with Determination of Critical Habitat in Michigan and Minnesota, 42 Fed. Reg. 9,607 (Mar. 9, 1978).

central Idaho and southwestern Montana.[69] In 1995 and 1996, FWS released a total of 66 Canadian gray wolves in Yellowstone, southwestern Montana, and central Idaho.[70] The initial management goal was for each experimental population to raise two pups for two consecutive years after three to five years of reintroduction efforts.[71] If all went well, FWS estimated that between the two experimental populations and a naturally occurring population in Montana, wolf recovery could be expected to reach 10 breeding pairs in each of the three areas by 2002.[72] By the end of 2000, the wolf population met its initial management goals of 30 breeding pairs and more than 300 individuals across Montana, Idaho, and Wyoming.[73]

Concurrently with the introduction of two experimental populations, FWS also issued regulations pursuant to ESA Section 10(j) specifying protections for the two populations.[74] As nonessential experimental populations, the wolves were treated as threatened (or as a candidate species for the purposes of Section 7 consultation in areas outside of Yellowstone National Park).[75]

The 10(j) rules for the Yellowstone and Idaho/Montana experimental populations of gray wolves illustrate how such rules may be tailored and amended to allow for flexible management. The 10(j) rules for the two populations permitted unintentional, non-negligent, and accidental take of a member of the experimental populations "provided that the take was incidental to otherwise lawful activities ... or was in defense of human life."[76] Any such take had to be reported to FWS within 24 hours.[77] The regulations also permitted FWS or designated public entities to take wolves that posed a threat to livestock or property.[78] Private landowners were permitted to harass wolves found on private property so long as any such harassment was reported to FWS within seven days. Private landowners were also permitted to injure or kill wolves that were in the act of wounding or killing livestock on private land. The landowner was required to report any such take to FWS within 24 hours and provide evidence of wounded or dead livestock to corroborate the nature of the wolf attack.

Once six or more breeding pairs were established in the experimental area, livestock owners could apply for permits from FWS to injure or kill wolves that attacked livestock on public grazing lands. Permits for take on public grazing land would be issued only after wolf relocation efforts failed.[79] Under the 10(j) regulations, FWS could relocate wolves that FWS determined were responsible for excessive predation on big game (e.g., elk, moose, bison) that affected a

[69] Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of Gray Wolves in Yellowstone National Park in Wyoming, Idaho, and Montana, 59 Fed. Reg. 60,252, 60,253-54 (Nov. 22, 1994); Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of Gray Wolves in Central Idaho and Southwestern Montana, 59 Fed. Reg. 60,266, 60,267-69 (Nov. 22, 1994).

[70] J. DWIGHT HINES, THE CO-LIVING OF HUMANS AND WOLVES IN THE GREATER YELLOWSTONE ECOSYSTEM 194 (2017).

[71] 59 Fed. Reg. at 60,255.

[72] *Id.*

[73] Endangered and Threatened Wildlife and Plants; Revision of Special Regulation for the Central Idaho and Yellowstone Area Nonessential Experimental Populations of Gray Wolves in the Northern Rocky Mountains, 73 Fed. Reg. 4,720, 4,721 (Feb. 27, 2008); *see also* Ed Bangs, et al., Gray Wolf Restoration in the Northwestern United States, 18 ENDANGERED SPECIES UPDATE 147, 149 (2001).

[74] 59 Fed. Reg. at 60,253-54; 59 Fed. Reg. at 60,270-71.

[75] *See id.*; 16 U.S.C. § 1539(j). As mentioned above, Section 4(d) of the ESA permits FWS to establish by rule which prohibitions contained in Section 9 will apply to a species listed as threatened. *See* 16 U.S.C. § 1533(d).

[76] 59 Fed. Reg. at 60,270.

[77] *Id.*

[78] *Id.*

[79] *Id.*

state or tribe's big game management goals.[80] Wolves, however, could not be intentionally killed to resolve predation conflicts with big game.[81]

FWS also provided for state or tribal management of the experimental populations outside of Yellowstone National Park through cooperative agreements, which would include FWS oversight and technical assistance.[82] If a state or tribe declined to enter into an agreement, FWS managed the wolf population in the relevant area.[83]

In 2005, FWS revised its 10(j) rules for the experimental populations by marginally expanding the circumstances when wolves could be injured or killed.[84] FWS again amended the 10(j) rules in 2008.[85] The 2008 amendment permitted wolf removal when a state or tribe determined that wolf predation was one of the major causes keeping a big game herd from reaching state or tribal management goals.[86]

The reintroduction of wolves to Yellowstone and the surrounding area generated significant litigation over FWS's authority to establish the two experimental populations in the selected geographic areas. Section 10(j) of the ESA requires that experimental populations must be "wholly separate geographically from non-experimental populations of the same species."[87] When it established the experimental populations, FWS interpreted that provision to require separation based on the areas occupied by existing gray wolf *populations*, even if individual gray wolves—lone dispersers from a pack—might be found elsewhere. In the rules, FWS stated that it would treat any individual gray wolves found in the experimental population area as part of that population. Farm bureaus, researchers, and conservation organizations challenged FWS's interpretation of Section 10(j), and the federal district court in Wyoming agreed with the challengers.[88] On appeal, however, the U.S. Court of Appeals for the Tenth Circuit (Tenth Circuit) disagreed and reversed the district court's ruling.[89] The Tenth Circuit rejected the argument that Section 10(j) required experimental populations to be separate from every naturally occurring individual animal.[90] Observing that wild animals—particularly wolves—move, the court concluded that protecting specimens based on where they are rather than where they came from was a reasonable interpretation of "wholly geographically separate."[91] Under the court's opinion, FWS may locate experimental populations in areas occupied by lone individuals of the same species so long as they are "wholly separate geographically" from *populations* of that species.[92]

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[80] *Id.*

[81] *Id.*

[82] *Id.*

[83] *Id.*

[84] Endangered and Threatened Wildlife and Plants; Regulation for Nonessential Experimental Populations of the Western Distinct Population Segment of the Gray Wolf, 70 Fed. Reg. 1,286, 1,299 (Feb. 7, 2005).

[85] Endangered and Threatened Wildlife and Plants; Revision of Special Regulation for the Central Idaho and Yellowstone Area Nonessential Experimental Populations of Gray Wolves in the Northern Rocky Mountains, 73 Fed. Reg. 4,720 (Feb. 27, 2008).

[86] 73 Fed. Reg. at 4,722-23. Prior versions of the regulations required wolves to be the "primary cause" of keeping a big game herd from reaching its management goals. *Id.* at 4,721.

[87] 16 U.S.C. § 1539(j)(1).

[88] Wyo. Farm Bureau Fed'n v. Babbitt, 987 F. Supp. 1349, 1371-76 (D. Wyo. 1997).

[89] Wyo. Farm Bureau Fed'n v. Babbitt, 199 F.3d 1224, 1234 (10th Cir. 2000) (deferring to FWS's interpretation of the ESA at step two of *Chevron*).

[90] *Id.* at 1234, 1237.

[91] *Id.* at 1235-36.

[92] *Id.*

In 2009, FWS designated the Northern Rocky Mountain (NRM) population of gray wolves as a distinct population segment (DPS),[93] including both experimental populations that had been introduced in 1995 and 1996, and delisted that population with the exception of wolves found in Wyoming.[94] FWS did not delist the Wyoming population because FWS determined that Wyoming's wolf management plan, to be implemented after delisting, was inadequate.[95] Under the 2009 delisting, Wyoming's population of gray wolves continued to be treated as an experimental population subject to the original 1994 10(j) regulations.[96] In 2010, a federal district court in Montana vacated the delisting, finding that the rule violated the ESA because it provided protections to only a portion of a DPS.[97] In 2011, however, Congress reinstated the delisting through legislation.[98]

In 2012, FWS delisted the gray wolf in Wyoming, finding that Wyoming's post-delisting management plan met FWS standards.[99] Environmental groups challenged the delisting, but the U.S. Court of Appeals for the District of Columbia Circuit upheld the rule.[100] As a result, no portion of the NRM DPS of gray wolves is listed as endangered or threatened, including wolves in Wyoming, and the experimental population regulations no longer apply to the NRM population.

Mexican Gray Wolf Experimental Population and 10(j) Rule

The Mexican gray wolf, a subspecies of the gray wolf, was listed as endangered in 1976.[101] Although there were occasional sightings of the wolf in Mexico, by the time it was listed as endangered, the Mexican gray wolf had been "effectively eliminated" in the U.S. Southwest.[102] In the 1970s and 1980s, the United States and Mexico developed a bilateral captive breeding program with the goal of saving the wolf from absolute extinction and ultimately reintroducing individuals from the program into the wild.[103]

In 1998, FWS issued a final rule establishing a nonessential experimental population of Mexican gray wolves in the Blue Range Wolf Recovery Area (BRWRA), which is largely centered on the

[93] In general, to qualify as a DPS, a population of a species must be discrete from the remainder of the species and significant to that species. *See* Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722 (Feb. 7, 1996).

[94] Endangered and Threatened Wildlife and Plants; Final Rule To Identify the Northern Rocky Mountain Population of Gray Wolf as a Distinct Population Segment and To Revise the List of Endangered and Threatened Wildlife, 74 Fed. Reg. 15,123 (Apr. 2, 2009).

[95] *Id.* at 15,125.

[96] *Id.*

[97] Defs. of Wildlife v. Salazar, 729 F. Supp. 2d 1207, 1228 (D. Mont. 2010).

[98] Department of Defense and Full-Year Appropriations Act, 2011, P.L. 112-10, § 1713, 125 Stat. 150 (2011). Parties challenged this legislation as unconstitutional for violating the separation of powers doctrine. All. for the Wild Rockies v. Salazar, 800 F. Supp. 2d 1123 (D. Mont. 2011). The courts upheld the legislation, holding that Congress substantively amended the ESA and did not direct the federal courts to make specific findings about the rule's validity under the ESA. *Id.*, *aff'd*, All. for the Wild Rockies v. Salazar, 672 F.3d 1170, 1175 (9th Cir. 2012).

[99] Endangered and Threatened Wildlife and Plants; Removal of the Gray Wolf in Wyoming From the Federal List of Endangered and Threatened Wildlife and Removal of the Wyoming Wolf Population's Status as an Experimental Population, 77 Fed. Reg. 55,530 (Sept. 10, 2012).

[100] Defs. of Wildlife v. Zinke, 849 F.3d 1077, 1093 (D.C. Cir. 2017).

[101] Determination That Two Species of Butterflies Are Threatened Species and Two Species of Mammals Are Endangered Species, 41 Fed. Reg. 17,736 (Apr. 28, 1976).

[102] U.S. FWS, Conserving the Mexican Wolf, https://www.fws.gov/program/conserving-mexican-wolf/species (last visited Mar. 14, 2023).

[103] *See* 63 Fed. Reg. at 1,753.

Gila and Apache National Forests in Arizona and New Mexico.[104] FWS released 14 family groups over five years with the goal of reaching 100 wild wolves.[105] Although FWS identified a larger Mexican Wolf Experimental Population Area that spanned from Interstate 40 in the north to Interstate 10 in the south and from the western border of Arizona to the eastern border of New Mexico, the rule provided that wolves found outside the BRWRA must be returned to the BRWRA.[106] Releases of wolves bred in captivity were also limited to the primary recovery zones.[107]

Figure 1. Map of Geographic Boundaries for the Mexican Gray Wolf 1998-2015

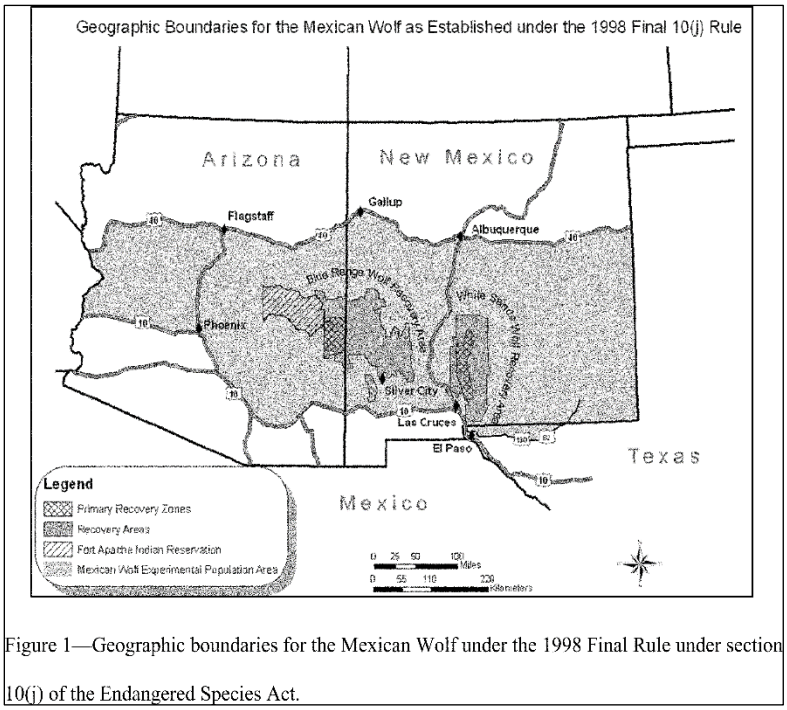


Figure 1—Geographic boundaries for the Mexican Wolf under the 1998 Final Rule under section 10(j) of the Endangered Species Act.

Source: Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Population of the Mexican Gray Wolf in Arizona and New Mexico, 63 Fed. Reg. 1,752 (Jan. 12, 1998).

At the same time that FWS established the experimental population, it also issued a 10(j) rule that established some protections for the population but with exceptions allowing take under certain circumstances.[108] The Mexican gray wolf experimental population 10(j) rule largely mirrored the 10(j) rule for the NRM experimental populations of gray wolves.[109] Relevant differences included a provision allowing FWS to kill, capture, or subject to genetic testing "any feral wolf-like

[104] *Id.* at 1,752

[105] *Id.* at 1,754.

[106] *Id.*

[107] *Id.*

[108] *Id.* at 1763.

[109] *Compare id. with* Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of Gray Wolves in Yellowstone National Park in Wyoming, Idaho, and Montana, 59 Fed. Reg. 60,252, 60,253-54 (Nov. 22, 1994); Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of Gray Wolves in Central Idaho and Southwestern Montana, 59 Fed. Reg. 60,266, 60,270-71 (Nov. 22, 1994).

animal, feral wolf hybrid, or any feral dog" found within the experimental population area, as well as limitations on predator control techniques used by the U.S. Department of Agriculture.[110]

FWS amended its 10(j) rule in 2015.[111] The 2015 amendment expanded the Mexican Wolf Experimental Population Area south to the U.S.-Mexico border, did away with the BRWRA designation, and expanded the areas where wolves could be reintroduced and naturally disperse.[112] The 2015 rule also slightly expanded the circumstances when wolves could be injured, killed, or harassed.[113]

As with the reintroduction of wolves to the Yellowstone area, reintroduction of the Mexican gray wolf to the U.S. Southwest generated significant litigation. Shortly after FWS issued the 1998 rule, a group of ranchers sued to block the reintroduction of the Mexican gray wolf.[114] The ranchers claimed that FWS failed to comply with the National Environmental Policy Act when it issued the 1998 rule because, they alleged, FWS underestimated the number of domestic livestock likely to be lost to wolf depredation.[115] A federal court in New Mexico rejected the ranchers' arguments, finding that FWS had "reasonable grounds" for its decision and that the administrative record it assembled supported its actions.[116] That rule remains in effect.

When FWS delisted the gray wolf throughout the lower 48 states in 2020, it stated that the delisting rule did not affect the Mexican gray wolf subspecies.[117] Accordingly, the Mexican gray wolf continues to be governed as a nonessential experimental population and subject to FWS's 10(j) rule.

Additional Delisting, Litigation, and the Colorado Experimental Population

In November 2020, FWS issued a final rule delisting the gray wolf (excluding the Mexican gray wolf) in the areas of the lower 48 states and Mexico where it had not already been delisted.[118]

FWS's delisting decision generated another round of litigation challenging the delisting. In February 2022, a federal district court in California vacated the rule delisting the gray wolf, effectively relisting the gray wolf as endangered throughout the lower 48 states except for the NRM DPS (which was delisted in 2011 and 2012) and Minnesota (which had previously been

[110] *Id.*

[111] Endangered and Threatened Wildlife and Plants; Revision to the Regulations for the Nonessential Experimental Population of the Mexican Wolf, 80 Fed. Reg. 2512 (Jan. 16, 2015).

[112] *Id.* at 2519.

[113] *Id.* at 2525.

[114] N.M. Cattle Growers Ass'n v. FWS, No. Civ. 98-367M/JHG, 1999 WL 34797509, at *1 (D.N.M. Oct. 28, 1999).

[115] *Id.* at *19.

[116] *Id.* at *28.

[117] Endangered and Threatened Wildlife and Plants; Removing the Gray Wolf (Canis lupus) from the List of Endangered and Threatened Wildlife, 85 Fed. Reg. 69,778, 69,778 (Nov. 3, 2020). As described in the next section, the delisting rule itself has been subject to litigation. Because of the exception stated in the delisting rule, the Mexican gray wolf remains listed regardless of the outcome of that litigation.

[118] Endangered and Threatened Wildlife and Plants; Removing the Gray Wolf (Canis lupus) from the List of Endangered and Threatened Wildlife, 85 Fed. Reg. 69,778 (Nov. 3, 2020).

listed as threatened).[119] An appeal of the district court's decision is currently pending before the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit).[120]

Also in November 2020, the voters of Colorado approved a ballot measure that directed Colorado Parks and Wildlife to reintroduce gray wolves to the western part of the state by 2023.[121] Because the California district court subsequently vacated FWS's delisting of the gray wolf, Colorado's reintroduction plans must now proceed with federal oversight pursuant to the ESA. Colorado accordingly petitioned FWS to establish an experimental population of gray wolves in conjunction with its gray wolf reintroduction effort.[122] In February 2023, FWS issued a proposed rule that would establish a nonessential experimental population of gray wolves in Colorado.[123] The comment period for the proposed rule closed on April 18, 2023.[124]

FWS proposes to introduce wolves in the northwest corner of Colorado, but FWS has designated the entire state of Colorado as the experimental population area because wolves are highly mobile.[125] Under the proposed rule, FWS would evaluate the reintroduction program every year for a minimum of five years to determine whether recovery goals are being met and if any modification is needed to reintroduction protocols.[126]

[119] Defs. of Wildlife v. FWS, 584 F. Supp. 3d 812, 834 (N.D. Cal. 2022). For more information about the litigation surrounding the delisting of the gray wolf *see* CRS Legal Sidebar LSB10697, *U.S. District Court Vacates Gray Wolf Delisting Rule*, by Erin H. Ward. Because the Mexican gray wolf was excluded from the 2020 delisting, it also remains listed, but its status was not affected by this litigation.

[120] WildEarth Guardians v. U.S. Dep't of Interior, No 22-15626 (9th Cir.).

[121] Bruce Finley, *Voter Approval of Colorado Wolf Reintroduction Means "Paws on the Ground" by Late 2023*, THE DENVER POST (Nov. 5, 2020), https://www.denverpost.com/2020/11/05/colorado-proposition-114-election-results-gray-wolves-final-results/.

[122] Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Population of the Gray Wolf in Colorado, 88 Fed. Reg. 10,258 (proposed Feb. 17, 2023).

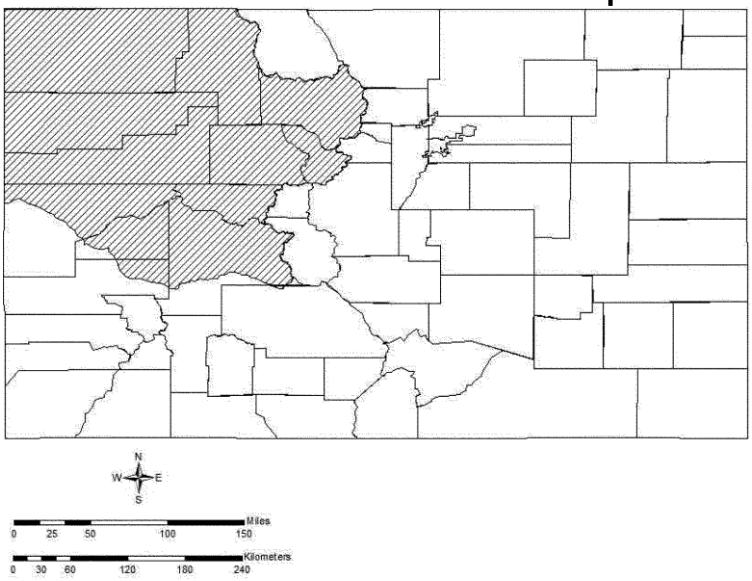
[123] *Id.*

[124] *Id.*

[125] *Id.* at 10,264.

[126] *Id.* at 10,279.

Figure 2. Map of State of Colorado with General Area Proposed for Initial Release



Source: Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Population of the Gray Wolf in Colorado, 88 Fed. Reg. 10,258, 10,265 (Feb. 17, 2023).

Notes: Crosshatch: proposed area for initial release.

The proposed rule also includes a proposed 10(j) rule for managing the experimental population.[127] The 10(j) regulations would permit Colorado or an Indian tribe within the state to assume lead authority for wolf conservation and management if the state or tribe has a wolf management plan that is consistent with the proposed rule.[128] Colorado has already issued a draft restoration and management plan for the proposed experimental population.[129]

The proposed 10(j) rule would also allow take of members of the experimental population in certain circumstances that largely mirror the 10(j) rule issued for the Yellowstone experimental populations.[130] For example, landowners would be allowed to kill or injure wolves when they are in the act of attacking livestock on their private land.[131] Any such take would have to be reported to FWS within 24 hours.[132] FWS would also have the authority to issue "shoot on-sight" permits to take wolves on public or private land in cases where there was at least one prior wolf depredation on that land, FWS had determined that problem wolves are routinely present, and FWS had already authorized its agents to lethally remove wolves from that land.[133]

Due to the ongoing litigation, the future listing status of the gray wolf is uncertain. If the Ninth Circuit reverses the district court's decision, the gray wolf could again be delisted, and states would have greater authority to manage the gray wolf. In that case, while Colorado would be able to conduct its reintroduction program without federal oversight, Colorado's reintroduction

[127] *Id.* at 10,271.

[128] *Id.*

[129] COLO. PARKS AND WILDLIFE COMM'N, COLORADO WOLF RESTORATION AND MANAGEMENT PLAN (2023).

[130] 88 Fed. Reg. at 10,271-72.

[131] *Id.* at 10,271.

[132] *Id.*

[133] *Id.* at 10,272.

program would not receive the same level of federal assistance as it would if the gray wolf remains listed as an endangered species.

Considerations for Congress

Congress included Section 10(j) in the ESA to give FWS flexibility to manage experimental populations, particularly when experimental populations may affect local development. Section 10(j) allows FWS to select which ESA prohibitions will apply to the experimental population, limits ESA consultation requirements in certain circumstances, and bars FWS from designating critical habitat for nonessential experimental populations. A decision to create an experimental population may impose comparatively fewer restrictions on stakeholders than the presence of endangered species. Nonetheless, introduction of an experimental population may still raise stakeholder concerns, especially when large predators such as gray wolves are at issue.

As noted above, litigation over the listing and delisting of the gray wolf, including experimental populations, has drawn the interest of Congress on several occasions, leading to congressional action that could affect the status of experimental populations. In 2011, in response to a federal court vacating FWS's delisting of the NRM gray wolf DPS, Congress legislatively reinstated the delisting through an appropriations rider.[134] A similar bill, known as the Trust the Science Act, has been introduced in the 118th Congress to reinstate the gray wolf delisting rule that was vacated by a federal district court in 2022.[135] The bill would require FWS to reissue its rule delisting the gray wolf in the lower 48 states and Mexico 60 days after the bill is enacted.[136] Were the bill enacted, it would return management of the gray wolf, including experimental populations of gray wolves, to the states. Delisting the gray wolf would also have the effect of precluding FWS from creating new experimental populations pursuant to Section 10(j). Delisting may also affect FWS's ability to provide technical, financial, and personnel assistance to efforts to reintroduce and manage gray wolf experimental populations. Congress may wish to consider such effects when reviewing delisting legislation.

The proposed Colorado experimental population of gray wolves illustrates the various perspectives that experimental populations can raise among stakeholders.[137] The presence of gray wolves, either naturally or as a result of the introduction of an experimental population, often creates tension with ranchers, sportsmen, and other stakeholders. For example, while there are conflicting accounts of the scale of wolf predation on livestock and game species,[138] some stakeholders in Colorado are concerned that the introduction of gray wolves will increase wolf predation on livestock and game species that will ultimately affect their livelihood or recreational

[134] Department of Defense and Full-Year Appropriations Act, 2011, P.L. 112-10, § 1713, 125 Stat. 150 (2011).

[135] Trust the Science Act, H.R. 764, 118th Cong. (2023).

[136] *Id.* § 2.

[137] *See* Michael Doyle, *Feds Plan for Colorado Gray Wolves Provokes Debate*, GREENWIRE, Apr. 17, 2023, https://subscriber.politicopro.com/article/eenews/2023/04/17/feds-plan-for-colorado-gray-wolves-provokes-debate-00092327.

[138] *See, e.g.*, Wyo. Game and Fish Dep't, Comment Letter on Establishment of a Nonessential Experimental Population of the Gray Wolf in Colorado (Apr. 18, 2023) (noting wolf predation on livestock is likely higher than FWS data indicates); Colo. Wool Growers Ass'n, Comment Letter on Proposed Colorado Gray Wolf Draft Environmental Impact Statement and 10(j) Rulemaking 10 (Apr. 17, 2023) (arguing that FWS underestimates livestock loss due to wolf predation). FWS expects its proposed 10(j) rule to significantly reduce wolf predation on livestock. U.S. FISH AND WILDLIFE SERVICE, DRAFT ENVIRONMENTAL IMPACT STATEMENT COLORADO GRAY WOLF 10(J) RULEMAKING 6-4 (Feb. 2023).

interests (e.g., hunting, hiking, and camping).[139] Section 10(j) allows FWS to address some of these concerns by establishing a rule that allows both lethal and nonlethal take of wolves (including harassing, hazing, and relocating) to protect livestock or game species. For naturally occurring endangered wolves, those activities are prohibited without an individual permit from FWS.[140]

The flexibility that Section 10(j) allows has also raised concerns for some stakeholders. For example, some environmental groups have urged FWS to limit or prohibit lethal take of members of the proposed experimental population in Colorado in order to restore natural predator-prey relationships with existing wild ungulate populations.[141] Some stakeholders have also argued that permitting lethal take of wolves in the experimental population undermines the purpose of the ESA to conserve endangered species because it may slow or prevent the attainment of a sustainable wolf population.[142] Finally, other stakeholders have asserted that wolf predation on livestock is rare, and as a result FWS should restrict or prohibit take under its 10(j) rule for wolves.[143]

Congress may consider whether to leave such decisions to the discretion of the agency or to provide more direction as to how experimental populations in general or gray wolf populations in particular should be managed. Congress may also consider legislation directly targeting stakeholder concerns outside the 10(j) context, such as through depredation programs for livestock owners in Colorado or generally. More fundamentally, Congress could also direct FWS to, or prohibit FWS from, establishing experimental populations of particular species.

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[139] *See, e.g.*, Board of County Commissioners of Rio Blanco County, Colo., Comment Letter on Establishment of a Nonessential Experimental Population of the Gray Wolf in Colorado (Apr. 18, 2023) (noting concerns over wolf predation on livestock); Colo. Wildlife Conservation Project, Comment Letter on Reintroduced Gray Wolves to be Established as a Nonessential Experimental Population in Colorado under ESA Section 10(j) 4 (Apr. 18, 2023) (noting concerns related to impacts of wolf predation on game species).

[140] *Compare* 88 Fed. Reg. at 10,271-72, *with* 16 U.S.C. § 1538(a)(1).

[141] *See* Defs. of Wildlife, Comment Letter on Establishment of a Nonessential Experimental Population of the Gray Wolf in Colorado (Apr. 18, 2023); Ctr. for Biological Diversity, Comment Letter on Proposed rule and draft environmental impact statement on establishment of a nonessential experimental population of the gray wolf in Colorado, 88 Fed. Reg. 10,258 (Feb. 17, 2023) (Apr. 18, 2023).

[142] *See* Ctr. for Biological Diversity, Comment Letter on Proposed rule and draft environmental impact statement on establishment of a nonessential experimental population of the gray wolf in Colorado, 88 Fed. Reg. 10,258 (Feb. 17, 2023) (Apr. 18, 2023).

[143] The Humane Soc'y of the U.S., Comment Letter on Establishment of a Nonessential Experimental Population of the Gray Wolf in Colorado 4 (FWS-R6-ES-2022-0100) (Apr. 19, 2023) (arguing that data shows that wolves have a negligible impact on livestock and lethal removal can make impacts on livestock from wolves worse).

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