COMMENT

DEFINING "HABITAT" POST-*WEYERHAEUSER*: CRITICAL HABITAT REGULATIONS UNDER THE ENDANGERED SPECIES ACT MUST PROMOTE SPECIES RECOVERY

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As one of the strongest federal environmental statutes, the Endangered Species Act (ESA) is a powerful tool for environmental litigators to uphold the important conservation objectives articulated by Congress in 1973. In recent years, the role of "critical habitat" within the ESA has come into question. The Supreme Court decided in Weyerhaeuser *that "critical habitat" must also qualify as "habitat," but it failed to articulate any guidelines for determining what "habitat" actually is. This decision incited a regulatory tug-of-war over the proper definition of "habitat" within the ESA. This Comment explores the approaches to defining "habitat" employed by the Trump and Biden administrations. This Comment further argues that while Biden's approach better effectuates the goals of the ESA, it is still a flawed interpretation of the Act because it allows the Secretary of the Interior to administer the ESA in such a way that is inconsistent with the Act's separate goals of species survival and species recovery.*

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INTRODUCTION

The Endangered Species Act of 1973[1] (ESA) is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation."[2] As one of the strongest environmental laws in the United States,[3] the ESA has helped many American species

1. 16 U.S.C. §§ 1531–1544.
2. Tenn. Valley Auth. v. Hill, 437 U.S. 153, 180 (1978).
3. *Id.*; The Endangered Species Act: A Wild Success, CTR. FOR BIOLOGICAL DIVERSITY, https://www.biologicaldiversity.org/campaigns/esa_wild_success [https://perma.cc/3NTN-WDPQ]; *see also* Babbitt v. Sweet Home Chapter of Cmtys. for a Greater Or., 515 U.S. 687, 708 (1995) (stating that "the Act encompasses a vast range of economic and social enterprises and endeavors").

recover from the brink of extinction.[4] Over 2,300 species have been placed under the protection of the ESA since its adoption, and the Act is responsible for the successful conservation efforts of many iconic species, including the bald eagle, gray wolf, grizzly bear, and gray whale.[5]

Although the early years of the ESA were characterized by powerful bipartisan support,[6] it has devolved into controversy due to the powerful restrictions it can place on land use.[7] Land use disputes under the ESA frequently involve the concept of "habitat." Scientists repeatedly warn that habitat loss is the greatest threat to biodiversity,[8] and the Act's critical habitat protections place significant limitations on federal actions taken within areas deemed to be "essential to the conservation of the species."[9]

The general strength of the ESA's substantive provisions generates litigation that often serves as a "surrogate battleground" in disputes actually motivated by land use, resource control, and land allocation.[10] Disputes over critical habitat designations frequently involve competing environmental and economic interests,[11] and the Supreme Court's decision in *Weyerhaeuser Co. v. United States Fish and Wildlife Service*[12] is no exception. The plaintiffs in *Weyerhaeuser*, a group of private landowners seeking to ease land use controls imposed by the ESA, filed suit contesting the Secretary's designation of a certain area as critical habitat for the dusky gopher frog.[13] *Weyerhaeuser* generated considerable ripple effects in the ESA's implementation because it imposed a new requirement that "critical habitat" must also qualify as

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4. *See* Michael J. Bean, *Historical Background of the Endangered Species Act*, *in* ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES 11, 17 (Donald C. Baur & Ya-Wei Li, 3d ed., 2021) (enumerating some of those species).

5. *Id.*

6. *Id.* at 17–18; James Salzman, *Evolution and Application of Critical Habitat Under the Endangered Species Act*, 14 HARV. ENV'T L. REV. 311, 313 (1990).

7. *See* Karin P. Sheldon, *Habitat Conservation Planning: Addressing the Achilles Heel of the Endangered Species Act*, 6 N.Y.U. ENV'T L.J. 279, 279–80 (1998).

8. Dave Owen, *Critical Habitat and the Challenge of Regulating Small Harms*, 64 FLA. L. REV. 141, 149 (2012); Lenore Fahrig, *Relative Effects of Habitat Loss and Fragmentation on Population Extinction*, 61 J. WILDLIFE MGMT. 603, 603 (1997); NAT'L RSCH. COUNCIL, SCIENCE AND THE ENDANGERED SPECIES ACT 72 (1995).

9. 16 U.S.C. §§ 1532(5)(A), 1536(a)(2).

10. M. LYNNE CORN & ALEXANDRA M. WYATT, CONG. RSCH. SERV., THE ENDANGERED SPECIES ACT: A PRIMER 1–2 (2016).

11. Bean, *supra* note 4, at 55.

12. 139 S. Ct. 361 (2018).

13. *Id.* at 364.

"habitat,"[14] which the ESA leaves undefined.[15] The Supreme Court did not determine whether the critical habitat at issue in the case met the definition for "habitat," nor did it attempt to define the term.[16] The Trump administration's Department of the Interior (DOI) promulgated two rules to resolve this ambiguity,[17] but the Biden administration is currently in the process of repealing and revising these rules.[18] Two related questions posed by the *Weyerhaeuser* decision remain unanswered: (1) how should "habitat" be defined under the ESA; and (2) can "habitat" include areas that cannot independently support a population of species without some sort of modification effort?[19]

This Comment will examine the current state of critical habitat policy and argue that the Biden administration's recent decision to repeal the "habitat" definition, while insufficient to fully effectuate critical habitat's recovery-based goal, is a step in the right direction because it allows the Secretary of the Interior to administer the ESA in a way that is consistent with Congress's intent. Part I explores the background to this issue, including the *Weyerhaeuser* case and the developments since, historical interpretations of "critical habitat" under the ESA, and how agencies must balance the ESA's interrelated goals of species survival and species recovery.

Next, Part II compares the regulatory approaches of the Trump and Biden administrations in the context of the ESA's textual mandates and objectives, concluding that the Biden administration's approach moves closer toward the ESA's objective of administering critical habitat in

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14. Jeffrey S. Knighton Jr., Comment, *Critical Decisions: The Challenge of Defining Critical Habitat Under the Endangered Species Act*, 9 LSU J. ENERGY L. & RES. 563, 580–81 (2021).

15. *Weyerhaeuser*, 139 S. Ct. at 368.

16. *Id.* at 369.

17. Regulations for Listing Species and Designating Critical Habitat, 84 Fed. Reg. 45,020, 45,021–22 (Aug. 27, 2019) (implementing a certainty-based standard to guide the designation of unoccupied critical habitat); Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 85 Fed. Reg. 81,411, 81,412 (Dec. 16, 2020) (offering a regulatory definition for "habitat").

18. Liz Trotter, *Biden Administration to Repeal and Revise Harmful Trump Endangered Species Act Rules*, EARTHJUSTICE (June 4, 2021), https://earthjustice.org/news/press/2021/biden-administration-to-repeal-and-revise-harmful-trump-endangered-species-act-rules [https://perma.cc/BW9N-CVZ6]; Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. 37,757, 37,757 (June 24, 2022) (to be codified at 50 C.F.R. pt. 424) (repealing one of the Trump-era rules).

19. For an examination of these questions within the context of the *Weyerhaeuser* litigation, see *infra* Part II(B).

such a way that furthers species recovery as well as survival. Part II then argues that the recently finalized rule is ultimately too vague to effectuate meaningful change because it does not propose regulatory language to guide the further designation of critical habitat. Finally, Part IV concludes by recommending that the Biden administration replace the current "habitat" definition by adding language to the C.F.R. specifying that "habitat" includes areas that may need some modification to support a species.

I. BACKGROUND

To fully understand the current state of affairs with the ESA, it is necessary to understand the history of the ESA and the critical habitat provisions it contains. This Section discusses the history of the ESA and its critical habitat provision, and how *Weyerhaeuser* changed the application of critical habitat within the statute. This Section then discusses the Administrative Procedure Act, judicial deference to agency rules, and how administrative law shapes the implementation of the ESA.

A. The Endangered Species Act (ESA) and Its Related Goals of Species Survival and Species Recovery

The ESA was largely a product of the environmental movement of the 1960s, which resulted in several major pieces of environmental legislation, including the ESA, National Environmental Policy Act (NEPA), the Clean Air Act, and the establishment of the EPA.[20] The environmental movement of the 1960s greatly increased public awareness of increasing species extinction, leading Congress to pass the Endangered Species Preservation Act in 1966, a precursor to the ESA.[21] The Endangered Species Preservation Act was weak in several respects,[22] so Congress passed the Endangered Species Conservation Act of 1969 to supplement it.[23] Even together, the 1966 and 1969 Acts left considerable blind spots in the conservation arena, leading

20. Adam Rome, "*Give Earth a Chance": The Environmental Movement and the Sixties*, 90 J. AM. HIST. 525, 551–52 (2003).

21. Shannon Petersen, Comment, *Congress and Charismatic Megafauna: A Legislative History of the Endangered Species Act*, 29 ENV'T L. 463, 471 (1999).

22. *Id.* at 471–72 (detailing that the 1966 legislation did not apply to "plants, subspecies, or population segments," and made interagency consultations voluntary rather than compulsory).

23. *Id.* at 472.

President Nixon to call for adopting even stronger endangered species legislation in 1972.[24] As a result, Congress passed the ESA in 1973.[25]

The ESA operates by authorizing the Secretary of the Interior to list a species as either "endangered" or "threatened" due to factors such as habitat destruction, commercial overutilization, disease, and more.[26] The ESA also requires the Secretary to designate any critical habitat for an endangered species at the time of listing.[27] The ESA contains three substantive provisions that provide for the conservation of endangered species: (1) the take prohibition, (2) the adverse modification prohibition, and (3) the jeopardy prohibition.[28] Once a species has been listed, the take prohibition prevents all parties from "tak[ing]" it,[29] which the ESA defines as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect."[30] The prohibitions against jeopardy and adverse modification come from section 7 of the ESA, which precludes federal agencies from taking actions that either jeopardize the species' continued existence, or that result in adverse modification of the species' critical habitat.[31]

Under the ESA, the Fish and Wildlife Service (FWS) administers terrestrial and freshwater species, while the National Marine Fisheries Service (NMFS) administers certain marine species.[32] The FWS is located within the DOI,[33] and the NMFS is located within the Department of Commerce (DOC) (collectively, "the Services").[34] The Secretary of the

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24. *Id.* at 473.

25. *Id.* at 473–74.

26. 16 U.S.C. § 1533(a)(1).

27. *Id.* § 1533(a)(3).

28. Owen, *supra* note 88, at 151–54; *see* 16 U.S.C. § 1538(a)(1); 16 U.S.C. § 1536(a)(2).

29. 16 U.S.C. § 1538(a)(1).

30. *Id.* § 1532(19); *see also* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 708 (upholding a regulation that defined "harm" within the ESA's take definition as "significant habitat modification or degradation that actually kills or injures wildlife").

31. 16 U.S.C. § 1536(a)(2). By itself, a critical habitat designation has no legal effect; it is only through the interaction with section 7's jeopardy and adverse modification prohibitions that critical habitat receives any legal protection. Owen, *supra* note 8, at 153.

32. CORN & WYATT, *supra* note 10, at 1.

33. *Interior Organizational Chart*, U.S. DEP'T OF THE INTERIOR, https://www.doi.gov/whoweare/orgchart [https://perma.cc/954Z-4U5Z].

34. *Organizational Structure*, U.S. DEP'T OF COM., https://www.commerce.gov/sites/default/files/2021-01/FY20-22DOCAPPROrgChart.pdf [https://perma.cc/GLE8-C7DX].

Interior (hereinafter "the Secretary") is responsible for listing species as endangered or threatened, and often does so in consultation with the FWS and public petitions.[35]

The stated purpose of the ESA is to provide for the conservation of endangered species and the ecosystems that support them.[36] Conservation is therefore the central focus of the ESA, which the Act defines as "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary."[37]

Judicial interpretations of the ESA's language have led to the generally accepted notion that the Act's conservation protections serve two interrelated purposes: species survival and species recovery.[38] The ESA treats the words "conservation" and "recovery" as synonymous, and these terms are frequently used interchangeably by courts and scholars alike.[39] The jeopardy prohibition is mainly designed to ensure a species' survival,[40] whereas critical habitat within the ESA is further reaching

35. CORN & WYATT, *supra* note 1010, at 8.

36. 16 U.S.C. § 1531(b).

37. *Id.* § 1532(3).

38. *See, e.g.*, Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv., 378 F.3d 1059, 1070 (9th Cir. 2004) (explaining that the ESA's critical habitat provisions promote the distinct goals of species "conservation" and survival); Sierra Club v. U.S. Fish & Wildlife Serv., 245 F.3d 434, 438 (5th Cir. 2001) ("[T]he objective of the ESA is to enable listed species not merely to survive, but to recover . . . ."); Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv., 441 F. Supp. 3d 843, 854–55 (D. Ariz. 2020) ("The purpose is not to simply maintain the status quo, but instead to recover or rebuild the species."); Kalyani Robbins, *Recovery of an Endangered Provision: Untangling and Reviving Critical Habitat Under the Endangered Species Act*, 58 BUFF. L. REV. 1095, 1103–04 (2010) (suggesting that Congress included distinct provisions within the ESA specifically designed to further either the survival goal or the recovery goal); *see also* 16 U.S.C. § 1533(f)(1) ("The Secretary shall develop and implement plans . . . for the conservation and survival of endangered species . . . .").

39. *See, e.g.*, Robbins, *supra* note 38, at 1097; PAMELA BALDWIN, CONG. RSCH. SERV., THE ROLE OF DESIGNATION OF CRITICAL HABITAT UNDER THE ENDANGERED SPECIES ACT (ESA) 2 (2004).

40. *See* 16 U.S.C. § 1536(a)(2) (requiring interagency consultation to ensure that proposed federal action "is not likely to jeopardize the continued existence of any endangered species"); Greenpeace v. Nat'l Marine Fisheries Serv., 55 F. Supp. 2d 1248, 1265 (W.D. Wash. 1999) (the jeopardy prohibition involves "the overall continued existence of a species"); Conservation Council for Haw. v. Babbitt, 2 F. Supp. 2d 1280, 1287 (D. Haw. 1998) (recognizing that while adverse modification and jeopardy overlap to some degree, jeopardy mainly focuses on considering "the effect of federal activity on the *existence*" of species); Robbins, *supra* note 38, at 1104 (affirming that jeopardy focuses on the continued existence of a species).

because it aims to promote both the survival and recovery of a species.[41] While the recovery and survival goals of critical habitat and jeopardy overlap to a certain degree,[42] agencies are required to administer the ESA in such a way that pursues both goals.[43]

Courts have historically struck down agency regulations that defeat the purpose of one of these goals in administering the ESA. For instance, in *Gifford Pinchot Task Force v. United States Fish and Wildlife Service*,[44] the Ninth Circuit examined a regulation defining "adverse modification" as:

> [A] direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival *and* recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.[45]

The court found that, when enacting the ESA, Congress intended survival and recovery to serve as distinct goals within the statute.[46] Congress designed the jeopardy prohibition primarily to promote species survival, and separately crafted the adverse modification and critical habitat protections to promote the broader goal of species recovery.[47]

The Ninth Circuit struck down agency biological opinions relying on this rule because the rule treated adverse modification and jeopardy as functionally equivalent.[48] In *Gifford*, the Services' failure to treat these

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41. *Gifford*, 378 F.3d at 1070; Ariz. Cattle Growers' Ass'n v. Salazar, 606 F.3d 1160, 1166 (9th Cir. 2010); *see also Sierra Club*, 245 F.3d at 438 (explaining that Congress included the critical habitat provisions specifically to achieve the objective of species recovery).

42. *Conservation Council for Haw.*, 2 F. Supp. 2d at 1287; *cf. Sierra Club*, 245 F.3d at 441 (interpreting the jeopardy standard to address "the effect of the [proposed federal] action itself on the survival and recovery of the species").

43. *See Gifford*, 378 F.3d at 1070 (explaining that the requirement is meant to promote both recovery and survival); *Sierra Club*, 245 F.3d at 441 (requiring two distinct standards); *see also* Bennett v. Spear, 520 U.S. 154, 173 (1997) (invoking the "cardinal principle of statutory construction . . . to give effect, if possible, to every clause and word of a statute").

44. 378 F.3d 1059 (9th Cir. 2004).

45. *Id.* at 1069 (emphasis added).

46. *Id.* at 1070.

47. *Id.*

48. *Id.* The ESA requires inter-agency consultation when the government proposes to take an action that may violate either the jeopardy or adverse modification provisions. 16 U.S.C. § 1536(a)(2). The consultation process culminates in the issuance

provisions as distinct was "blatantly[] contradictory to Congress'[s] express command."[49] A few years prior, in *Sierra Club v. United States Fish and Wildlife Service*,[50] the Fifth Circuit invalidated the same rule at issue in *Gifford*, reasoning that critical habitat serves a broader goal than just species survival and the Services' regulation failed to effectuate Congress's will.[51] Taken together, *Gifford* and *Sierra Club* conclude that the Services may not implement the ESA in such a way that treats its distinct provisions and goals as functionally equivalent.[52] These opinions also demonstrate Congress intended the ESA's critical habitat provisions to serve species recovery, not just species survival.[53]

B. Critical Habitat

The initial 1973 ESA prevented federal agencies from taking action that would modify the habitats of species determined by the Secretary to be "critical," but did not provide any mechanisms for designating critical habitats.[54] Congress amended the ESA in 1978 in response to the Supreme Court's first interpretation of the ESA in *Tennessee Valley Authority v. Hill* (hereinafter *TVA*).[55] In *TVA*, the Court enjoined the construction of the Tellico Dam because the snail darter, an endangered species, lived on a tiny portion of the Little Tennessee River that would have been "completely inundated by the reservoir created as a consequence of the Tellico Dam's completion."[56] The Court's decision to enjoin the construction of the Tellico Dam was especially noteworthy because, at the time of the decision, the government had spent over $110 million on the project,[57] which was approximately 75% done.[58] In its decision, the Court emphasized the strength of the ESA when it wrote

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of a biological opinion (BiOp), in which the Services evaluate the likelihood that the proposed action would violate either the adverse modification or jeopardy prohibitions. *Gifford*, 378 F.3d at 1063.

49. 378 F.3d at 1070.

50. 245 F.3d 434 (5th Cir. 2001).

51. *Id.* at 441–43.

52. Chuckie Sullivan, *Adverse Modification of the Endangered Species Act: Regulatory Impediment or Tool?*, 12 U. MASS. L. REV. 166, 175 (2017).

53. *See Gifford*, 378 F.3d at 1070; *Sierra Club*, 245 F.3d at 438.

54. Robbins, *supra* note 38, at 1118.

55. 437 U.S. 153 (1978); Isabella Kendrick, Comment, *Critical Habitat Designations Under the Endangered Species Act in an Era of Climate Crisis*, 121 COLUM. L. REV. 81, 88 (2020).

56. *TVA*, 437 U.S. at 161.

57. *Id.* at 200 n.6 (Powell, J., dissenting).

58. *Id.* at 197.

that "[t]he plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, *whatever the cost*."[59] The *TVA* decision sparked public outcry and evoked calls to amend the ESA by clarifying the critical habitat designation procedure.[60]

As amended post-*TVA*, the ESA *requires* the Secretary to designate "critical habitat,"[61] defined as:

> [T]he specific areas within the geographical area occupied by the species . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and specific areas outside the geographical area occupied by the species at the time it is listed . . . [that] are essential for the conservation of the species.[62]

The ESA thus distinguishes between occupied and unoccupied critical habitat.[63] The statutory language limits the Secretary's ability to designate *occupied* critical habitat to areas containing specific physical or biological features. The provision allows the Secretary to designate *unoccupied* critical habitat so long as it is essential to the species' conservation.[64] Therefore, Secretaries have historically designated unoccupied areas as critical habitat to assist in a species' recovery, despite the location's lack of all the essential features needed to sustain a species.[65] To appease those upset by the *TVA* decision, the 1978 amendments allowed the Secretary to engage in cost-benefit analyses when designating critical habitat, and to refrain from designating areas that would create undue economic burdens.[66] Despite the inclusion of the critical habitat cost-benefit analysis, the ESA requires the Secretary

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59. *Id.* at 184 (majority opinion) (emphasis added).
60. Salzman, *supra* note 6, at 317–18.
61. 16 U.S.C. § 1533(a)(3)(A).
62. *Id.* § 1532(5)(A).
63. *Id.*
64. *Id.* "Conservation" within the ESA is synonymous with "recovery." Robbins, *supra* note 38, at 1097.
65. *See, e.g.*, Determination of Critical Habitat for the Northern Spotted Owl, 57 Fed. Reg. 1,796, 1,797 (Jan. 15, 1992) (to be codified at 50 C.F.R. pt. 17) ("Critical habitat identifies specific areas essential to the conservation of a species. Areas not currently containing all of the essential features, but with the capability to do so in the future, may also be essential for the long-term recovery of the species, . . . and may be designated as critical habitat.").
66. Salzman, *supra* note 6, at 320; 16 U.S.C. § 1533(b)(4).

to designate any critical habitat that is essential to the survival of the species.[67]

The ESA requires the Secretary to designate critical habitat "on the basis of the best scientific data available."[68] In *Bennett v. Spear*,[69] the Supreme Court noted that the "obvious purpose" of the best available science standard is "to ensure that the ESA not be implemented haphazardly, on the basis of speculation or surmise."[70] The best available science standard prohibits agencies from disregarding available evidence that is better than the evidence it relies on.[71]

A benefit of the best available science standard is that it allows the Secretary to make meaningful conservation decisions in the face of scientific uncertainty. For example, in *Alaska Oil & Gas Ass'n v. Pritzker*,[72] the Services relied on climate projections to determine that the loss of sea ice would leave the bearded seal endangered by 2095.[73] The plaintiffs challenged the Services' decision to list the bearded seal as threatened because they alleged that the Services relied on speculative and volatile data.[74] The Ninth Circuit upheld the Services' listing decision because the data it relied on, although limited, were the best available scientific data.[75]

Similarly, in *Alaska Oil & Gas Ass'n v. Jewell*,[76] the Services designated three units of critical habitat for the polar bear: Unit 1 consisted of sea ice, Unit 2 consisted of terrestrial denning areas, and Unit 3 consisted of barrier island habitats.[77] The plaintiffs challenged the designation of Units 2 and 3, contending that these areas were unjustifiably large.[78] The

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67. *See* 16 U.S.C. § 1533(b)(2) (allowing the Secretary to "exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines . . . that the failure to designate such area as critical habitat will result in the extinction of the species concerned").

68. *Id.*

69. 520 U.S. 154 (1997).

70. *Id.* at 176.

71. San Luis & Delta-Mendota Water Auth. v. Locke, 776 F.3d 971, 995 (9th Cir. 2014) (citation omitted) (explaining that "[a]n agency complies with the best available science standard so long as it does not ignore available studies, even if it disagrees with or discredits them").

72. 840 F.3d 671 (9th Cir. 2016).

73. *Id.* at 674.

74. *Id.* at 675.

75. *Id.* at 684.

76. 815 F.3d 544 (9th Cir. 2016).

77. *Id.* at 552.

78. *Id.* at 550.

Services designated Units 2 and 3 upon a finding that they contain essential physical and biological features for polar bears to feed, den, rest, and migrate,[79] but the plaintiffs claimed that the Services failed to show specifically where within these areas polar bears were active.[80] The Services nevertheless demonstrated that it relied on the best available scientific data to determine that Units 2 and 3 were essential for the conservation of the polar bear, so the Ninth Circuit upheld the designations.[81]

Scientific research in conservation ecology shows that habitat is an extremely broad, dynamic concept.[82] At its core, habitat is "a basic requirement of all living organisms."[83] Habitat conditions may be temporally dynamic,[84] exacerbating challenges in protecting endangered species, which may exist in disparate, fragmented patches within a broader landscape.[85] While habitat loss poses an existential threat to species survival, habitat restoration efforts may benefit species by counteracting some of the negative effects of habitat loss.[86] Scientists serving as amici curiae in *Weyerhaeuser* distilled scientific research on the breadth of habitat into the following five factors: (1) habitat should be viewed at a landscape scale, (2) a habitat's quality can vary by

79. *Id.* at 552.

80. *See id.* at 560–61.

81. *Id.* at 562.

82. *See* Joshua J. Lawler, David D. Ackerly, Christine M. Albano, Mark G. Anderson, Solomon Z. Dobrowski, Jacquelyn L. Gill et al., *The Theory Behind, and the Challenges of, Conserving Nature's Stage in a Time of Rapid Change*, 29 CONSERVATION BIOLOGY 618, 623 (2015) (explaining that a species' habitat depends on abiotic factors, and that as climate change drives changes in abiotic factors, species' habitats will change at an increasing pace); *see also* NAT'L RSCH. COUNCIL, *supra* note 8, at 97 (suggesting that habitat should be viewed from a landscape scale, where a "landscape is a large area in which a certain array of ecosystem types is linked by natural disturbance regime, pattern of human land use and disturbance, and distribution of land forms"); T. Luke George & Steve Zack, *Spatial and Temporal Considerations in Restoring Habitat for Wildlife*, 9 RESTORATION ECOLOGY 272, 272 (2001) (noting that habitat continuously changes on both spatial and temporal scales).

83. NAT'L RSCH. COUNCIL, *supra* note 88, at 7.

84. George & Zack, *supra* note 82, at 272.

85. Eamon J. Harrity, Bryan S. Stevens & Courtney J. Conway, *Keeping Up With the Times: Mapping Range-Wide Habitat Suitability for Endangered Species in a Changing Environment*, BIOLOGICAL CONSERVATION, Oct. 2020, at 1, 1.

86. *See* Rebecca K. Tonietto & Daniel J. Larkin, *Habitat Restoration Benefits Wild Bees: A Meta-Analysis*, 55 J. APPLIED ECOLOGY 582, 588 (2018) (documenting the positive effects of habitat restoration on wild bee abundance and richness).

location and over time, (3) habitat can be unoccupied, (4) habitats may be restored, and (5) a species' habitat may be currently unknown.[87]

In practice, the ESA's critical habitat provision has unfortunately been undereffective.[88] As written, the critical habitat provision is an incredibly strong tool for conservation.[89] The critical habitat provision's strength gives it the potential to affect innumerable environmental issues, which frightens industries.[90] Perhaps unsurprisingly then, critical habitat's history is marked by the Services' desire to downplay the importance of critical habitat and avoid enforcing it wherever possible.[91] In a study published in 2012, Professor Dave Owen examined 4,048 biological opinions issued by the Services.[92] In these opinions, the Services only found jeopardy 7.2% of the time, and adverse modification was found only 6.7% of the time.[93] Remarkably, not a single one of these opinions found adverse modification without also finding jeopardy, suggesting the Services' reluctance to treat adverse modification as an independent provision.[94]

Critical habitat's unrealized place in the ESA is, in part, due to functional equivalence: the traditional notion propagated by the Services that the jeopardy and adverse modification provisions serve an identical purpose under the Act.[95] Functional equivalence weakens the ESA because the prohibition on adverse modification of critical habitat is designed to implement the ESA's recovery goal, whereas the

87. Brief of Amici Curiae Scientists in Support of Respondents, Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv. 16, 139 S. Ct. 361 (2018) (No. 17-71).

88. *See, e.g.*, Robbins, *supra* note 38, at 1107 (explaining the Services' disinterest in implementing the provision); Owen, *supra* note 8, at 166 (exploring the Services' reluctance to enforce adverse modification as an independent statutory provision); Sullivan, *supra* note 52, at 176 (noting that the Services routinely relied on economic considerations to decide against designating critical habitat in the 1980s and 1990s).

89. *See, e.g.*, Owen, *supra* note 8, at 142–43 (describing the potentials of the regulation as infinite); Salzman, *supra* note 6, at 312 (describing the provision as one of the strongest in the ESA); William H. Rogers, Jr., *Indian Tribes*, *in* 1 THE ENDANGERED SPECIES ACT AT THIRTY: RENEWING THE CONSERVATION PROMISE 161, 170 (Dale D. Goble et al. eds. 2005) (calling the critical habitat provision "the highest promontory in the boldest section of the strongest environmental law in the world").

90. Owen, *supra* note 8, at 143.

91. *See* Robbins, *supra* note 38, at 1106 (explaining that the FWS has explicitly expressed the view that critical habitat adds no independent protection within the ESA's scheme).

92. Owen, *supra* note 8, at 161.

93. *Id.* at 164.

94. *See id.* at 165–66.

95. Robbins, *supra* note 38, at 1106; *see also supra* notes 44–53 and accompanying text.

prohibition on jeopardizing a species is designed to implement the ESA's survival goal.[96]

Recognizing that habitat destruction poses a major threat of extinction to species,[97] Congress drafted the 1973 ESA to include a provision within section 7 prohibiting the government from taking an action that would adversely modify a species' habitat.[98] "Critical habitat" did not exist in the original ESA outside section 7,[99] but Congress amended the ESA in 1978 to include a more rigid framework after public outcry over the Court's decision in *TVA*.[100] The current statutory framework for critical habitat requires the Secretary to designate areas, both occupied and unoccupied, that are "essential for the conservation of the species."[101] The framework for designation is fundamentally scientific, as the ESA requires the Secretary to make these determinations "on the basis of the best scientific data available,"[102] but the Act allows the Secretary to consider the economic implications of designation as well.[103] In practice, critical habitat regulation's effectiveness has been crippled by the notion that the prohibition against the adverse modification of critical habitat serves no independent statutory function.[104] Courts have repeatedly recognized this as a derogation of the duties bestowed upon the Services by Congress.[105]

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96. *See* Robbins, *supra* note 38, at 1103–04. The jeopardy prohibition forbids the government from taking action that would jeopardize the continued existence of a species, 16 U.S.C. § 1536(a)(2), whereas the adverse modification provision forbids the government from adversely modifying a species' critical habitat. *Id.*

97. *See* Tenn. Valley Auth. v. Hill, 437 U.S. 153, 179 (1978) (explaining how Congress shaped the Endangered Species Act on a finding that the greatest threat to extinction is habitat destruction).

98. Salzman, *supra* note 6, at 315; 16 U.S.C. § 1536(a)(2) (prohibiting the federal government from undertaking an action that may "result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical").

99. Salzman, *supra* note 6, at 315.

100. *Id.* at 317–18.

101. 16 U.S.C. § 1532(5)(A).

102. *Id.* § 1533(b)(2).

103. *Id.*

104. *See* Owen, *supra* note 8, at 165–66 (finding that contrary to the plain language of the statute, the adverse modification prohibition usually does not have an independent effect).

105. *See supra* notes 38–53 and accompanying text.

C. Weyerhaeuser *and Subsequent Habitat Regulations*

The most recent Supreme Court ruling on the critical habitat came in 2018, when it decided *Weyerhaeuser Co. v. United States Fish & Wildlife Service*. In *Weyerhaeuser*, the plaintiffs were landowners in an area marked as unoccupied critical habitat for the dusky gopher frog.[106] The FWS designated a 1,544-acre site in Louisiana as unoccupied critical habitat for the dusky gopher frog because the site contained five ephemeral ponds, which the FWS identified as "essential to the conservation" of the frog because the species uses these sites to breed.[107] The dusky gopher frog requires open-canopy forests to survive,[108] and much of the area designated by the FWS was covered by a closed-canopy plantation.[109] The FWS nevertheless designated this area as unoccupied critical habitat because it found that the existing four zones of occupied critical habitat for the dusky gopher frog were insufficient to ensure the survival of the species.[110] The FWS further reasoned that the area qualified as critical habitat because it could be converted to an open canopy forest with reasonable effort.[111]

Consequently, the landowners sued the FWS, arguing that this area could not be designated as "critical habitat" because it was not "habitat" for the dusky gopher frog.[112] Citing to "the ordinary understanding of how adjectives work," the Supreme Court agreed with the plaintiffs and held that unoccupied critical habitat must also qualify as habitat.[113] The ESA does not define the term "habitat," and the Court notably did not suggest a definition in the *Weyerhaeuser* opinion.[114] Rather, the Court remanded the case to the Fifth Circuit for further consideration.[115] The Fifth Circuit remanded the case again to the Eastern District of Louisiana,[116] where the parties reached a settlement, effectively

106. 139 S. Ct. 361, 364 (2018). While critical habitat designations do not directly affect private landowners' property rights, private parties are nevertheless affected because the ESA's provisions would prevent the government from issuing permits that would affect critical habitat. *Id.* at 365–66.
107. *Id.* at 366.
108. *Id.* at 365.
109. *Id.* at 366.
110. *Id.*
111. *Id.*
112. *Id.* at 364.
113. *Id.* at 368–69.
114. *See id.* at 368.
115. *Id.* at 369.
116. Knighton, Jr., *supra* note 14, at 575.

precluding the District Court from ruling on the case's remaining issue—defining habitat.[117]

In the wake of *Weyerhaeuser*, the DOI published two rules in which it moved toward defining and regulating "habitat" under the ESA. On August 27, 2019, the DOI published a final rule concerning unoccupied critical habitat designations.[118] The 2019 rule imposed a new requirement that "the Secretary must determine that there is a *reasonable certainty* both that the area will contribute to the conservation of the species and that the area contains one or more of those physical or biological features essential to the conservation of the species."[119] The DOI further explained that "reasonable certainty" would not require the Secretary to be absolutely certain in the designations, but the standard nevertheless requires a "high degree of certainty."[120]

The DOI published its second habitat-related rule on December 16, 2020, where it provided a regulatory definition for "habitat."[121] The final rule defines "habitat" as "the abiotic and biotic setting that currently or periodically contains the resources and conditions necessary to support one or more life processes of a species," and specifically notes the definition is only relevant in the ESA for the purposes of designating critical habitat.[122] When read together, these two rules exemplify the DOI's attempt to introduce more rigidity to the critical habitat designation process in the Trump administration.

In June 2021, the Biden administration announced its intent to review and repeal Trump-era environmental regulations, including the habitat-related rules discussed above.[123] The Services proposed a rule in October 2021 that sought to strike the regulatory definition of "habitat" from the C.F.R., thus deregulating habitat designations in an attempt "to return to implementing the statute as [the Services] had done for decades prior to January 2021."[124] According to the proposed rule, *Weyerhaeuser* did not actually require the Services to adopt a regulatory

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117. *Id.* at 565 n.13.

118. Regulations for Listing Species and Designating Critical Habitat, 84 Fed. Reg. 45,020 (Aug. 27, 2019).

119. *Id.* at 45,021 (emphasis added).

120. *Id.* at 45,021–22.

121. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 85 Fed. Reg. 81,411, 81,412 (Dec. 16, 2020).

122. *Id.*

123. Trotter, *supra* note 18.

124. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 86 Fed. Reg. 59,353, 59,355 (Oct. 27, 2021) (to be codified at 50 C.F.R. pt. 424).

definition for "habitat." It merely remanded the case back down to the Fifth Circuit to consider whether the dusky gopher frog's specific designation qualified as habitat.[125] The Biden administration published the final rule in June 2022, which was substantively the same as the proposed rule.[126]

D. The Administrative Procedure Act (APA) and the Implementation of the ESA

Congress passed the APA[127] in 1946, intending for it to serve four main functions: (1) to specify rulemaking procedures, (2) to set limits on administrative powers, (3) to set forth the requirements for administrative hearings, and (4) to set forth a system of judicial review to redress any legal wrongs.[128] Of these four functions, the APA's role in establishing rulemaking procedures is the most pertinent to the implementation of the ESA.[129] The APA defines a "rule" as "an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy."[130] Furthermore, "rule making" is the "agency process for formulating, amending, or repealing a rule."[131] The current system for rulemaking in the United States can be traced back to *United States v. Florida East Coast Railway*,[132] in which the Supreme Court first allowed an agency to engage in informal rulemaking through notice-and-comment procedures.[133]

The APA provides that any person suffering a legal wrong due to an agency's action is "entitled to judicial review,"[134] and it requires judges

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125. *Id.*

126. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. 37,757, 35,757–79 (June 24, 2022) (to be codified at 50 C.F.R. pt. 424).

127. 5 U.S.C. §§ 551–559.

128. *Id.*; H.R. Rep. No. 79-1980, at 16–17 (1946).

129. *See* 16 U.S.C. § 1533(a) (requiring the Secretary to effectuate listing decisions and critical habitat designations through the promulgation of rules); Robert M. Simmons, *The Endangered Species Act of 1973*, 23 S.D. L. REV. 302, 304–05 (1978).

130. 5 U.S.C. § 551(4).

131. *Id.* § 551(5).

132. 410 U.S. 224 (1973).

133. *Id.* at 241–42 ("Here, the Commission promulgated a tentative draft of an order, and accorded all interested parties 60 days in which to file statements of position, submissions of evidence, and other relevant observations. The parties had fair notice of exactly what the Commission proposed to do . . . . [W]e think the hearing requirement of [the APA] was met.").

134. 5 U.S.C. § 702.

to "set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious . . . [or] in excess of statutory jurisdiction."[135] *Motor Vehicle Manufacturers Ass'n of the United States v. State Farm Mutual Automobile Insurance*[136] is a watershed decision in administrative law because it articulated the standard for courts to use when reviewing a rule under the "arbitrary and capricious" standard.[137] The *State Farm* Court noted that the arbitrary and capricious standard is inherently deferential in that a reviewing court should not merely substitute an agency's judgment with that of its own.[138] Nevertheless, the reviewing court should set aside as arbitrary and capricious any rule that (1) relies on factors that Congress did not intend the agency to consider, (2) fails to consider a part of the issue, (3) offers a conclusion that is not supported by evidence, or (4) is implausible.[139] Thus, congressional intent is the touchstone to *State Farm*'s first factor,[140] and courts strike down rules that rely on extraneous rationales when Congress "has specified the statutory factors" to be considered.[141] The Fifth Circuit struck down an EPA rule under this rationale in *Luminant Generation Co. v. EPA*.[142] The Clean Air Act (CAA) requires the EPA to work with states to develop state implementation plans to ensure compliance with the federal limits set on air pollution.[143] In creating its implementation plan for Texas, the EPA considered state law, whereas the CAA only requires state plan compliance with federal law.[144] The court therefore struck down the plan as arbitrary and capricious, relying on a reading of the CAA to find that Congress did not intend the EPA to consider state law when acting in this capacity.[145]

Courts use a variety of methods to determine what, exactly, Congress intended for an agency when it created a statute. Courts begin this process by first looking to the plain meaning of the statutory language—if the statute unambiguously answers the court's question, then the

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135. *Id.* § 706(2).
136. 463 U.S. 29 (1983).
137. JAMES T. O'REILLY, ADMINISTRATIVE RULEMAKING: STRUCTURING, OPPOSING, AND DEFENDING FEDERAL AGENCY REGULATIONS 585–86 (2021 ed.).
138. 463 U.S. at 43.
139. *Id.*
140. *Id.*
141. O'REILLY, *supra* note 137, at 591.
142. 675 F.3d 917, 925–26 (5th Cir. 2012).
143. *See id.* at 921.
144. *Id.* at 926.
145. *Id.*

inquiry ends there.[146] If, as is often the case, the plain meaning of the statute's language fails to provide a clear-cut answer, then courts examine additional evidence to determine Congressional intent, such as the statute's legislative history,[147] the statute's purpose,[148] and, perhaps most controversially, whether Congressional silence in particular situations demonstrates Congress's intent not to act on a specific issue.[149]

Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.[150] is a landmark case in agency rulemaking because it established a framework for analyzing judicial deference to agency interpretations.[151] In its opinion, the Supreme Court set forth a two-step test for determining when courts should defer to an agency's interpretation of a statute.[152] Step one is determining whether Congress has spoken to the precise question at issue.[153] If the court answers "yes" to this question, then Congress's interpretation is controlling and the inquiry ends there.[154] If Congress has not spoken to the question, then the court moves on to step two, in which it defers to the agency's interpretation if it is a reasonable interpretation of the statute at issue.[155] *Chevron*'s step one test has taken

146. BedRoc Ltd. v. United States, 541 U.S. 176, 183 (2004) (plurality opinion); O'REILLY, *supra* note 137, at 592.

147. Stephen Breyer, *On the Uses of Legislative History in Interpreting Statutes*, 65 S. CAL. L. REV. 845, 848 (1992).

148. *See, e.g.*, Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 691, 698 (1995) (upholding a DOI regulation defining "harm" under the ESA because the rule supported the ESA's broad purpose of protecting wildlife).

149. O'REILLY, *supra* note 137, at 831; *see also* FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 143–44 (2000) (determining that Congress did not intend to give the FDA the jurisdiction to regulate tobacco products because Congress enacted six statutes involving tobacco use without expressly conferring jurisdiction to the FDA); West Virginia v. EPA, Nos. 20–1530, 20–1531, 20–1778, and 20–1780, slip op. at 2, 20, 28, 31 (2022) (denying the EPA's authority to regulate coal plant emissions because Congress' directive for the EPA to implement the "best system of emission reduction" did not represent Congress' clear intent to allow the EPA to effectively restructure energy markets).

150. 467 U.S. 837 (1984).

151. *See* Cass R. Sunstein, Chevron *Step Zero*, 92 VA. L. REV. 187, 188–89 (2006) (stating that *Chevron* established a new approach to judicial review of agency action going so far as to create a "counter-*Marbury* for the administrative state").

152. *Chevron*, 467 U.S. at 842–43.

153. *Id.*

154. *Id.*

155. *Id.* at 843.

on a particular importance because administrative interpretations almost always clear the low "reasonableness" hurdle set by step two.[156]

These basic principles of administrative law are prevalent in implementing the ESA. For instance, the Supreme Court significantly expanded the ESA's protections in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*,[157] where it upheld a regulatory definition of the term "harm" to include adverse habitat modification.[158] The rule at issue in *Babbitt* defined "harm" as "an act which actually kills or injures wildlife . . . includ[ing] significant habitat modification or degradation . . . ."[159] The Court upheld this definition because the ordinary meaning of "harm" supported it, the regulation served the broad purpose of the ESA, and legislative history indicated that Congress intended the "take" provision to encompass both direct and indirect takings.[160] Thus, in administering the ESA, the Services are required to promulgate rules that reasonably effectuate the intent of Congress when it enacted the ESA.

II. ANALYSIS

The Supreme Court's *Weyerhaeuser* decision opened a jurisprudential can of worms in relation to what "habitat" is and how it operates under the ESA.[161] The opinion specifically left two questions open: (1) what is habitat; and (2) can it include areas that require restoration in order to independently sustain a species population?[162] The Trump administration responded by adopting rules that aimed to implement a sense of rigidity to the critical habitat designation process.[163] While the Biden administration has already repealed one of the post-*Weyerhaeuser* habitat rules,[164] the policy debate on habitat is just

156. *See* Sunstein, *supra* note 151, at 195 (claiming that agencies are subject "only" to reasonableness limitations when resolving statutory ambiguities).

157. 515 U.S. 687 (1995).

158. *Id.* at 691, 698, 708.

159. *Id.* at 691.

160. *Id.* at 697–700.

161. *See* Knighton Jr., *supra* note 14, at 563 (explaining the various questions that have arisen due to the *Weyerhaeuser* decision).

162. These questions in the context of the *Weyerhaeuser* case are discussed below. *See infra* Part II(B).

163. *See supra* notes 118–122 and accompanying text.

164. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. 37,757, 37,757 (June 24, 2022) (to be codified at 50 C.F.R. pt. 424).

beginning because the new rules will almost certainly generate litigation.[165]

This Section will compare the regulatory approaches of the DOI under both the Biden and Trump administrations, concluding that the Biden administration's decision to leave habitat undefined more closely effectuates Congress's intent that the ESA promote species survival and recovery. Although the Biden administration is currently addressing the "habitat" rule, it must take further action to repeal the "reasonable certainty" rule, as it is inconsistent with Congress's express commands within the ESA. Finally, this Section argues that although the recent proposed habitat deregulation is a step in the right direction, the Services' approach vests too much discretion in the Secretary, and that it can fix this issue by proposing a new definition of "habitat" specifying that it can include areas in need of restoration.

A. The Trump Administration's Attempts to Impose Rigid Habitat Regulations are Arbitrary, Capricious, and Inconsistent With the Purposes of the ESA

During the Trump administration, the DOI responded to *Weyerhaeuser* by implementing habitat rules that either (1) introduce certainty-based requirements on critical habitat designation[166] or (2) attempt to actually define "habitat" within the ESA.[167] Substantively, each of the Trump administration's rules are flawed because they are not consistent with Congress's intention that the ESA be used to promote species conservation, "whatever the cost."[168]

1. Certainty-Based Requirements

The 2019 rule requires the Secretary to make unoccupied critical habitat designations on a finding of "reasonable certainty" that the area is essential for the conservation of the species.[169] The rule specifies that

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165. *See* Knighton Jr., *supra* note 14, at 581–82.

166. *See, e.g.*, 50 C.F.R. § 424.12(b)(2) (2020) (requiring "reasonable certainty" that unoccupied areas are essential to species conservation and contain necessary biological features as a prerequisite for designation as critical habitat).

167. *See, e.g.*, Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 85 Fed. Reg. 81,411, 81,412 (Dec. 16, 2020) (to be codified at 50 C.F.R. pt. 424) (defining "habitat" for purposes of critical habitat designation).

168. *See* Tenn. Valley Auth. v. Hill, 437 U.S. 153, 184 (1978).

169. 50 C.F.R § 424.12(b)(2) (2020)

while "reasonable certainty" does not require *absolute* certainty, the rule requires the Secretary to have "high confidence that an area designated as unoccupied critical habitat will actually contribute to the conservation of the species."[170]

The 2019 reasonable certainty standard requires the Secretary to operate beyond the bounds of administrative discretion because the standard fails the *Chevron* test. Step one of the *Chevron* test is to consider whether Congress has spoken to the question at issue.[171] The specific question at issue here is whether Congress has indicated any standards the Secretary must consider when designating unoccupied critical habitat. A plain reading of the ESA shows that Congress answered this question when it implemented the statutory requirement that the Secretary make all critical habitat designations in accordance with the best available scientific data.[172] The best scientific data regarding habitat may be uncertain,[173] and so the Services must not operate in any way that attaches a certainty-based requirement to the Secretary's ability to designate areas as critical habitat. Congress has spoken to the precise question at issue,[174] and so the "reasonable certainty" requirement is not entitled to judicial deference because it contradicts Congress's intent.

The DOI justified the reasonably certain standard by arguing that "Congress intended that a higher standard apply to the designation of unoccupied critical habitat than to the designation of occupied critical habitat."[175] To support this interpretation of Congressional intent, the DOI relies on Senate Report No. 95–874, which states that "lands needed for population expansion" should not be given the same status as "critical habitats."[176] Again, a plain reading of the ESA demonstrates that there is simply no room for this interpretation within the text of the statute. Although the term "unoccupied critical habitat" does not actually appear within the ESA, the ESA explicitly defines "critical

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170. Regulations for Listing Species and Designating Critical Habitat, 84 Fed. Reg. at 45,021–22.

171. Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–43 (1984).

172. 16 U.S.C. § 1533(b)(2) ("The Secretary shall designate critical habitat . . . on the basis of the best scientific data available . . . .").

173. *See* Alaska Oil & Gas Ass'n v. Pritzker, 840 F.3d 671, 680 (9th Cir. 2016) (describing the inherent volatility of long-term climate predictions).

174. *Supra* note 172 and accompanying text.

175. Regulations for Listing Species and Designating Critical Habitat, 84 Fed. Reg. at 45,022.

176. *Id.* (citing S. REP. NO. 95–874 at 10 (1978)).

habitat" to include areas inside and outside the geographical area occupied by a species.[177] Congress's decision to define "critical habitat" as both areas within and without the geographic area occupied by the species indicates its intent to treat both occupied critical habitat and unoccupied critical habitat similarly.

Thus, when the ESA requires the Secretary to designate critical habitat "on the basis of the best scientific data available,"[178] this standard applies equally to occupied and unoccupied critical habitat designations. Congress spoke to the proper standard of critical habitat designation when it required the Secretary to make all critical habitat designations, both occupied and unoccupied, on the basis of the best available science.[179] Imposing differential certainty-based requirements on certain types of habitat designations is thus an ineffective method of molding the ESA to fit with *Weyerhaeuser*'s requirement that "'critical habitat' must [also] be 'habitat.'"[180]

Previous cases show that the ESA's recovery goal is best served by allowing the Secretary to designate critical habitat in the face of scientific uncertainty.[181] In *Alaska Oil & Gas Ass'n v. Jewell*, the FWS set aside as unoccupied critical habitat an area for polar bears, even though it could not point to specific instances of polar bear activity within the designated area.[182] The Ninth Circuit upheld the FWS's designation because the FWS relied on the best available science, which was unable to unequivocally establish polar bear activity in the region.[183] This designation presumably would have failed under the 2019 reasonable certainty requirement, despite the court's holding that the FWS properly relied on the best available scientific data.[184] Similarly, the court in *Alaska Oil & Gas Ass'n v. Pritzker* upheld the NMFS' reliance on speculative and volatile climate data because they were the best available scientific data.[185] A certainty-based standard presumably would have compelled the court to strike down the NMFS' decision to

177. 16 U.S.C. § 1532(5)(A).
178. *Id.* § 1533(b)(2).
179. *Id.*
180. *See* Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 368 (2018).
181. Courts have frequently recognized that "the ESA accepts agency decisions in the face of uncertainty." Def. of Wildlife v. Zinke, 856 F.3d 1248, 1257 (9th Cir. 2017); Ariz. Cattle Growers' Ass'n v. Salazar, 606 F.3d 1160, 1164 (9th Cir. 2010); Def. of Wildlife v. Jewell, No. CV 14–1656–MWF (RZx), 2014 WL 1364452 (C.D. Cal. 2014).
182. Alaska Oil & Gas Ass'n v. Jewell, 815 F.3d 544, 560–61 (9th Cir. 2016).
183. *Id.* at 558, 562.
184. *See id.* at 562.
185. 840 F.3d 671, 684–85 (9th Cir. 2016).

designate certain area as critical habitat, despite the agency's reasoned judgment that such a designation was necessary to protect the bearded seal against climate-induced habitat loss.[186]

The best available science is frequently characterized by uncertainty due to the complexity of ecological processes,[187] and expert knowledge is frequently necessary to guide the conservation process with respect to data-deficient species.[188] The best available scientific data are often uncertain, and the ESA does not require the Secretary to rely on a greater degree of scientific data than is currently possible.[189] Given that the ESA requires the government to pursue the conservation of endangered species "whatever the cost,"[190] courts recognize that "a narrow construction of critical habitat runs directly counter to the Act's conservation purposes."[191]

The worsening impact of climate change on ecosystems across the nation significantly complicates the task of designating any critical habitat to a degree of certainty.[192] Climate change is rapidly altering the inner mechanisms of ecosystems, causing species to increasingly seek new areas to accommodate their needs.[193] Climate migration is a ubiquitous phenomenon affecting both people and animals—thus, humans increasingly migrate to new areas as resources and land become scarcer.[194] Similarly, as the climate continues to change, science indicates that species' habitats will shift as species seek out suitable

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186. *See id.* at 683 (holding that the uncertainty of the speed and magnitude of the decreasing sea ice does not invalidate data that supports the conclusion that habitat loss at key life stages will likely jeopardize the bearded seal).

187. *See supra* note 82 and accompanying text (explaining that the intricacies of habitat science suggest that habitat is best understood at a broad, landscape scale).

188. Daniel B. Fitzgerald, David R. Smith, David C. Culver, Daniel Feller, Daniel W. Fong, Jeff Hajenga et al., *Using Expert Knowledge to Support Endangered Species Act Decision-Making for Data-Deficient Species*, 35 CONSERVATION BIOLOGY 1627, 1628 (2021).

189. *Jewell*, 815 F.3d at 555; 16 U.S.C. § 1533.

190. Tenn. Valley Auth. v. Hill, 437 U.S. 153, 184 (1978).

191. *See Jewell*, 815 F.3d at 555.

192. *See* CONG. RSCH. SERV., THE ENDANGERED SPECIES ACT AND CLIMATE CHANGE: SELECTED LEGAL ISSUES 10 (2019); *see also* Alaska Oil & Gas Ass'n v. Pritzker, 840 F.3d 671, 675 (9th Cir. 2016) (suggesting that the impending crises threatened by climate change force the Services to rely on scientific data that are volatile); Lawler et al., *supra* note 82, at 623 (explaining that habitat changes will increasingly accelerate as climate change's impact becomes more pronounced).

193. Joshua J. Lawler, *Anticipating Climate-Driven Movement Routes, in* BIODIVERSITY AND CLIMATE CHANGE 183, 183 (Thomas E. Lovejoy & Lee Hannah eds., 2019).

194. Abrahm Lustgarten, *The Great Climate Migration*, N.Y. TIMES MAG., https://www.nytimes.com/interactive/2020/07/23/magazine/climate-migration.html [https://perma.cc/CX2K-3JAT].

climates.[195] On a global scale, climate migration generally involves migration toward colder climates, but species' behavior on regional levels is often much more complex.[196] Climate change also yields an increasing number of habitat disturbances such as fires, drought, and floods, meaning that species will continue to migrate as climate change disrupts the adequacy of their existing habitat.[197] Any certainty-based habitat requirements will therefore become increasingly impractical as species' habitats continue to shift in complex ways.

The certainty-based standard implemented by the Services' 2019 rule is arbitrary and capricious because it requires the Secretary to consider a legal standard while designating critical habitat, whereas the ESA expressly commands the Secretary to use a science-based standard when designating critical habitat.[198] Agency rules that rely on factors that Congress did not intend the agency to consider are inherently arbitrary and capricious.[199] Therefore, the "reasonably certain" standard cannot stand because it requires the Secretary to operate in a fashion not contemplated by the ESA.

Under Biden, the Services finalized a rule to repeal the regulatory definition for "habitat,"[200] but the Services have not yet taken any action to repeal the implementation of the reasonably certain requirement. For our federal environmental regulatory system to comply with the ESA, either the Services must act to repeal this rule, or a reviewing court must set it aside.

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195. Lawler, *supra* note 193, at 183.

196. Camille Parmesan, *Range and Abundance Changes, in* BIODIVERSITY AND CLIMATE CHANGE 25, 26 (Thomas E. Lovejoy & Lee Hannah eds., 2019).

197. Thomas T. Moore, *Climate Change and Animal Migration*, 41 ENV'T L. 393, 398–99 (2011); *see also* Michael Berlemann & Max Friedrich Steinhardt, *Climate Change, Natural Disasters, and Migration—A Survey of the Empirical Evidence*, 63 CESIFO ECON. STUD. 353, 359 (2017) (framing migration as an adaptation strategy to help species survive increasing rates of natural disasters).

198. *Compare* 50 C.F.R. § 424.12(b)(2) (2020) (requiring the Secretary to only designate an area as critical habitat when she is reasonably certain that the area is essential for the conservation of the species), *with* 16 U.S.C. § 1533(b)(2) (requiring the Secretary to designate critical habitat on the basis of the best available scientific data).

199. Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

200. Regulations for Listing Endangered and Threatened Species and Critical Habitat, 87 Fed. Reg. 37,757, 37,757–58 (June 24, 2022) (to be codified at 50 C.F.R. pt. 424).

2. "Habitat" Definitions

Although the DOI's 2020 definition of "habitat" has been repealed,[201] any new habitat regulations must be sufficiently broad to comply with *Weyerhaeuser*'s holding. A comparison between the Trump administration's regulatory definition of "habitat" and the statutory definition of "critical habitat" shows that the recently repealed regulation was too narrow to comply with *Weyerhaeuser*. The repealed rule defined "habitat" as "the abiotic and biotic setting that currently or periodically contains the resources and conditions necessary to support one or more life processes of a species,"[202] whereas the ESA defines "critical habitat" as

> [A]reas within the geographical area occupied by the species . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed . . . [that] are essential for the conservation of the species.[203]

There is considerable overlap between these definitions, and understandably so, considering that the latter is a subset of the former. *Weyerhaeuser* surmised that "critical habitat" is distinct from "habitat" because critical habitat "identifies only certain areas that are indispensable to the conservation of the endangered species."[204] The Supreme Court's reasoning therefore suggests that unlike critical habitat, a proper statutory definition of "habitat" would describe areas that are not indispensable for the survival of the species. Yet, the DOI's 2020 definition defined "habitat" as areas containing elements "necessary to support one or more life processes of a species."[205]

This definition's reliance on the conditions necessary to support a species' life process is too similar to the statutory definition of critical habitat. The 2020 definition elaborated that "life processes" include functions "such as movement, respiration, growth, reproduction, excretion, and nutrition—that are essential to sustain a living being."[206] Endangered species are listed because they are at risk of becoming

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201. *See id.*

202. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 85 Fed. Reg. 81,411, 81,412 (Dec. 16, 2020).

203. 16 U.S.C. § 1532(5)(A).

204. Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 368–69 (2018).

205. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 85 Fed. Reg. at 81,412 (to be codified at 50 C.F.R. pt. 424).

206. *Id.*

extinct;[207] therefore, when a species is listed under the ESA, any areas necessary to support the species' life processes are inherently essential to the species' conservation. No species would be able to survive without life functions, suggesting that the only difference between "habitat" and "critical habitat" is the Secretary's designation that such areas are essential. The 2020 definition apparently satisfies *Weyerhaeuser*'s requirement that "'critical habitat' must also be 'habitat,'"[208] but the main issue is that there is little functional difference between the two definitions. After *Weyerhaeuser*, critical habitat must be a subset of habitat. Logic requires that "habitat" be defined in broader terms than "critical habitat." The regulatory definition fails to do this, instead choosing a different set of words that ultimately amounts to the same substantive definition for critical habitat provided by Congress in the text of the ESA itself. "Habitat" is a word of "many, too many, meanings,"[209] and so it is unlikely that Congress would have included the word undefined into the ESA amendments of 1978 if it intended the word to take on a restrictive meaning.[210] Furthermore, the word "habitat" is used inconsistently throughout the text of the ESA,[211] implying that Congress intended habitat to function in a broad, dynamic way. That is, of course, if Congress intended habitat to have a distinctive function in the ESA at all.

While the Biden administration has struck this definition from the C.F.R. completely,[212] this Comment later argues that the Services must codify their reasoning by replacing the language in the C.F.R. with an updated definition.[213] The Biden administration must not perpetuate the same failures of the Trump administration. If "habitat" is to be defined, it must be defined as being (1) broader than the statutory

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207. 16 U.S.C. § 1533(a)(1).

208. *Weyerhaeuser*, 139 S. Ct. at 368.

209. Brief for Intervenor-Respondents at 44, Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361 (2018) (No. 17-71) (quoting Steel Co. v. Citizens for a Better Env't, 523 U.S. 83, 90 (1998)).

210. *Id.*

211. *Id.* at 44–45 (noting that the ESA includes references to habitat that may be construed as defining habitat both as (1) present areas currently needed for the survival of the species, and (2) currently uninhabitable areas whose restoration is important for the conservation of the species).

212. Regulations for Listing Endangered and Threatened Species and Critical Habitat, 87 Fed. Reg. 37,757, 37,757 (June 24, 2022) (to be codified at 50 C.F.R. pt. 424).

213. *Infra* Part II(C).

definition of "critical habitat"[214] and (2) in accordance with the best available science.[215]

*B. Any Post-*Weyerhaeuser *Habitat Regulations Must Further Critical Habitat's Recovery-based Objective by Allowing the Secretary to Designate Areas in Need of Some Modification as Critical Habitat*

Congress specifically designed the ESA to serve the two related goals of species survival and species recovery.[216] One of the foundational notions of administrative law is that agencies must implement statutes in ways that comply with Congress's intent.[217] Congress intended the ESA to serve the two distinct goals of species survival and species recovery,[218] and critical habitat within the ESA specifically aims to promote species recovery.[219] Courts have struck down prior rules that treated critical habitat protections as only promoting species survival,[220] so any future directions in defining and regulating "habitat" must support the provision's broader recovery-based objective.

Examining "habitat" as it functioned in the context of the *Weyerhaeuser* litigation shows that much of the current policy debate revolves around whether habitat under the ESA can include areas that are inhospitable to an endangered species at the time of designation, absent some sort of government-led restoration effort. In the Fifth Circuit, the court framed *Weyerhaeuser*'s issue as determining whether the Secretary is entitled to deference in his definition of "essential" when designating unoccupied critical habitat.[221] Whether "critical habitat"

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214. *See* Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 368 (2018) (noting that "'critical habitat' is a subset of 'habitat'").

215. *See* 16 U.S.C. § 1533(b)(2).

216. *See supra* Part I(A).

217. *See* Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–43 (1984) (holding that agency rules are not entitled to judicial deference where Congress's intent on the issue is clear); Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins., 463 U.S. 29, 43 (1983) (explaining that rules that rely on information that Congress did not intend the agency to consider are inherently arbitrary and capricious).

218. *See supra* note 38 and accompanying text.

219. *See supra* note 41 and accompanying text.

220. *See, e.g.*, Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv., 378 F.3d 1059, 1070 (9th Cir. 2004) (setting aside agency regulations that relied on the notion that adverse modification of critical habitat only occurs when a species' survival is threatened); Sierra Club v. U.S. Fish & Wildlife Serv., 245 F.3d 434, 441–43 (5th Cir. 2001) (invalidating a rule defining "adverse modification" and "jeopardy" in a way that gives no independent significance to the recovery-based goal of critical habitat).

221. Markle Ints. v. U.S. Fish & Wildlife Serv., 827 F.3d 452, 467–68 (5th Cir. 2016), *vacated sub nom*. Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361 (2018).

must also be "habitat" was a minor issue for the court in resolving this question.[222] The Fifth Circuit reasoned that, because the ESA explicitly allows the designation of both occupied and unoccupied critical habitat, the statute's plain text imposes no habitability requirement.[223]

While neither the Supreme Court nor the Fifth Circuit opinion attempts to define "habitat," its meaning within the context of the litigation is fairly apparent. The thrust of the petitioners' argument was that the FWS designated an area as critical habitat for the gopher frog that could not independently support a population of the species without modification.[224] The petitioners argued that the Secretary's designation of unoccupied critical habitat for the frogs was unreasonable because the frogs could not survive within this area without some modification.[225] Thus, the petitioners relied on the ordinary meaning of the word "habitat" in their argument. Merriam-Webster defines "habitat" as "the place or environment where a plant or animal naturally or normally lives and grows," or, alternatively, as "the place where something is commonly found."[226]

However, a reliance on the ordinary meaning of "habitat" within the ESA is misplaced because it does not fit within the general context and scheme of the Act. Under the petitioners' offered definition, there could be no unoccupied critical habitat because occupancy is central to its definition, and the specific area at issue could not fit this definition of critical habitat without some modification.[227] On the other hand, the respondents argued that the Secretary was entitled to judicial deference in this case because the designated area could sustain a population of

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222. *Id.* at 468 (quickly dismissing the plaintiffs' argument that critical habitat has a habitability requirement because there is simply "no habitability requirement in the text of the ESA").

223. *Id.*

224. Brief for Petitioner at 27–29, Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361 (2018) (No. 17-71).

225. *See id.* at 23 (stating that, because the ESA did not define habitat, the petitioners used the ordinary meaning).

226. *Habitat*, MERRIAM-WEBSTER, https://www.merriam-webster.com/dictionary/habitat [https://perma.cc/556F-RGA5]. To support their argument, petitioners used Merriam-Webster's 1976 definition of "habitat," which it defined as "the place where a plant or animal species naturally lives and grows," or "the kind of site or region with respect to physical features . . . naturally or normally preferred by a biological species." Brief for Petitioner, *supra* note 224, at 23.

227. *See* Brief for Petitioner, *supra* note 224, at 23 (using the ordinary meaning of habitat); *see also id.* at 28–29 (discussing how, to be a habitat, the area in question would require modifications making it livable for the species).

the species and was essential to the conservation of the species.[228] Thus, the real question in *Weyerhaeuser* was not whether critical habitat must also be habitat, but rather whether the designation of unoccupied critical habitat is reasonable when the designated area requires reasonable modification to independently sustain a population of the species.[229]

Although the inclusion of a "reasonable modification" provision is not consistent with the ordinary meaning of "habitat," a plain reading of the ESA strongly indicates that Congress does not intend the definition "habitat" to coincide with its ordinary meaning. The ordinary meaning of habitat, advanced by the petitioners in *Weyerhaeuser*, is contingent upon a species' presence within an area.[230] Yet, the ESA's definition for "critical habitat" explicitly provides for the existence of unoccupied habitat.[231] Unlike occupied habitat, the ESA imposes no requirement that unoccupied habitat include specific biological features essential to a species' recovery.[232] Unoccupied habitat is therefore at odds with the layperson's understanding of habitat, which requires a species' presence in an area.[233] For example, in oral arguments for *Weyerhaeuser*, Justice Kagan noted:

> We know that habitat doesn't mean just where a species lives. I mean, that's . . . the common understanding of the word "habitat," but this statute clearly goes beyond that, and we know because it says . . . there are also habitats that are outside the geographical area occupied by the species.[234]

Congress designed the ESA to effectuate its dual purposes of survival and recovery, and the Services are required to implement these dual

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228. Brief for the Federal Respondents at 31, 34, 36, Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361 (2018) (No. 17–71).

229. *See* Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 86 Fed. Reg. 59,353, 59,355 (Oct. 27, 2021) (to be codified at 50 C.F.R. pt. 424) (explaining that *Weyerhaeuser*'s remand did not require the creation of a regulatory definition for "habitat," but it instead required a determination of whether the specific area disputed in the case qualified as habitat despite the dusky gopher frog's inability to inhabit the area without reasonable modification).

230. Brief for Petitioner, *supra* note 224, at 23; *Habitat*, *supra* note 226.

231. 16 U.S.C. § 1532(5)(A)(ii).

232. *Id.*

233. *Habitat*, *supra* note 226.

234. Oral Argument at 4:01, Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S.Ct. 361 (2018) (No. 17-71), https://www.oyez.org/cases/2018/17-71 [https://perma.cc/NC49-93DL].

purposes in the administration of the statute.[235] The legislative history of the 1978 ESA amendments indicate that Congress intended the ESA's critical habitat framework to be far more flexible and powerful than it currently is.[236] Habitat loss is the main threat faced by endangered species,[237] and logically, a species listed as endangered under the ESA cannot recover unless some modifications and protections are given to the habitat in which it became endangered. Habitat is integral to a species' wellbeing,[238] and the very nature of extending government protection to endangered species suggests that listed species cannot continue to survive in its habitat *unless something changes*. Thus, to effectuate critical habitat's "recovery" goal, it makes sense to define "habitat" as areas that are not currently habitable but may become habitable with reasonable modification to the area. Justice Kagan later noted in the *Weyerhaeuser* argument:

> [A]ll over the place [in the ESA] you get these references to the fact that habitat isn't just sort of there and perfect always, that habitat requires things to be done to it . . . . [S]o all through the statute there's this idea that . . . there is habitat that needs to be maintained, improved, and so forth in order to fulfill the function of preserving a species.[239]

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235. *See supra* Part II(A); *see also* Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv., 378 F.3d 1059, 1070 (9th Cir. 2004) ("[I]t is clear that Congress intended that conservation and survival be two different . . . goals of the ESA . . . Clearly then, the purpose of establishing 'critical habitat' is for the government to carve out territory that is not only necessary for the species' survival but also essential for the species recovery.").

236. *Compare* H.R. REP. NO. 95–1625, at 17 (1978) ("The committee intends that in most situations the Secretary will, in fact, designate critical habitat at the same time that a species is listed . . . It is only in rare circumstances where the specification of critical habitat . . . would not be beneficial to the species."), *and* H.R. REP. NO. 94–887, at 3 (1976) ("[T]he ultimate effectiveness of the Endangered Species Act will depend on the designation of critical habitats."), *with* ENV'T CONSERVATION ONLINE SYS., *FWS-Listed U.S. Species by Taxonomic Group*, U.S. FISH & WILDLIFE SERV., https://ecos.fws.gov/ecp/report/species-listings-by-tax-group-totals [https://perma.cc/JYP5-K77N] (there are currently more than 1,600 species listed under the FWS' jurisdiction), *and* ENV'T CONSERVATION ONLINE SYS., *USFWS Threatened & Endangered Species Active Critical Habitat Report*, U.S. FISH & WILDLIFE SERV., https://ecos.fws.gov/ecp/report/critical-habitat [https://perma.cc/66TR-HTS8] (the FWS has only designated critical habitat for 812 listed species).

237. Jason C. Rylander, Megan Evansen, Jennifer R.B. Miller, & Jacob Malcom, *Defining Habitat to Promote Conservation Under the ESA*, 50 ENV'T L. REP. 10,531, 10,532 (2020).

238. NAT'L RSCH. COUNCIL, *supra* note 8, at 7.

239. Oral Argument at 9:12, Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv.,

Scientific data corroborate that habitat restoration is consistent with the promotion of species recovery.[240] Clearly then, a recovery-based notion of habitat cannot exclude areas that are suitable to sustain a species population through some reasonable modification effort.

Lessons from the field of conservation ecology strongly suggest that the ESA's purpose is best served by defining "habitat" as broadly as the ESA may permit. The amicus brief submitted by conservation scientists in *Weyerhaeuser* offers the following considerations for defining habitat: (1) habitat must be viewed at a landscape scale, (2) habitat suitability varies considerably over time and by location, (3) habitat need not be currently occupied, (4) habitat may be restorable, and (5) habitat may be currently unrecognized.[241] An examination of these considerations strongly points to the conclusion that defining "habitat" as broadly as the statute may permit is the best course of action to promote the core purpose of the ESA— the conservation of endangered species.

Habitat should be viewed at a landscape scale, which highlights the context-specific nature of habitat needs and the spatial variability of habitat boundaries.[242] Such a construction supports the unoccupied critical habitat designation of the polar bear at issue in *Alaska Oil v. Jewell*, in which the FWS designated certain areas as critical habitat that contained certain features vital to polar bear conservation despite the lack of concrete evidence of polar bear activity in the area.[243] Scientists support a landscape view of habitat because it "provides the flexibility necessary to respond to the dynamic characteristics of nature."[244] The ESA already provides a comprehensive system for identifying and designating critical habitat,[245] and defining "habitat" not to include potentially restorable areas would undercut the Secretary's ability to

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139 S. Ct. 361 (2018) (No. 17-71), https://www.oyez.org/cases/2018/17-71 [https://perma.cc/J6CM-NZ9T].

240. *See* Tonietto & Larkin, *supra* note 86, at 588; *see also* William D. Newmark, Clinton N. Jenkins, Stuart L. Pimm, Phoebe B. Mcneally, & John M. Halley, *Targeted Habitat Restoration Can Reduce Extinction Rates in Fragmented Forests*, 114 PROC. NAT'L ACAD. SCI. 9635, 9635 (2017) (confirming that "[h]abitat restoration results in an increase in population size—and therefore, viability—because of an expansion in available habitat.").

241. Brief of Amici Curiae Scientists in Support of Respondents, *supra* note 87, at 15–20.

242. NAT'L RSCH. COUNCIL, *supra* note 8, at 97.

243. Alaska Oil & Gas Ass'n v. Jewell, 815 F.3d 544, 560–61 (9th Cir. 2016).

244. Brief of Amici Curiae Scientists in Support of Respondents, *supra* note 87, at 17.

245. *See* 16 U.S.C. § 1533(b)(2).

make habitat designations in accordance with the dynamic characteristics of nature.

Like the landscape principle, the notion that habitats vary by location and time stands for the principle that habitat cannot scientifically be defined as a geographic boundary at a specific point in time.[246] The ESA already requires the Secretary to designate critical habitat at a singular point in time,[247] but *Weyerhaeuser*'s requirement that critical habitat also qualify as habitat would necessarily require the Secretary to determine at the point of designation that the geographical boundaries of the critical habitat designation also qualify as habitat, which is incompatible with this scientific principle. Since the ESA requires the Secretary to designate critical habitat "on the basis of the best scientific data available,"[248] the spatiotemporal variability of habitat requires the Secretary to designate critical habitat broadly.

The Biden administration's finalized rule remedies many of these problems by opting to leave "habitat" undefined under the ESA.[249] Science shows that habitat is dynamic and continuously changing,[250] and leaving "habitat" undefined better serves the purposes of the ESA than the Trump-era definitions by giving the Secretary the flexibility to designate critical habitat as broadly as the Secretary sees fit. The new rule also attempts to answer the substantive question left by *Weyerhaeuser* by suggesting that its approach allows the Secretary to designate areas in need of restoration as critical habitat.[251] The newest proposed habitat rule better serves Congress's intent that critical habitat be used to further species recovery by giving the Secretary the flexibility to designate critical habitat to serve this purpose.

C. The Best Way to Serve Critical Habitat's Recovery-based Goal Is to Codify Language Specifying that "Habitat" Includes Areas that Can Be

246. Harrity et al., *supra* note 85; George & Zack, *supra* note 82, at 272; Brief of Amici Curiae Scientists in Support of Respondents, *supra* note 87, at 26.

247. 16 U.S.C. § 1533(a)(3)(A).

248. § 1533(b)(2).

249. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. 37,757, 37,757–58 (June 24, 2022) (to be codified at 50 C.F.R. pt. 424).

250. *See supra* note 241 and accompanying text.

251. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. 37,757, 37,758 (June 24, 2022) (to be codified at 50 C.F.R. pt. 424).

Reasonably Modified to Sustain Species Populations

While the Services' most recent proposed rule is certainly a step in the right direction for "habitat," the rule remains significantly flawed because it does not attempt to codify its reasoning into the C.F.R. By repealing the definition of "habitat" enacted by the Trump administration, the finalized rule contemplates that habitat will be determined on a case-by-case basis. While this strategy is broad enough to encompass the scientific notion that habitat is dynamic and variable,[252] it does not actually define "habitat" as areas that can be reasonably restored to sustain species.

In deciding not to replace the current regulatory definition of habitat, the proposed rule vests an unwarranted amount of discretion in whomever is serving as Secretary. In leaving it up to the Secretary to decide what "habitat" is on a case-by-case basis,[253] the rule fails to answer *Weyerhaeuser*'s question with any sense of finality. *Weyerhaeuser*'s central holding was that "critical habitat" must also qualify as "habitat."[254] *Weyerhaeuser* left two essential and related questions that have vexed the Services since 2018: (1) what is habitat;[255] and (2) can it include areas that cannot support a species without some reasonable modification effort?[256] Leaving habitat undefined does not sufficiently answer either of these questions. An area must still qualify as habitat before it can be designated as critical habitat, meaning that future Secretaries must determine that any area they designate as critical habitat is also habitat.[257] So by leaving the meaning of "habitat" to be determined on a case-by-case basis, the proposed rule means that "habitat" is whatever the current Secretary believes it to be.

252. NAT'L RSCH. COUNCIL, *supra* note 8, at 77.

253. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. at 37,757–58.

254. Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 368 (2018). One legal scholar noted that "after *Weyerhaeuser*, you can't take the 'habitat' out of 'critical habitat." J.B. Ruhl, *What Is Habitat?*, 34 NAT. RES. & ENV'T 52, 53 (2019).

255. *See* Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, Final Rule, 85 Fed. Reg. 81,411, 81,412 (Dec. 16, 2020) (attempting to define "habitat").

256. *See* Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 86 Fed. Reg. 59,353, 59,354 (Oct. 27, 2021) (discussing whether "habitat" should include areas that "may need some degree of restoration").

257. *Weyerhaeuser*, 139 S. Ct. at 368.

While the new rule technically allows the Secretary to designate areas to further species recovery,[258] it leaves the ultimate meaning of "habitat" to the political winds of change. The federal administrative machinery is marked by its tendency to significantly change course under each presidential administration.[259] Given the significant changes in policy perspective between administrations, leaving "habitat" undefined makes critical habitat designations more of a policy choice than a scientific one. The ESA specifically requires that critical habitat designations be made "on the basis of the best scientific data available,"[260] not on the basis of the current presidential administration's policy preferences.

An additional rule can remedy this problem by actually proposing language to serve as a regulatory definition for "habitat." The newly finalized rule reasons that "an area should not be precluded from qualifying as habitat because some reasonable restoration or alteration . . . is necessary for it to support a species' recovery."[261] In specifying that critical habitat can include areas that require some restoration, the Services show an intent to move into compliance with Congress's goal of advancing species recovery through critical habitat designation.[262] However, the rule's ambiguity may allow future Secretaries to conduct business in a way that circumvents the recovery-based goal that underscores critical habitat. Rather than stating what "habitat" *is*, the rule explores factors of some areas that *could possibly qualify* as habitat.[263] Courts have repeatedly held that an agency may not conduct its business in such a way that would eliminate the functionality of a specific goal or provision of the ESA.[264] By leaving "habitat" undefined,

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258. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. at 37,758.

259. *See* Knighton Jr., *supra* note 14, at 580.

260. 16 U.S.C. § 1533(b)(2).

261. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. at 37,758.

262. *See id.*; *see also* Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv., 378 F.3d 1059, 1070 (9th Cir. 2004) (The ESA's broad definition of critical habitat allows the government to designate territory for species' recovery as well as survival.).

263. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. at 37,758.

264. *See, e.g.*, Gifford, 378 F.3d at 1070 (invalidating a regulation that would allow the FWS to disregard the ESA's recovery goal); Sierra Club v. U.S. Fish & Wildlife Serv., 245 F.3d 434, 445 (5th Cir. 2001) (invalidating a rule that would preclude threatened species from receiving critical habitat protection); N. M. Cattle Growers v. U.S. Fish & Wildlife Serv., 248 F.3d 1277, 1285 (10th Cir. 2001) (rejecting a regulation that would render the ESA's provision on economic analysis meaningless).

the proposed rule opens the door for Secretaries to interpret the word in a way that does not effectuate critical habitat's recovery goal. The Services' rule demonstrates that they believe an area can qualify as habitat that needs restoration,[265] and they can improve this problem simply by offering an actual definition for "habitat" that explicitly states that "habitat" under the ESA includes areas that require some modification effort, so long as they are essential for the conservation of the species.

CONCLUSION

Since the *Weyerhaeuser* decision, federal agencies have scrambled to regulate and define "habitat" under the ESA in a way that furthers the decision's basic requirement that "critical habitat" also qualify as "habitat."[266] In response to the *Weyerhaeuser* opinion, the Trump administration adopted two rules that (1) imposed a certainty-based requirement on the designation of unoccupied habitat[267] and (2) adopted a regulatory definition for "habitat."[268] Biden's DOI signaled its intent to review these regulations,[269] and subsequently issued a final rule in June 2022 that struck the "habitat" definition from the C.F.R. completely.[270]

Through the course of this administrative tug-of-war, the Services must be cautious to properly implement the ESA as Congress intended.[271] Specifically, the Services must administer the ESA in such a way that treats survival and recovery as distinct goals.[272] The Biden administration's proposition to leave "habitat" undefined furthers the statute's recovery goal, but the DOI needs to take further action both to effectuate its new rule and to correct other existing rules. In declining to replace the existing "habitat" definition, the Services open the door to

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265. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. at 37,758.

266. *See* Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv., 139 S. Ct. 361, 368 (2018).

267. Regulations for Listing Species and Designating Critical Habitat, 84 Fed. Reg. 45,020,45,021–22 (Aug. 27, 2019).

268. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, Final Rule, 85 Fed. Reg. at 81,412.

269. Trotter, *supra* note 18.

270. Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat, 87 Fed. Reg. at 37,757.

271. *See* Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins., 463 U.S. 29, 43 (1983) (holding that agency action qualifies as arbitrary and capricious when it relies on factors that Congress did not intend for the agency to consider).

272. *See supra* Part II(A).

prolonged confusion and litigation, since *Weyerhaeuser* still requires that all critical habitat qualify as habitat. Furthermore, the reasonable certainty standard imposed by the Trump administration is inconsistent with the statute's command to determine critical habitat according to the best available science.[273] Congress specifically intended the ESA to require the federal government to conserve endangered species, "whatever the cost."[274] To promote this conservation objective, the Biden administration must replace the current "habitat" definition with another definition that is (1) broad enough to satisfy the scientific understanding of habitat, and which (2) specifies that areas in need of restoration qualify as habitat. Finally, the Services must take further action to repeal the "reasonably certain" standard, as it is inconsistent with Congress' express intent.[275]

273. *See supra* Part II(A)(i).

274. Tenn. Valley Auth. v. Hill, 437 U.S. 153, 184 (1978).

275. *See supra* Part II(A)(i) (explaining that certainty-based standards cannot be considered in the designation of critical habitat because Congress expressly provided that these determinations are to be made in accordance with the best available science, which often falls short of certainty).