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The Gray Wolf Under the Endangered Species Act (ESA): A Case Study in Listing and Delisting Challenges

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SUMMARY

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The Gray Wolf Under the Endangered Species Act (ESA): A Case Study in Listing and Delisting Challenges

Under the Endangered Species Act of 1973 (ESA or the Act; 16 U.S.C. §§ 1531-1544), the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (together, the Services) determine which species to "list" as "endangered species" or "threatened species," terms defined in the Act. Species, subspecies, and distinct population segments (DPSs) may all be listed as "species" under the Act. Listing a species invokes certain protections under the Act and a requirement that the Services develop a recovery plan to conserve the species. A species listed as threatened may be reclassified as endangered or vice versa. The Services may also remove a species from the list, often called delisting, if the species no longer meets the definition of an endangered or threatened species. The Services list, reclassify, and delist species through the agency rulemaking process, guided by statutory criteria and definitions. Persons may—and often do—challenge the legality of those final rules through litigation. When such challenges succeed, the court remands the rule to the applicable Service for further proceedings and may vacate the challenged rule.

The case of the gray wolf (*Canis lupus*) exemplifies the legal issues that arise with listing and delisting species as threatened and endangered under the ESA and how FWS has addressed them. FWS first listed the gray wolf as endangered in 1967 under the Endangered Species Preservation Act (ESPA), a predecessor of the ESA. The gray wolf's status and regulation under the ESA and its predecessors have been the subjects of numerous FWS rules and court opinions. FWS's gray wolf rules show how the agency's approach to interpreting and implementing the ESA has evolved and highlight hurdles that may arise with species' status determinations.

As American pioneers settled the West, hunting and other human-caused mortality, spurred by federal and state bounties, brought the gray wolf to near extinction. By the 1960s, the only population remaining in the lower 48 states was in the northern Minnesota forests. FWS listed the eastern timber wolf (*C. lupus lycaon*, a gray wolf subspecies found in Minnesota) as endangered under the ESPA. By 1976, three more gray wolf subspecies—the Mexican wolf (*C. lupus baileyi*), the northern Rocky Mountain wolf (*C. lupus irremotus*), and the Texas wolf (*C. lupus monstrabilis*)—were listed as endangered under the ESA. In 1978, FWS combined all gray wolf subspecies listings. One rule listed the entire gray wolf species as endangered in the lower 48 states except Minnesota, and a separate rule listed the gray wolf in Minnesota as threatened. In the next few years, FWS created subspecies recovery plans that outlined management strategies and recovery criteria. In the 1990s, FWS reintroduced gray wolves to the northern Rocky Mountains and the Southwest as experimental populations under the ESA. Protected under the ESA from human-caused mortality, which FWS identified as the greatest threat to the species, gray wolf populations increased. In the 2000s, FWS tried on multiple occasions to reclassify or delist gray wolf DPSs it had determined were no longer in risk of extinction, but courts vacated many of the agency's rules. In 2015, FWS listed the Mexican wolf separately as endangered. In that rule, FWS adjusted the territory over which the gray wolf in the lower 48 states was endangered or threatened to exclude the Mexican wolf's territory in Arizona and New Mexico. On November 3, 2020, FWS published a final rule delisting the gray wolf in the lower 48 states, with an effective date of January 4, 2021. This delisting rule does not affect the separate listing for the Mexican wolf as endangered.

FWS's efforts to recover the gray wolf under the ESA exemplify the regulatory and legal challenges that arise when listing and delisting species under the Act. From initial listing to recovery and reintroduction efforts to more recent attempts to delist the gray wolf, FWS has addressed such issues as uncertainties in gray wolf taxonomy, ambiguous statutory terms (e.g., "foreseeable future" and "significant portion of its range"), and the adequacy of state management plans. Stakeholders have questioned FWS's choices in comments to the proposed rules and have challenged many of the agency's gray wolf rules in court. Many of the legal challenges to FWS's delisting rules have succeeded, with courts vacating the rules and remanding them to the agency. The history of FWS's regulation of the gray wolf under the ESA and related litigation serve as a useful case study in how regulatory and legal challenges have shaped FWS's interpretation and application of key terms when listing and delisting species under the Act.

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Under the Endangered Species Act of 1973 (ESA or the Act),[1] the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (together, the Services) determine which species to "list" as "endangered species" or "threatened species," terms defined in the Act.[2] Species, subspecies, and distinct population segments (DPSs) may all be listed as "species" under the Act.[3] Listing a species invokes certain protections under the Act and a requirement that the Services develop a recovery plan to conserve the species.[4] A species listed as threatened may be reclassified as endangered or vice versa.[5] The Services may also remove a species from the list, often called delisting,[6] if the species no longer meets the definition of an endangered or threatened species.[7] The Services list, reclassify, and delist species through the agency rulemaking process, guided by statutory criteria and definitions.[8] Persons may—and often do—challenge the legality of those final rules through litigation.[9] When such challenges succeed, the court remands the rule to the applicable Service for further proceedings and may vacate the challenged rule.[10]

The gray wolf (*Canis lupus*) presents a useful example of the legal issues that arise with listing and delisting species as threatened and endangered under the ESA and how FWS has addressed those issues. The gray wolf was among the first species identified by federal law as endangered after being hunted to near extinction in the lower 48 states.[11] FWS has issued numerous rules in connection with its efforts to recover the gray wolf under the ESA.[12] Many of those rules have been challenged in court, and a number of them have been vacated and remanded to FWS.[13] FWS has addressed issues such as uncertainties in gray wolf taxonomy, ambiguous statutory terms (e.g., "foreseeable future" and "significant portion of its range"), and the adequacy of state management plans. This report uses FWS's regulation of the gray wolf under the ESA and related litigation as a case study in how legal challenges have shaped FWS's interpretation of ESA provisions when listing and delisting species under the Act. The report begins by laying out general legal principles governing agency rulemaking under the ESA before reviewing the history of FWS's actions to list, recover, and delist the gray wolf and subsequent litigation. The report then uses this regulatory and litigation history to analyze specific issues that arise when listing and delisting species under the Act.

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[1] Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified at 16 U.S.C. §§ 1531 – 1544).

[2] 16 U.S.C. § 1533.

[3] *Id.* §§ 1532(16) & 1533(a).

[4] *Id.* §§ 1533(f), 1536, & 1538. The Secretary of the Interior or of Commerce, as applicable, may decline to develop and implement a recovery plan only upon finding "that such a plan will not promote the conservation of the species." *Id.* § 1533(f)(1).

[5] *Id.* § 1533(a) & (c).

[6] Though the term "delist" does not appear in the Endangered Species Act of 1973 (ESA or the Act), it is generally used by the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Services (together, the Services) to refer to removing a species from the list of endangered or threatened species.

[7] *Id.*

[8] *Id.* § 1533(a); 5 U.S.C. § 553.

[9] *See, e.g.*, Defenders of Wildlife v. Sec'y, U.S. Dep't of the Interior, 354 F. Supp. 2d 1156 (D. Ore. 2005); Nat'l Wildlife Fed'n v. Norton, 386 F. Supp. 2d 553 (D. Vt. 2005).

[10] *See, e.g.*, Humane Soc'y of the U.S. v. Kempthorne, 579 F. Supp. 2d 7, 21 (D.D.C. 2008).

[11] Endangered Species, 32 Fed. Reg. 4001, 4001 (Mar. 11, 1967).

[12] *See infra* "History of Listing and Delisting the Gray Wolf" section.

[13] *Id.*

Listing and Delisting Species Under the Endangered Species Act

The ESA aims to accomplish its goal of conserving fish, wildlife, and plants species threatened with extinction by "listing" species the Services determine to be endangered or threatened.[14] The ESA's provisions and protections generally apply only to these listed species.[15] The Act's legal framework determines when and how species are listed, reclassified,[16] and delisted.[17] The Secretary of the Interior and the Secretary of Commerce (this report refers to "the Secretary" to mean either the Secretary of the Interior or the Secretary of Commerce, as applicable) review species' statuses under the Act on the respective Secretary's own initiative or in response to petitions.[18] Any person[19] may petition the Secretary to list, reclassify, or delist a species.[20] The ESA prescribes when and how the Secretary is required to respond to such petitions, as shown in **Figure 1**.

[14] 16 U.S.C. §§ 1531(b), 1533(a) & (c).

[15] Candidate species being considered for listing receive some minimal protections under the Act before they are listed. 50 C.F.R. § 424.02.

[16] *Reclassification*, as used in this report, refers to a "change[] in status" from endangered to threatened or from threatened to endangered. *See* 16 U.S.C. § 1533(c)(2)(B).

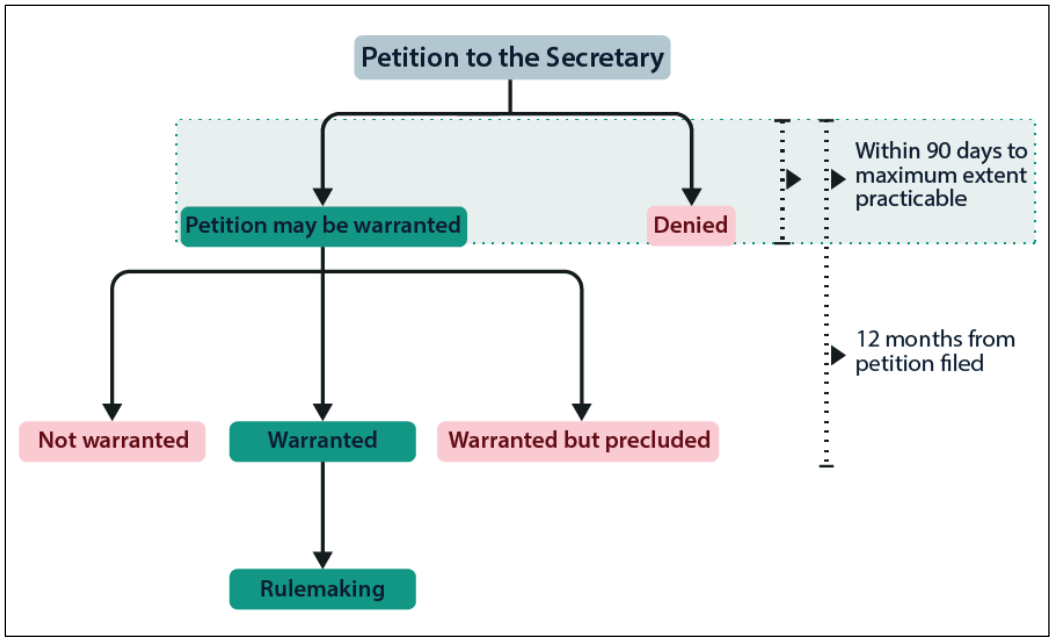
[17] *See generally id.* § 1533.

[18] *Id*. § 1533(b).

[19] Under the ESA, "person" is defined to mean "an individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State, or of any foreign government; any State, municipality, or political subdivision of a State; or any other entity subject to the jurisdiction of the United States." *Id.* § 1532(13).

[20] *Id.* § 1533(b)(3); 5 U.S.C. § 553(e).

Figure 1. Petitioning the Secretary Under the Endangered Species Act



Source: Congressional Research Service (based on 16 U.S.C. § 1533(b)).

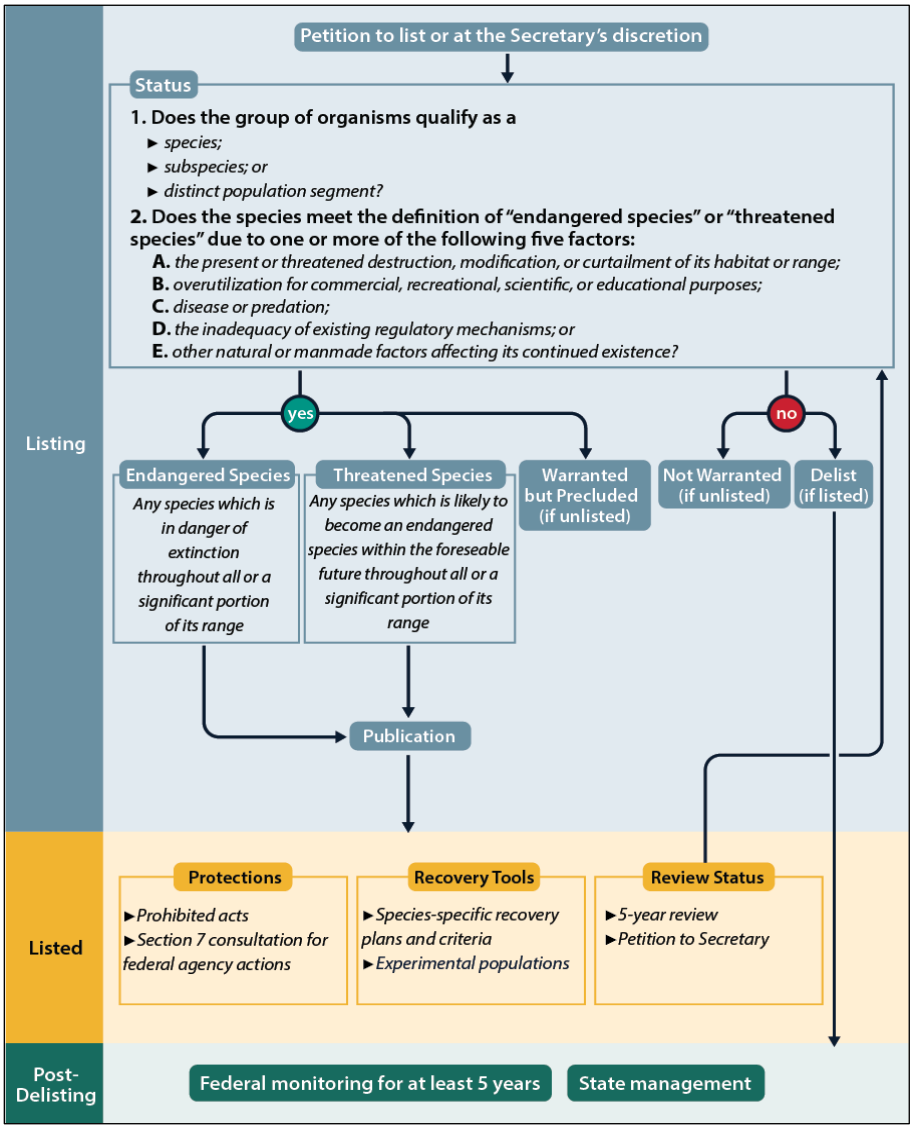
Note: "The Secretary" refers to the Secretary of the Interior or the Secretary of Commerce, as applicable.

A status review, conducted pursuant to a petition that may be warranted or at the Secretary's initiative, determines whether a species should be or remain listed.[21] **Figure 2** depicts the general pathway for a species from status review and listing through post-delisting monitoring and management under the ESA framework. A brief explanation of each stage is provided below **Figure 2**.[22]

[21] 16 U.S.C. § 1533(a) & (b)(3)(A). For species listed as endangered or threatened, a status review could determine that the species should be reclassified from endangered to threatened or vice versa, as applicable. *Id.* § 1533(c).

[22] For more information on the ESA, see CRS Report RL31654, *The Endangered Species Act: A Primer*, by Pervaze A. Sheikh and CRS In Focus IF11241, *The Legal Framework of the Endangered Species Act (ESA)*, by Erin H. Ward.

Figure 2. Listing and Delisting Species Under the Endangered Species Act



Source: Congressional Research Service (based on 16 U.S.C. §§ 1532, 1533, 1536 & 1538).

Note: "Secretary" refers to either the Secretary of the Interior or the Secretary of Commerce, as applicable.

Listing. As a threshold matter, the Secretary may list only groups of organisms that qualify as a "species" under the ESA,[23] defined to include subspecies and DPSs.[24] Because the term "species" under the Act has a distinct legal meaning that may differ from its conventional or taxonomic meaning,[25] this report uses the term "species" to refer to species as defined by the Act (i.e., including subspecies and DPSs) and the term "full species" when referring to a taxonomic

[23] 16 U.S.C. § 1532(16).

[24] Distinct population segments (DPSs) are limited to species of vertebrate fish or wildlife that interbreed when mature. 16 U.S.C. § 1532(16). For more information about how the Services have interpreted and applied this term, see infra "Designating Distinct Population Segments (DPSs).

[25] *See, e.g.*, John L. Gittleman, *Species*, ENCYCLOPAEDIA BRITANNICA (Nov. 6, 2019), https://www.britannica.com/science/species-taxon.

species. For species eligible for listing, the Secretary examines whether the species qualifies as an endangered species or threatened species, as defined by the Act,[26] because of any of the five factors listed in **Figure 2**. The ESA requires the Secretary to make this determination "solely" based on the "best scientific and commercial data available."[27] Based on this evaluation, the Secretary either lists the species as endangered or threatened, as appropriate, or determines the species is ineligible for listing and, if the Secretary conducted the status review pursuant to a petition to list, denies the petition.[28] The Secretary may also determine that a species qualifies as an endangered or threatened species but that the species cannot be listed at the time due to the Services' priorities and limited resources. In that case, the Secretary may deny a petition as warranted but precluded.[29] The Secretary publishes listing determinations in the Federal Register and the Code of Federal Regulations.[30]

Listed. Once endangered and threatened species are listed, the ESA directs federal agencies to "conserve" them and their ecosystems.[31] As shown in **Figure 2**, the Act provides two types of mechanisms to conserve listed species and facilitate their recovery.[32] First, as shown in the Protections box of **Figure 2**, it protects the species by prohibiting certain acts with respect to endangered species; similar prohibitions may also be extended to threatened species.[33] The Act further protects listed species by requiring federal agencies to consult with the Services when their actions, or actions they approve or fund, could affect listed species—often called Section 7 consultations.[34] Through this process, federal agencies assess the potential effects of their actions on any endangered or threatened species and evaluate, as necessary, alternatives that would mitigate the impact.[35]

Second, as shown in the Recovery Tools box in **Figure 2**, the ESA provides tools to facilitate the recovery of the species. The Act generally requires the Secretary to develop and implement a

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[26] 16 U.S.C. § 1532(6) & (20).

[27] *Id.* § 1533(b). "Best scientific and commercial data" is not defined in the ESA.

[28] *Id.* § 1533(a)-(c).

[29] *Id.* § (b)(3)(B)(iii).

[30] *Id.* § 1533(c)(1); 50 C.F.R. § 17.11-17.12. The Secretary is also required, "to the maximum extent prudent and determinable," to designate critical habitat concurrently with listing a species. 16 U.S.C. § 1533(a)(3)(A). Critical habitat designations are also published in the Federal Register and Code of Federal Regulations. *Id.* § 1533(c)(1); 50 C.F.R. § 17.95.

[31] 16 U.S.C. § 1531(b). Conserving an endangered or threatened species means the federal agency uses "all methods and procedures which are necessary to bring [the species] to the point at which the measures provided [in the ESA] are no longer necessary." *Id.* § 1532(3).

[32] The Services use the term "recovery" to mean "improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act." 50 C.F.R. § 402.02. *See also* Endangered and Threatened Wildlife and Plants; Final Rule to Reclassify and Remove the Gray Wolf from the List of Endangered and Threatened Wildlife in Portions of the Conterminous United States; Establishment of Two Special Regulations for Threatened Gray Wolves, 68 Fed. Reg. 15,804, 15,809 (Apr. 1, 2003) ("Essentially, recover and conserve both mean to bring a species to the point at which it no longer needs the protections of the Act, because the species is no longer threatened or endangered.").

[33] 16 U.S.C. § 1538(a) & 1533(d). The Act requires the Secretary to issue regulations, often called 4(d) rules, for threatened species "as he deems necessary and advisable to provide for the conservation of such species." *Id.* § 1533(d). In those regulations, the Secretary may prohibit any act that is prohibited with respect to endangered species, with minor limitations. *Id.*

[34] *Id.* § 1536(a)(2). This consultation, often called a Section 7 consultation, is intended to ensure that federal agency actions are "not likely to jeopardize the continued existence of endangered or threatened species" or to "adversely modify" or to destroy critical habitat. *Id.* § 1536; 50 C.F.R. Part 402.

[35] 16 U.S.C. § 1536; 50 C.F.R. Part 402.

recovery plan for each listed species unless such a plan would "not promote the conservation of the species."[36] The recovery plan includes any site-specific management actions needed to conserve the species, objective and measureable criteria that would merit delisting the species if met,[37] and estimates of timelines and costs.[38] In addition to recovery plans, Congress amended the ESA in 1982 to allow the Services to reintroduce experimental populations of listed species, which are regulated as threatened species regardless of the listed species' status.[39] Experimental populations must be "wholly separate geographically" from existing natural populations of the species.[40]

As shown in the Review Status box in **Figure 2**, the Secretary must review the status of a listed species every five years[41]—or pursuant to a petition to reclassify or delist the species that may be warranted[42]—to determine whether it still qualifies as an endangered or threatened species. Species are reclassified or delisted based on the same criteria used to list species, as shown in the Status box in **Figure 2**.[43]

Post-delisting. Once a species is delisted, the states in which the species resides resume control over management of the recovered species.[44] The Secretary and the states monitor the status of a recovered species for at least five years after delisting.[45] In this period, if the Secretary determines that there is a significant risk to the well-being of the species, the Secretary must exercise emergency powers to restore the Act's protections to the species for 240 days, during which time the Secretary may begin rulemaking proceedings to relist the species.[46]

Administrative Law and Statutory Interpretation

The Services list, reclassify, and delist species through the rulemaking process. The principles of administrative law and statutory interpretation that generally govern the agency rulemaking process and judicial review underpin the Services' actions under the ESA.[47] Agencies use rules,

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[36] 16 U.S.C. § 1533(f).

[37] Species are not automatically delisted if they meet the objective, measurable criteria in their recovery plans. The Secretary must undertake agency rulemaking to delist the species in accordance with the ESA listing criteria, 5 U.S.C. § 553; 16 U.S.C. § 1533(a), and circumstances may have changed since the criteria were set.

[38] 16 U.S.C. § 1533(f). For example, the recovery plan may specify the number of breeding pairs that must be sustained for a certain number of years in a particular geographic area to consider the species recovered. *See, e.g.*, *Northern Rocky Mountain Wolf Recovery Plan*, U.S. FISH & WILDLIFE SERV., at v (1987).

[39] Endangered Species Act Amendments, Pub. L. No. 97-304, 96 Stat. 1411 (1982) (codified at 16 U.S.C. § 1539(j)); 16 U.S.C. § 1539(j)(2)(C). A court, reviewing relevant legislative history, concluded that Congress added this option, with its greater regulatory flexibility, to address the Services' frustration with political opposition to such reintroduction efforts borne from "industry's fears experimental populations would halt development projects." Wyo. Farm Bureau Fed'n v. Babbitt, 199 F.3d 1224, 1231-32 (10th Cir. 2000) (citing H.R. Rep. No. 97-567, at 8 (1982)).

[40] 16 U.S.C. § 1539(j)(1).

[41] *Id.* § 1533(c)(2)(A).

[42] *Id.* § 1533(b).

[43] *Id.* § 1533(c).

[44] The Secretary generally reviews and may need to approve state management plans for states where a recovered species is found as part of the recovery criteria and five-factor threats assessment before finalizing the delisting rule. *See, e.g.*, Endangered and Threatened Wildlife and Plants; Final Rule Designating the Northern Rocky Mountain Population of Gray Wolf as a Distinct Population Segment and Removing this Distinct Population Segment from the Federal List of Endangered and Threatened Wildlife, 73 Fed. Reg. 10,514, 10,546-52 (Feb. 27, 2008).

[45] 16 U.S.C. § 1533(g)(1).

[46] *Id.* §§ 1533(b)(7) & (g)(2).

[47] For in-depth information on agency rulemaking, judicial review, and statutory interpretation, see CRS Report

among other tools, to implement and interpret statutes and promulgate regulations.[48] The Administrative Procedure Act (APA)[49] generally governs agency rulemaking by prescribing procedural requirements for agencies to follow and providing an opportunity for judicial review of final agency actions.[50] The APA requires agencies to publish a *proposed rule* to provide notice of the agency's proposed action and provide an opportunity for public comment, then to publish a *final rule* that concisely states the agency's basis and purpose for the rule.[51] The agency's statement must generally address significant comments and explain the agency's rationale for those comments not incorporated into the final rule.[52] Any changes in the final rule must be a "logical outgrowth" of the proposed rule to comport with due process.[53]

Parties affected by an agency rule can generally seek judicial review of the agency's action.[54] To the extent the rule relies on an agency's interpretation of a provision in a statute it administers, the court generally evaluates the agency's interpretation under the *Chevron* doctrine.[55] Under the *Chevron* doctrine,[56] the court first determines whether the statutory provision is ambiguous (i.e., if there are multiple permissible meanings) by relying on principles of statutory interpretation.[57] The court may look to the plain meaning of the term in common parlance, the provision's statutory context, how the term is used elsewhere in the statute or other statutes, the statute's purpose and legislative history, and whether a particular interpretation would render a term superfluous, lead to absurd results, or raise constitutional questions.[58] If the court determines that a statutory provision is ambiguous, then it defers to the administering agency's interpretation so long as it is a permissible (i.e., reasonable) interpretation.[59]

R41546, *A Brief Overview of Rulemaking and Judicial Review*, by Todd Garvey, and CRS Report R45153, *Statutory Interpretation: Theories, Tools, and Trends*, by Valerie C. Brannon.

[48] 5 U.S.C. § 551(4).

[49] *Id.* §§ 551-559, 701-706.

[50] *Id.*

[51] *Id.* § 553. Congress may provide by statute that all or part of the Administrative Procedure Act (APA) does not apply to certain agency actions. In some cases, Congress has provided alternative rulemaking procedures for an agency to follow. *See, e.g.*, 42 U.S.C. 7607(d) (prescribing rulemaking procedures for the U.S. Environmental Protection Agency to follow for rules promulgated under certain provisions of the Clean Air Act).

[52] *See, e.g.*, Perez v. Mortg. Bankers Ass'n, 135 S. Ct. 1199, 1203 (2015).

[53] Envt'l Integrity Project v. EPA, 425 F.3d 992, 996 (D.C. Cir. 2005) ("[A]n agency's proposed rule and its final rule may differ only insofar as the latter is a 'logical outgrowth' of the former."). A final rule is a "logical outgrowth" of the proposed rule if parties "'should have anticipated' that the change was possible, and thus reasonably should have filed their comments on the subject during the notice-and-comment period." Northeast Md. Waste Disposal Auth. v. EPA, 358 F.3d 936, 952 (D.C. Cir. 2004).

[54] 5 U.S.C. § 702. Judicial review is a right created by statute under the APA, but Congress may and has limited the availability of judicial review for certain agency actions or entirely precluded judicial review. *See, e.g.*, 38 U.S.C. § 511(a); 42 U.S.C. § 7607(b).

[55] *See, e.g.*, Adams Fruit Co. v. Barrett, 494 U.S. 638, 649 (1990).

[56] Chevron U.S.A., Inc. v. Natural Res. Def. Council, 467 U.S. 837, 843 (1984). For more information on the *Chevron* doctrine, see CRS Report R44954, *Chevron Deference: A Primer*, by Valerie C. Brannon and Jared P. Cole.

[57] *Chevron U.S.A., Inc.*, 467 U.S. at 842.

[58] *See, e.g.*, NLRB v. SW Gen., Inc., 137 S. Ct. 929, 938-39 (2017); McDonnell v. United States, 136 S. Ct. 2355, 2369 (2016); Yates v. United States, 135 S. Ct. 1074, 1080 (2015); FAA v. Cooper, 566 U.S. 284, 291-92 (2012); FCC v. AT&T Inc., 562 U.S. 397, 407-08 (2011); Stenberg v. Carhart, 530 U.S. 914, 942 (2000); City of Chicago v. Envtl. Def. Fund, 511 U.S. 328, 337-38 (1994); Anita S. Krishnakumar, *Statutory Interpretation in the Roberts Court's First Era: An Empirical and Doctrinal Analysis*, 62 HASTINGS L.J. 221, 251 (2010).

[59] *Chevron U.S.A., Inc.*, 467 U.S. at 843.

Under the APA, a court must set aside agency rules if it finds the rule is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[60] For example, a court may determine that a rule is arbitrary and capricious because the agency's interpretation of an ambiguous term is not a permissible one.[61] A court may also hold that an agency rule is arbitrary and capricious if it is illogically reasoned, fails to consider an important aspect of the problem, or is unsupported by the administrative record.[62] When a court overturns an agency rule, it generally vacates the rule and remands it to the agency.[63]

History of Listing and Delisting the Gray Wolf

The gray wolf has a long history as a listed species under the ESA and its predecessors. As discussed in this section, from the initial listing to the present, nearly every element of the listing and delisting legal framework has been implicated in regulating the gray wolf under the Act. (See "Listing and Delisting Species Under the Endangered Species Act" section.) **Table 1** includes a timeline of legislative, regulatory, and litigation actions by population, and **Table A-1** in the **Appendix** provides a more detailed version. The substantive issues that have been raised in the various rulemakings and court opinions described in this section are discussed by topic in the "Challenges When Listing and Delisting Species" section.

[60] 5 U.S.C. § 706(2)(A).

[61] *See, e.g.*, Defenders of Wildlife v. Salazar, 729 F. Supp. 2d 1207, 1224-26 (D. Mont. 2010). *Cf.* Sec'y of Labor, Mine Safety & Health Admin v. Nat'l Cement Co. of Cal., Inc., 494 F.3d 1066, 1074-75 (D.C. Cir. 2007).

[62] *See, e.g.*, Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt., 698 F.3d 1101, 1124 (9th Cir. 2012); Am. Fed'n of Gov't Emps., Local 2924 v. Fed. Labor Relations Auth., 470 F.3d 375, 380 (D.C. Cir. 2006); United States v. Dierckman, 201 F.3d 915, 926 (7th Cir. 2000) (quoting Bagdonas v. Dep't of the Treasury, 93 F.3d 422, 426 (7th Cir. 1996)); Allied-Signal, Inc. v. Nuclear Reg. Comm'n, 988 F.2d 146, 152 (D.C. Cir. 1993).

[63] *See, e.g.*, Humane Soc'y of U.S. v. Kempthorne, 579 F. Supp. 2d 7, 21 (D.D.C. 2008).

The gray wolf's traits and history inform much of FWS's analysis of threats to the species and pathways to recovery. Gray wolves are the largest member of the Canidae (i.e., dog) family.[64] They are frequently found in packs and occupy defined territory, but lone gray wolves may leave their packs to join another pack or wander alone.[65] Gray wolves are effective and adaptive predators who generally hunt large prey, such as moose, elk, caribou, bison, and deer; they also eat smaller prey.[66] Historically, gray wolves ranged throughout most of North America, Europe, and Asia.[67] On the North American continent, gray wolves were once found from Canada and Alaska to northern Mexico except for much of the southeastern United States (where the related but distinct red wolf lived) and parts of southern California.[68] The arrival of European settlers and their expansion into the western frontier led to widespread persecution of wolves as a result of fear, superstition, and perceived and real conflicts between wolves and humans, such as attacks on humans, domestic animals, or livestock.[69] Encouraged by federal, state, and local bounties, settlers poisoned, trapped, and shot wolves until they were eliminated from more than 95% of their historical range.[70]

Listing and Recovery Efforts

FWS listed the first gray wolf subspecies, the eastern timber wolf (*C. lupus lycaon*), as endangered in 1967 under the Endangered Species Preservation Act of 1966 (ESPA).[71] After the Endangered Species Conservation Act of 1969 (ESCA)[72] amended the ESPA, FWS listed the northern Rocky Mountain wolf (*C. lupus irremotus*) as endangered in 1973.[73] Under the ESPA and the ESCA, the Services could list only species or subspecies that were endangered worldwide.[74] Enacted in 1973,[75] the ESA allowed the Services to identify a species as endangered or threatened in all or a significant part of its range.[76] After the ESA was enacted, FWS listed two more gray wolf subspecies—the Mexican wolf (*C. lupus baileyi*) and the Texas wolf (*C. lupus monstrabilis*)—as endangered in 1976.[77] In 1978, FWS combined these listings into one listing for the gray wolf species as endangered throughout the lower 48 states except Minnesota and a separate listing for the gray wolf in Minnesota as threatened.[78]

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[64] Endangered and Threatened Wildlife and Plants; Proposal to Reclassify and Remove the Gray Wolf from the List of Endangered and Threatened Wildlife in Portions of the Conterminous United States; Proposal to Establish Three Special Regulations for Threatened Gray Wolves, 65 Fed. Reg. 43,450, 43,451 (July 13, 2000).

[65] *Id.*

[66] *Id.*

[67] *Id.*

[68] *Id.*

[69] *Id.*

[70] *Id.*

[71] 32 Fed. Reg. 4001 (Mar. 11, 1967).

[72] Pub. L. No. 91-135, 83 Stat. 273 (1969).

[73] Amendments to Lists of Endangered Fish and Wildlife, 38 Fed. Reg. 14,678 (June 4, 1973).

[74] Pub. L. No. 89-669, 80 Stat. 926 (1966); Pub. L. No. 91-135, 83 Stat. 273 (1969).

[75] Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified at 16 U.S.C. §§ 1531 – 1544).

[76] 16 U.S.C. § 1533(a).

[77] 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); Endangered Status for 159 Taxa of Animals, 41 Fed. Reg. 24,064 (June 14, 1976).

[78] Reclassification of the Gray Wolf in the United States and Mexico, with Determination of Critical Habitat in Michigan and Minnesota, 42 Fed. Reg. 9607 (Mar. 9, 1978).

Between 1978 and 1982, FWS created recovery plans for the eastern timber wolf, the northern Rocky Mountain wolf, and the Mexican wolf that outlined management strategies and recovery criteria.[79] It later updated each of those plans.[80] In the 1990s, FWS reintroduced gray wolves into central Idaho and the greater Yellowstone area in the northern Rocky Mountains and the Southwest.[81] FWS designated each population as a *nonessential* experimental population, meaning FWS determined the population is not essential to the conservation of the species.[82] Protected from human-caused mortality, which FWS identified as the greatest threat to the species, gray wolf populations in the western Great Lakes region, the northern Rocky Mountains, and the Southwest increased and expanded their ranges.[83]

Designating Distinct Population Segments (DPSs)

Beginning in the early 2000s, FWS promulgated a series of rules that simultaneously designated gray wolf DPSs, removing them from (or dividing up) the previously listed gray wolf entities, and reclassified or delisted them—nearly all of which have been overturned by courts. As mentioned above, the ESA defines species to include taxonomic species, subspecies, and DPSs.[84] The term DPS is distinct to the ESA, unlike species and subspecies, which are commonly used taxonomic terms with scientific meanings.[85] The term DPS is not defined in the ESA. The Services issued a DPS policy (DPS Policy) in 1996 explaining how they would interpret and apply the term.[86] Under the DPS Policy, the Services evaluate the population's discreteness[87] and significance[88] to determine if it qualifies as a DPS and, therefore, a listable species under the Act.[89] FWS has used

[79] *Recovery Plan for the Eastern Timber Wolf*, EASTERN TIMBER WOLF RECOVERY TEAM (1978); *Northern Rocky Mountain Wolf Recovery Plan*, U.S. FISH & WILDLIFE SERV. (1980); *Mexican Wolf Recovery Plan*, U.S. FISH & WILDLIFE SERV. (1982).

[80] *Northern Rocky Mountain Wolf Recovery Plan*, U.S. FISH & WILDLIFE SERV. (1987); *Recovery Plan for the Eastern Timber Wolf*, EASTERN TIMBER WOLF RECOVERY TEAM (Rev. 1992); *Mexican Wolf Recovery Plan: First Revision*, U.S. FISH & WILDLIFE SERV. (2017).

[81] 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, 60,252 (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, 60,266 (Nov. 22, 1994); Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of the Mexican Gray Wolf in Arizona and New Mexico, 63 Fed. Reg. 1752, 1752 (Jan. 12, 1998).

[82] 59 Fed. Reg. at 60,252; 59 Fed. Reg. at 60,266; 63 Fed. Reg. at 1752.

[83] *See, e.g.*, Endangered and Threatened Wildlife and Plants; Final Rule Designating the Western Great Lakes Populations of Gray Wolves as a Distinct Population Segment; Removing the Western Great Lakes Distinct Population Segment of the Gray Wolf from the List of Endangered and Threatened Wildlife, 72 Fed. Reg. 6052, 6053-56 (Feb. 8, 2007); 73 Fed. Reg. 10,514, 10523-26 (Feb. 27, 2008).

[84] 16 U.S.C. § 1532(16).

[85] *See* Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722, 4722 (Feb. 7, 1996) (henceforth "DPS Policy"); 16 U.S.C. § 1532.

[86] DPS Policy, 61 Fed. Reg. 4722.

[87] The DPS Policy considers a population discrete if it is "markedly separate from other populations" of the same species due to "physical, physiological, ecological, or behavioral factors." *Id.* at 4725. A population may also be considered discrete if (1) it is separated from other populations by international governmental boundaries and (2) the legal protections differ significantly between the two countries. *Id.*

[88] The DPS Policy considers a population significant based on its biological and ecological significance to the species. *Id.* For example, a population might be significant if it persists in an unusual or unique setting for the species, its loss would create a significant gap in the species' range, it represents the only surviving population in the wild that was not reintroduced, or its genetic composition differs markedly from other populations of the species. *Id.*

[89] *Id.* at 4725.

its authority to list DPSs as species, as interpreted by the Services' DPS policy, to designate gray wolf populations as DPSs and delist those DPSs. The various rules designating and delisting gray wolf DPSs and related court decisions are described below and listed in **Table 1**.

Final Rule Designating Eastern, Western, and Southwestern DPSs in 2003

In 2000, FWS proposed to designate four DPSs of gray wolves—the Western Great Lakes DPS, Western DPS, Southwestern DPS, and Northeastern DPS,[90] as shown in Map 2 of **Figure 3**—and to delist the gray wolf in any state outside the range of those DPSs.[91] FWS determined that non-DPS states were outside the gray wolf's current range and unlikely to be repopulated by gray wolves, and that wolf restoration to those areas was neither potentially feasible nor necessary for recovery.[92] FWS also proposed to reclassify the gray wolves of the Western Great Lakes DPS, Western DPS, and Northeastern DPS from endangered to threatened.[93] For the Western Great Lakes and Western DPSs, FWS determined that they were not in danger of extinction based on the recovery progress of the western Great Lakes and northern Rocky Mountain gray wolf populations, respectively.[94] FWS determined that these populations were sufficient to ensure the continuing viability of the DPSs as a whole.[95] For the Northeastern DPS, FWS proposed to reclassify it as threatened due to the regulatory flexibility afforded by a threatened status, rather than based on determining that the DPS met the definition of "threatened species."[96]

[90] Endangered and Threatened Wildlife and Plants; Proposal to Reclassify and Remove the Gray Wolf from the List of Endangered and Threatened Wildlife in Portions of the Conterminous United States; Proposal to Establish Three Special Regulations for Threatened Gray Wolves, 65 Fed. Reg. 43,450, 43,450, 43,472-74, 43,476-78 (July 13, 2000). Under the proposal, the Western Great Lakes DPS would include gray wolves in North Dakota, South Dakota, Minnesota, Wisconsin, and Michigan; the Western DPS would include gray wolves in Washington, Oregon, Idaho, Montana, Wyoming, Utah, Colorado, and northern parts of Arizona and New Mexico; the Southwestern DPS would include gray wolves in southern Arizona and New Mexico, parts of southwest Texas, and Mexico; and the Northeastern DPS would include gray wolves in New York, Vermont, New Hampshire, and Maine. *Id.* at 43,473.

[91] *Id.* at 43,450, 43,476-78.

[92] *Id.*

[93] *Id.* at 43,450, 43,472-74, 43,476-78.

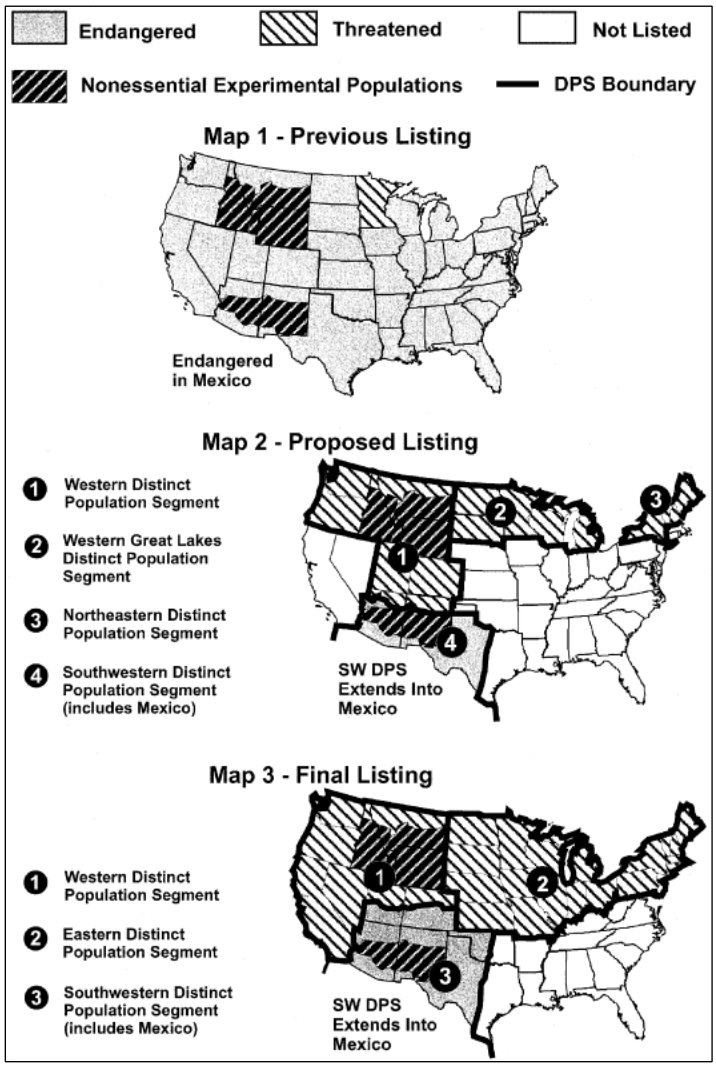
[94] *Id.*

[95] *Id.*

[96] *Id.* Though FWS provided this justification in its proposed rule, a species' status is determined by whether it meets the definition of endangered or threatened based on the five statutory factors. 16 U.S.C. § 1533(a).

Figure 3. Distinct Population Segments (DPSs) in 2000 Proposed Rule and 2003 Final Rule

Designations and Listing Statuses



Source: U.S. Fish and Wildlife Service. The gray wolf has never been listed in Alaska or Hawaii.

In the 2003 final rule, FWS combined and expanded the Western Great Lakes and Northeastern DPSs to create the Eastern DPS, as shown in Map 3 of **Figure 3**, after not finding justification for a separate Northeastern DPS.[97] FWS reclassified the gray wolves of the Eastern DPS and the Western DPS from endangered to threatened.[98] The agency also determined that it could delist only based on a finding of recovery, extinction, or original listing in error.[99] Accordingly, FWS

[97] 68 Fed. Reg. 15,804, 15,859 (Apr. 1, 2003). FWS had relied on anecdotal evidence of wolf sightings when it proposed to designate the Northeastern DPS and expected to receive more information on wolf populations in that region during the comment period. 65 Fed. Reg. at 43,450. However, FWS received no new data on this subject, so it determined that it could not designate a DPS without concrete evidence of a population. 68 Fed. Reg. at 15,859.

[98] *Id.* at 15,809-11.

[99] *Id.* at 15,826, 15,859.

extended the three DPSs to include 12 of the states it had proposed to delist.[100] The agency delisted the gray wolf only in 14 states in the southeastern United States and in portions of Oklahoma and Texas that FWS determined were outside the gray wolf's historical range.[101]

District courts in Oregon and Vermont ultimately vacated the 2003 final rule.[102] Those courts held that FWS conflated the statutory terms "all" and "a significant portion" when analyzing whether the DPSs were endangered or threatened in "all or a significant portion of [their] range."[103] By assessing what constituted "a significant portion" of the range based on which areas ensured the continuing viability of the DPS *as a whole*, FWS rendered the phrase "a significant portion" superfluous by ensuring that any DPS endangered or threatened in "a significant portion" of its range would also be endangered or threatened in "all" of its range.[104] Those courts also concluded that FWS violated the ESA and the DPS Policy by designating DPSs based on *geographical* rather than *biological* criteria and by failing to conduct the five-factor analysis for wolves outside the core recovery populations, thus reclassifying species without applying the statutory criteria.[105] The Oregon district court further held that FWS combining the two DPSs and including states in the DPSs beyond the recovered populations' ranges was arbitrary and capricious because the gray wolf's conservation status varied across each DPS.[106] By extending the DPSs to the gray wolf's historical range rather than "draw[ing] a line around a population whose conservation status differs from other populations within that species," the court held that FWS "invert[ed]" the DPS's purpose.[107] The Vermont district court held that FWS violated the APA by combining the Western Great Lakes and Northeastern DPSs into a new Eastern DPS in the 2003 final rule, which did not appear in the proposed rule.[108] The Vermont district court determined that establishing the Eastern DPS was not a "logical outgrowth" of the proposed rule and accordingly did not provide the public with adequate notice and opportunity for comment.[109]

Final Rules Designating and Delisting Western Great Lakes DPS in 2007 and Northern Rocky Mountain DPS in 2008

After the district courts vacated the 2003 final rule, FWS adjusted its approach by individually designating and delisting the Western Great Lakes DPS (as shown in **Figure 4**) in 2007 and the Northern Rocky Mountain DPS (as shown in **Figure 5**) in 2008.[110] For these and later DPS rules, FWS assessed whether each DPS met the DPS Policy's discreteness and significance criteria.[111]

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[100] *Id.*

[101] *Id.*

[102] Defenders of Wildlife v. Sec'y, U.S. Dep't of the Interior, 354 F. Supp. 2d 1156 (D. Ore. 2005); Nat'l Wildlife Fed'n v. Norton, 386 F. Supp. 2d 553 (D. Vt. 2005).

[103] *Defenders of Wildlife*, 354 F. Supp. 2d at 1167-69; *Nat'l Wildlife Fed'n*, 386 F. Supp. 2d at 565-66.

[104] *Defenders of Wildlife*, 354 F. Supp. 2d at 1167-69; *Nat'l Wildlife Fed'n*, 386 F. Supp. 2d at 565-66.

[105] *Defenders of Wildlife*, 354 F. Supp. 2d at 1171; *Nat'l Wildlife Fed'n*, 386 F. Supp. 2d at 563-65.

[106] *Defenders of Wildlife*, 354 F. Supp. 2d at 1170.

[107] *Id.*

[108] *Nat'l Wildlife Fed'n*, 386 F. Supp. 2d at 564-65.

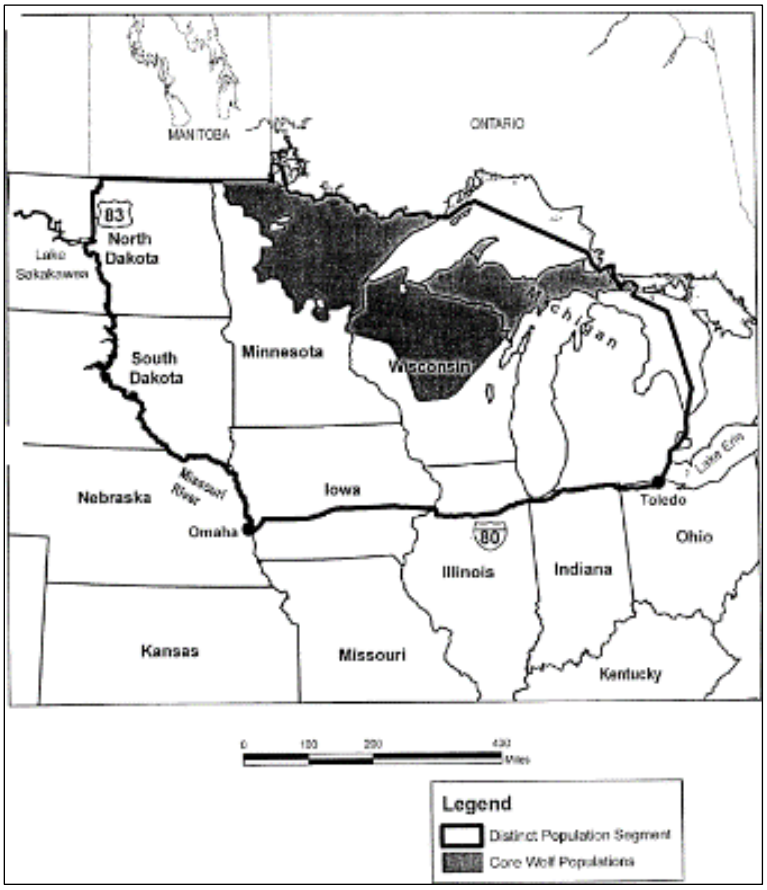
[109] *Id.*

[110] 72 Fed. Reg. 6052, 6052 (Feb. 8, 2007); 73 Fed. Reg. 10,514, 10,514 (Feb. 27, 2008).

[111] *See, e.g.*, 72 Fed. Reg. at 6059-60; 73 Fed. Reg. at 10,519-20; Endangered and Threatened Wildlife and Plants; Final Rule to Identify the Western Great Lakes Populations of Gray Wolves as a Distinct Population Segment and to Revise the List of Endangered and Threatened Wildlife, 74 Fed. Reg. 15,070, 15,078 (Apr. 2, 2009); 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,

FWS determined that gray wolf populations were discrete under the DPS Policy by comparing the distance between areas occupied by gray wolf populations to gray wolf dispersal data, finding that the populations were separated by more than three times the average dispersal distance and that the area in between generally was not suitable habitat for gray wolves.[112] In the new final rules, FWS determined the populations to be significant under the DPS Policy by finding that (1) the populations occupied an unusual or unique ecological setting for the gray wolf, and (2) losing these populations would create a significant gap in the gray wolf's range.[113] In subsequent DPS rules, FWS would rely solely on the latter finding.[114]

Figure 4. Western Great Lakes Distinct Population Segment



Source: U.S. Fish and Wildlife Service.

15,128-29 (Apr. 2, 2009). FWS analyzed discreteness and significance under the DPS Policy for the 2003 rule, but its discussion was less robust than the analysis found in the DPS rules from 2007 onward. *See* 68 Fed. Reg. at 15,818-19.

[112] *See, e.g.*, 72 Fed. Reg. at 6059; 73 Fed. Reg. at 10,519-20; 74 Fed. Reg. at 15,078; 74 Fed. Reg. at 15,128-29.

[113] 72 Fed. Reg. at 6059-60; 73 Fed. Reg. at 10,520.

[114] *See, e.g.*, 74 Fed. Reg. at 15,079; 74 Fed. Reg. at 15,129.

In its 2007 and 2008 rulemakings, FWS also assessed whether each population had met the recovery criteria in its recovery plan and was no longer in danger of extinction at the time or in the foreseeable future.[115] FWS found that both the Western Great Lakes and Northern Rocky Mountain populations had met the objective criteria laid out in the recovery plans.[116] It also determined that the States of Minnesota, Michigan, and Wisconsin in the Western Great Lakes DPS and the States of Montana and Idaho in the Northern Rocky Mountain DPS had adequate wolf management plans in place.[117] However, in the proposed rule for the Northern Rocky Mountain DPS, FWS determined that Wyoming's wolf management plan was inadequate to ensure the continued recovery of the species.[118] Among other concerns, FWS pointed to Wyoming committing to manage only seven breeding packs outside the national parks[119] and to Wyoming designating the gray wolf as a predatory animal in most of the state.[120] FWS stated that delisting was contingent on Wyoming implementing an adequate wolf management plan.[121] Wyoming enacted legislation in February 2007 removing statutory obstacles to the revisions FWS required, and the Wyoming Fish and Game Commission approved the revised plan in November 2007.[122] In the 2008 final rule, FWS determined that Wyoming's plan would adequately ensure the continued recovery of the gray wolf population there.[123]

[115] 72 Fed. Reg. 6052, 6052 (Feb. 8, 2007); 73 Fed. Reg. 10,514, 10,514 (Feb. 27, 2008).

[116] 72 Fed. Reg. at 6052-56; 73 Fed. Reg. at 10,520-26.

[117] 72 Fed. Reg. at 6083-95; 73 Fed. Reg. at 10,546-49.

[118] 72 Fed. Reg. at 6134.

[119] The recovery criteria in the Northern Rocky Mountain Wolf Recovery Plan established 10 breeding pairs in each of the 3 recovery areas—northern Montana, central Idaho, and the greater Yellowstone area— as a minimum recovery level. *Northern Rocky Mountain Wolf Recovery Plan*, U.S. FISH & WILDLIFE SERV., at 10 (1987). To ensure the populations' continued recovery, FWS determined that each state (Montana, Idaho, and Wyoming) should commit to managing their populations to maintain at least 15 breeding pairs. *See, e.g.*, 73 Fed. Reg. at 10,522; 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, 55,538 (Sept. 10, 2012). Wyoming's gray wolf population was differently situated from the other two states because most of the gray wolves in the greater Yellowstone area occupy land within the boundaries of national parks, such as Yellowstone National Park. *Id.*

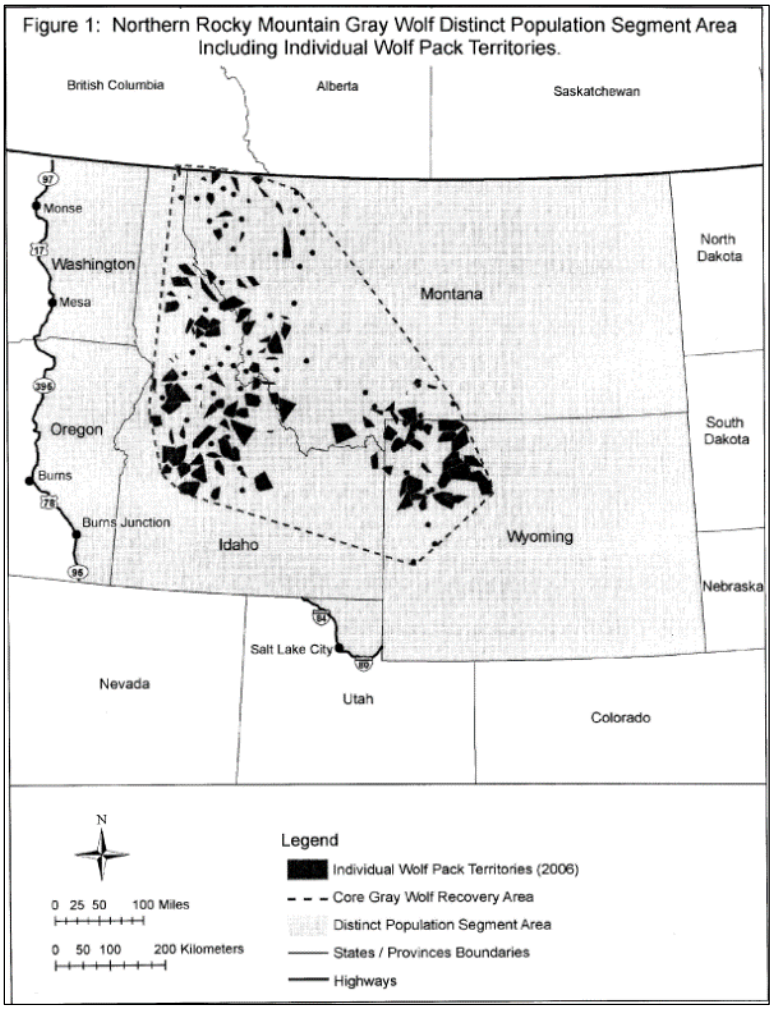
[120] According to FWS, classifying the wolf as a "predatory animal" under Wyoming law means the animal is "under the jurisdiction of the Wyoming Department of Agriculture and may be taken by anyone, anywhere in the predatory animal area, at any time, without limit, and by any means[.]" 72 Fed. Reg. at 6129.

[121] *Id.* at 6106.

[122] Endangered and Threatened Wildlife and Plants; Designating the Northern Rocky Mountain Population of Grey Wolf as a Distinct Population Segment and Removing this Distinct Population Segment from the Federal List of Endangered and Threatened Wildlife, 72 Fed. Reg. 36,939, 36,940 (July 6, 2007).

[123] 73 Fed. Reg. at 10,514, 10,552-55.

Figure 5. Northern Rocky Mountain Distinct Population Segment



Source: U.S. Fish and Wildlife Service.

Much like the 2003 rule, courts also vacated these final rules.[124] For the 2007 Western Great Lakes DPS final rule, a federal district court in the District of Columbia held that the ESA was ambiguous about whether FWS could designate for delisting purposes a DPS from a listed full species if FWS had never listed the DPS specifically.[125] However, FWS had argued that the ESA was unambiguous and the plain meaning of the text supported its authority to designate and delist a DPS from a listed full species.[126] Because FWS had relied on the ESA's plain language rather than interpreting the text, the court determined there was no FWS interpretation to defer to under

[124] Humane Soc'y of the U.S. v. Kempthorne, 579 F. Supp. 2d 7 (D.D.C. 2008); Defenders of Wildlife v. Hall, No. 9:08-cv-00056 (Oct. 14, 2008) (order vacating and remanding rule to FWS and dismissing case with prejudice).

[125] *Humane Soc'y of the U.S.*, 579 F. Supp. 2d at 17.

[126] *Id.* at 19-20.

the *Chevron* doctrine.[127] The court vacated the rule and remanded it to FWS to interpret the ambiguous statutory language.[128]

For the 2008 Northern Rocky Mountain DPS final rule, a federal court in Montana reviewed FWS's rule when it granted a motion to enjoin the rule while litigation proceeded.[129] To issue a preliminary injunction, a court must find, among other things, that the plaintiffs have a likelihood of success on the merits of the case.[130] The court determined the plaintiffs were likely to prevail based on two arguments. First, the court determined that FWS likely had been arbitrary and capricious by inadequately explaining why its final rule ignored the recovery plan criterion of genetic exchange between gray wolves from different recovery areas (i.e., central Idaho, northwestern Montana, and the greater Yellowstone area).[131] Genetic exchange had been included as a recovery criterion in a 1994 environmental impact statement prepared to evaluate the environmental impacts of introducing the experimental gray wolf populations into central Idaho and the greater Yellowstone area.[132] The court held that although FWS did not have to rely on recovery criteria to find that a species had recovered, the agency needed to explain its decision to ignore such criteria adequately.[133] Second, the court determined that FWS was arbitrary and capricious in approving Wyoming's wolf management plan—part of the recovery criteria—because, in the court's view, FWS's reasons for rejecting previous Wyoming plans applied equally to the 2007 one.[134] After issuing the preliminary injunction, the court granted FWS's request to vacate the rule and remand it.[135]

Final Rules Designating and Delisting Western Great Lakes DPS and Northern Rocky Mountain DPS Except Wyoming in 2009

In 2009, FWS again published final rules designating and delisting the Western Great Lakes DPS and the Northern Rocky Mountain DPS, except it did not delist the gray wolf in Wyoming after finding the state's management plan inadequate.[136] FWS issued the final Western Great Lakes DPS rule, which interpreted FWS's authority to designate and delist DPSs from listed species to address the concerns raised by the D.C. district court's 2008 ruling, without issuing a new proposed rule.[137] Parties challenged the latest Western Great Lakes DPS rule for, among other

[127] *Id.*

[128] *Id.*

[129] Defenders of Wildlife v. Hall, 565 F. Supp. 2d 1160 (D. Mont. 2008).

[130] *Id.* at 1167 (citing Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv., 422 F.3d 782, 795 (9th Cir. 2005)).

[131] FWS argued that the criterion did not require evidence of actual genetic exchange, only the potential for likely genetic exchange; the court disagreed. *Id.* at 1169-70.

[132] *Id.* at 1169-71.

[133] *Id.*

[134] *Id.* at 1172-75.

[135] Endangered and Threatened Wildlife and Plants; Designating the Northern Rocky Mountain Population of Gray Wolf as a Distinct Population Segment and Removing this Distinct Population Segment from the Federal List of Endangered and Threatened Wildlife, 73 Fed. Reg. 63,926, 63,926 (Oct. 28, 2008); Defenders of Wildlife v. Hall, No. 9:08-cv-00056 (Oct. 14, 2008) (order vacating and remanding rule to FWS and dismissing case with prejudice).

[136] 74 Fed. Reg. 15,070 (Apr. 2, 2009); 74 Fed. Reg. 15,123 (Apr. 2, 2009).

[137] 74 Fed. Reg. at 15,075-78.

things, violating the APA's notice and comment requirements.[138] Pursuant to a settlement agreement, FWS ultimately withdrew the rule.[139]

The Montana district court vacated the 2009 Northern Rocky Mountain DPS rule after concluding that the ESA did not allow FWS to list a partial DPS (i.e., listing the gray wolf only in the Wyoming segment of the DPS).[140] FWS had interpreted the statutory phrase "significant portion of its range" in the endangered species and threatened species definitions to allow a species to be listed for only that portion of its range where the Services determine the species is endangered or threatened.[141] The court rejected this interpretation as impermissible under the Act and vacated the rule.[142] It held that the plain language of the ESA precluded listing a smaller classification than a DPS.[143] The court also held that FWS's interpretation rendered superfluous Congress's addition of DPS to the definition of "species" and Congress's restriction of DPSs to vertebrate species because under FWS's interpretation, the agency could simply list the full species or subspecies for only the range occupied by the DPS and achieve the same result without the DPS designation and for any species—vertebrate or not.[144] However, an act of Congress in 2011 directed FWS to reinstate the 2009 rule designating and delisting the Northern Rocky Mountain DPS without Wyoming.[145]

Final Rule Designating and Delisting Western Great Lakes DPS in 2011

FWS published another final rule designating and delisting the Western Great Lakes DPS in 2011.[146] In the *proposed* rule, FWS also proposed to recognize the eastern timber wolf as a full species (*C. lycaon*) rather than a subspecies of gray wolf (*C. lupus lycaon*) based on developments in taxonomic research.[147] In recognizing the eastern timber wolf as a full species, FWS proposed to delist the gray wolf in all or part of 29 states (outside the Western Great Lakes DPS) where FWS determined that the areas were part of the historical range of the eastern timber wolf or red wolf (*C. rufus*) rather than the gray wolf (*C. lupus*).[148] In the 2011 Western Great Lakes DPS *final* rule, however, FWS determined that the scientific community had not reached a consensus on whether the eastern timber wolf was a full species.[149] FWS accordingly continued to recognize the eastern timber wolf as a subspecies of gray wolf until the scientific debate was

[138] Humane Soc'y of the U.S. v. Salazar, No. 1:09-CV-1092 (D.D.C. June 15, 2009) (complaint).

[139] Humane Soc'y of the U.S. v. Salazar, No. 1:09-CV-1092 (D.D.C. July 2, 2009) (settlement order).

[140] Defenders of Wildlife v. Salazar, 812 F. Supp. 2d 1205, 1207 (D. Mont. 2009).

[141] *Id.* at 1218.

[142] *Id.* at 1221-22.

[143] *Id.* at 1218-24.

[144] *Id.*

[145] Department of Defense and Full-Year Appropriations Act, 2011, Pub. L. No. 112-10, § 1713, 125 Stat. 150 (2011). Parties challenged this legislation as unconstitutional for violating the separation-of-powers doctrine. Alliance for the Wild Rockies v. Salazar, 800 F. Supp. 2d 1123 (D. Mont. 2011). A court 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.*; Alliance for the Wild Rockies v. Salazar, 672 F.3d 1170, 1175 (9th Cir. 2012).

[146] Endangered and Threatened Wildlife and Plants; Revising the Listing of the Gray Wolf (Canis lupus) in the Western Great Lakes, 76 Fed. Reg. 81,666 (Dec. 28, 2011).

[147] Endangered and Threatened Wildlife and Plants; Proposed Rule to Revise the List of Endangered and Threatened Wildlife for the Gray Wolf (*Canis lupus*) in the Eastern United States, Initiation of Status Reviews for the Gray Wolf and for the Eastern Wolf (*Canis lycaon*), 76 Fed. Reg. 26,086, 26,088 (May 5, 2011).

[148] *Id.* at 26,086-88.

[149] 76 Fed. Reg. at 81,669.

resolved and postponed delisting in the 29 states and partial states.[150] FWS otherwise finalized the rule as proposed, relying on data and analysis similar to what it had used in prior rules designating and delisting the Western Great Lakes DPS.[151]

A district court in the District of Columbia vacated the 2011 Western Great Lakes DPS rule in 2014.[152] The court reviewed FWS's interpretation of its statutory authority under the ESA to designate and delist a DPS from a listed full species, which the agency adopted after the 2008 opinion vacating FWS's 2007 Western Great Lakes DPS rule that relied on the plain meaning of the ESA.[153] On appeal, the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) held in 2017 that FWS *could* designate and delist DPSs from listed full species but that FWS had failed to do so properly in the 2011 rule.[154] The court concluded that the 2011 Western Great Lakes DPS rule was arbitrary and capricious because FWS had improperly conducted its analysis by failing to consider two factors: (1) the effect of delisting the DPS on the remainder of the species and (2) the loss of the gray wolf's historical range when analyzing threats to the species.[155]

Final Rule Delisting the Gray Wolf in Wyoming in 2012

After approving its revised state laws and wolf management plan, FWS delisted the gray wolf in Wyoming in 2012.[156] The federal district court in the District of Columbia vacated the rule after finding it was arbitrary and capricious for FWS to rely on nonbinding promises in Wyoming's management plan to determine the state's regulatory mechanisms were adequate.[157] The D.C. Circuit reversed the federal district court, holding that the ESA did not limit FWS to considering only legally binding regulatory mechanisms to determine whether the regulatory mechanisms were adequate to protect the species.[158] The rule delisting the gray wolf in Wyoming was accordingly reinstated.[159]

Delisting the Gray Wolf Listed Entities

Beginning in 2013, FWS delisting proposals have examined the gray wolf entities that were listed through FWS's various rulemakings (referred to as the "listed entities") rather than attempting to list or delist gray wolf DPSs. As discussed in more detail below, in 2013, FWS proposed to delist the gray wolf entities (at the time, (1) the gray wolf in Minnesota and (2) the gray wolf in the

[150] *Id.* at 81,666, 81,669.

[151] *Id.* at 81,721-23.

[152] Humane Soc'y of the U.S. v. Jewell, 76 F. Supp. 2d 69, 110-13 (D.D.C. 2014).

[153] *Id.*

[154] Humane Soc'y of the U.S. v. Zinke, 865 F.3d 585, 600-07 (D.C. Cir. 2017).

[155] *Id.*

[156] 77 Fed. Reg. 55,530 (Sept. 10, 2012). The gray wolf in Wyoming is not a species, subspecies, or DPS. However, as discussed above, the 2011 legislation directed FWS to reinstate the rule delisting the gray wolf in the Northern Rocky Mountain DPS, except for in Wyoming, leaving the gray wolf in Wyoming listed. Department of Defense and Full-Year Appropriations Act, 2011, Pub. L. No. 112-10, § 1713, 125 Stat. 150 (2011). In the proposed and final rules, FWS assessed the status and recovery of the gray wolf in Wyoming in the context of being part of the Northern Rocky Mountain DPS. 76 Fed. Reg. 61,782 (Oct. 5, 2011) (proposed rule); 77 Fed. Reg. 55,530 (Sept. 10, 2012) (final rule).

[157] Defenders of Wildlife v. Jewell, 68 F. Supp. 3d 193, 203-10 (D.D.C. 2014).

[158] Defenders of Wildlife v. Zinke, 849 F.3d 1077, 1082-84, 1093 (D.C. Cir. 2017).

[159] Endangered and Threatened Wildlife and Plants; Reinstatement of Removal of Federal Protections for Gray Wolves in Wyoming, 82 Fed. Reg. 20,284 (May 1, 2017).

lower 48 states—other than Minnesota, the Northern Rocky Mountain DPS, and the Western Great Lakes DPS—and Mexico) and relist the Mexican wolf (*C. lupus baileyi*), a subspecies of the gray wolf, as endangered.[160] However, FWS finalized the Mexican wolf listing in 2015 as a separate listing without finalizing the delisting component of the proposed rule.[161] In that rule, FWS revised the gray wolf listing for the lower 48 states that had previously included the Mexican wolf's territory in New Mexico and Arizona to exclude that area.[162] FWS published a new proposed rule in 2019 to delist the listed entities other than the Mexican wolf.[163] At the time, the listed entities were (1) the gray wolf in Minnesota; and (2) the gray wolf in the lower 48 states and Mexico, except for gray wolves in Minnesota, the Northern Rocky Mountain DPS of gray wolves, and the Mexican wolf. In November 2020, FWS published a final rule removing these two gray wolf entities from the list of endangered and threatened species effective January 4, 2021, but leaving the Mexican wolf listed as endangered.[164]

2013 Proposed Rule to Delist Gray Wolf Listed Entities and List Mexican Wolf

In 2013, FWS proposed to delist the gray wolf in the lower 48 states and Mexico and list the Mexican wolf—a gray wolf subspecies—as endangered.[165] At the time FWS published the 2013 proposed rule, the Northern Rocky Mountain DPS (including Wyoming) and the Western Great Lakes DPS were already delisted.[166] In the proposed rule, FWS concluded that the gray wolf as listed at the time (i.e., gray wolves found in the lower 48 states that were not part of the Western Great Lakes or Northern Rocky Mountain DPSs) did not qualify as a "species" under the ESA, which is a requirement for listing under the Act.[167] FWS noted that the listed entity was not an entire species or subspecies of gray wolf.[168] It also concluded that the listed entity did not describe a valid "population" of gray wolves that could qualify as a DPS, and accordingly was not a "species."[169]

FWS then evaluated whether the gray wolf as a taxonomical species or any subspecies or DPSs of the gray wolf merited listing as an endangered or threatened species.[170] FWS determined first that

[160] Endangered and Threatened Wildlife and Plants; Removing the Gray Wolf (Canis lupus) from the List of Endangered and Threatened Wildlife and Maintaining Protections for the Mexican Wolf (Canis lupus baileyi) by Listing It as Endangered, 78 Fed. Reg. 35,664 (June 13, 2013).

[161] Endangered and Threatened Wildlife and Plants; Endangered Status for the Mexican Wolf, 80 Fed. Reg. 2488 (Jan. 16, 2015).

[162] *Id.* at 2511.

[163] Endangered and Threatened Wildlife and Plants; Removing the Gray Wolf (*Canis lupus*) from the List of Endangered and Threatened Wildlife, 84 Fed. Reg. 9648, 9686 (Mar. 15, 2019). For the status at the time of the proposed rule, see **Table 1**.

[164] 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).

[165] 78 Fed. Reg. 35,664 (June 13, 2013). As a reminder, the ESA definition of species includes subspecies and DPSs. 16 U.S.C. § 1532(16).

[166] The rules delisting the gray wolf in Wyoming and the Western Great Lakes DPS were subsequently vacated by courts in 2014. Humane Soc'y of the U.S. v. Jewell, 76 F. Supp. 2d 69, 110-13 (D.D.C. 2014), *aff'd by* Humane Soc'y of the U.S. v. Zinke, 865 F.3d 585, 614-15 (D.C. Cir. 2017); Defenders of Wildlife v. Jewell, 68 F. Supp. 3d 193, 203-10 (D.D.C. 2014). The latter was later ordered to be reinstated by the D.C. Circuit in 2017. Defenders of Wildlife v. Zinke, 849 F.3d 1077, 1082-84, 1093 (D.C. Cir. 2017).

[167] 78 Fed. Reg. at 35,673-78, 35,695.

[168] *Id.* at 35,673.

[169] *Id.* at 35,673-74.

[170] *Id.* at 35,673-78, 35,695.

the gray wolf as a whole did not merit listing.[171] FWS concluded that based on the best available data, there were three subspecies of gray wolf and, of the three, only the Mexican wolf was listable as endangered and the other two did not merit listing.[172] Further, FWS did not identify any listable DPSs of the gray wolf.[173] In particular, FWS determined that gray wolves that had been sighted in the Pacific Northwest did not qualify as a DPS because it was not a population and, in any event, were not discrete from the Northern Rocky Mountain DPS population.[174] Having concluded that the listed entities did not qualify as a species, and finding only one listable species or DPS—the Mexican wolf, FWS proposed to delist the gray wolf where it was still listed and list the Mexican wolf as an endangered species.[175]

In 2014, as discussed above, federal courts in the District of Columbia vacated the 2011 and 2012 rules delisting the Western Great Lakes DPS and delisting the gray wolf in Wyoming.[176] Following these court decisions, in 2015 FWS finalized its 2013 proposal to list the Mexican wolf as endangered, but it did not finalize the rest of the proposed rule pertaining to delisting the gray wolf.[177] In that rule, FWS adjusted the listing for the gray wolf in the lower 48 states and Mexico to exclude the Mexican wolf's territory in Arizona and New Mexico from the territory over which the gray wolf is endangered.[178]

2020 Rule Delisting the Gray Wolf Listed Entities Except the Mexican Wolf

In 2019, FWS published a proposed rule to delist two gray wolf listed entities: (1) the gray wolf in Minnesota and (2) the gray wolf in the lower 48 states and Mexico, except for the gray wolves: (a) in Minnesota, (b) in the Northern Rocky Mountain DPS, and (c) that are part of the gray wolf subspecies, the Mexican wolf.[179] Though the listed entities had changed since the 2013 proposed rule, the effect would be the same—delisting all gray wolves except the Mexican wolf. The proposed rule did not address or affect the Mexican wolf that was listed separately in 2015.[180] On

[171] *Id.* at 35,673-74.

[172] FWS recognized the following three gray wolf subspecies: *C. lupus nubilus* (found in the coastal areas of Alaska and Canada and the Pacific Northwest to the Great Lakes region), *C. lupus occidentalis* (found in the interior of Canada and the northern Rocky Mountains), and *C. lupus baileyi* (historically found in the American Southwest and Mexico). *Id.* at 35,717, 35,670-73.

[173] *Id.* at 35,675-77. In its analysis, FWS also revisited the gray wolf's taxonomy, determining that scientific evidence supported recognizing the eastern wolf as a full species, *C. lycaon*, separate from the gray wolf. *Id.* at 35,717, 35,670-73.

[174] *Id.* at 35,675-77.

[175] *Id.* at 35,718.

[176] Humane Soc'y of the U.S. v. Jewell, 76 F. Supp. 2d 69, 110-13 (D.D.C. 2014), *aff'd by* Humane Soc'y of the U.S. v. Zinke, 865 F.3d 585, 614-15 (D.C. Cir. 2017); Defenders of Wildlife v. Jewell, 68 F. Supp. 3d 193, 203-10 (D.D.C. 2014). The latter was later ordered to be reinstated by the D.C. Circuit in 2017. Defenders of Wildlife v. Zinke, 849 F.3d 1077, 1082-84, 1093 (D.C. Cir. 2017). For more information on these decisions, see "Final Rule Designating and Delisting Western Great Lakes DPS in 2011" and "Final Rule Delisting the Gray Wolf in Wyoming in 2012."

[177] 80 Fed. Reg. 2488 (Jan. 16, 2015).

[178] *Id.* at 2511.

[179] Endangered and Threatened Wildlife and Plants; Removing the Gray Wolf (*Canis lupus*) from the List of Endangered and Threatened Wildlife, 84 Fed. Reg. 9648, 9686 (Mar. 15, 2019). For the status at the time of the proposed rule, see **Table 1**.

[180] 84 Fed. Reg. at 9686; Endangered and Threatened Wildlife and Plants; Endangered Status for the Mexican Wolf, 80 Fed. Reg. 2488 (Jan. 16, 2015).

November 3, 2020, FWS published a final rule, effective January 4, 2021, delisting the gray wolf listed entities except for the Mexican wolf, which remains listed as endangered.[181]

In the final rule, FWS concluded that the two listed entities are not "species" as defined by the Act, which is a requirement for listing.[182] FWS observed that neither listed entity encompassed the entire taxonomic species or any subspecies of gray wolf, and accordingly could only be listable as DPSs.[183] Neither listed entity qualified as a DPS, according to the FWS, because neither was discrete—the Minnesota wolves were not discrete from the remainder of the Western Great Lakes population, and the remaining entity listed as endangered was not discrete from the Minnesota wolves or the Northern Rocky Mountain DPS wolves.[184] FWS also assessed the status of various gray wolf groups (i.e., whether they are threatened or endangered species), assessing the two listed entities, separately and combined, as well as the two listed entities combined plus the Northern Rocky Mountain DPS wolves.[185] FWS concluded that those various combinations of the gray wolf listed entities did not qualify as endangered species or threatened species under the Act.[186] Pursuant to its determination that the listed entities did not qualify as species and its finding that the entities, separately or combined, did not qualify as endangered or threatened, FWS delisted the gray wolf entities.[187] As mentioned, the final rule did not affect the listing for the Mexican wolf.[188]

The gray wolf is accordingly, as of January 4, 2021, delisted in the lower 48 states and Mexico, although the Mexican wolf remains listed as endangered. Several environmental groups have provided a notice of intent to sue to the Secretary of the Interior and Director of FWS, alleging that the final rule violates the ESA.[189] **Table 1** summarizes the history of listing, recovery, and delisting by DPS or region (described further in the "History of Listing and Delisting the Gray Wolf" section), and **Table A-1** in this report's **Appendix** provides a more detailed timeline.

[181] 85 Fed. Reg. 69,778 (Nov. 3, 2020).

[182] *Id.* at 69,783-85.

[183] *Id.* at 69,783.

[184] *Id.* at 69,783-84.

[185] *Id.* at 69,784-85.

[186] *Id.* at 69,882, 69,885-86, 69,889, 69,893.

[187] *Id.* at 69,778. FWS also returned to its position that the scientific community had not yet reached a consensus that the eastern wolf is a full species. *Id.* at 69,785-86.

[188] *Id.* at 69,778.

[189] Letter from Kristen L. Boyles & Timothy J. Preso, EarthJustice, to David Bernhardt, Sec'y, Dep't of the Interior, & Aurelia Skipwith, Dir., U.S. Fish & Wildlife Serv. (Nov. 5, 2020), https://www.biologicaldiversity.org/campaigns/gray_wolves/pdfs/Gray-Wolf-60-Day-Notice.pdf.

Table 1. Timeline: Gray Wolf Status by Population

Date	Western Great Lakes Population	Northern Rocky Mountain Population	Southwestern Population	Remaining Lower 48 States
3/11/1967	Eastern timber wolf (*C. lupus lycaon*) listed			
1/15/1973		Northern Rocky Mountain wolf (*C. lupus irremotus*) listed		
4/28/1976			Mexican wolf (*C. lupus baileyi*) listed	
6/14/1976			Texas wolf (*C. lupus monstrabilis*) listed	
3/9/1978	Gray wolf listings consolidated to list as full species in lower 48 states except in Minnesota; Minnesota gray wolf listed as threatened			
11/22/1994		Experimental populations introduced		
1/12/1998			Experimental population introduced	
4/1/2003	Eastern (combining Western Great Lakes and Northeastern DPSs), Western, and Southwestern DPSs designated; Eastern and Western DPSs reclassified as threatened			
1/31/2005	Eastern, Western, and Southwestern DPSs invalidated by Oregon district court; full listing as endangered restored			
3/18/2005		Court dismissed Wyoming's suit challenging FWS's finding that the state's management plan was inadequate		
8/19/2005	Eastern, Western, and Southwestern DPSs also invalidated by Vermont district court			
2/8/2007	Designated as DPS and delisted			
2/27/2008		Designated as DPS and delisted		
7/18/2008		Court granted preliminary injunction and stays delisting rule		
9/29/2008	Court vacated delisting rule			
10/14/2008		Court vacated delisting rule		
12/11/2008	Listing reinstated			
4/2/2009	Designated as DPS and delisted	Designated as DPS and delisted except in Wyoming		

Date	Western Great Lakes Population	Northern Rocky Mountain Population	Southwestern Population	Remaining Lower 48 States
7/1/2009	Settlement entered agreeing to reinstate listing			
9/16/2009	Listing reinstated			
8/5/2010		Court vacated delisting rule		
10/26/2010		Listing reinstated		
11/18/2010		Court overturned FWS rejection of Wyoming's management plan		
4/9/2011		Court rejected settlement that would delist in Idaho and Montana		
4/15/2011		Legislation directed FWS to reinstate rule delisting Northern Rocky Mountain DPS except in Wyoming		
5/5/2011		Delisting, except in Wyoming, reinstated		
8/3/2011		Court upheld constitutionality of legislation reinstating rule		
12/28/2011	Designated as DPS and delisted			
3/14/2012		Appeals court affirmed district court decision upholding constitutionality of legislation reinstating rule		
9/10/2012		Wyoming delisted		
6/13/2013	FWS proposed to delist gray wolf listed entities except for the Mexican wolf			
9/23/2014		Court vacated rule delisting Wyoming		
12/19/2014	Court vacated delisting rule			
1/16/2015			Mexican wolf listed as endangered	
2/20/2015	Listing reinstated	Listing reinstated in Wyoming		
3/3/2017		Appeals court overturned district court and reinstated rule delisting Wyoming		
5/1/2017		Delisting of Wyoming reinstated		

Date	Western Great Lakes Population	Northern Rocky Mountain Population	Southwestern Population	Remaining Lower 48 States
8/1/2017	Appeals court affirmed district court opinion vacating delisting rule			
11/3/2020	Gray wolf delisted except the Mexican wolf (*C. lupus baileyi*) subspecies			
Status Effective 1/4/2021[a]	**Delisted**	**Delisted**	**Mexican wolf (*C. lupus baileyi*) listed as endangered**	**Delisted**

Source: Congressional Research Service.

Notes: DPS = Distinct Population Segment; FWS = U.S. Fish and Wildlife Service.

a. January 4, 2021, is the effective date of the November 3, 2020 final rule.

Challenges When Listing and Delisting Species

FWS has encountered a host of legal challenges when listing or delisting the gray wolf.[190] This section reviews by topic the substantive challenges FWS has encountered in rulemaking and litigation. Though specific to the gray wolf, the challenges FWS has faced provide insight into the issues the Services generally encounter with listing and delisting species and how courts may react to the Services' approaches.

Identifying the Species

To identify a species as endangered or threatened, the Services must first identify what qualifies as a "species" under the Act. When the ESA was enacted in 1973, it defined a species to include "any subspecies of fish or wildlife or plants and any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature."[191] In 1978, Congress amended the ESA to define species to include "any subspecies of fish or wildlife or plants, and any *distinct population segment* of any species of *vertebrate* fish or wildlife which interbreeds when mature."[192] Species and subspecies are biological concepts used in taxonomic classification.[193] As such, the Services consult experts in those fields to identify listable species and subspecies based on the best available scientific data.[194] A DPS, however, is a statutory creation, not a biological concept.[195] In 1996, the Services implemented the DPS Policy to outline how they would evaluate DPSs.[196] Under the policy, a population must be discrete from other

[190] *See, e.g.*, Defenders of Wildlife v. Sec'y, U.S. Dep't of the Interior, 354 F. Supp. 2d 1156 (D. Ore. 2005); Nat'l Wildlife Fed'n v. Norton, 386 F. Supp. 2d 553 (D. Vt. 2005); Humane Soc'y of the U.S. v. Kempthorne, 579 F. Supp. 2d 7 (D.D.C. 2008); Defenders of Wildlife v. Hall, 565 F. Supp. 2d 1160 (D. Mont. 2008); Defenders of Wildlife v. Salazar, 729 F. Supp. 2d 1207 (D. Mont. 2010); Humane Soc'y of the U.S. v. Jewell, 76 F. Supp. 3d 69 (D.D.C. 2014), *aff'd on other grounds* Humane Soc'y of the U.S. v. Zinke, 865 F.3d 585 (D.C. Cir. 2017).

[191] Pub. L. No. 93-205, § 3, 87 Stat. 886 (1973).

[192] Pub. L. No. 95-632, § 2, 92 Stat. 3752 (1978) (emphasis added).

[193] *See, e.g.*, SCIENCE AND THE ENDANGERED SPECIES ACT, NAT'L RESEARCH COUNCIL, NAT'L ACADEMY OF SCI. 56-57 (1995) (henceforth "NAS ESA Report").

[194] *See, e.g.*, 78 Fed. Reg. 35,664, 35,669-73 (June 13, 2013).

[195] DPS Policy, 61 Fed. Reg. at 4722.

[196] *Id.*

populations, significant in accordance with principles of conservation biology, and endangered or threatened to be listed as a DPS.[197]

Applying these criteria in practice has proven difficult. For the gray wolf in particular, FWS has encountered challenges with the wolf's taxonomy and with regulating segments of the wolf population.

Taxonomy

Many of FWS's rulemaking preambles detail the difficulties involved in identifying listable entities and analyzing them in light of disagreements over the taxonomic classification of wolf species and subspecies. Under the ESA, FWS must be able to identify a listable entity—a full species, a subspecies, or a DPS—to analyze its status for listing.[198] The entity identified for analysis determines the population(s), historical and current range, and threats that the Services consider. Though FWS's determinations about gray wolf taxonomy generally have not been subject to direct legal challenges, they underpin how FWS conducts the remainder of its analyses to assess the species' status. Changing views and a lack of scientific consensus over the taxonomic classifications for the gray wolf have caused FWS to revise its analyses during or between rulemakings.[199]

The Services must base decisions about what entity to evaluate on the "best scientific and commercial data available."[200] But scientists do not always agree on their taxonomic conclusions.[201] Taxonomists may classify species based on distinctive physical or behavioral traits, evolutionary pathways, interbreeding capabilities, or genetic composition.[202] Taxonomists may disagree about whether and how to recognize subspecies within a species. Differences in methodology or datasets may also lead to disagreements about the taxonomic level to assign a particular entity. For example, various scientific studies have concluded that the eastern timber wolf is a full species (*C. lycaon*), a subspecies of gray wolf (*C. lupus lycaon*), a hybrid of different wolf species, a wolf-coyote hybrid, or a distinct gray wolf population not rising to the level of a subspecies.[203] Different methodological approaches may also affect how many entities within a species taxonomists recognize as distinct. For example, FWS has observed that scientific studies had recognized as many as 24 subspecies of wolves in North America but that other taxonomists had suggested there were actually 5 or fewer subspecies.[204] From these divergent scientific studies, the Services must determine what classification for an entity the "best scientific and commercial data available" support.

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[197] *Id.* at 4725.

[198] 16 U.S.C. §§ 1532(16) & 1533(a). The ESA defines species to include subspecies and DPSs. Id. The term "full species" does not appear in the statute but is used here to distinguish a taxonomic species from species as it is used in the ESA.

[199] *Compare* 76 Fed. Reg. 26,086, 26,088-89 (May 5, 2011), *with* 76 Fed. Reg. 81,666, 81,668-69 (Dec. 28, 2011); *compare* 78 Fed. Reg. 35,664, 35,669-70 (June 13, 2013), *with* 84 Fed. Reg. 9648, 9654-55 (Mar. 15, 2019).

[200] 16 U.S.C. § 1533(b)(1).

[201] *See, e.g.*, 78 Fed. Reg. at 35,670-73; 84 Fed. Reg. at 9654-55.

[202] *See, e.g.*, NAS ESA REPORT, *supra* note 193, at 51-54; 78 Fed. Reg. at 35,670-73.

[203] *See, e.g.*, 76 Fed. Reg. 26,086, 26,088-89 (May 5, 2011); 78 Fed. Reg. at 35,669-70.

[204] Endangered and Threatened Wildlife and Plants; Proposed Establishment of a Nonessential Experimental Population of Gray Wolf in Yellowstone National Park in Wyoming, Idaho, and Montana, 59 Fed. Reg. 42,108, 42,108 (Aug. 16, 1994).

The Services may also conclude that there is no scientific consensus on an entity's taxonomic status that would be defensible based on the data.[205] For example, twice FWS has proposed to recognize the eastern timber wolf as a full species only to conclude later that the scientific community had not reached a consensus on its classification.[206] In each case, FWS reverted to the eastern timber wolf's original classification as a subspecies of gray wolf (*C. lupus lycaon*).[207] It is unclear how FWS would have proceeded if it could not have reverted to a status quo. Any determination on taxonomic classification for listing purposes must be defensible based on the best scientific and commercial data available.[208]

Classifications may also change over time as scientists reevaluate their conclusions based on additional data or improved methodologies.[209] In its 2013 proposed rule, FWS determined that it would recognize only three gray wolf subspecies out of as many as 24 identified historically—*C. lupus nubilus* (coastal wolf), *C. lupus occidentalis* (interior and mountain wolf), and *C. lupus baileyi* (Mexican wolf).[210] As described above, FWS has continued to evaluate the taxonomic status of the eastern timber wolf as scientific research and opinion evolves.[211]

Changing classifications and disagreements within the scientific community may result in a previously listed entity no longer qualifying as a "species" under the ESA or in the Services being unable to identify any listable entity that qualifies as endangered or threatened. Such changes and disagreements can also affect other aspects of the Services' status analysis. For example, which areas FWS recognizes as comprising the gray wolf's current and historical range depends on whether the eastern timber wolf is a subspecies of gray wolf or a separate full species.[212] Any areas solely occupied by the eastern timber wolf would be included in the gray wolf's range only if the eastern timber wolf is a subspecies. When FWS proposed to recognize the eastern timber wolf as a full species in 2011, it also proposed removing certain areas from the gray wolf listing that FWS considered listed in error because it determined that the wolves occupying those areas were eastern timber wolves rather than gray wolves.[213] In addition, the Services use a species' current range to determine the species' status (i.e., whether it is endangered or threatened in "all or a significant portion of its *range*"[214]) and use the historical range to assess threats against the species' continued existence.[215] Accordingly, changes to how a species is classified and defined can affect the Services' analysis of the species' status.

Defining DPSs

FWS's efforts to designate and delist gray wolf DPSs have given rise to multiple legal challenges and vacated rules. To designate gray wolf DPSs, FWS has applied the DPS Policy. Under the

[205] *See, e.g.*, 76 Fed. Reg. at 26,088-89; 78 Fed. Reg. at 35,669-70.

[206] *Compare* 76 Fed. Reg. at 26,088-89, *with* 76 Fed. Reg. 81,666, 81,668-69 (Dec. 28, 2011); *compare* 78 Fed. Reg. at 35,669-70, *with* 84 Fed. Reg. 9648, 9654-55 (Mar. 15, 2019).

[207] 76 Fed. Reg. at 81,668-69; 84 Fed. Reg. at 9654-55.

[208] 16 U.S.C. § 1533(b).

[209] *See, e.g.*, 78 Fed. Reg. at 35,670-73; 84 Fed. Reg. at 9654-55.

[210] 78 Fed. Reg. at 35,670-73.

[211] *Compare* 76 Fed. Reg. at 26,088-89, *with* 76 Fed. Reg. 81,666, 81,668-69 (Dec. 28, 2011); *compare* 78 Fed. Reg. at 35,669-70, *with* 84 Fed. Reg. 9648, 9654-55 (Mar. 15, 2019).

[212] 76 Fed. Reg. at 26,088-89; 78 Fed. Reg. at 35,669-70.

[213] 76 Fed. Reg. at 26,142.

[214] *See* 16 U.S.C. § 1532(6) & (20) (emphasis added).

[215] *See, e.g.*, 84 Fed. Reg. 9648, 9658 (Mar. 15, 2019).

policy, the Services may designate a DPS if it is *discrete* from the remainder of the species and *significant* to the species.[216] The Services determine a population is discrete if it is "markedly separate" from other populations based on "physical, physiological, ecological, or behavioral factors" or international boundaries.[217] The Services determine that a population is significant—biologically and ecologically—based on whether the population persists in an unusual setting for the species, differs markedly from the rest of the species genetically, represents the only naturally occurring population in the wild (i.e., excluding reintroduced populations), or would create a gap in the species range if the population were lost.[218] The Services imposed the significance criteria to ensure they use the DPS designation authority "sparingly," consistent with congressional guidance, to avoid potential abuse, such as listing numerous populations of otherwise abundant species.[219] If the Services determine a population meets the discreteness and significance criteria, they evaluate the DPS's status to determine whether it is endangered or threatened in accordance with the ESA definitions and factors.[220]

For the gray wolf, FWS has generally evaluated discreteness by determining the distance between the areas occupied by different populations against average dispersal distances.[221] The agency determined that the distances between the Western Great Lakes, Northern Rocky Mountain, and Mexican wolf populations were all greater than three times the average dispersal distance for a lone wolf, leading FWS to determine that each population is discrete. FWS also has used the Canada-U.S. border to demarcate DPSs based on the different regulatory regimes in the two countries.[222] FWS determined the Western Great Lakes and Northern Rocky Mountain DPSs were significant because losing either population would leave a significant gap in the gray wolf's range.[223] In the 2003 rulemaking, FWS also determined that the Western Great Lakes, Western (later Northern Rocky Mountain), and Mexican wolf populations each displayed distinct morphological traits that could represent different subspecies, presumably meaning they were genetically distinct.[224] In the 2007 rule, FWS also concluded that the Western Great Lakes DPS persisted in a unique environment due to its presence in the Laurentian Mixed Forest Province where the boreal forest transitions to the broadleaf deciduous forest.[225] However, it did not rely on those factors in later rules.

FWS's determinations that gray wolf populations meet the DPS Policy's discreteness and significance criteria generally have not been the subject of legal challenge. Instead, parties have challenged FWS's determination of DPSs' geographic boundaries.[226] The Oregon district court

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[216] DPS Policy, 61 Fed. Reg. 4722, 4725 (Feb. 7, 1996).

[217] *Id.*

[218] *Id.*

[219] *Id.*; S. Rep. No. 96-151, at 6-7 (1979).

[220] 61 Fed. Reg. at 4725.

[221] *See, e.g.*, 72 Fed. Reg. 6052, 6059 (Feb. 8, 2007); 73 Fed. Reg. 10,514, 10,519-20 (Feb. 27, 2008).

[222] *See, e.g.*, 74 Fed. Reg. 15,123, 15,129 (Apr. 2, 2009).

[223] *See, e.g.*, 72 Fed. Reg. at 6059-60; 73 Fed. Reg. at 10,520; 74 Fed. Reg. at 15,129.

[224] 65 Fed. Reg. 43,450, 43,473 (July 13, 2000); 68 Fed. Reg. 15,804, 15,819 (Apr. 1, 2003).

[225] Endangered and Threatened Wildlife and Plants; Designating the Western Great Lakes Population of Gray Wolves as a Distinct Population Segment; Removing the Western Great Lakes Distinct Population Segment of the Gray Wolf from the List of Endangered and Threatened Wildlife, 71 Fed. Reg. 15,266, 15,273-74 (Mar. 27, 2006); 72 Fed. Reg. at 6059-60.

[226] Defenders of Wildlife v. Sec'y, U.S. Dep't of the Interior, 354 F. Supp. 2d 1156, 1170-71 (D. Ore. 2005). See also Humane Soc'y of the U.S. v. Kempthorne, 579 F. Supp. 2d 7, 14 (D.D.C. 2008) (declining to reach plaintiff's argument regarding the DPS boundaries after finding another argument sufficient to vacate the rule).

vacated FWS's rule designating the Western, Eastern, and Southwestern DPSs because it determined that FWS had inappropriately delineated the DPSs.[227] In that 2003 final rule, FWS had combined the proposed Western Great Lakes DPS and Northeastern DPS into the Eastern DPS after it did not obtain sufficient evidence of gray wolves inhabiting the Northeast to designate a DPS.[228] The agency also extended each DPS to include surrounding states such that the historical range of the gray wolf was carved up into DPSs.[229] The court determined that FWS had inverted the DPS Policy's purpose by combining populations with dramatically different statuses into one DPS based on geography.[230] The court held that FWS must delineate DPSs carefully to include only discrete, significant populations that qualify as DPSs and their occupied ranges.[231]

The Services' decisions to list a full species rather than a subspecies or DPS may also affect their ability to *delist* the species.[232] Most of the challenges FWS has encountered with gray wolf DPSs have arisen when the agency has designated DPSs from listed full species for delisting purposes. Plaintiffs have argued that FWS can only designate a DPS to increase protections—either listing a DPS of a species or subspecies that is not listed or reclassifying a DPS to endangered if the species or subspecies is listed as threatened—and therefore can only delist a previously listed DPS.[233] FWS has contended that it has authority to delist a DPS from a listed species or subspecies based on (1) the statutory definition of species including DPSs and (2) its authority to review species' statuses and revise listings pursuant to new determinations or designations.[234] FWS has argued that its interpretation enables the flexibility Congress intended to provide the Services through the DPS category and is consistent with the Act's purposes by allowing the Services to direct resources to conserve those species or populations most in need of assistance.[235]

Courts have concluded that the ESA is ambiguous as to whether FWS may designate and delist a DPS from a listed species or subspecies.[236] District courts had initially agreed with plaintiffs that FWS's interpretation was impermissible because DPSs are a "one-way ratchet" and FWS may only delist a DPS it had previously listed.[237] But the D.C. Circuit reversed the district court's opinion in 2017, holding that it is reasonable to interpret the ESA as authorizing FWS to revise a full species or subspecies listing by designating and removing a DPS from the listed species.[238] The D.C. Circuit also concluded, however, that FWS had improperly executed designating and delisting the Western Great Lakes DPS in the 2011 rule because the agency must consider the effects of removing the DPS on the status of the listed remnant of the species in its analysis.[239] Thus although this decision determined that FWS has the legal authority to designate and delist

[227] *Defenders of Wildlife*, 354 F. Supp. 2d at 1170-71.

[228] 68 Fed. Reg. at 15,809-10.

[229] *Id.* at 15,818-19; *Defenders of Wildlife*, 354 F. Supp. 2d at 1172-73.

[230] *Defenders of Wildlife*, 354 F. Supp. 2d at 1170-71.

[231] *Id.* at 1171-73.

[232] *See, e.g.*, Defenders of Wildlife v. Zinke, 865 F.3d 585 (D.C. Cir. 2017).

[233] *See, e.g.*, Humane Soc'y of the U.S. v. Jewell, 76 F. Supp. 3d 69, 109-12 (D.D.C. 2014); Humane Soc'y of the U.S. v. Kempthorne, 579 F. Supp. 2d 7, 13-14 (D.D.C. 2008).

[234] *See, e.g.*, 74 Fed. Reg. 15,070, 15,075-76 (Apr. 2, 2009); Humane Soc'y of the U.S. v. Zinke, 865 F.3d 585, 592-94 (D.C. Cir. 2017).

[235] *Humane Soc'y of the U.S.*, 865 F.3d at 593.

[236] *Humane Soc'y of the U.S.*, 579 F. Supp. 2d at 15-16.

[237] *See, e.g.*, *Humane Soc'y of the U.S.*, 76 F. Supp. 3d at 109-25.

[238] *Humane Soc'y of the U.S.*, 865 F.3d at 600.

[239] *Id.*

DPSs from listed species and subspecies, the agency has yet to do so in practice in a way that survives judicial review.

Experimental Populations

The ESA allows the Secretary to release specimens of listed species into the wild and designate the population as an "experimental population" if it is "wholly separate geographically" from existing populations of the species.[240] Experimental populations may be designated as essential or nonessential to the conservation of the species.[241] An experimental population is protected as a threatened species even if the species is listed as endangered, allowing the Services to limit which acts are prohibited with respect to the experimental population.[242] Additionally, federal agencies are not required to enter into Section 7 consultations if their actions are likely to affect only nonessential experimental populations.[243] These more limited protections afforded to experimental populations reduce the regulatory burden on the local community where the specimens are released, which may reduce public opposition to introducing (or reintroducing) the species to the wild in that area.[244] The Services must ensure that the released population is "wholly separate geographically" from existing populations to qualify as experimental and be subject to these reduced protections.[245]

FWS implemented two rules in 1994 establishing experimental populations of gray wolves in (1) the greater Yellowstone area and (2) central Idaho and southwestern Montana.[246] FWS evaluated whether these populations would be "wholly separate geographically" based on the areas occupied by existing gray wolf *populations*, not where any individual gray wolves—lone dispersers from the pack—might be found.[247] In the rules, FWS stated that it would treat any individual gray wolves found in the experimental population area as part of that population.[248] Farm bureaus, researchers, and conservation groups challenged this approach.[249]

[240] 16 U.S.C. § 1539(j)(1).

[241] *Id.*

[242] *Id.*

[243] *Id.*

[244] The ESA was amended in 1982 to allow the Services to reintroduce listed species and designate them as experimental populations. Endangered Species Act Amendments, Pub. L. No. 97-304, 96 Stat. 1411 (1982) (codified at 16 U.S.C. § 1539(j)). Though the Services had preexisting authority to reintroduce listed species, a court, reviewing the statute's legislative history, concluded that Congress added this section to address the Services' frustration with political opposition to such reintroduction efforts borne from "industry's fears experimental populations would halt development projects." Wyo. Farm Bureau Fed'n v. Babbitt, 199 F.3d 1224, 1231-32 (10th Cir. 2000) (citing H.R. Rep. No. 97-567, at 8 (1982)).

[245] 16 U.S.C. § 1539(j)(1).

[246] 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).

[247] 59 Fed. Reg. at 60,253-54; 59 Fed. Reg. at 60,267-69.

[248] 59 Fed. Reg. at 60,253-54; 59 Fed. Reg. at 60,267-69.

[249] Wyo. Farm Bureau Fed'n v. Babbitt, 987 F. Supp. 1349, 1355-57 (D. Wyo. 1997).

A federal district court in Wyoming vacated the rules on three grounds, all centered on FWS's use of populations rather than individuals to evaluate geographic separation.[250] First, the court held that FWS's interpretation was inconsistent with clear congressional intent by potentially lessening protections for individual members of the species that ventured from protected populations into the experimental population's range.[251] Second, the court held that the rules conflicted with FWS's own regulations, which require that any overlapping experimental and nonexperimental animals all be treated as endangered under the Act.[252] Third, it held that treating all gray wolves in the experimental area as part of the experimental population, including naturally occurring wolves who migrated there, effected a de facto delisting of those wolves contrary to the ESA.[253]

On appeal, the U.S. Court of Appeals for the Tenth Circuit (Tenth Circuit) disagreed. It found that Congress left the phrase "wholly separate geographically from nonexperimental populations" to the Services to interpret.[254] Reviewing FWS's interpretation, the court observed that FWS's regulations define the term "population" as a group "in common spatial arrangement."[255] FWS had relied on this definition to conclude that individual dispersers would never be part of a "population" and therefore need not be accounted for when assessing geographic separation of *populations*.[256] The court held that this interpretation was reasonable and consistent with the Act.[257] It pointed to the use of species, subspecies, and DPSs rather than individuals as evidence that the Act's purpose is to conserve groups of organisms, not individual specimens.[258] Consistent with that approach, the Tenth Circuit found that FWS reasonably determined the gray wolf's current range based on where populations were located rather than where individuals might disperse.[259] Observing that wildlife—particularly wolves— moves, the court concluded that protecting specimens based on where they *are* rather than where they *came from* was a reasonable enforcement approach.[260]

The Tenth Circuit also held that the plaintiffs' contrary interpretation would require FWS to ensure that no individual specimens might cross between experimental and nonexperimental populations and would unnecessarily limit FWS's flexibility and discretion.[261] The court determined that such a restrictive interpretation would prevent FWS from making full use of the experimental population tool and could hinder the conservation of the species, undermining the purposes of the Act.[262] Accordingly, the Tenth Circuit reversed the district court's decision, allowing the central Idaho and greater Yellowstone area experimental populations to remain in place.[263] Pursuant to the court's opinion, the Services may rely on areas occupied by populations

[250] *See generally id.*

[251] *Id.* at 1373-74.

[252] *Id.* at 1375.

[253] *Id.* at 1375-76.

[254] Wyo. Farm Bureau Fed'n v. Babbitt, 199 F.3d 1224, 1234 (10th Cir. 2000).

[255] *Id.*

[256] *Id.*

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

[258] *Id.* at 1234.

[259] *Id.* at 1234-46.

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

[261] *Id.* at 1236-37.

[262] *Id.* at 1237.

[263] *Id.* at 1241.

rather than individuals to determine whether an experimental population would be "wholly separate geographically" as the Act required.

Qualifying as Endangered or Threatened

Determining whether a species qualifies as endangered or threatened for purposes of listing or delisting requires the Services to examine whether the species is in danger of extinction (1) currently or in the foreseeable future, (2) in all or a significant portion of its range, and (3) due to one or more of the five statutory factors categorizing types of threats. Though some commenters have disagreed with FWS's analyses of threats under the five statutory factors,[264] those analyses have not generally been a focal point in gray wolf litigation except for FWS's assessment of state management plans' adequacy under the five statutory factors.[265]

"All or a Significant Portion of Its Range"

FWS has had difficulty in successfully interpreting "significant portion of its range"—particularly the "significant" component—in connection with gray wolf rulemakings. Plaintiffs and commenters have repeatedly challenged FWS's interpretation of "significant portion of its range" in such rulemakings. Following an adverse court decision,[266] FWS currently treats "significant portion of its range" as an independent basis for listing a species, meaning FWS will list the species in *all* of its range if it finds that the species is endangered or threatened in either (1) all or (2) a significant portion of its range.[267] FWS has successfully defended its interpretation of "range" by interpreting the phrase to mean current rather than historical range.[268] But some courts have rejected FWS's interpretation of which portions are "significant."[269] FWS has not yet issued a revised policy on the meaning of "significant portion of its range" or how it interprets "significant" in light of the new decisions.[270]

Interpreting the Terms "Significant" and "Range"

In its 2003 rule, plaintiffs challenged FWS's interpretation of "significant" using the current "range" of the species. FWS had used the gray wolf's current range (i.e., the areas occupied by the Western Great Lakes and Northern Rocky Mountain populations) as the "significant" areas when reclassifying the Eastern DPS and Western DPS as threatened.[271] An Oregon district court held that FWS failed to adequately justify why the areas occupied by these populations were the only "significant" ones.[272] The court determined that FWS had instead relied on the gray wolf's

[264] 76 Fed. Reg. 81,666, 81,682 (Dec. 28, 2011).

[265] Challenges to FWS's approval of state management plans, which may be analyzed in delisting rules as part of the factor addressing adequate regulatory mechanisms, are discussed in the "Recovery and Delisting" section.

[266] Defenders of Wildlife v. Salazar, 729 F. Supp. 2d 1207, 1217-28 (D. Mont. 2010).

[267] 77 Fed. Reg. 55,530, 55,601 (Sept. 10, 2012).

[268] *See, e.g.*, Humane Soc'y of U.S. v. Zinke, 865 F.3d 85, 603-04 (D.C. Cir. 2017).

[269] Ctr. for Biological Diversity v. Jewell, 248 F. Supp. 3d 946, 956 (D. Ariz. 2017); Desert Survivors v. U.S. Dep't of the Interior, 321 F. Supp. 3d 1011, 1073-74 (N.D. Cal. 2018) (order granting summary judgment to plaintiffs).

[270] 84 Fed. Reg. 9648, 9684 (Mar. 15, 2019) (interpreting "significant" for purposes of this rulemaking only).

[271] Defenders of Wildlife v. Sec'y, U.S. Dep't of Interior, 354 F. Supp. 2d 1156, 1165-66 (D. Ore. 2005).

[272] *Id.* at 1167-69.

current range, without considering the areas where the gray wolf "is no longer viable but once was."[273] Based in part on this conclusion, the court vacated the rule and remanded it to FWS.[274]

On remand, FWS revisited its interpretation of the terms "range" and "significant" in its 2007 Western Great Lakes DPS rule:

- **Interpreting "Range."** FWS explicitly interpreted "range" to refer to the species' current rather than historical range.[275] FWS based its interpretation on the fact that the ESA defines an endangered species or threatened species as one that "*is* in danger of extinction" at the time or in the foreseeable future.[276] FWS determined that while a species may be *extinct* in its historical range, it could only be in danger of extinction in all or part of its *current* range.[277] The District of Columbia district court vacated this rule on other grounds,[278] but the D.C. Circuit subsequently upheld FWS's interpretation of range as reasonable.[279] FWS has since clarified that although it evaluates the current rather than historical range for purposes of determining the species' status, it considers the effect of losing the species' historical range when evaluating the statutory factors in listing decisions.[280]
- **Interpreting "Significant."** FWS explained in the 2007 rule that it would determine what constituted a "significant" part of a species range on a case-by-case basis depending on the biological needs of the species.[281] To conduct this analysis, FWS would consider the ecosystems on which the species depends and the values identified in the Act.[282] Relevant factors might include the quality and quantity of habitat, the historical and current use of the habitat, specific uses for the habitat such as breeding or migration, and the role of that part of the range in maintaining genetic diversity.[283] Though a federal district court in the District of Columbia subsequently vacated this rule, it did so on other grounds without reviewing FWS's interpretation of "significant."[284] The Solicitor's Office of the Department of the Interior issued an opinion soon after the final rule affirming FWS's interpretation and providing a more extensive explanation of the position.[285] FWS relied on this interpretation and the Solicitor's opinion in subsequent gray wolf rulemakings.[286]

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[273] *Id.* at 1167-69.

[274] *Id.* at 1169, 1174.

[275] 72 Fed. Reg. 6052, 6069 (Feb. 8, 2007).

[276] *Id.* at 6069-70 (emphasis added).

[277] *Id.*

[278] Humane Soc'y of the U.S. v. Kempthorne, 579 F. Supp. 2d 7 (D.D.C. 2008).

[279] *See, e.g.*, Humane Soc'y of U.S. v. Zinke, 865 F.3d 85, 603-04 (D.C. Cir. 2017).

[280] *See, e.g.*, 84 Fed. Reg. 9648, 9658 (Mar. 15, 2019).

[281] 72 Fed. Reg. at 6070-71.

[282] *Id.*

[283] *Id.*

[284] Humane Soc'y of the U.S. v. Kempthorne, 579 F. Supp. 2d 7 (D.D.C. 2008).

[285] *The Meaning of "In Danger of Extinction Throughout All or a Significant Portion of Its Range,"* OFFICE OF THE SOLICITOR, U.S. DEP'T OF THE INTERIOR (Mar. 16, 2007).

[286] 73 Fed. Reg. 10,514, 10,533 (Feb. 27, 2008); 74 Fed. Reg. 15,123, 15,152-53 (Apr. 2, 2009); 74 Fed. Reg. 15,070, 15,089-90 (Apr. 2, 2009).

Beginning with its 2011 Western Great Lakes DPS rule, FWS adjusted its explanation of "significant portion of its range" to incorporate principles of conservation biology. The agency interpreted the phrase to mean that the area is (1) within the current range of the species and (2) "important to the conservation of the species because it contributes meaningfully to the representation, resiliency, or redundancy of the species."[287] An area would "contribute[] meaningfully" if loss of the area would negatively affect FWS's ability to conserve the species.[288]

In 2014, the Services issued a joint policy on their interpretation of "significant portion of its range" under the ESA.[289] The policy was generally consistent with FWS's and the Solicitor's past interpretations but contained a revised definition of "significant":

> A portion of the range of a species is "significant" if the species is not currently endangered or threatened throughout all of its range, but the portion's contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range.[290]

District courts later invalidated this definition, concluding that a species could never be listed based on a "significant portion of its range" under this interpretation, and prohibited the Services from applying it.[291] These courts maintained that under this definition no species could be endangered or threatened in a significant portion of its range without being endangered or threatened in all its range.[292] The courts reasoned that if a species were endangered or threatened in a "significant portion" of its range and would be endangered or threatened in all of its range *without* that portion, then the species would be listable as endangered or threatened in *all* its range.[293] In its 2019 proposed rule to delist the remaining gray wolf entities, FWS acknowledged that the policy had been invalidated and addressed the courts' opinions by reviewing the gray wolf's range to identify any portion "that could be significant under any reasonable definition of 'significant' that relates to the conservation of the gray wolf entity."[294] The Services have not yet issued a revised policy interpreting the phrase "significant portion of its range."

Using "Significant Portion of Its Range" for Listing

Plaintiffs have also challenged FWS's interpretation of "significant portion of its range" to allow FWS to list a species only in those parts of its range where it is endangered or threatened. In its 2009 rule designating the Northern Rocky Mountain DPS and delisting it except in Wyoming, FWS implicitly interpreted the ESA as allowing the agency to list a species only in that portion of its range where FWS determined the species was endangered or threatened.[295] This interpretation allowed FWS to keep the DPS listed in Wyoming (based on inadequate regulatory mechanisms)

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[287] 76 Fed. Reg. 81,666, 81,722 (Dec. 28, 2011). *See also* 77 Fed. Reg. 55,530, 55,601-02 (Sept. 10, 2012).

[288] 76 Fed. Reg. 81,666, 81,722 (Dec. 28, 2011). *See also* 77 Fed. Reg. 55,530, 55,601-02 (Sept. 10, 2012).

[289] Final Policy on Interpretation of the Phrase "Significant Portion of Its Range" in the Endangered Species Act's Definition of "Endangered Species" and "Threatened Species," 79 Fed. Reg. 37,578 (July 1, 2014).

[290] *Id.* at 37,609.

[291] *E.g.*, Desert Survivors v. U.S. Dep't of the Interior, 321 F. Supp. 3d 1011, 1073-74 (N.D. Cal. 2018) (order granting summary judgment to plaintiffs); Ctr. for Biological Diversity v. Jewell, 248 F. Supp. 3d 946, 956 (D. Ariz. 2017).

[292] *Ctr. for Biological Diversity*, 248 F. Supp. 3d at 956.

[293] *Id.*; *see also Desert Survivors*, 321 F. Supp. 3d at 1073-74 (order granting summary judgment to plaintiffs).

[294] 84 Fed. Reg. 9648, 9684 (Mar. 15, 2019).

[295] 74 Fed. Reg. at 15,184.

but delist it elsewhere.[296] A Montana district court vacated this rule on the grounds that FWS's interpretation was inconsistent with the ESA and its legislative history.[297] The court determined that Congress added the phrase "significant portion of its range" to expand the circumstances under which the Services could list a species to address concerns that the ESA's predecessors limited the Services to listing species that were endangered worldwide.[298] The court accordingly concluded that the phrase was added to change "*when* a species can be listed," not "*what* must be listed and protected."[299] The court also concluded that FWS's interpretation rendered superfluous DPSs and the vertebrate distinction for DPSs if the agency could limit its listing of a species to the part of its range that was endangered or threatened.[300] The court held that "significant part of its range" refers to *whether*, not *where*, a species is endangered or threatened.[301] In light of the court's decision, FWS has subsequently interpreted this phrase to constitute an independent basis for listing a species throughout its range.[302]

Foreseeable Future

To determine whether a species is threatened, the Services must determine whether it is in danger of extinction in the "foreseeable future." Though FWS's interpretation of this phrase has not been the focus of legal challenges to rules relating to the gray wolf, FWS's interpretation of the term as it applies to the gray wolf has changed over time. Originally, FWS used the term "foreseeable future" in its analyses but did not interpret it in general or with respect to the gray wolf specifically.[303] In the 2007 Western Great Lakes DPS rule, however, FWS defined the term "foreseeable future" specifically for the gray wolf.[304] The agency determined that 30 years was an appropriate measure of the foreseeable future for the gray wolf because wolves have 3-year generations, so 30 years represented 10 generations of wolves.[305] FWS viewed 10 generations as a reasonable period to reliably predict the effects of threats on the species.[306]

FWS changed course again in the 2009 rules designating and delisting the Western Great Lakes DPS and Northern Rocky Mountain DPS.[307] Rather than defining the "foreseeable future" for the species as a whole based on its reproductive patterns, FWS announced that it would determine the foreseeable future for each threat it considered based on its ability to project and predict effects of the threats reliably.[308] For example, the agency used 30 years as the timeframe for available habitat and distribution models, but when considering the effect of genetic isolation on the species, it used a model that predicted those effects for the next 100 years.[309] Though FWS's gray wolf rules have not been overturned based on its interpretation of "foreseeable future," its

[296] *Id.*

[297] Defenders of Wildlife v. Salazar, 729 F. Supp. 2d 1207, 1217-28 (D. Mont. 2010).

[298] *Id.* at 1227-28.

[299] *Id.* (emphasis in original).

[300] *Id.* at 1224-25.

[301] *Id.* at 1227.

[302] *See, e.g.*, 77 Fed. Reg. 55,530, 55,601 (Sept. 10, 2012).

[303] *See, e.g.*, 68 Fed. Reg. 15,804 (Apr. 1, 2003).

[304] 72 Fed. Reg. 6052, 6069 (Feb. 8, 2007).

[305] *Id.*

[306] *Id.*

[307] 74 Fed. Reg. 15,070, 15,088-89 (Apr. 2, 2009); 74 Fed. Reg. 15,123, 15,147, 15,156-57 (Apr. 2, 2009).

[308] 74 Fed. Reg. at 15,088-89; 74 Fed. Reg. at 15,147, 15,156-57.

[309] 74 Fed. Reg. at 15,147, 15,156-57.

approach is information as interpretations of this term have generated challenges for rules on other species.[310]

The Services' 2019 revisions to their ESA regulations codify an interpretation of "foreseeable future" much like the one FWS adopted in the 2009 rules.[311] As revised, the Services interpret "foreseeable future" to "extend[] only so far into the future as the Services can reasonably determine that both the future threats and the species responses to those threats are likely."[312] The Services intend to evaluate "foreseeable future" on a case-by-case basis based on "considerations such as the species' life-history characteristics, threat-projection timeframes, and environmental variability."[313] Consistent with the approach adopted in the 2009 gray wolf rules, the Services state that they need not identify the foreseeable future as a specific time period.[314]

Recovery and Delisting

The Services delist species using the same process they use to list species:[315] They evaluate whether the species meets the definition of "endangered species" or "threatened species" due to one or more of the five statutory factors based on the best available scientific and commercial data.[316] However, when delisting a species, the Services also generally evaluate the species' recovery pursuant to any identified objective recovery criteria in recovery plans and assesses the adequacy of state management plans following delisting.[317] FWS has stated that a species need not meet all of the recovery criteria to be delisted.[318] But a Montana district court has required FWS to provide an adequate explanation if it chooses to reject recovery criteria or delist a species that has not met these criteria,[319] because FWS develops the recovery criteria pursuant to the statutory directive to establish "objective, measurable criteria which, *when met*, would result in a determination ... that the species be removed from the list."[320] State management plans fall under the purview of "inadequate regulatory mechanisms" in the five-factor analysis, but the Services give them particular attention in delisting rules because the regulatory mechanisms protecting a species necessarily change when it is delisted and no longer receives federal protection under the ESA. Accordingly, this section focuses specifically on two aspects of recovery and delisting species: (1) how FWS has addressed objective recovery criteria and (2) post-delisting state management plans.

Objective Recovery Criteria in Recovery Plans

Plaintiffs have challenged how FWS has used recovery plan criteria when assessing the gray wolf's recovery in its delisting rules. The ESA directs the Services to develop and implement

[310] *See, e.g.*, *In re* Polar Bear Endangered Species Act Listing and Section 4(d) Rule Litigation, 709 F.3d 1, 15-16 (D.C. Cir. 2013).

[311] 84 Fed. Reg. 45,020, 45,020-21 (Aug. 27, 2019) (codified at 50 C.F.R. § 424.11(d)).

[312] *Id.*

[313] *Id.*

[314] *Id.*

[315] 16 U.S.C. § 1533(c).

[316] *Id.* § 1533(a) & (b).

[317] *See, e.g.*, 72 Fed. Reg. 6052, 6052-56, 6083-95 (Feb. 8, 2007); 74 Fed. Reg. 15,123, 15,130-38, 15,166-75 (Apr. 2, 2009).

[318] Defenders of Wildlife v. Hall, 565 F. Supp. 2d 1160, 1169 (D. Mont. 2008).

[319] *Defenders of Wildlife*, 565 F. Supp. 2d at 1168.

[320] 16 U.S.C. § 1533(f)(1)(B)(ii) (emphasis added).

recovery plans for the conservation and survival of listed species if such a plan would promote conservation of the species.[321] In any such plan, the Services must include "objective, measurable criteria" that, if met, would cause the Services to delist the species.[322] The Act, however, directs the Services to determine whether a species should be reclassified or removed from the list during a status review based on the Section 4(a) and (b) criteria—namely the endangered and threatened species definitions and the five statutory categories of threats as determined using the best available commercial and scientific data—without mentioning recovery plan criteria.[323] Though these two provisions do not inherently conflict, they have generated questions about the role of objective criteria in recovery plans when delisting species.

Parties have challenged FWS's decision to delist a species when it had not met all of the objective recovery criteria. For example, plaintiffs challenged the 2008 rule to designate and delist the Northern Rocky Mountain DPS based in part on a study finding no evidence of genetic exchange between the greater Yellowstone area population and the other two recovery areas.[324] The 1994 EIS included as a recovery criterion that the northern Rocky Mountain recovery areas have "[t]hirty or more breeding pairs comprising some 300+ wolves in a metapopulation (a population that exists as partially isolated sets of subpopulations) *with genetic exchange between subpopulations*."[325] The plaintiffs argued—and a Montana district court agreed—that this criterion required evidence of actual DNA exchange, not just the potential for genetic exchange or expectation of such exchange in the future.[326] The court held that although the ESA did not prohibit FWS from finding that a species had recovered without meeting recovery criteria, FWS still needed to justify adequately rejecting its own recovery criteria to avoid violating the APA.[327]

FWS addressed these criticisms in its 2009 Northern Rocky Mountain DPS rule in multiple ways. The agency challenged the factual conclusion that genetic exchange had not occurred by questioning the assumptions of the underlying scientific study and identifying new studies showing wolf dispersal and genetic exchange.[328] FWS further explained its interpretation of the recovery criterion, maintaining that the recovery criterion did not require confirmed genetic exchange and that genetic exchange need not result from natural migration and could be human-assisted.[329] Finally, the agency explained why the criterion was not needed to find recovery, reasoning that genetic exchange was not a concern for the populations due to the high level of preexisting genetic diversity.[330] In later rulemakings, FWS has stated that "recovery may be achieved without all recovery criteria being fully met."[331] When there are questions about whether a species FWS seeks to delist has met objective recovery criteria, the agency may use one or more of the following approaches based on past practice: (1) explaining flaws in evidence showing the criteria have not been met; (2) finding additional evidence supporting its position; (3) explaining

[321] 16 U.S.C. §1533(f).

[322] *Id.* §1533(f)(1)(B)(2).

[323] *Id.* § 1533(c)(2).

[324] *Defenders of Wildlife*, 565 F. Supp. 2d at 1168.

[325] *Id.*

[326] *Id.* at 1168-69.

[327] *Id.* at 1170.

[328] 74 Fed. Reg. 15,123, 15,130-35 (Apr. 2, 2009).

[329] *Id.*

[330] *Id.*

[331] 84 Fed. Reg. 9648, 9657 (Mar. 15, 2019).

its understanding of the recovery criteria to explain why they have been met; or (4) explaining why it views the species as having recovered despite not explicitly meeting the objective criteria.

Finally, parties have challenged the recovery criteria in comments on proposed rules as either excessive or inadequate to determine whether the species had recovered.[332] FWS generally has concluded that its recovery criteria are adequate,[333] and, to date, courts generally have not addressed FWS's technical expertise in selecting the criteria.

State Management Plans

State plans for managing a species post-delisting can enter into the Services' delisting determinations in two ways: (1) the Services examine any state management plans under "Factor D: The Inadequacy of Existing Regulatory Mechanisms,"[334] and (2) the Services may require in the recovery plan that they approve certain state management plans before delisting the species.[335] For the gray wolf, the Eastern Timber Wolf Recovery Plan required as part of its recovery criteria that Minnesota, Michigan, and Wisconsin have in place state management plans FWS had approved as providing adequate wolf protection and management.[336] Similarly, the Northern Rocky Mountain Gray Wolf Recovery Plan required in its recovery criteria that Montana, Wyoming, and Idaho have FWS-approved state management plans.[337] To meet this recovery plan requirement, (1) the state must create a management plan that FWS approves, (2) FWS must adequately explain why it approved the plan, and (3) the state must implement the plan.[338] The state or FWS failing to complete any of these steps has delayed FWS delisting gray wolf populations and caused courts to vacate final delisting rules.[339]

Formulating an Adequate Management Plan. First, the state must craft a management plan that FWS deems adequate to ensure the continued recovery of the species. In 2003, FWS designated but did not delist the Western DPS because the agency had rejected Wyoming's state management plan as inadequate. Wyoming challenged FWS's decision to not approve its management plan, but a Wyoming district court dismissed the case for failing to tie the decision to any final agency action that could be reviewed.[340] FWS took a different approach in 2009 when it delisted the Northern Rocky Mountain DPS without Wyoming because it determined that the Wyoming plan remained inadequate and could not be approved.[341] But a Montana district court determined that FWS could not delist the DPS only in part, effectively holding that Wyoming must enact an approved state management plan for the entire DPS to be delisted.[342] Congress superseded this

[332] *See, e.g.*, 72 Fed. Reg. 6052, 6066 (Feb. 8, 2007) ("The 1992 Service Recovery Plan is outdated, and its recovery criteria cannot be used to justify delisting.").

[333] *See, e.g.*, 72 Fed. Reg. at 6066.

[334] *See, e.g.*, 76 Fed. Reg. 81,666, 81,701-16 (Dec. 28, 2011); 74 Fed. Reg. 15,070, 15,103-17 (Apr. 2, 2009).

[335] *See* 65 Fed. Reg. 43,450, 43,468, 43,475 (July 13, 2000).

[336] *Id.* at 43,475.

[337] *Northern Rocky Mountain Wolf Recovery Plan*, U.S. FISH & WILDLIFE SERV. at 32 (1987).

[338] *See, e.g.*, 65 Fed. Reg. at 43,475; Defenders of Wildlife v. Hall, 565 F. Supp. 2d 1160, 1163 (D. Mont. 2008); 74 Fed. Reg. 15,123, 15,123 (Apr. 2, 2009).

[339] *See, e.g.*, 65 Fed. Reg. at 43,475; Defenders of Wildlife v. Hall, 565 F. Supp. 2d 1160, 1163 (D. Mont. 2008); 74 Fed. Reg. 15,123, 15,123 (Apr. 2, 2009).

[340] Wyoming v. U.S. Dep't of the Interior, 360 F. Supp. 2d 1214 (D. Wyo. 2005).

[341] 74 Fed. Reg. at 15,123, 15,170-72.

[342] Defenders of Wildlife v. Salazar, 729 F. Supp. 2d 1207, 1217-28 (D. Mont. 2010).

decision by enacting legislation in 2011 that directed FWS to reinstate the rule delisting the DPS except for Wyoming.[343]

Explaining the Agency's Approval of the Management Plan. Second, FWS must adequately explain why it approved the state plan. In 2008, FWS delisted the Northern Rocky Mountain DPS after Wyoming revised its state management plan between the proposed and final rules.[344] FWS proposed to delist the DPS only if Wyoming modified its plan to provide adequate protection for the species.[345] Wyoming modified its statutes and wolf management plan after the proposed rule was published.[346] In the final rule, FWS determined that the revised plan was adequate to ensure the gray wolf's continued recovery.[347] A Montana district court, however, held that FWS's approval of Wyoming's plan was likely arbitrary and capricious and issued a preliminary injunction staying the delisting rule.[348] The court determined that the plan suffered from the same flaws that FWS had identified in the plan it previously rejected and that FWS had failed to adequately explain why the plan was now sufficient.[349] Several months after issuing the preliminary injunction, the court vacated and remanded the rule at FWS's request.[350]

Implementing the Management Plan. Finally, the state must enact and otherwise implement, as applicable, the approved management plan to ensure that the protections the Services rely on to delist the species are actually in place. For example, FWS stated in its 2000 proposed rule that it had intended to propose delisting the Western Great Lakes DPS as well as designating it but that the agency could not because the Minnesota legislature had failed to vote on the plan FWS had approved before FWS published its proposed rule.[351] FWS accordingly proposed to designate the DPS but not delist it because the recovery criteria were not met without an approved Minnesota management plan in place.[352] Once Minnesota enacted its plan, FWS moved forward with delisting the DPS (though courts ultimately vacated all the rules that followed).[353] Similarly, FWS found Wyoming's management plan to be inadequate in the 2007 Northern Rocky Mountain DPS proposed rule because state laws and regulations prevented the Wyoming Game and Fish

[343] Pub. L. No. 112-10, § 1713, 125 Stat. 150 (2011).

[344] 73 Fed. Reg. 10,514, 10,514, 10,549-50 (Feb. 27, 2008).

[345] 72 Fed. Reg. 6106, 6106, 6129-31 (Feb. 8, 2007). FWS decided that Wyoming's existing plan was inadequate because, among other things, it designated the gray wolf as a predatory animal throughout the state outside the national parks that could be killed at any time by any means so long as there were at least 15 packs in the state or 7 packs outside the national parks. *Id.* at 6129. In the event these criteria were not met, the plan directed the Wyoming Game and Fish Commission to select areas in the state where the gray wolf would be designated as trophy game subject to regulated take. *Id.* FWS determined that this plan did not ensure a sufficient number of breeding pairs would be maintained in the state. *Id.* at 6129-30.

[346] 72 Fed. Reg. 36,939, 36,940 (July 6, 2007). Wyoming revised its statutes and wolf management plan to designate the gray wolf as trophy game in those parts of the state FWS had identified as significant and committed to maintaining 7 breeding pairs outside the national parks, recognizing Wyoming does not have jurisdiction over the national parks and assuming that 8 breeding pairs would be maintained there. *Id.*

[347] 73 Fed. Reg. 10,514, 10,549 (Feb. 27, 2008).

[348] Defenders of Wildlife v. Hall, 565 F. Supp. 2d 1160, 1172-75 (D. Mont. 2008).

[349] *Defenders of Wildlife*, 565 F. Supp. 2d at 1172-75.

[350] 73 Fed. Reg. 75,356, 75,357 (Dec. 11, 2008).

[351] 65 Fed. Reg. 43,450, 43,468, 43,475 (July 13, 2000).

[352] *Id.*

[353] *See, e.g.*, 73 Fed. Reg. at 10,547-48; 74 Fed. Reg. 15,070, 15,103-05 (Apr. 2, 2009).

Commission from actually implementing certain components of the plan.[354] Once Wyoming modified its state laws and regulations, FWS approved the plan.[355]

As the litigation over the FWS's 2012 rule illustrates, although states must enact management plans for the Services to move forward with delisting a species, the regulatory mechanisms need not all be legally binding so long as states assure the Services that adequate protections will be provided in practice. The federal district court for the District of Columbia vacated FWS's 2012 rule delisting the gray wolf in Wyoming because FWS relied on nonbinding promises from Wyoming that it would manage the population above the minimum recovery level.[356] On appeal, the D.C. Circuit reversed the district court and restored the rule delisting the gray wolf in Wyoming, holding that "regulatory mechanisms" need not be binding with the force of law for FWS to determine they were adequate to protect the species.[357]

The Services' approval of state management plans and the adequacy of their explanations for approving the plans can accordingly play a central role in both finalizing delisting rules and surviving judicial review of those rules. For a particular species and state, the adequacy of the state's regulatory mechanisms and management plan are determined on a case-by-case basis through negotiation between the state and the Services.

Conclusion

The history of the gray wolf under the ESA illustrates the challenges FWS has faced in conserving the species as the Act intended. In implementing the ESA, the Services must contend with disagreements over how to interpret ambiguous terms, uncertain and ever-changing scientific data, and conflicting views on what it means to conserve species and the role of the states in that effort. These issues can complicate the Services' efforts to conserve endangered and threatened species and delist them, consistent with the Act's purposes.

Difficulties that delay delisting species may frustrate certain stakeholders, such as state wildlife agencies that want more flexibility in managing the species or private entities in the species' habitat who must comply with the Act's prohibitions and Section 7 consultation requirements. Other stakeholders such as conservation groups or animal rights activists may raise concerns that species are inadequately regulated to ensure their long-term recovery or continued biodiversity due to uncertainties in the science and ambiguities in the statute. Either set of stakeholders may question whether the Act is effectively promoting the recovery of listed species.

In light of the scientific and administrative challenges FWS has encountered with regulating the gray wolf under the Act, Congress could consider amending the Act to address these issues and ensure the Act is implemented in accordance with congressional intent. Such legislation could amend the Act generally or specifically with respect to a particular action, such as the Act directing FWS to reinstate the rule designating and delisting the Northern Rocky Mountain DPS

[354] 72 Fed. Reg. 6106, 6106, 6129-31 (Feb. 8, 2007).

[355] 73 Fed. Reg. at 10,514, 10549-50. A court subsequently vacated this rule after determining that FWS was acted in an arbitrary and capricious manner in approving the Wyoming wolf management plan because it suffered from the same flaws as the 2003 plan FWS rejected. *Defenders of Wildlife*, 565 F. Supp. 2d at 1172-75. Wyoming revised its wolf management plan yet again and FWS ultimately delisted the gray wolf in Wyoming in 2012. 77 Fed. Reg. 55,530 (Sept. 10, 2012).

[356] Defenders of Wildlife v. Jewell, 68 F. Supp. 3d 193, 196, 203-10 (D.D.C. 2014).

[357] Defenders of Wildlife v. Zinke, 849 F.3d 1077, 1082-88 (D.C. Cir. 2017).

except for Wyoming.[358] Legislative proposals introduced in the 116th Congress would pursue each of these approaches: amending the Act generally[359] or specifically directing FWS to issue new rules or reissue vacated ones regarding the gray wolf.[360]

[358] Department of Defense and Full-Year Appropriations Act, 2011, Pub. L. No. 112-10, § 1713, 125 Stat. 150 (2011).

[359] *See, e.g.*, S. 1429, 116th Cong. (2019); S. 2343, 116th Cong. (2019); S. 2491, 116th Cong. (2019); H.R. 2245, 116th Cong. (2019); H.R. 5095, 116th Cong. (2019); H.R. 4804, 116th Cong. (2019).

[360] *See, e.g.*, S. 831, 116th Cong. (2019) (directing the Department of the Interior to reinstate the final rule designating and delisting the Western Great Lakes DPS and precluding judicial review of that rule or the reinstated rule delisting the gray wolf in Wyoming); American Wild Game and Livestock Protection Act, S. 3140, 116th Cong. (2019) (directing the Secretary of the Interior to issue a final rule delisting the gray wolf); Gray Wolf State Management Act of 2019, H.R. 4494, 116th Cong. (2019) (directing the Secretary of the Interior to reissue the final rule designating and delisting the Western Great Lakes DPS).

Appendix. Timeline

Table A-1. Gray Wolf Endangered Species Act Timeline

Key Legislative, Regulatory, and Litigation Developments

Date	Event	Description
Oct. 15, 1966	Legislation	Endangered Species Preservation Act enacted
March 11, 1967	Listing	Timber wolf listed as endangered
Dec. 5, 1969	Legislation	Endangered Species Conservation Act enacted, amending Endangered Species Preservation Act
June 4, 1973	Listing	Northern Rocky Mountain wolf listed as endangered
Dec. 28, 1973	Legislation	Endangered Species Act enacted, replacing Endangered Species Preservation Act
Apr. 21, 1975	Listing	Mexican wolf listed as endangered
July 1, 1975	Legislation	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) entered into force
June 14, 1976	Listing	Gray wolf listed as endangered in Texas, New Mexico, and Mexico pursuant to CITES
March 9, 1978	Reclassification	Timber wolf, northern Rocky Mountain wolf, Mexican wolf, and Texas gray wolf reclassified as subspecies of the gray wolf; Gray wolf listed as endangered in 48 coterminous states excluding Minnesota and in Mexico; Gray wolf listed as threatened in Minnesota with special 4(d) rule allowing take for depredation control; Critical habitat established in Minnesota and Michigan
June 5, 1978	Regulation	Approved recovery plan for the eastern timber wolf
Aug. 10, 1983	Regulation	Special 4(d) rule for gray wolf in Minnesota expanded to address depredation
Jan. 5, 1984	Court decision	Minnesota district court vacated special 4(d) rule for gray wolf in Minnesota
Feb. 19, 1985	Court decision	Eighth Circuit affirmed in part and remanded in part Montana district court decision vacating special 4(d) rule for gray wolf in Minnesota and remanded to district court
May 2, 1985	Court decision	District court orders amendments to special 4(d) rule for gray wolf in Minnesota
Dec. 12, 1985	Regulation	Special 4(d) rule for gray wolf in Minnesota amended consistent with court orders
Apr. 24, 1989	Petition denied	Petition to delist gray wolf denied as not warranted
Nov. 30, 1990	Petition denied	Petition to delist gray wolf denied as not warranted
Jan. 31, 1992	Regulation	Approved revised recovery plan for the eastern timber wolf
Nov. 22, 1994	Experimental population	Nonessential experimental population of gray wolves established in Yellowstone National Park in Wyoming, Idaho, and Montana
Jan. 12 & 14, 1995	Experimental population	Gray wolves released in Yellowstone National Park and central Idaho

Date	Event	Description
Dec. 12, 1997	Court decision	Wyoming district court vacated wolf introduction rule and ordered introduced wolves removed
Jan. 12, 1998	Experimental population	Nonessential experimental population of Mexican gray wolves established in Arizona and New Mexico
Oct. 19, 1998	Petition denied	Petition to delist gray wolf in Minnesota, Wisconsin, and Michigan denied as not warranted
Jan. 13, 2000	Court decision	Tenth Circuit reverses district court and reinstates rule establishing experimental population in Yellowstone National Park and central Idaho
Apr. 1, 2003	Reclassification DPS Regulation	Established three DPSs of the gray wolf: Western DPS, Eastern DPS, and Southwestern DPS; Reclassified Western DPS and Eastern DPS from endangered to threatened; Implemented special 4(d) rule for Western DPS and Eastern DPS
Jan. 6, 2005	Regulation	Implemented regulations for nonessential experimental population in Yellowstone National Park and central Idaho within Western DPS to allow more flexibility in state and tribal management
Jan. 31, 2005	Court decision	Oregon district court vacated the rule reclassifying Western DPS and Eastern DPS from endangered to threatened
March 18, 2005	Court decision	Wyoming district court dismissed case by State of Wyoming challenging FWS's rejection of its gray wolf management plan
Aug. 19, 2005	Court decision	Vermont district court also vacated the rule reclassifying Western DPS and Eastern DPS from endangered to threatened
Oct. 26, 2005	Petition may be warranted	Petition to establish Northern Rocky Mountain DPS and delist it may be warranted
Dec. 9, 2005	Petition denied	Petition to delist gray wolf in Nevada denied as not warranted
Aug. 1, 2006	Petition denied	Petition to establish northern Rocky Mountain DPS and delist it denied as not warranted in 12-month finding based on inadequate protections under Wyoming state law
Feb. 8, 2007	DPS Delisting	Established the Western Great Lakes DPS and delisted it
Jan. 28, 2008	Regulation	Implemented revised regulations for nonessential experimental population in Yellowstone National Park and central Idaho within Western DPS to allow more flexibility in state and tribal management
Feb. 27, 2008	DPS Delisting	Established Northern Rocky Mountain DPS and delisted it
July 18, 2008	Court decision	Montana district court issued preliminary injunction reinstating Endangered Species Act protections for Northern Rocky Mountain DPS pending final resolution of the matter
Sept. 29, 2008	Court decision	District of Columbia district court vacated the rule establishing the Western Great Lakes DPS and delisting it
Oct. 14, 2008	Court decision	Montana district court vacated the rule establishing the Northern Rocky Mountain DPS and delisting it, at the request of FWS
Dec. 11, 2008	Relisting	Reinstated protections of the Endangered Species Act for Northern Rocky Mountain DPS and Western Great Lakes DPS to comply with court orders

Date	Event	Description
Apr. 2, 2009	DPS Delisting	Established Northern Rocky Mountain DPS and delisted it except for gray wolves in Wyoming, which would continue to be managed as a nonessential experimental population
Apr. 2, 2009	DPS Delisting	Established the Western Great Lakes DPS and delisted it, removing critical habitat in Minnesota and Michigan and special 4(d) regulations for Minnesota
Sept. 8, 2009	Court decision	Montana district court denies motion for preliminary injunction to prohibit scheduled wolf hunts but found a likelihood of success on the merits regarding the rule establishing Northern Rocky Mountain DPS and delisting it except for Wyoming
Sept. 16, 2009	Relisting	Reinstated protections of Endangered Species Act for Western Great Lakes DPS to comply with settlement agreement and court order
June 10, 2010	Petition denied	Petition to establish Northeastern United States DPS and list it as endangered denied as not warranted
Aug. 4, 2010	Petition may be warranted	Petition to reclassify Mexican wolf as a separate subspecies may be warranted
Aug. 5, 2010	Court decision	Montana district court vacated the rule establishing the Northern Rocky Mountain DPS and delisting it except for Wyoming
Sept. 14, 2010	Petition may be warranted	Petition to delist the gray wolf in Minnesota, Wisconsin, and Michigan may be warranted
Oct. 26, 2010	Relisting	Reinstated protections of the ESA for the Northern Rocky Mountain DPS to comply with court order
Nov. 18, 2010	Court decision	Wyoming district court set aside FWS requirement that Wyoming designate the entire state as a trophy game area to provide adequate protection for gray wolves upon delisting and remanded to agency to determine whether Wyoming's management plan with its proposed trophy game area constitutes an adequate regulatory mechanism
Apr. 9, 2011	Court decision	Montana district court rejects settlement of suit challenging delisting of Northern Rocky Mountain DPS that would have removed ESA protections in Idaho and Montana
April 15, 2011	Legislation	Department of Defense and Full-Year Appropriations Act, 2011, directed the Secretary of the Interior to reinstate rule establishing the Northern Rocky Mountain DPS and delisting it except for Wyoming
May 5, 2011	Delisting	Reinstated rule establishing the Northern Rocky Mountain DPS and delisting it except for Wyoming to comply with legislation
Aug. 3, 2011	Court decision	Montana district court upholds constitutionality of legislation directing the Secretary of the Interior to reinstate the vacated rule establishing the Northern Rocky Mountain DPS and delisting it except for Wyoming
Dec. 28, 2011	DPS Delisting	Designated Western Great Lakes DPS to include wolves in Minnesota, Wisconsin, and Michigan along with portions of adjoining states and delisted it; Removed critical habitat in Minnesota and Michigan and special 4(d) rule for Minnesota
March 14, 2012	Court decision	Ninth Circuit affirmed Montana district court decision upholding constitutionality of legislation directing the Secretary of the Interior to reinstate vacated rule establishing the Northern Rocky Mountain DPS and delisting it except for Wyoming
Sept. 10, 2012	Delisting	Delisted gray wolf in Wyoming and eliminated nonessential experimental population designation for gray wolves in Yellowstone National Park

Date	Event	Description
Oct. 9, 2012	Petition denied	Petition to designate Mexican wolf as subspecies or DPS denied as not warranted
Sept. 23, 2014	Court decision	District of Columbia district court vacated and remanded rule delisting gray wolf in Wyoming based on inadequacy of Wyoming regulatory mechanisms
Dec. 19, 2014	Court decision	District of Columbia district court vacated rule designating the Western Great Lakes DPS and delisting it on the grounds that FWS could not simultaneously designate a DPS and delist it
Jan. 16, 2015	Listing	Listed Mexican wolf as endangered subspecies; Revised regulations for nonessential experimental population of the Mexican wolf
Feb. 20, 2015	Relisting	Reinstated protections of ESA for gray wolf in Wyoming as nonessential experimental population and for gray wolf in Western Great Lakes DPS as threatened in Minnesota and endangered in Wisconsin, Michigan, and portions of adjoining states to comply with court orders
March 3, 2017	Court decision	D.C. Circuit reversed District of Columbia district court and reinstated rule delisting gray wolf in Wyoming
May 1, 2017	Delisting	Reinstated rule delisting gray wolf in Wyoming
Aug. 1, 2017	Court decision	D.C. Circuit affirmed District of Columbia district court decision vacating rule designating Western Great Lakes DPS and delisting it
March 31, 2018	Court decision	Arizona district court remanded rule revising regulations for nonessential experimental population of the Mexican wolf and retaining that designation to FWS to consider the conservation of the species in a revised rule
March 15, 2019	Proposed delisting	Proposed delisting gray wolf wherever it is found but maintaining Mexican wolf endangered status
Nov. 3, 2020	Delisting	Delisted the gray wolf in the lower 48 states except for Mexican wolf, which remains listed as endangered

Source: Congressional Research Service.

Note: The actions listed in this table were taken by FWS unless otherwise specified.

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