

Assessing State Laws and Resources for Endangered Species Protection

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The federal Endangered Species Act (ESA)¹ enjoys considerable popular support² and provides enormous ecological and other benefits beyond the protection of particular species.³ Nonetheless, calls to devolve greater authority for endangered species management to the states are long-standing and have accelerated in the 115th U.S. Congress and new Donald Trump Administration. The Western Governors' Association, for its part, has recently called for states to be "provided the opportunity to be full partners in administering and implementing the ESA."⁴ Extending the potential role of states even further, Sen. John Barrasso (R-Wyo.), chairman of the Senate Environment and Public Works Committee, is expected to introduce a bill that may devolve authority and responsi-

bility from the federal government to states to protect and recover threatened and endangered species under the ESA.

This Comment provides a comprehensive analysis of state endangered species laws and state funding to implement the federal ESA. Increased coordination between the states and federal agencies regarding the protection and recovery of threatened and endangered species may well have some benefits, and opportunities for partnerships between states and the federal government may enhance species protection. However, a close analysis of current state laws and state-level experience reveals that conservation laws in most states are inadequate to achieve the ESA's conservation and recovery goals.⁵ As a result, with-

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1. Endangered Species Act of 1973, 16 U.S.C. §§1531-1544; ELR STAT. ESA §§2-18.
2. See, e.g., Press Release, Earthjustice, New National Poll Finds 90 Percent of American Voters Support the Endangered Species Act (July 7, 2015), <http://earthjustice.org/news/press/2015/new-national-poll-finds-90-percent-of-american-voters-support-the-endangered-species-act> (discussing a poll conducted by Tulchin Research in 2015 that shows 90% of Americans support the ESA); Omar N. White, *The Endangered Species Act's Precarious Perch: A Constitutional Analysis Under the Commerce Clause and the Treaty Power*, 27 *ECOLOGY L.Q.* 215, 222 (2000) (recalling that the ESA passed the U.S. Senate with a unanimous vote and the U.S. Congress with popular support).
3. See, e.g., W. GOVERNORS' ASS'N, POLICY RESOLUTION 2017-11: SPECIES CONSERVATION AND THE ENDANGERED SPECIES ACT 1 (2017) ("Since its enactment in 1973, the ESA has helped prevent the extinction and assisted the recovery of some threatened and endangered species, while providing ancillary benefits to other species."); DEFENDERS OF WILDLIFE, ECONOMIC BENEFITS OF THE ESA, http://www.defenders.org/publications/economic_benefits_of_the_esa.pdf (discussing various economic benefits derived from the ESA, such as wildlife-related tourism and the protection of natural resources through critical habitats); Fact Sheet, Nat'l Wildlife Fed'n, Endangered Species Act by the Numbers, <https://www.nwf.org/-/media/PDFs/Wildlife/esabythenumbers.ashx> (discussing medicinal benefits of species).
4. W. GOVERNORS' ASS'N, *supra* note 3, at 1.

5. The state endangered species laws were assessed in comparison to the federal ESA. Building on a peer-reviewed study authored by Dale Goble of the University of Idaho School of Law and other ESA scholars, the specific elements assessed include: the existence of a state statute; the extent of plants, animals, and taxonomic levels covered; the evidentiary standard required and citizen petition provisions for listing species; authority for recovery planning, conservation programs, and designation of critical habitats; private land use restrictions; substantive restrictions; consultations for public actions; animal commerce restrictions; animal take restrictions; whether habitat modification constitutes take for animals; plant commerce restrictions; and plant take restrictions. See Dale Goble et al., *Local and National Protection of Endangered Species: An Assessment*, 2 *ENVTL. SCI. & POL'Y* 43 (1999), available at <http://www.sciencedirect.com/science/article/pii/S1462901198000410>; see also CTR. FOR WILDLIFE L. & DEFENDERS OF WILDLIFE, STATE ENDANGERED SPECIES ACTS—PAST, PRESENT AND FUTURE (1998). All 50 states were primarily coded by Prof. Eric Biber and his team at University of California, Berkeley School of Law, with supplemental coding provided by the University of California, Irvine School of Law Center for Land, Environment, and Natural Resources (CLEANR). The analysis of state endangered species laws was also complemented by data retrieved from the U.S. Fish and Wildlife Service and compiled by CLEANR, on species incidence by species type and by state. See U.S. Fish & Wildlife Serv. Environmental Conservation Online System, *Listed Species Summary (Boxscore)*, <https://ecos.fws.gov/ecp0/reports/box-score-report> (last updated Aug. 22, 2017); see U.S. Fish & Wildlife Serv. Envtl. Conservation Online Sys., *Listed Species Believed to or Known to Occur in Each State*, <https://ecos.fws.gov/ecp0/reports/species-listed-by-state-totals-report> (last visited Aug. 22, 2017). The state funding was analyzed relative to federal funding to implement the ESA. The funding data was provided by the U.S. Fish and Wildlife Service, compiled by the Defenders of Wildlife, and reviewed by CLEANR. See Michael Evans, *The Importance of Properly Funding the ESA*, DEFENDERS OF WILDLIFE, June 5, 2017, https://cci-dev.org/analysis/ESA_funding/. All data are available on the CLEANR website for review.

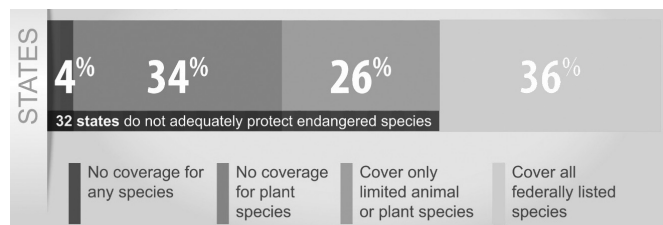
out significant state law reforms in most states, the proposed devolution of federal authority and responsibility over threatened and endangered species to states is likely to undermine conservation and recovery efforts, lead to a greater number of species becoming imperiled, and result in fewer species recovered.

Moreover, state expenditures on the conservation of federally listed species make up only a small fraction (approximately 5%) of total ESA spending. As a result, any substantial devolution of responsibility to the states to implement the ESA would require a massive expansion of funding by states. Further, given that state laws are, in the vast majority of cases, weaker than the federal legislation and more limited in application, proposals to transfer federal funding to states in the form of block grants are likely to lead to a lower level of protection for currently imperiled species.

I. What Is Covered Under Federal and State ESA Laws

The ESA broadly covers most classes of endangered and threatened species,⁶ including most species characterized as fish, wildlife, or plants.⁷ According to the U.S. Fish and Wildlife Service (FWS), of the 1,652 total federally listed species occurring in the United States, 710 (43%) are animals and 942 (57%) are plants.⁸ In contrast, only 18 states cover all animals and all plants covered by the federal ESA,⁹ with 32 states providing less coverage than the federal statute.

Figure I. Endangered Species Protection Under State ESA Laws



See Univ. of Cal. Irvine Sch. of Law, Ctr. for Land, Env't, and Natural Res., *About the Center*, <http://www.law.uci.edu/academics/centers/clean/> (last visited Aug. 22, 2017).

6. 16 U.S.C. §1532(6), (20).
7. *Id.* §1532(16). The definition of fish and wildlife is expansive enough to include any member of the animal kingdom, including without limitation any mammal, fish, bird (including any migratory, nonmigratory, or endangered bird for which protection is also afforded by treaty or other international agreement), amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate, and includes any part, product, egg, or offspring thereof, or the dead body or parts thereof. *Id.* §1532(8). The definition of plant includes "any member of the plant kingdom, including seeds, roots and other parts thereof." *Id.* §1532(14). One limitation in the statute, however, is with regard to the class Insecta, which are exempt from being classified as endangered if it is determined that their protection would constitute immense difficulties. *Id.* §1532(6).
8. U.S. Fish & Wildlife Serv. Envtl. Conservation Online Sys., *Boxscore*, *supra* note 5.
9. See, e.g., HAW. REV. STAT. ANN. §§195D-2, 195D-4(a), 195D-4(b) (2017); R.I. GEN. LAWS ANN. §§20-37-1, 20-37-2(3), 20-37-2(1) (2017).

Beyond West Virginia and Wyoming, the two states that do not have any endangered species laws, 17 states offer no protections to endangered or threatened plants. Indiana and Montana, for example, cover only wildlife.¹⁰ Without the protections of the federal ESA, current federally listed plant species located within the boundaries of these states would not be afforded protection. For example, Colorado does not protect endangered plants,¹¹ but 16 federally listed plant species are believed or known to occur in that state.¹² Similarly, Alabama's endangered species law does not cover plants,¹³ but 23 federally listed plant species are located in that state.¹⁴ The remaining 13 states, while protecting some plants and animals, protect only a subset of the flora and fauna protected by the federal ESA.¹⁵

The federal ESA requires the consideration of numerous factors when determining whether a species is endangered or threatened.¹⁶ Importantly, the statute requires those determinations to be made "solely on the basis of the best scientific and commercial data available."¹⁷ Experts on the protection of endangered species have long acknowledged that reliance on objective, rigorous science is vital for making species conservation decisions. Indeed, as recently stated by the Western Governors' Association:

Given the broad implications that may arise when ESA actions are taken, significant decisions must be made using objective, peer-reviewed scientific literature and scientific observations. A review of the scientific and management provisions contained within listing, recovery and de-listing decisions by acknowledged independent experts is important to ensure the public that decisions are well-reasoned and scientifically based.¹⁸

10. IND. CODE ANN. §14-22-34-1(a), (b) (2017); MONT. CODE ANN. §§87-5-103(2)(b), 87-5-103(2)(c), 87-5-102(4) (2017).
11. See COLO. REV. STAT. ANN. §33-2-105(1) (2017).
12. U.S. Fish & Wildlife Serv. Envtl. Conservation Online Sys., *Listed Species Believed to or Known to Occur in Colorado*, <https://ecos.fws.gov/ecp/0/reports/species-listed-by-state-report?state=CO&status=listed> (last visited Aug. 22, 2017).
13. See ALA. CODE §§9-11-1 to -505 (2017); see also ALA. ADMIN. CODE r. 220-2-.92 (2017).
14. U.S. Fish & Wildlife Serv. Envtl. Conservation Online Sys., *Listed Species Believed to or Known to Occur in Alabama*, <https://ecos.fws.gov/ecp/0/reports/species-listed-by-state-report?state=AL&status=listed> (last visited Aug. 22, 2017).
15. See, e.g., WIS. STAT. ANN. §29.604(2)(c) (2017) (not covering all invertebrates); N.C. GEN. STAT. ANN. §113-331(10) (2017) (not covering all invertebrates, such as arthropods). At the other end of the spectrum, some states like Pennsylvania and California list a greater number of species than are listed under the federal ESA. See, e.g., Pa. Game Comm'n, *Threatened and Endangered Species*, <http://www.pgc.pa.gov/Wildlife/EndangeredandThreatened/Pages/default.aspx> (last visited Aug. 22, 2017); Cal. Dep't of Fish & Wildlife, *Threatened and Endangered Species*, https://www.dfg.ca.gov/wildlife/nongame/t_e_spp/ (last visited Aug. 22, 2017).
16. These include: "(A) the present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence." 16 U.S.C. §1533(a)(1).
17. *Id.* §1533(b)(1)(A).
18. W. GOVERNORS' ASS'N, *supra* note 3, at 6; see also EUGENE H. BUCK ET AL., CONG. RESEARCH SERV., *THE ENDANGERED SPECIES ACT AND "SOUND SCIENCE"* (2013) (RL32992) (stating that the reliance on science for ESA decisionmaking is highly important for species, land use, and development, and that FWS and the National Marine Fisheries Service (NMFS) have

Unfortunately, almost one-half of the states do not expressly require that decisions about whether to provide protections to vulnerable species be based on rigorous science. Fifteen states fail to provide any evidentiary requirements in determining endangered and threatened species. Arkansas, for example, has no mention of the types of evidence required.¹⁹ Delaware's statute²⁰ and regulations²¹ similarly provide no such requirement. Only 27 states specifically require the use of scientific evidence. Nebraska, Vermont, and Wisconsin, for example, use language similar to the federal ESA to require the use of "the best scientific and commercial data available."²²

Figure 2. State ESA Laws Regarding Science-Based Listing Decisions



Of the remaining eight states, there are some indications of requiring scientific expertise in some listing decisions, but the requirements are incomplete. Alaska, for example, requires the commissioner of the Department of Fish and Game to "seek the advice and recommendation of interested persons and organizations, including but not limited to ornithologists, ichthyologists, ecologists, and zoologists."²³ In Pennsylvania, the types of evidence required vary by the type of species being considered. For animals, no explanation is provided about the forms of evidence that may be referenced to aid in the listing process.²⁴ For plants, however, the jurisdictional agency is expected to cooperate with "taxonomists, biologists, botanists and other interested persons [to] conduct investigations on wild plants in order to ascertain information relating to population, distribution, habitat needs, limiting factors and other biological and ecological data to classify plants and to determine management measures necessary for their continued ability to sustain themselves successfully."²⁵

II. Interagency and Citizen Involvement

Under the federal ESA, federal agencies must consult with either the Secretary of Commerce or the Interior, depend-

procedures and policies to use objective science for properly administering the ESA).

19. See ARK. ADMIN. CODE 002.00.1-05.27 (2017).

20. See DEL. CODE ANN. tit. 7, §§601-605 (2017).

21. See 7-3000-3900 DEL. ADMIN. CODE §16.0 (2017).

22. See NEB. REV. STAT. ANN. §37-806(3)(a) (2017); see also VT. STAT. ANN. tit. 10, §5402(e)(1) (2017); see also WIS. STAT. ANN. §29.604(3)(a) (2017).

23. ALASKA STAT. ANN. §16.20.190(c) (2017).

24. 34 PA. CONS. STAT. ANN. §2167(a) (2017) ("The commission may, by regulation, add or remove any wild bird or wild animal native to [the] Commonwealth to or from the Pennsylvania native list of endangered or threatened species.").

25. 32 PA. CONS. STAT. ANN. §5307(a) (2017).

ing on the circumstance,²⁶ to "insure that any action authorized, funded, or carried out by [a Federal] agency" does not "jeopardize the continued existence of any endangered species or threatened species" or "result in the destruction or adverse modification of [critical] habitat."²⁷ This requirement ensures that any potential effects on a listed species from an activity proposed by a government agency are analyzed and minimized in partnership with those officials in that jurisdiction with the experience, training, and expertise in endangered species management. However, only about one-quarter of the states, 12 states, have any consultation requirement in their state ESA law. Thirty-eight states do not have any interagency consultation requirements. Examples include Rhode Island,²⁸ Colorado,²⁹ and Iowa.³⁰

Figure 3. State ESA Consultation Requirements



Of the few states with consultation requirements, only eight have clear interagency consultation provisions. Oregon's interagency consultation provision is representative of this rare category. It requires that "[i]f the species or its habitat is found on state land, the land owning or managing agency, in consultation with the State Department of Fish and Wildlife, shall determine the role its state land shall serve in the conservation of the endangered species."³¹ For all other Oregon state agencies, "the [State Wildlife and Fish] [C]ommission, in consultation and cooperation with the agency, shall determine whether the agency can serve a role in the conservation of endangered species."³² The remaining four states have interagency consultation provisions that are more equivocal or ambiguous. For instance, Kansas' consultation provision merely requires other state agencies to cooperate with the state wildlife agency.³³

The federal ESA permits citizens to petition to add or remove species from listing.³⁴ After a citizen petition is submitted, a review of a particular species' status by the appropriate federal agency may be initiated if the petition is found to contain sufficient scientific and commercial

26. 16 U.S.C. §1532(15). In addition, the secretary of agriculture may be consulted in particular circumstances pertaining to the importation or exportation of terrestrial plants. *Id.*

27. *Id.* §1536(a)(2).

28. See R.I. GEN. LAWS ANN. §§20-37-1 to -5 (2017).

29. See COLO. REV. STAT. ANN. §§33-2-101 to -107 (2017).

30. See IOWA CODE ANN. §§481B.1-.10 (2017).

31. OR. REV. STAT. ANN. §496.182(8)(a) (2017).

32. *Id.* §496.182(8)(b).

33. KAN. STAT. ANN. §32-962(c) (2017) ("All state agencies shall cooperate with the secretary in furtherance of the conservation of nongame, threatened and endangered species.").

34. 16 U.S.C. §1533(b)(3)(A).

information.³⁵ These provisions are vital for ensuring not only that responsible agencies are protecting vulnerable species that meet the legislature's identified criteria for protection,³⁶ but also for removing from protection those species that have sufficiently achieved their recovery goals.³⁷

Regrettably, citizen listing petition provisions under most state laws generally are much weaker compared to the federal ESA. In fact, 30 states do not even allow citizen petitions for listing or delisting species. Iowa³⁸ and Mississippi³⁹ are illustrative. Six states have adopted citizen petition provisions that are substantially less comprehensive than those provided in the federal statute. Tennessee, for instance, expressly allows such petitions⁴⁰ and other public participation opportunities⁴¹ in the listing process for plant species, but not animals.⁴² Kentucky takes a similar approach.⁴³

Figure 4. Citizen Involvement in Listing and Delisting at the State Level



Only 14 states allow citizen petitions close to the level provided in the federal ESA. Oregon, for example, allows citizens to petition for listing of animals⁴⁴ and

35. *Id.*

36. *See, e.g.,* M. LYNNE CORN & ALEXANDRA M. WYATT, CONG. RESEARCH SERV., THE ENDANGERED SPECIES ACT: A PRIMER 11 (2016) (RL31654) (stating that lawsuits have been brought against FWS and NMFS for failing to meet deadlines outlined under the petition process of the federal ESA); Ctr. for Biological Diversity, *Listing Species Under the Endangered Species Act*, http://www.biologicaldiversity.org/programs/biodiversity/endangered_species_act/listing_species_under_the_endangered_species_act/index.html (last visited Aug. 22, 2017) (stating that citizen petitions by groups or individuals to list a particular plant or animal propels FWS and NMFS).

37. *Cf. W. GOVERNORS' ASS'N., WGA SPECIES CONSERVATION AND THE ENDANGERED SPECIES ACT INITIATIVE YEAR TWO RECOMMENDATIONS 2-3, 5* (2017) (recommending procedures to promote increased consideration of, and funding for, delisting by the responsible federal agencies under the federal ESA).

38. *See* IOWA CODE ANN. §481B.1-10 (2017).

39. *See* MISS. CODE ANN. §49-5-109(a) (2017).

40. TENN. COMP. R. & REGS. 0400-06-02-.03(2) (2017) ("Any interested person may nominate a plant species for listing as endangered, threatened, or special concern status or recommend changes in status or removal of species from the current rare plant list. . . .").

41. TENN. CODE ANN. §70-8-305 (2017) (providing public hearings on proposed listings).

42. *Id.* §70-8-105(b) (2017) ("The commission shall conduct a review of the state list of endangered species . . . every two (2) years . . . and may amend the list by such additions or deletions as are deemed appropriate.").

43. *Compare* KY. REV. STAT. ANN. §150.183 (2017) (not providing for citizen listing petitions for animal species), *and* 301 KY. ADMIN. REGS. 3:061 (2017), *with* 400 KY. ADMIN. REGS. 3:030(1)(1) (2017) ("Any person may nominate a candidate [plant species] for inclusion, removal, or change of status on the state endangered or threatened list.").

44. OR. REV. STAT. ANN. §496.176(5)(a) (2017) ("Any person may petition the commission to, by rule, add, remove or change the status of a species on the list."); *see also* OR. ADMIN. R. 635-100-0110(1) (2017) ("Any person may

petition the commission to list, reclassify or remove wildlife species on the state list.").

III. Restricting Habitat Modification and Private Land Use

Habitat loss and modification are significant threats to the majority of endangered and threatened species. Habitats including tallgrass prairie, wetlands, and old growth forests have all been reduced to just a fraction of their former extent.⁴⁵ Generally, the federal ESA requires the secretary to designate "critical habitat" at the time that species are listed.⁴⁹ Critical habitat is defined as "the 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 consideration or protection."⁵⁰ The ESA requires federal agencies to avoid the "destruction or adverse modification" of critical habitat.⁵¹

Figure 5. State ESA Laws Designating Critical Habitat



Although the preservation of critical habitat is intended to help ensure the continued survival and eventual recovery of a listed species, 38 states, more than three-quarters of them, fail to provide *any* authority for the designation of critical habitat for listed species. Only 12 states have provisions allowing for the designation of critical habitat. For example, Connecticut, where critical habitat is termed "essential habitat," directs the commissioner of the Department of Energy and Environmental Protection to "adopt regulations to identify . . . essential habitats for endangered and threatened species."⁵² Similarly, in New Hampshire, state agencies consult with the executive director of the Fish and Game Department "for the conservation of endangered

petition the commission to list, reclassify or remove wildlife species on the state list.").

45. OR. REV. STAT. ANN. §564.110(5)(a) (2017) (allowing any person to petition in order to add, remove, or change a species' status on the list).

46. *See* CAL. FISH & GAME CODE §§2071, 2072 (2017).

47. WIS. STAT. ANN. §29.604(3)(c) (2017); *see also* WIS. ADMIN. CODE §27.04(1)(a) ("Any 3 persons may petition the department to review the status of any listed or unlisted wild animal or wild plant.").

48. CORN & WYATT, *supra* note 36, at 6.

49. 16 U.S.C. §1533(a)(3)(A) (limiting designation to where "prudent and determinable").

50. *Id.* §1532(5)(A)(i).

51. *Id.* §1536(a)(2).

52. CONN. GEN. STAT. ANN. §26-306(b) (2017).

or threatened species” by “tak[ing] such action as is reasonable and prudent to insure that actions authorized, funded, or carried out by them do not . . . result in the destruction or modification of habitat of such species which is determined by the executive director to be critical.”⁵³

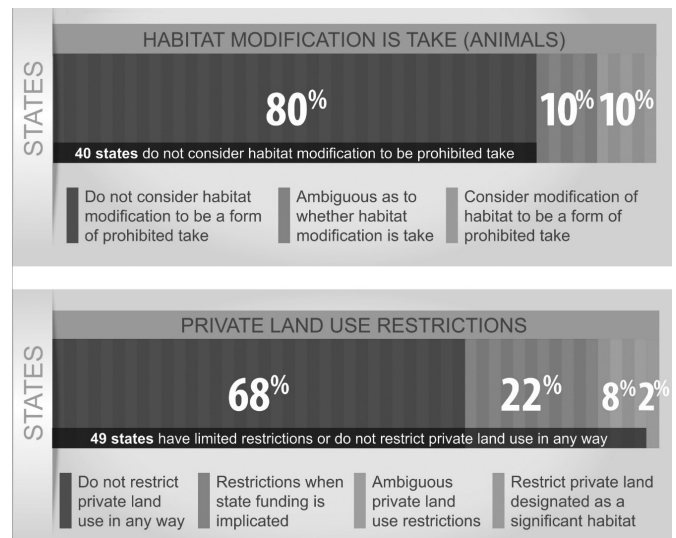
Under the ESA and its associated regulations, significant habitat modification that kills or injures imperiled species is subject to the statute’s take prohibition.⁵⁴ As stated by the U.S. Supreme Court in upholding this definition, among the ESA’s central purposes is “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.”⁵⁵ Protection against significant habitat modification advances this ecosystem-focused objective of the statute.⁵⁶

In contrast to the federal ESA, only five states follow the federal lead considering the significant modification of habitat for threatened or endangered species to be a form of prohibited take. For instance, Maryland’s definition of “harm” includes “an act that significantly modifies or degrades a habitat thereby killing or injuring wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”⁵⁷ The laws and regulations in another five states are ambiguous as to whether or not habitat modification is considered under their definition of “take.” Hawaii⁵⁸ and Illinois,⁵⁹ for example, allow for incidental take permits, making unclear the extent to which habitat modification is a prohibited “take” in those states. The overwhelming majority, 40 states, do not consider significant habitat modification to fall within their definitions of “take.”

Threatened and endangered species are, of course, found on public and private lands. Indeed, nearly 80% of endangered species have relied on private lands for all or some of their habitat.⁶⁰ Unsurprisingly, the extent to which the ESA and state laws may limit private land use, and thus the ability of private landowners to undertake actions that may be detrimental to the survival and recovery of listed species, has proven to be a contentious issue.

Under the federal ESA, federal agencies must ensure that “any action authorized, funded, or carried out by [a federal] agency is not likely to jeopardize the continued

Figure 6. State Laws Protecting Habitat and Species on Private Land



existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.”⁶¹ Thus, where private land use requires a federal authorization such as a permit, or otherwise receives significant federal funding, the permitting agency may not authorize or fund the project if the private land use would jeopardize an endangered or threatened species, or significantly modify such a species’ habitat.

Only 16 states impose restrictions on private land use. Of these states, Massachusetts imposes restrictions on private land use where private land has been designated as “significant habitat,” analogous to “critical habitat” in the ESA.⁶² Eleven other states restrict private land use when state authorization or funding is implicated—essentially the same restriction as the ESA. In Wisconsin, for example, the Department of Natural Resources may issue an incidental take permit for the taking of an endangered or threatened species for a lawful activity, but the applicant for the permit must submit “to the department a conservation plan and an implementing agreement,” which includes, among other things, a description of the impact the action is likely to have on the listed species, steps to be taken to minimize and mitigate the impact of the action, and the reasons for ruling out alternative actions that may have less impact.⁶³ Four states have ambiguous private land use restrictions, which may or may not restrict private land use.⁶⁴

The remaining 34 states, roughly two-thirds, fail to restrict private land use that would jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of habitat of such species.

53. N.H. REV. STAT. ANN. §212-A:9(III) (2017).

54. The federal ESA defines “take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. §1532(19). Through regulation, FWS has defined “harm” under the definition of “take” to include “an act which actually kills or injures wildlife,” and that “[s]uch [an] act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” 50 C.F.R. §17.3 (2016). NMFS has also included “significant habitat modification” under its definition of “take.” *Id.* §222.102 (2016).

55. *Babbitt v. Sweet Home Chapter, Cmty. for a Great Or.*, 515 U.S. 687, 698, 25 ELR 21194 (1995) (quoting 16 U.S.C. §1531(b)).

56. *Id.*

57. MD. REGS. CODE tit. 08, §08.03.08.01(6)(b) (2017).

58. HAW. REV. STAT. ANN. §195D-4(g) (2017).

59. 520 ILL. COMP. STAT. ANN. 10/5.5 (2017).

60. *The Importance of Property Rights for Successful Endangered Species Conservation: Hearing Before the Subcomm. on the Constitution & Civil Justice of the Comm. on the Judiciary*, 2 (2015) (written testimony of Brian Seasholes, Director, Endangered Species Project, Reason Foundation).

61. 16 U.S.C. §1536(a)(2).

62. *Id.* §1532(5)(A)(i); MASS. GEN. LAWS ANN. ch. 131A, §2 (2017) (“Except as otherwise provided in this chapter, no person may alter significant habitat.”).

63. WIS. STAT. ANN. §29.604 (2017).

64. These states are Nevada, South Carolina, Tennessee, and Virginia.

IV. Species Recovery and Delisting

A primary goal of the federal ESA is to recover species to the point that they no longer require the Act's protections and may be delisted. In general, the federal ESA requires the development of a plan that describes the actions necessary for recovery of the species and "estimates of the time required and the cost to carry out those measures needed to achieve the plan's goal and to achieve intermediate steps toward that goal."⁶⁵ Species that would benefit the most from these plans are given priority over others.⁶⁶

Analogous state laws addressing the recovery of species and state experience with such planning are inadequate. Only two states have provisions providing state agencies full recovery planning authority for both animal and plant species. Oregon, for example, requires the development of endangered species management plans for animals by landowning and managing agencies.⁶⁷ Those plans need to discuss matters such as the state land covered by the plan,⁶⁸ how the state land will help conserve the species,⁶⁹ how the plan's implementation will be monitored,⁷⁰ how the plan will be reevaluated,⁷¹ and how the plan relates to other state and federal recovery efforts.⁷² In addition to recovery plans, Oregon also establishes "quantifiable and measurable guidelines that it considers necessary to ensure the survival of individual members of the species."⁷³ Similar authority for recovery planning also exists for plants.⁷⁴ In Florida, the Department of Agriculture and Consumer Services administers a grant program for activities that encourage "the protection, curation, propagation, reintroduction, and monitoring of native flora that are identified as endangered or threatened,"⁷⁵ and the Florida Fish and Wildlife Conservation Commission is responsible for developing management plans to help the recovery of endangered and threatened animals.⁷⁶

Three states provide recovery planning authority that varies and applies differently to animals and plants. In New

Figure 7. Species Recovery Planning Required by States



Mexico, for example, the laws concerning fish and wildlife require the director of the Department of Game and Fish to develop a recovery plan⁷⁷ with the following objectives:

- (1) restoration and maintenance of a viable population of the threatened or endangered species and its habitat reasonably expected to lead to the delisting of the species;
- (2) avoidance or mitigation of adverse social or economic impacts;
- (3) identification of social or economic benefits and opportunities; and
- (4) use of volunteer resources and existing economic recovery and assistance programs and funding available from public and private sources to implement the plan.⁷⁸

However, there is no mention of any recovery planning authority under the laws concerning plants.⁷⁹

Forty-five states either provide very limited or no authority for recovery planning. For example, Alaska declares that the purpose of their endangered species statute, which excludes plants, is "to establish a program for . . . conservation, protection, restoration, and propagation,"⁸⁰ but provides no other details concerning recovery planning.⁸¹ Indiana also has no mention of recovery planning authority for endangered species, referencing only the establishment of programs for the management of non-game species.⁸² West Virginia and Wyoming have no endangered species laws and therefore no recovery planning authority.

V. State Versus Federal ESA Funding

Although the ESA has successfully aided in the protection and recovery of numerous listed species, Congress has provided only a small fraction of the funds that would be necessary for the recovery of all listed species.⁸³ Even so, the overwhelming majority of spending on the implementation of the ESA comes from federal funds. Relative to federal ESA spending, state ESA spending is negligible, constituting approximately 5% of total ESA spending.

65. 16 U.S.C. §1533(f)(1)(B)(iii).

66. *Id.* §1533(f)(1)(A).

67. OR. REV. STAT. ANN. §496.182(8)(a)(C) (2017).

68. OR. ADMIN. R. 635-100-0140(6)(a) (2017).

69. *Id.* 635-100-0140(6)(b).

70. *Id.* 635-100-0140(6)(d).

71. *Id.* 635-100-0140(6)(e).

72. *Id.* 635-100-0140(6)(f).

73. OR. REV. STAT. ANN. §496.182(2)(a) (2017).

74. Oregon also requires:

Before a state agency takes, authorizes or provides direct financial assistance to any activity on land owned or leased by the state, or for which the state holds a recorded easement, the state agency, in consultation with the department, shall: . . . [i]f no program has been established for the listed species, determine whether such action has the potential to appreciably reduce the likelihood of the survival or recovery of any species of plant that is threatened or endangered.

Id. §564.115(2)(b) (2017). If the state agency finds adverse impacts on the recovery of a species, then the state Department of Agriculture is to be notified, which will recommend "reasonable and prudent alternatives." *Id.* §564.115(3).

75. FLA. STAT. ANN. §581.185(11) (2017); FLA. ADMIN. CODE ANN. r. 5B-40.010(3)(a) (2017).

76. FLA. ADMIN. CODE ANN. r. 68A-27.0012(1) (2017); *id.* r. 68A-27.0012(2)(d)(1).

77. N.M. STAT. ANN. §17-2-40.1(A) (2017).

78. *Id.* §17-2-40.1(E).

79. *See id.* §75-6-1 (2017); *see also* N.M. ADMIN. CODE tit. 19, §19.21.2 (2017).

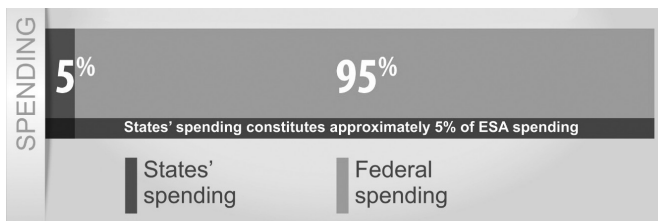
80. ALASKA STAT. ANN. §16.20.180 (2017).

81. *See id.* §§16.20.180-.210.

82. IND. CODE ANN. §14-22-34-14 (2017).

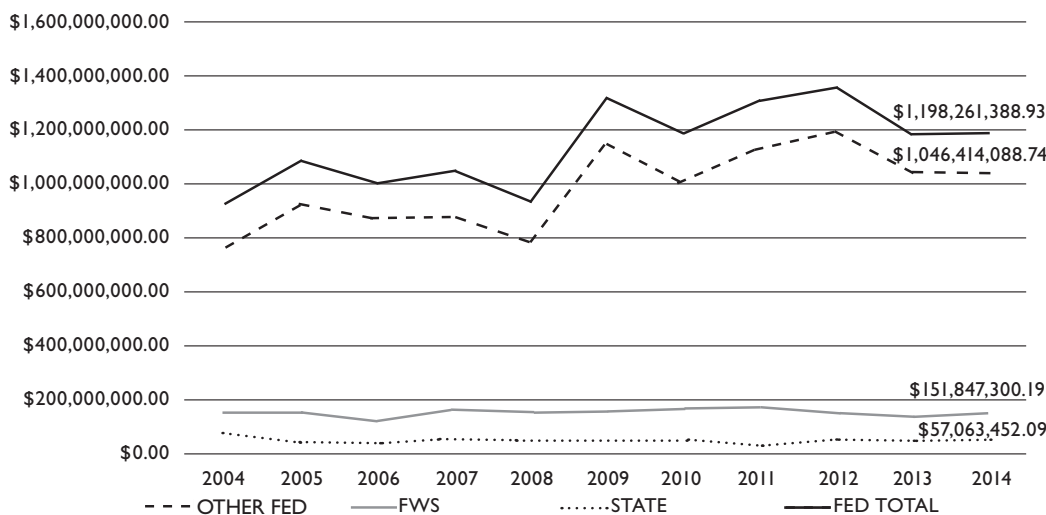
83. Evans, *supra* note 5 (collecting data from FWS).

Figure 8. ESA Implementation Spending at the State and Federal Level



As demonstrated in Figure 9,⁸⁴ from 2004 to 2014, total federal spending on implementation of the ESA, adjusted for inflation, has generally increased over time.⁸⁵ In contrast, from 2004 to 2014, cumulative state spending has remained relatively stagnant when adjusted for inflation. Figure 9 also demonstrates that since 2004, FWS has spent significantly more money than the states for implementation of the ESA.⁸⁶

Figure 9. State Versus Federal ESA Expenditures (2004-2014)



A state-by-state review of state spending, illustrated in Figure 10, indicates not only relatively limited state financial responsibility for implementing the federal ESA, but also a significant disparity in state expenditures. In 2013, for example, 24 of the 40 states reporting spent less than \$500,000, with 15 states spending less than \$100,000, and eight states spending less than \$50,000 to implement the federal ESA. Furthermore, in-state ESA spending by states

varied greatly from just under \$2,000 in Rhode Island to \$32 million in Washington.

Using data collected from FWS' yearly expenditures reported from 2013, Figure 10 shows state spending on threatened and endangered species. Forty states reported their spending that year. States are ordered based on the number of listed species, from the fewest to the greatest number of listed species (top to bottom). Spending in certain states exceeds the spending range (amounts noted in boxes).

Of particular concern may be those states with significant numbers of listed species that spend little on ESA implementation.⁸⁷ For example, despite having a large number of listed species in their states, Alabama and Hawaii spent relatively little implementing the federal ESA. In 2013, Alabama spent \$96,600 and Hawaii spent \$234,080.

In short, state spending to implement the ESA is negligible, with states contributing approximately 5% of total ESA expenditures. If the federal government were to cut federal funding, states would be unable to protect an overwhelming majority of the known threatened and endangered species.

VI. Conclusion

Although increased coordination between the states and federal agencies regarding the protection and recovery of threatened and endangered species may well have some benefits, close analysis of current state laws and state-level experience reveals that

conservation laws in most states are inadequate to achieve the ESA's conservation and recovery goals. Though a large number of states have adopted endangered species laws to complement the federal ESA, these laws fundamentally rely on the federal ESA's more comprehensive statutory regime as a foundation for their comparatively modest protections. As a result, without significant state law reforms in most states, devolution of federal authority and responsibility over threatened and endangered species to states is likely to undermine conservation and recovery efforts, lead to a greater number of species becoming imperiled, and result in fewer species recovered.

84. The data represented in this graph are taken from the ESA expenditures report consolidated by FWS. The reported spending amounts are factored to account for 2016 inflation. U.S. FISH & WILDLIFE SERVICE, FEDERAL AND STATE ENDANGERED AND THREATENED SPECIES EXPENDITURES (2014), available at https://www.fws.gov/Endangered/esa-library/pdf/20160302_final_FY14_ExpRpt.pdf; U.S. FISH & WILDLIFE SERVICE, FEDERAL AND STATE ENDANGERED AND THREATENED SPECIES EXPENDITURES (2013), available at <https://www.fws.gov/Endangered/esa-library/pdf/2013.EXP.FINAL.pdf>.

85. During this same period, the number of listed species grew substantially. The data do not reflect the growth or decline of funding per species.

86. This available data do not include any state funding spent in implementation of any state laws.

87. Of course, state expenditures in ESA implementation (as absolute amount and as percentages of total) are limited proxies for commitment to implementation. Furthermore, the number of federally listed species believed or known to occur in the state is only one, imperfect indicator of the ecological vulnerability protected by the federal ESA within a state. Nonetheless, a review of this data is probative regarding relative state capacity and readiness to serve as a substitute for federal protection of endangered species.

Moreover, state expenditures on the conservation of federally listed species make up only a small fraction (approximately 5%) of total spending by federal agencies. As a result, any substantial devolution of responsibility to the states to implement the ESA would require a massive expansion of funding by states to even approach current federal funding levels. Further, given that state laws are, in

the vast majority of cases, weaker than federal legislation and more limited in application, and that many federally listed species occur on federal lands, any proposal to transfer federal funding to states in the form of block grants is likely to lead to a lower level of protection for currently imperiled species.

Figure 10. State Spending on Threatened and Endangered Species (2013)

