STATE IMPERILED SPECIES LEGISLATION

BY

ROBERT L. FISCHMAN,* VICKY J. MERETSKY,** WILLEM DREWS,*** KATLIN STEPHANI**** & JENNIFER TESON*****

State wildlife conservation programs are essential to accomplishing the national goal of extinction prevention. By virtue of their constitutional powers, their expertise, and their on-the-ground personnel, states could—in theory—accomplish far more than the federal agencies directly responsible for implementing the Endangered Species Act (ESA). States plausibly argue that they can catalyze collaborative conservation that brings together key stakeholders to improve conditions for imperiled species. Bills to revise the ESA seek to delegate greater authority to states. We evaluated states' imperiled species legislation to determine their legal capacity to employ the key regulatory tools that prompt collaborative conservation. All but four states possess statutory programs to identify species on the brink of extinction. Most of them include both animals protected under the ESA and wildlife imperiled just within the boundaries of the state. Thirty-four states legislate imperiled plant protection programs. States generally fail to prohibit habitat impairment by private parties, lack permit programs to minimize incidental harms to species and spur habitat conservation, and do not restrict state agency actions that undermine species recovery. Compared to the key regulatory programs of the ESA that prompt stakeholders to collaborate on conservation, state laws—in general—reflect a more permissive attitude. Though state laws, in the aggregate, only weakly support cooperative federalism, some state legislative provisions are very strong. Illinois, Massachusetts, and Wisconsin even go beyond the ESA in their protective measures. Major funding increases to pay for conservation

* George P. Smith, II Distinguished Professor of Law, Indiana University Maurer School of Law, I.U. Environmental Resilience Institute. Many thanks to my Endangered Species Act mavens who each offered superb suggestions throughout the research and editing of this project: Michael Bean, Eric Biber, Susan George, Ya-Wei "Jake" Li, Dan Rohlf, and Bill Snape. Michele Wilcox-Petrites provided excellent research assistance and the Indiana University Maurer School of Law provided research support. Direct comments to rfischma@indiana.edu.

** Professor, Indiana University School of Public and Environmental Affairs.

*** Natural Resource Specialist, Knox County Soil & Water Conservation District.

**** Laboratory Safety Specialist, Indiana University.

***** Land Protection Coordinator, Lancaster County Conservancy.

measures could overcome weak agency regulatory authority, but prospects for a spending spree are dim. Therefore, some state legislative reform will be necessary to implement stronger cooperative federalism under the ESA.

I. INTRODUCTION

The Endangered Species Act[1] (ESA) may well be the most contentious of the federal environmental statutes. It certainly is the most controversial of the conservation laws outside the purview of the United States Environmental Protection Agency (EPA). Yet, in congressional hearing after congressional hearing, one consensus rises above the rancor. All parties agree that states should play a greater role in preventing extinctions.[2] Immense conservation benefits would accrue from more active state programs designed to arrest the decline of rare species or to recover endangered species. Alas, potential benefits are seldom realized because neither state treasuries nor the federal appropriations provide sufficient resources for conservation actions. But, suppose Congress decided to transfer the federal endangered species budget to states through block

1 Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (2012).

2 *E.g.*, *Oversight: Modernization of the Endangered Species Act: Hearing Before the S. Comm. on Env't & Pub. Works*, 115th Cong. 161 (2017) (statement of Jamie Rappaport Clark, President and CEO, Defenders of Wildlife); *id.* at 161–62 (testimony of Dan M. Ashe, President and CEO, Association of Zoos and Aquariums); W. GOVERNORS' ASS'N, POLICY RESOLUTION 2016-08: SPECIES CONSERVATION AND THE ENDANGERED SPECIES ACT 1–2 (2016), https://perma.cc/6XMR-NKBK [hereinafter WGA POLICY RESOLUTION] (recommending statutory reforms for greater state involvement); *see also* H.R. 4315, 113th Cong. § 3(a)(2) (2014) (passed by the U.S. House of Representatives on July 29, 2014) (requiring a greater role for states in ESA listing decisions); S. 1731, 113th Cong. § 4 (2013) (requiring state consent for listing decisions and allowing states to assert exclusive authority to manage intra-state listed species and highlighting the role of states in listing decisions and in conservation partnerships); *The Endangered Species Act: Reviewing the Nexus of Science and Policy: Hearing Before the Subcomm. on Investigations and Oversight of the H. Comm. on Science, Space, and Technology*, 112th Cong. 3 (2011), https://perma.cc/NA82-5G3K (testimony of Gary Frazer, Assistant Director, Endangered Species, U.S. Fish and Wildlife Service).

grants.[3] Would that prove more effective than the current approach? Putting aside the political and implementation uncertainties over how effectively states would spend new monies, this Article shows that there is another hurdle to greater delegation of responsibility to prevent extinction: weak state legislation.

We reviewed legislation relevant to recovery of imperiled species for all fifty states. Most states adopt the argot of the ESA, which refers to species on the brink of extinction as "endangered" and those with a somewhat lower risk of disappearing as "threatened." But other states define the words differently or employ alternative terminology. Therefore, we use the term "imperiled" to refer generally to species identified as needing special protections to avoid extinction. The ESA defines "conservation" to mean the use of methods "necessary to bring any endangered species or threatened species to the point at which the measures provided [by the Act] are no longer necessary."[4] In this sense, conservation is synonymous with recovery. Conservation and recovery are modest goals intended to move the very most imperiled species out of the legislative, emergency-room treatments of the ESA. They do not imply that a species has regained most of its habitat or historic abundance. When the term "conservation" is used in other contexts, it has a broader meaning that generally promises more abundant and healthy wildlife.[5]

Part II of this Article constructs the cooperative federalism framework for understanding current debates about ESA reform. The ESA authorizes cooperative agreements, which serve as a conduit for federal grants to help states conduct conservation actions that aid federal efforts to recover species. Other environmental law programs present a more varied toolbox of state incentives that offer options for better promoting effective cooperation to prevent extinctions. Part III describes the three regulatory pillars of the ESA that account for the most species protections: interagency coordination, prohibitions, and permits. Part IV details our method of coding legislation to compare state imperiled species law with the ESA.

Part V presents our results. We found legislative programs designed to recover imperiled animals in all but four states. Two states protect only species on the ESA list, and thirty-nine states automatically include ESA-listed species among their longer imperiled species lists. Thirty-four states legislate imperiled plant protection programs. Of the twenty-four states that require periodic administrative updates to the status of listed species, twenty require status reviews every five years or more frequently. Only three state laws require preparation of species-specific recovery plans. Eleven state legislative codes require interagency cooperation to ensure that state agencies do not take actions to jeopardize state-listed species. Most state

---

3 *E.g.*, WGA POLICY RESOLUTION, *supra* note 2, at 7 (calling for ESA block grant funding allowing states to spend the money according to their own priorities).

4 16 U.S.C. § 1532(3).

5 *See, e.g.*, National Wildlife Refuge System Administration Act of 1996, 16 U.S.C. § 668ee(4) (defining "conservation" to mean "to sustain and, where appropriate, restore and enhance, healthy populations of . . . wildlife, and plants").

wildlife legal regimes ban trafficking and purposeful actions to kill, capture, or injure an imperiled species. However, only two state statutes clearly prohibit habitat degradation that is incidental to some otherwise legal activity, such as farming.[6] Nonetheless, seven state laws provide for incidental take permits, indicating a somewhat broader scope of prohibitions (as administered) than is apparent from the face of the statutes.

Part VI discusses how our results relate to the current debates over ESA reauthorization. Compared to the key regulatory programs of the ESA that prompt stakeholders to collaborate on conservation, state laws, *in general*, reflect a more permissive attitude. Though state laws, in the aggregate, only weakly support cooperative federalism, some state legislative provisions are very strong. State programs in Illinois, Massachusetts, and Wisconsin even go beyond the ESA in their protective measures. They offer helpful models for other states seeking to improve the effectiveness of their imperiled species laws. However, we cannot speak to actual administration of the programs, in practice. We conclude with broader observations about how to make the ESA-reform debate more constructive and responsive to the consensus that state conservation programs are essential to preventing extinctions.

II. COOPERATIVE FEDERALISM AND EXTINCTION PREVENTION

Cooperative federalism has framed U.S. environmental law for the past half century.[7] It is most closely associated with EPA, which relies on state personnel to permit and enforce programs that advance objectives under federal pollution-control statutes.[8] But the natural resources side of environmental law also harnesses cooperative federalism.[9] The ESA expressly addresses cooperative federalism in section 6, which requires the relevant cabinet officials to cooperate with states "to the maximum extent practicable."[10] This reflects a common, deferential formulation of savings clauses for state authority in federal natural resources statutes.[11] Section 6 authorizes cooperative agreements between federal agencies and states only to recover species already listed under the ESA.[12] The ESA does not

---

6 A third state, New York, prohibits incidental take according to a judicial interpretation of more ambiguous language in its statute. *See* State v. Sour Mountain Realty, Inc., 714 N.Y.S.2d 78, 80, 82–83 (N.Y. App. Div. 2000) (upholding an injunction against a mine that erected a fence that kept state-listed rattlesnakes from making their seasonal migration); *see also infra* notes 251–252 and accompanying text.

7 Robert L. Fischman, *Cooperative Federalism and Natural Resources Law*, 14 N.Y.U. ENVTL. L.J. 179, 187 (2005).

8 *Id.* at 188–89.

9 *See generally id.* at 193–204 (arguing that the state-federal system of managing natural resources can be understood as cooperative federalism).

10 16 U.S.C. § 1535(a).

11 Robert L. Fischman & Angela M. King, *Savings Clauses and Trends in Natural Resources Federalism*, 32 WM. & MARY ENVTL. L. & POL'Y REV. 129, 161 (2007) (explaining that more courts are adopting interpretation approaches that encourage "federal reconsideration of state interests in public land management").

12 16 U.S.C. § 1535(c)(1)–(2).

expressly authorize agreements with or grants to states to protect declining species in order to stave off federal listing. Instead, a separate federal grant program provides states with funding to undertake actions focused on preventing imperilment.[13] States with federally approved state wildlife action plans (SWAPs) are eligible for this preventive funding.[14]

States have complained for decades about implementation of the section 6 cooperative agreements program. Many states would interpret the self-contradicting text of section 6 to prohibit federal preemption of state programs weaker than federal law.[15] Though there is support for that view in the legislative history,[16] courts have rejected the antipreemption arguments.[17] The result is cooperative agreements that "demand very little from the states and offer the same in return."[18] Most of the agreements relate to listing, monitoring, and voluntary conservation programs.[19] Congress has increased section 6 funding in the past quarter century, from 1% of the United States Fish and Wildlife Service (FWS) budget in 1990 ($6.7 million),[20] to 3% in 2000 ($26.9 million),[21] and to 3.5% in 2017 ($53.5 million).[22] That funding offers

---

13 Pittman-Robertson Wildlife Restoration Act, 16 U.S.C. § 669c(d) (describing the requirements for the state wildlife grants tied to state wildlife action plans (SWAPs), first authorized in Department of the Interior and Related Agencies Appropriations Act, 2002, Pub. L. No. 107-63, 115 Stat. 408 (2001)).

14 *Id.*; U.S. FISH & WILDLIFE SERV., FEDERAL FINANCIAL ASSISTANCE: PART 517 FINANCIAL ASSISTANCE—ELIGIBILITY & PROGRAM-SPECIFIC REQUIREMENTS § 10 (2010), https://perma.cc/NR9C-3CRV (setting out the requirements for approving SWAPs).

15 *Compare* 16 U.S.C. § 1535(g)(2)(A) (stating that takings prohibitions set forth in 1533(d) for resident species do not apply to a state with a cooperative agreement), *and id.* § 1533(d) (stating that protective regulations apply only if the state has adopted those regulations), *with id.* § 1535(f) (emphasizing that a state law that interferes with the purpose of the ESA is void).

16 *See, e.g.*, H.R. REP. NO. 93-740, at 9–10 (1973), *reprinted in* 1973 U.S.C.C.A.N. 979, 986–89; S. REP. NO. 93-307, at 8 (1973), *reprinted in* 1973 U.S.C.C.A.N. 2989, 2996–97. For a comprehensive review of the legislative history of ESA section 6, see generally Robert P. Davison, *The Evolution of Federalism Under Section 6 of the Endangered Species Act*, *in* THE ENDANGERED SPECIES ACT AND FEDERALISM: EFFECTIVE CONSERVATION THROUGH GREATER STATE COMMITMENT 89 (Kaush Arha & Barton H. Thompson, Jr. eds., 2011).

17 *E.g.*, Swan View Coal., Inc. v. Turner, 824 F. Supp. 923, 938 (D. Mont. 1992) (holding that "the less restrictive takings provisions under Montana law are preempted by the ESA"); United States v. Glenn-Colusa Irrigation Dist., 788 F. Supp. 1126, 1134 (E.D. Cal. 1992) (holding that "to the extent that California's law on taking is less protective than the Endangered Species Act, it is preempted"); *see also* Robert L. Fischman & Jaelith Hall-Rivera, *A Lesson for Conservation from Pollution Control Law: Cooperative Federalism for Recovery Under the Endangered Species Act*, 27 COLUM. J. ENVTL. L. 45, 81 (2002) (summarizing the operation of ESA section 6 in the context of cooperative federalism); John Copeland Nagle, *The Original Role of the States in the Endangered Species Act*, 53 IDAHO L. REV. 385, 414–18 (2017) (providing an insightful review of the legislative history of section 6 and *Swan View Coalition*).

18 J.B. Ruhl, *Cooperative Federalism and the Endangered Species Act: A Comparative Assessment and Call for Change*, *in* THE ENDANGERED SPECIES ACT AND FEDERALISM, *supra* note 16, at 35, 35.

19 *Id.* at 41.

20 Department of the Interior and Related Agencies Appropriations Act, 1991, Pub. L. No. 101-512, 104 Stat. 1915, 1918 (1990).

21 Department of the Interior and Related Agencies Appropriations Act, 2001, Pub. L. No. 106-291, 114 Stat. 922, 927 (2000).

22 Consolidated Appropriations Act, 2017, Pub. L. No. 115-31, 131 Stat. 135, 139–40.

ample incentive to induce most states to enter into agreements.[23] A state receiving cooperative funds must surmount the low bar of showing that it has enacted authority to conserve resident species, has established acceptable conservation programs, possesses authority to conduct investigations to determine the status of animal species, and provides for public participation in designating species as imperiled.[24] It must also match a portion of the costs of projects funded.[25] State spending constitutes about 5% of total ESA appropriations.[26]

Appropriations still fall far short of the estimated costs of preventing extinction, however. The total costs of recovering the 1,661 ESA-listed species in the United States is unknown.[27] But one can derive recovery costs for those 1,159 species with recovery plans. The plans identify costs of $1.21 billion/year.[28] Currently, FWS tallies spending of federal and state governments together for endangered species protection between one and two billion dollars annually.[29] However, that includes funding all aspects of the program, including listing, which is not directly tied to recovering already listed species.[30] Nearly all of that money goes to staff salaries and operations, not directly to recovery efforts.[31] A peer-reviewed study of the budget indicated that Congress funds less than 25% of the aggregate annual recovery plan costs.[32] The budget outlook for the foreseeable future remains austere.

Since 1994, the United States Department of the Interior's FWS and the Department of Commerce's National Marine Fisheries Service (NMFS) (collectively, the Services) policy on section 6 cooperation has emphasized the states' role in preventing listing by alleviating threats to declining

---

23 *Grants: Overview*, U.S. FISH & WILDLIFE SERV., https://perma.cc/79TL-J7P3 (last updated Jan. 4, 2017) (noting that most states have entered into cooperative agreements). J.B. Ruhl states that *all* states have entered into cooperative agreements, which our findings show would result in grants to states that have only the weakest basis for meeting the ESA criteria. Ruhl, *supra* note 18, at 41.

24 ESA, 16 U.S.C. § 1535(c) (2012).

25 *Grants: Overview*, *supra* note 23 (states must match 25% of most project costs unless they are implementing a cooperative project with other states, in which case the match is 10%).

26 Alejandro E. Camacho et al., *Assessing State Laws and Resources for Endangered Species Protection*, 47 Envtl. L. Rep. (Envtl. Law Inst.) 10,837, 10,838 (Oct. 1, 2017).

27 *Listed Species Summary (Boxscore)*, U.S. FISH & WILDLIFE SERV., https://perma.cc/7JJC-S686 (last updated Jan. 27, 2018).

28 *Id.*; *see* Leah R. Gerber, *Conservation Triage or Injurious Neglect in Endangered Species Recovery*, 113 PROC. NAT'L ACAD. SCIS. U.S. 3563, 3563, 3565 (2016) (statistics based on 2016 data with 1,125 listed species).

29 *Endangered Species Act Document Library*, U.S. FISH & WILDLIFE SERV., https://perma.cc/VCX3-EVVP (last updated Dec. 3, 2017) (listing annual Expenditure Reports from 1996–2015). The most recent report tallied $1.3 billion in ESA-conservation expenditures. U.S. FISH & WILDLIFE SERV., FEDERAL AND STATE ENDANGERED AND THREATENED SPECIES EXPENDITURES 78 (2014), https://perma.cc/NJB8-BZAY [hereinafter FWS EXPENDITURES].

30 FWS EXPENDITURES, *supra* note 29, at 4.

31 For the actual appropriations going to recovery plan tasks, see Gerber, *supra* note 28, app. 1–39.

32 *Id.* at 3563.

species.[33] Pursuant to the policy, the Services enter into candidate conservation agreements with states and other stakeholders to apply conservation measures to a particular species, which are then considered in listing decisions.[34] Most rare and declining species are not on the very brink of extinction.[35] The SWAPs required for states to be eligible for federal nongame conservation grants have identified over 12,000 species of greatest conservation need (SGCN), which are generally declining in range or population.[36] The SGCNs include ESA-listed species as well as rare and declining species that might be eligible for listing if the state fails to conserve them.[37] Each state's wildlife action plan contains conservation actions to sustain and restore SGCN populations. Unfortunately, implementation has been hampered by inadequate funding.[38] A recent study estimates that implementation of the state action plans would require $1.3 billion annually, which would be a bargain if it fulfilled its promise of stemming the tide of new ESA listings.[39] Most state officials and conservationists agree that increasing funding for conservation of SGCNs would alleviate many ESA controversies because fewer species would decline to the point of listing.[40]

Virtually no player in U.S. politics wins points by praising federal bureaucrats. Members of Congress, like fellow politicians, are fond of promoting better management by transferring authorities from "distant bureaucrats" in Washington to state officials, who are regarded as "closest" to the conservation needs of species.[41] Tilting the balance of cooperative federalism more toward states has many benefits. For instance, state fish

---

33 Endangered and Threatened Wildlife and Plants: Notice of Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities, 59 Fed. Reg. 34,274, 34,275 (July 1, 1994). Recently, the Services revised the policy. *See* Revised Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities, 81 Fed. Reg. 8663, 8664 (Feb. 22, 2016) (to be codified at 50 C.F.R. ch. IV).

34 *E.g.*, U.S. FISH & WILDLIFE SERV. ET AL., CANDIDATE CONSERVATION AGREEMENT FOR THE LOUISIANA PINE SNAKE 3 (2013), https://perma.cc/9N93-94PH (addressing conservation needs of a rare snake through cooperation among FWS, federal land managers, state agencies, and other parties).

35 *H.R 1314, H.R. 1927, H.R. 4256, H.R. 4284, H.R. 4319, and H.R. 4866: Legislative Hearing Before the H. Comm. on Nat. Res.*, 113th Cong. 17 (2014) [hereinafter *Hearings*] (prepared statement of Robert L. Fischman, Professor of Law, Indiana University Maurer School of Law); *see also* Vicky J. Meretsky et al., *A State-Based National Network for Effective Wildlife Conservation*, 62 BIOSCIENCE 970, 970, 974–75 (2012) (describing the importance of state programs that identify declining species before they get to the point of imperilment).

36 ASS'N OF FISH & WILDLIFE AGENCIES, THE FUTURE OF AMERICA'S FISH AND WILDLIFE: A 21ST CENTURY VISION FOR INVESTING IN AND CONNECTING PEOPLE TO NATURE 6 (2016), https://perma.cc/G7T3-3U32.

37 *Id.*

38 *Id.*

39 *Id.* at 7.

40 *E.g.*, *Hearings*, *supra* note 35, at 17–19 (prepared statement of Robert L. Fischman, Professor of Law, Indiana University Maurer School of Law).

41 *E.g.*, Press Release, House Comm. on Nat. Res., Committee to Hold Endangered Species Act Hearing (May 28, 2013), https://perma.cc/F6FW-A7HD (addressing positive and cooperative species conservation efforts).

and wildlife agencies employ 50,000 staff on the front lines of conservation challenges.[42] But, their funding is paltry compared to their current needs. Shouldering greater responsibility for imperiled species recovery is not realistic without a significant increase in funding. In 2016, the Association of Fish & Wildlife Agencies launched a major initiative to address the funding problems through federal appropriations from royalties, fees, and bonus bids collected by federal energy resource agencies.[43] The Land and Water Conservation Fund, which assists federal agencies and states/local jurisdictions with property acquisition, pulls from similar sources of federal revenue.[44] Its fate in budget negotiations will serve as a harbinger of the success of the state wildlife funding initiative.

But, even taking the most optimistic scenario for greater state funding, it will be hard to improve the success rate for species recovery without the legal tools that prompt stakeholders to collaborate on conservation projects. Under the ESA, federal agencies can threaten enforcement of draconian bans on harming species through habitat modifications, or halting desired federal programs and permits.[45] Federal agencies seldom carry through on those dreaded outcomes.[46] But the specter of enforcement, though unlikely, does motivate collaborative conservation by landowners, their lenders, and others whose businesses create habitat degradation or otherwise impede recovery. Decades of research by Steven Yaffee and Julia Wondolleck found that conservation collaboration successes depend on "legal structures that establish management bottom lines" for conservation goals.[47] The ESA, in particular, served as the "regulatory driver" of stakeholder cooperation in about half of the hundreds of conservation collaborations they studied.[48] The legal mandates create incentives to collaborate on projects that avoid more drastic outcomes (e.g., ESA section 7 jeopardy)[49] and to establish clear

---

42 *Oversight: Modernization of the Endangered Species Act: Hearing Before the S. Comm. on Env't & Pub. Works*, 115th Cong. 50 (2017) (statement of Gordon S. Myers, Executive Director, North Carolina Wildlife Resources Commission, and President, Southeastern Association of Fish and Wildlife Agencies). As early as the enactment of the 1973 ESA, Congress noted that the most efficient way to recover species was to tap into state wildlife agencies. S. REP. NO. 93-307, at 1 (1973), *reprinted in* 1973 U.S.C.C.A.N. 298, 303.

43 ASS'N OF FISH & WILDLIFE AGENCIES, *supra* note 36, at 10.

44 Land and Water Conservation Fund Act of 1965, 54 U.S.C. §§ 200301–200310 (Supp. II 2015) (describing sources of funding for land and water conservation).

45 *See* Jacob W. Malcom & Ya-Wei Li, *Data Contradict Common Perceptions About a Controversial Provision of the U.S. Endangered Species Act*, 112 PROC. NAT'L ACAD. SCIS. U.S. 15,844, 15,844–45 (2015).

46 *See id.* at 15,845 (finding only 0.0023% of all 6,829 formal consultations between 2008 and April 2015 resulted in jeopardy decisions); *see also* MICHAEL J. BEAN & MELANIE J. ROWLAND, THE EVOLUTION OF NATIONAL WILDLIFE LAW 234 (3d ed. 1997) (noting that the federal government rarely prosecutes incidental takes).

47 Steven L. Yaffee, *Collaborative Strategies for Managing Animal Migrations: Insights from the History of Ecosystem-Based Management*, 41 ENVTL. L. 655, 677 (2011).

48 *Id.*; *see* STEVEN L. YAFFEE ET AL., ECOSYSTEM MANAGEMENT IN THE UNITED STATES: AN ASSESSMENT OF CURRENT EXPERIENCE 21, 27 (1996); *see also* JULIA M. WONDOLLECK & STEVEN L. YAFFEE, MAKING COLLABORATION WORK: LESSONS FROM INNOVATION IN NATURAL RESOURCE MANAGEMENT 102, 240 (2000) (describing more case studies).

49 *See infra* notes 61–64 and accompanying text.

accountability through scientifically sound goalposts for tracking success.[50] The ESA statutory threshold of jeopardy has been credited with signaling when key ecological thresholds of disruption may be crossed and prompting collaborative approaches to water governance.[51] If legislation or administration were to push more species recovery responsibility toward states, could the states mount similar incentives for private actors to collaborate?

Our research attempts to answer that question by evaluating the legislative authorities defining the duties and powers of state agencies responsible for wildlife management. In brief, we find most states possess insufficient statutory authority. Nonetheless, some state laws offer good models to strengthen other states' ability to prevent extinctions. Before presenting the results of our analysis, we review how the ESA establishes incentives for conservation. The next Part surveys the key ESA provisions against which we measure state laws in Parts IV and V.

III. THE THREE REGULATORY PILLARS OF THE ESA

In order to be protected under the ESA, species must be listed and critical habitats designated under a notice-and-comment, informal rulemaking procedure.[52] No unlisted species or undesignated habitats receive any protection under the ESA, no matter how biologically imperiled they may be.[53] The Services share responsibility for these programs and are often called the "listing agencies."[54] Species are listed as endangered[55] or threatened,[56] depending on the imminence of extinction risk.[57] The Services' cooperative federalism policy promises that they will "utilize the expertise" of and "solicit" information from state wildlife agencies on listing and other regulatory rulemaking.[58] In addition to enforcing the regulatory programs

---

50 Yaffee, *supra* note 47, at 677–78.

51 Bruce C. Chaffin et al., *Resilience, Adaptation, and Transformation in the Klamath River Basin Social-Ecological System*, 51 IDAHO L. REV. 157, 191 (2014); Barbara Cosens et al., *The Adaptive Water Governance Project: Assessing Law, Resilience and Governance in Regional Socio-Ecological Water Systems Facing a Changing Climate*, 51 IDAHO L. REV. 1, 27 (2014).

52 ESA, 16 U.S.C. § 1533 (2012).

53 *See* DEFS. OF WILDLIFE, PROTECTING UNLISTED SPECIES: ASSESSING AND IMPROVING CANDIDATE CONSERVATION AGREEMENTS WITH ASSURANCES 3 (2013), https://perma.cc/KY6D-RKKR.

54 NAT'L MARINE FISHERIES SERV., UPDATED STATUS OF FEDERALLY LISTED ESUS OF WEST COAST SALMON AND STEELHEAD 8 (Thomas P. Good et al. eds., 2005).

55 Endangered species are those "in danger of extinction throughout all or a significant portion of [their] range." 16 U.S.C. § 1532(6).

56 Threatened species are those "likely to become an endangered species within the foreseeable future throughout all or a significant portion of [their] range." *Id.* § 1532(20).

57 *See In re* Polar Bear Endangered Species Act Listing and § 4(D) Rule Litigation, 748 F. Supp. 2d 19, 26 (D.D.C. 2010) (acknowledging "a temporal element to the distinction between the categories of endangered and threatened species" based on the plain language of the statute).

58 Revised Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities, 81 Fed. Reg. 8663, 8663 (Feb. 22, 2016) (to be codified at 50 C.F.R. ch. IV).

that apply after listing, the Services have a duty to prepare a recovery plan for each listed species.[59] However, compliance with the plans is not mandatory,[60] so we exclude them from our description of regulatory elements of the ESA. Recovery plans are important to provide clear objectives for collaborative conservation. But they do not require stakeholders to act.

Once listed, three key regulatory programs work to protect species. The first program involves federal agency action that triggers interagency, interdisciplinary analysis. Under section 7 of the ESA, an action agency (one authorizing, funding, or carrying out an action) that may affect a listed species must consult with the listing Service.[61] This consultation involves the same kind of look-before-you-leap evaluation as the Fish and Wildlife Coordination Act[62] and the National Environmental Policy Act[63] (NEPA).[64] The main difference between the ESA consultation process and those other statutory programs is that the procedural elements are supplemented by a substantive threshold banning certain actions due to adverse impacts.[65] Section 7 prohibits actions that the analysis shows are "likely to jeopardize the continued existence of" a listed species or "result in the destruction or adverse modification of" critical habitat.[66] This motivates the action agency (and the permittee if the impacts are from a proposed authorization of private activity, such as filling a wetland) to mitigate impacts so that they fall short of the jeopardy threshold.

Because state law generally cannot constrain federal agencies, there are relatively few ways for states to take on more responsibility for section 7 consultation. Under NEPA, state agencies may receive cooperating agency status, which allows them to exert influence over the impact analysis without having to wait for formal comment periods.[67] It is possible that a revision of the section 7 consultation regulations could facilitate similar state involvement on the inside of consultation, which typically has few windows for public notice and comment.[68] The current cooperative federalism policy of the Services promises to inform state agencies of federal agency actions subject to consultation, to request relevant

---

59 16 U.S.C. § 1533(f). As of November 26, 2017, 1159 of the 1661 listed species in the United States have approved recovery plans. *Listed Species Summary (Boxscore)*, *supra* note 27.

60 Nat'l Wildlife Fed'n v. Nat'l Park Serv., 669 F. Supp. 384, 388–89 (D. Wyo. 1987) ("Congressional intent supports the view that the Secretary is required to develop a recovery plan only insofar as he reasonably believes that it would promote conservation.").

61 16 U.S.C. § 1536(a)(2).

62 *Id.* §§ 661–666c.

63 National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321–4333 (2012).

64 *Id.* § 4321 (providing that one of NEPA's purposes is "to promote efforts which will prevent or eliminate damage to the environment").

65 16 U.S.C. § 1536(a)(2).

66 *Id.*

67 *See* 40 C.F.R. §§ 1501.6, 1505.3 (2016).

68 *See* Nat'l Ass'n of Home Builders v. Defs. of Wildlife, 551 U.S. 644, 660 n.6 (2007) (noting that the public does not have a right under the ESA to comment on interagency consultations (citing Interagency Cooperation—Endangered Species Act of 1973, as Amended; Final Rule, 51 Fed. Reg. 19,926, 19,928 (June 3, 1986) (to be codified at 50 C.F.R. pt. 402))).

information from the relevant states, and to request an update of information prior to concluding consultation.[69] State wildlife agencies often have deep expertise on listed species within their jurisdictions, which may be reason enough to include states in consultation in a more formal way. The Services recognized this expertise in their 2016 policy revisions to promote greater state involvement in formal consultation under section 7.[70] Some states develop relevant experience in evaluating agency impacts through state laws that limit their own actions along procedural or substantive lines similar to the ESA.[71] But wholesale devolution of federal consultation is not feasible.

The second key element of the ESA involves the broad, section 9 prohibitions against activities that "take" individuals of a listed animal species.[72] Take is but one of several section 9 prohibitions, most of which address trafficking.[73] But it is the broadest, most controversial, and most responsive to the chief cause of species imperilment: habitat alteration.[74] Congress defined "take" to include "harm,"[75] which the Services interpret as: "an act which actually kills or injures wildlife. Such 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."[76] The take prohibition is the element that states could potentially play a much larger role in implementing. Unlike section 7, which is applicable only to federal agencies, the section 9 prohibitions apply to all persons.[77] State police power to provide for public health and welfare, and to fulfill wildlife trust responsibilities,[78] is a better match for limiting private activities to conserve

---

69 Revised Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities, 81 Fed. Reg. 8663, 8664 (Feb. 22, 2016) (to be codified at 50 C.F.R. ch. IV).

70 *See id.* at 8663–65.

71 *See id.* at 8664.

72 ESA, 16 U.S.C. § 1538(a) (2012).

73 *Id.* § 1538(a), (d), (f).

74 David S. Wilcove et al., *Quantifying Threats to Imperiled Species in the United States*, 48 BIOSCIENCE 607, 607–08 & tbl.1 (1998) (finding habitat degradation is a threat to 85% of imperiled species); *see* REED F. NOSS ET AL., THE SCIENCE OF CONSERVATION PLANNING: HABITAT CONSERVATION UNDER THE ENDANGERED SPECIES ACT 2 (1997); *see also* NAT'L RES. COUNCIL ET AL., SCIENCE AND THE ENDANGERED SPECIES ACT 7, 35–38, 40, 94 (1995).

75 16 U.S.C. § 1532(19).

76 50 C.F.R. § 17.3 (2016); Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or. (*Sweet Home*), 515 U.S. 687, 691 (1995) (upholding this regulatory definition).

77 16 U.S.C. § 1538(a)(1)(B). The ESA defines "person" to mean "an individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State, or of any foreign government; any State, municipality, or political subdivision of a State; or any other entity subject to the jurisdiction of the United States." *Id.* § 1532(13).

78 Kleppe v. New Mexico, 426 U.S. 529, 545 (1976) (discussing the states' "broad trustee and police powers over wild animals within their jurisdictions"); *see also* Michael C. Blumm & Aurora Paulsen, *The Public Trust in Wildlife*, 2013 UTAH L. REV. 1437, 1442, 1477 (explaining that all states except Nevada and Utah have asserted a fiduciary duty and power to conserve

species than federal power under the commerce clause of the U.S. Constitution. The federal government and its enforcement offices generally lack the land-use control authorities that most states delegate to local governments. Local governments, operating under state enabling statutes, have much greater leverage than the Services to monitor, minimize, and mitigate habitat loss for imperiled species.[79] States are the logical implementing agents for the vast majority of conservation challenges where habitat degradation or loss is the leading threat to the continued existence of a species.[80] On the other hand, even with more money, states and local governments may lack the political will and expertise to prevent habitat degradation.

For threatened species only, the ESA provides flexibility for the listing agencies to loosen some of the prohibitions that are statutorily applied to endangered species. The Services may promulgate ESA section "4(d) rules" exercising this authority, which allows for relief from the ban on incidental take[81] through habitat alteration.[82] The Services sometimes use this administrative flexibility to induce state cooperation in recovery efforts in exchange for special exceptions to otherwise applicable prohibitions.[83]

Prohibitions are common in federal environmental law and often serve as gateways to permit programs. For instance, the Clean Water Act[84] (CWA) prohibits "the discharge of any pollutant by any person."[85] However, the proscription primarily functions as a trigger for dischargers to seek permits that limit harm rather than as an outright ban of the discharges. Though not originally the purpose of the ESA section 9 prohibitions, after 1982 they often function to channel habitat-modifying activities into permit programs.[86]

The most important such program is the third key ESA regulatory element: incidental take permits. Section 10 of the ESA allows otherwise prohibited takes where they are incidental to, rather than the purpose of, the

---

wildlife). Most states also assert some form of ownership over wild animals. *See, e.g.*, IND. CODE § 14-22-1-1(a) (2017).

79 *See* WGA POLICY RESOLUTION, *supra* note 2, at 1–4.

80 *See id.* at 1–2 (calling for an ESA amendment that provides incentives to state and local governments to craft "land-use and development plans that meet the objectives of the ESA as well as local needs"); *see also* Douglas P. Wheeler, *It Ain't Broke but It Should Be Fixed*, ENVTL. F., May/June 2016, at 57, 57 (proposing that the Services "delegate responsibility for administration of the ESA to states, like California, which have robust programs of their own").

81 An incidental take results from a side-effect of an otherwise legal activity (e.g., farming) rather than from the purpose of the activity (e.g., hunting). 50 C.F.R. § 402.02 (2016).

82 16 U.S.C. § 1533(d) (allowing regulations "necessary and advisable to provide for the conservation of [threatened] species").

83 *See* Fischman & Hall-Rivera, *supra* note 17, at 133–34 (analyzing the track record and potential of ESA 4(d) rules to promote conservation through cooperative federalism); *see also infra* notes 91–103 and accompanying text (describing examples of the use of cooperative federalism 4(d) rules).

84 Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387 (2012).

85 *Id.* § 1311(a).

86 *See generally* Endangered Species Act Amendments of 1982, Pub. L. No. 97-304, § 6, 96 Stat. 1411, 1422–24 (providing amendments to the ESA that allow permits for takings and habitat modifications).

activity.[87] By providing flexibility for otherwise illegal incidental takes, the permit program paradoxically increased the Services' leverage over habitat-degrading activities "because it substituted a flexible regulatory authority for a threat of prosecution that few found credible."[88] For instance, when improved flood control on the Sacramento River facilitated development in the Natomas Basin of California, landowners and local jurisdictions secured an incidental take permit for development in order to degrade habitat of the giant garter snake and several other ESA-listed species.[89] The permit included various commitments to minimize impacts, primarily through a statutorily required habitat conservation plan that established a conservancy to purchase, preserve, and manage mitigation habitat.[90] However, unlike the permit programs under federal pollution-control statutes, the ESA fails to authorize states to take over implementation of the incidental take permitting process.

One way to overcome this lack of delegation authority in the statute is through ESA 4(d) rules for threatened (but not endangered) species.[91] A section 4(d) rule may allow incidental takes or otherwise prohibited harms if they occur pursuant to a particular plan or permit. For instance, FWS allows ranchers and farmers to take (either directly or incidentally) threatened Utah prairie dogs as long as they have permits from the Utah Division of Wildlife Resources.[92] Rather than applying for federal section 10 permits after preparing habitat conservation plans, the agricultural land users merely apply to the state agency under a more permissive permitting regime.[93] This saves the farmers and ranchers both the expense of developing a habitat conservation plan as well as the impact fees that typically fund mitigation

---

87 16 U.S.C. § 1539(a)(1)(B). Section 10 also authorizes a number of other programs and exceptions (e.g., scientific permits, hardship exemptions, and experimental population designations), which are not as prominent as the incidental take permits. *Id.* § 1539(a)(1)(A), (b).

88 BEAN & ROWLAND, *supra* note 46.

89 Nat'l Wildlife Fed'n v. Babbitt, 128 F. Supp. 2d 1274, 1277–78, 1294, 1302 (E.D. Cal. 2000) (denying a 1997 permit for failure to adequately comply with several statutory conditions, including minimizing and mitigating the impacts of the takings, and ensuring adequate funding for the mitigation plan). The parties subsequently renegotiated the plan to the satisfaction of the court. Nat'l Wildlife Fed'n v. Norton, No. CIV-S-04-0579 DFL JF, 2005 WL 2175874, at *2 (E.D. Cal. Sept. 7, 2005) (upholding the revised 2003 incidental take permit).

90 *Nat'l Wildlife Fed'n*, 128 F. Supp. 2d at 1280.

91 16 U.S.C. § 1533(d); Fischman & Hall-Rivera, *supra* note 17, at 89; W. GOVERNORS' ASS'N, WGA SPECIES CONSERVATION AND THE ENDANGERED SPECIES ACT INITIATIVE YEAR TWO RECOMMENDATIONS 4, https://perma.cc/6C4A-ZZQC (last visited Jan. 27, 2018) [hereinafter WGA RECOMMENDATIONS] (promoting section 4(d) rules as vehicles for greater cooperative federalism).

92 50 C.F.R. § 17.40(g)(2)–(3) (2016); *see also* People for the Ethical Treatment of Prop. Owners v. U.S. Fish & Wildlife Serv., 852 F.3d 990, 994 (10th Cir. 2017) (upholding the constitutionality of ESA regulation of Utah prairie dogs on private property).

93 50 C.F.R. § 17.40(g)(3); *People for the Ethical Treatment of Prop. Owners*, 852 F.3d at 995, 997 (comparing the requirements for permitting through the Utah Division of Wildlife Resources (UDWR) with the base permit requirements from ESA for incidental takings, and concluding that the UDWR requirements are less stringent).

projects.[94] One worry about the ESA 4(d) rule approach is that it will not generate sufficient funds for offsetting the adverse impacts from development.[95] In the urban areas surrounding the Puget Sound, NMFS applies all the endangered prohibitions of ESA section 9 to the threatened Chinook salmon unless the takes occur pursuant to thirteen limitations approved by the listing agency.[96] Some of the limitations relate to activities complying with particular programs named in the 4(d) rule, such as the Washington forest practices control program for fish conservation.[97] This limitation rewards a state agency's existing collaborative conservation efforts. Other limitations offer inducements for county and municipal jurisdictions to submit comprehensive land use plans for approval.[98] If NMFS approves a plan, then all development proceeding under the plan is shielded from incidental take liability.[99] This operates in much the same way as a large-scale, area-wide habitat conservation plan,[100] such as the one approved in the Natomas Basin.[101] But it does not require that all the incidental take permit criteria be met. The cooperative federalism for threatened animals invites states to strike deals with the Services that allow for state permitting and planning to substitute for incidental take permits.[102] FWS has also experimented with relying on state rulemaking to issue incidental take permits, even for endangered species in some circumstances.[103]

Of the three most powerful regulatory tools that influence habitat-disturbing behavior, federal interagency cooperation under ESA section 7 has the least potential for greater cooperative federalism. But it is a useful model for state laws seeking to reshape state agency decisions, such as industrial siting permits and highway construction. The section 9 prohibitions against incidental take through habitat alteration could serve as federal floors upon which states could build their own imperiled species programs. Incidental take permitting is perfectly suited for state implementation and integration with planning and zoning.

---

94 *E.g.*, Martin Wachs, *It's All About Finding the Money*, ENVTL. F., May/June 2016, at 56, 56 (citing the development fee structure of area-wide habitat conservation plans (HCPs) in California and Nevada).

95 *Id.*

96 50 C.F.R. § 223.203(b)(1)–(13).

97 *Id.* § 223.203(b)(13).

98 *Id.* § 223.203(b)(12).

99 *Id.*

100 Fischman & Hall-Rivera, *supra* note 17, at 146–50 (explaining how 4(d) rules can promote effective recovery by managing habitat over a large enough area to provide both a sufficient range for the species and economic development). In contrast to ESA section 4(d) tools that may be limited to land-use jurisdictions, anybody, including a small-lot owner, can apply for an incidental take permit. *See* Lynn Scarlett, *Bigger May Sometimes Be Better*, ENVTL. F., May/June 2016, at 54, 54 (noting that only 5% of HCPs apply to areas 100,000 acres or larger).

101 *Nat'l Wildlife Fed'n*, 128 F. Supp. 2d 1274, 1279–82, 1302 (E.D. Cal. 2000).

102 *See* 50 C.F.R. § 222.103(a).

103 *See, e.g.*, FLA. FISH & WILDLIFE CONSERVATION COMM'N & U.S. FISH & WILDLIFE SERV., COOPERATIVE AGREEMENT BETWEEN THE UNITED STATES DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE AND FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION FOR THE CONSERVATION OF ENDANGERED AND THREATENED FISH AND WILDLIFE 6 (2012), https://perma.cc/Z976-94K2 [hereinafter FLORIDA COOPERATIVE AGREEMENT].

IV. METHOD AND CODING

We reviewed all fifty state legislative codes as of March 15, 2017, to identify the key provisions that relate to extinction prevention. We did not review state constitutions, many of which address wildlife authority and place special powers directly in commissions.[104] The scope of our research reaches to all types of species, including imperiled plants. However, we focused on programs that prevent animal species extinctions for two related reasons. First, states control wildlife directly through constitutional provisions and common law tradition.[105] In many states, this control is articulated through the language of property: states assert ownership of wildlife.[106] Plants, unlike animals, are considered part of the fee simple absolute estate.[107] Therefore, landowners who hold complete title enjoy exclusive ownership of wild plants as they do crops, timber, and minerals. Wild animals on private land are not owned by the fee simple absolute estate holder unless they are captured or otherwise reduced to possession.[108] State regulation of wildlife is much more extensive than regulation of plants because, in part, it interferes less directly with private property.[109]

Second, federal law imposes almost no duties on private landowners to protect listed plants. As with animals, ESA-listed plants are subject to strict prohibitions on trade and commerce.[110] But, incidental takes remain the most controversial limitations on private landowners.[111] Unlike the incidental take prohibitions for listed animals, the section 9 duties for plants on private property limit only activities that "remove, cut, dig up, or damage" them "in knowing violation" of state law or in the course of a criminal trespass.[112] Thus, a farmer plowing under a listed plant or a builder excavating it would not face liability under the ESA unless some state law prohibits the activity. Our objective to determine whether state statutes would support equal levels of species recovery as the ESA does not require deep analysis of state plant conservation statutes, which already provide the only solid *in situ*

---

104 *E.g.*, FLA. CONST. art. 4, § 9; ARK. CONST. amend. 35, § 1.

105 *See Kleppe*, 426 U.S. 529, 545 (1976).

106 Blumm & Paulsen, *supra* note 78, at 1462, 1488–1504.

107 *See, e.g.*, Clarke v. Alstores Realty Corp., 527 P.2d 698, 701 (Wash. Ct. App. 1974) ("At common law, vegetation which grew from perennial roots without the aid of human care and cultivation . . . was considered as pertaining to realty."); *see also* S. REP. NO. 100-240, at 12 (1987) ("[L]andowners traditionally have been accorded greater rights with respect to plants growing on their lands than with respect to animals.").

108 *E.g.*, Swenson v. Holsten, 783 N.W.2d 580, 585 (Minn. Ct. App. 2010); *see also* Dale D. Goble, *Three Cases/Four Tales: Commons, Capture, the Public Trust, and Property in Land*, 35 ENVTL. L. 807, 849–50 (2005) (summarizing the relationship between the common law property rights of landowners and control over wildlife).

109 Congress also justified the limited ESA section 9 prohibitions on listed plants based on the traditional rights of landowners. S. REP. NO. 100-240, at 12 (1987).

110 ESA, 16 U.S.C. § 1538(a)(2) (2012).

111 *See, e.g.*, RANDY T. SIMMONS, PROPERTY RIGHTS AND THE ENDANGERED SPECIES ACT 1 (2002), https://perma.cc/SZQ8-UEAL.

112 16 U.S.C. § 1538(a)(2)(B).

protection for privately owned plants.[113] The one exception is where private-land activity requires a federal permit (e.g., filling a wetland). In that case, the ESA section 7 duty to avoid jeopardy to any species would trigger limitations in the service of plant conservation.[114]

States may have a patchwork of statutes relevant to protecting imperiled animals, so we searched codes rather than session laws in order to evaluate the entire, currently applicable legislative program.[115] Generally the scope of code titles and agencies dealing with "wildlife" or "fish and wildlife" extends to all animals.[116] We used the Westlaw[117] database but made minimal use of search terms. In general, state code contents are clearly outlined and the best method of finding the relevant legislation is to look at titles pertaining to "conservation," "natural resources," "fish & wildlife," or "wildlife." We often used the Westlaw search function to dive right into legislation dealing with "endangered species" and then looked at other chapter contents within the code title to ensure that we had identified all relevant legislation. A few state programs to prevent extinctions use terms other than "endangered."[118] For those states, we turned to the code's table of contents to find the titles and chapters where relevant law would likely be codified. However, an overwhelming majority of states call the most imperiled category of species listed by their agencies "endangered."

Many state codes contain a variety of sections defining key terms. There may be a broadly applicable definitions section for the code itself and a more specific definitions section applicable to a title. In analyzing definitions, we always used the most specific definition we could find, starting with the section, and then moving up the hierarchy of the legislative code structure to subchapter, chapter, subtitle, title, etc. While the names of the levels of code organization vary, our search principle did not: we used the most narrowly applicable scope in coding definitions. This is consistent with the common canon of statutory construction that specific provisions trump general ones in legislation.[119]

---

113 *See* DEFS. OF WILDLIFE & CTR. FOR WILDLIFE LAW, STATE ENDANGERED SPECIES ACTS: PAST, PRESENT AND FUTURE 25–26 (1998) (discussing state conservation statutes that provide protection for privately owned plants).

114 16 U.S.C. § 1536(a)(2).

115 Some state endangered species statutes contained programs that expired. For instance, the California Endangered Species Act originally required state agencies to consult on the effects of state action on state-listed species. *See* 1984 Cal. Stat. 4243, 4248; CAL. FISH & GAME CODE § 2096 (West 1998). Though extended through 1998, the legislature ultimately allowed the consultation program to expire. *See* 1993 Cal. Stat. 2107.

116 *E.g.*, 16 U.S.C. § 1532(8) ("'[F]ish or wildlife' means any member of the animal kingdom . . . ."); OKLA. STAT. tit. 29, § 2-149.1 (2017) (providing that "wildlife" means all animals).

117 Westlaw Next is a registered trademark. WESTLAW NEXT, Registration No. 3,986,538.

118 *E.g.*, GA. CODE ANN. § 27-3-131 (2017) (defining "protected species" as "a species of animal life which the department shall have designated as a protected species and shall have made subject to the protection of this article"); *see also id.* § 27-3-132 (identifying species subject to special protections as "protected species" as a result of being "rare, unusual, or in danger of extinction").

119 WILLIAM N. ESKRIDGE, JR. ET AL., LEGISLATION AND STATUTORY INTERPRETATION 275 (2000); *see Generalia Specialibus Non Derogant*, BLACK'S LAW DICTIONARY (8th ed. 1999).

Our method evaluated only legislation. Many states with very little legislation or few protections for species may nonetheless have extensive and effective state regulatory programs that emerge from particular agencies or administrations. Conversely, some states with seemingly strong statutory protections may fail to implement or enforce key provisions.[120] Management plans, administrative rules, and cooperative agreements are all important aspects of state conservation programs.[121] Yet, except for statutory mandates to prepare recovery plans for listed species, they fall largely outside the scope of our study. Moreover, California's Natural Community Conservation Planning Act,[122] though not an imperiled species law, goes further than any state in planning for conservation of ecosystems on which species depend.[123] As early as 1973, the disparity between legislation protecting imperiled species (then limited to less than twenty states)[124] and administrative programs (established by thirty-five states)[125] highlighted the limitations of a statutes-only review as a barometer of state commitment to extinction prevention.[126] Nonetheless, legislation is important as enduring and binding instructions to state agencies. It is the strongest foundation upon which states can enhance their recovery programs. Legally, state legislation has served as the prime basis for delegating federal authority to state programs under pollution-control statutes.[127] It would serve the same function should Congress heed the calls to amend the ESA to delegate greater regulatory authority to states.

V. RESULTS

All but four state legislative codes contain some program to protect in some way designated imperiled animals, by which we mean animal species that are on the verge of extinction within the state. Four states, Alabama, Arkansas, West Virginia, and Wyoming, have no general imperiled species legislation, though they have SWAPs that address SGCNs.[128] Another state,

120 *E.g.*, *infra* note 244 and accompanying text (noting Massachusetts has not designated any areas subject to a stringent program prohibiting alteration of significant habitat).

121 *See* Martha Williams, *Lessons from the Wolf Wars: Recovery v. Delisting Under the Endangered Species Act*, 27 FORDHAM ENVTL. L. REV. 106, 144 (2016).

122 CAL. FISH & GAME CODE §§ 2800–2835 (West 2017).

123 *See* Fischman & Hall-Rivera, *supra* note 17, at 95–101 (describing how the Natural Community Conservation Planning program works).

124 Susan George & William J. Snape III, *State Endangered Species Acts*, *in* ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES 344, 346 (Donald C. Baur & WM. Robert Irvin eds., 2d ed. 2010) (providing that sixteen states possessed imperiled species legislation in 1973); Kaush Arha & Barton H. Thompson, Jr., *Federalism under the Endangered Species Act*, *in* THE ENDANGERED SPECIES ACT AND FEDERALISM, *supra* note 16, at 3, 11 (providing that seventeen states possessed imperiled species legislation in 1973).

125 S. REP. NO. 93-307 (1973), *reprinted in* 1973 U.S.C.C.A.N. 2989, 2992–93.

126 *See id.* (discussing "extensive [state] programs" protecting endangered species and their habitat).

127 *See, e.g.*, CWA, 33 U.S.C. § 1342(b) (2012) (requiring EPA to approve a state's CWA permit program if state law "provide[s] adequate authority to carry out" such a program).

128 *See infra* tbl.1.

Idaho, possesses legislation on "Species Conservation" with precise definitions,[129] but its only function appears to be facilitating ESA species delisting in Idaho.[130] We judged the Idaho legislation to constitute an imperiled species law because it concerns planning for federal hand off of endangered species once delisted. Delisting generally requires some habitat and population improvement for the listed species.[131] The Idaho law concerns itself only with writing plans and strategies.[132] No Idaho legislation offers any special regulatory protection to imperiled species.[133] Effective state legislation would prevent federal listing in the first place rather than focus solely on delisting species that have declined to the point of requiring federal protection.[134] Nonetheless, we employed an inclusive approach for identifying state imperiled species laws. Sources disagree about how many states have enacted "endangered species" statutes, but we hesitate to conclude that minor disparities between our findings and other studies reflect changes to legislation rather than differences in coding judgments.[135]

A. Domains of Protection and Recovery Plans

The domain of species protected under state imperiled species laws varies. Of the forty-six states with imperiled species laws, Idaho and Utah protect nothing other than ESA-listed species. However, unlike Idaho, Utah legislation offers a modicum of protection through a ban on illegal possession of protected wildlife.[136] Of the remaining forty-four states, most

---

129 IDAHO CODE § 36-2401 (2017) (defining endangered, threatened, candidate, and listed species as including only species threatened pursuant to federal law).

130 *See id.* §§ 36-2402 to -2405 (establishing a delisting advisory team that is charged with developing a delisting management plan).

131 *See, e.g.*, U.S. FISH & WILDLIFE SERV., RECOVERY PLANNING AND IMPLEMENTATION (2017), https://perma.cc/W2PN-WWFA (listing "acquiring and restoring habitat" and "breeding species in captivity to release them into their historic range" as tools for recovering threatened and endangered species).

132 IDAHO CODE § 36-2401. The Idaho "species conservation strategy" is a management plan "that describes the species needs in terms of habitat needs, population size, distribution and connectivity. The strategy shall include voluntary, landowner-based incentives and measures to achieve the management or conservation goals." *Id.* § 36-2401(10). Delisting management plans "shall provide for the management and conservation of the species once it is delisted, and contain sufficient safeguards to protect the health, safety, private property and economic well-being of the citizens of the state of Idaho." *Id.* § 36-2404(1).

133 The Idaho legislature limits the reach of the "Species Conservation" chapter by noting that it shall not "be interpreted as granting the department of fish and game with new or additional authority." *Id.* § 36-2405(7). Idaho, like most states, already bans possession of wildlife except where legally taken. *Id.* § 36-401. Because many listed animals would require state license for taking, there remains this indirect protection. But, it is not special to imperiled or even federally listed species.

134 Michael J. Bean, *A Statute Reborn*, ENVTL. F., Sept./Oct. 2017, at 31, 34.

135 George and Snape counted forty-six states with endangered species legislation in 2010, in contrast to Arha and Thompson's count of forty-five in 2011. *Compare* George & Snape III, *supra* note 124, at 347, *with* Arha & Thompson, Jr., *supra* note 124, at 11. More recently, a study concluded that all states but West Virginia and Wyoming have endangered species laws. *See* Camacho et al., *supra* note 26, at 10,838.

136 UTAH CODE ANN. § 23-20-4.5 (West 2017).

either automatically include federally listed species[137] or require state determinations of whether federally listed species should be added to their protective domain.[138] However, all forty-four states also list species that are imperiled within the state but not protected under the ESA.

Some states without specific imperiled species regulatory protections nonetheless have programs to list species under various categories, fund and engage in conservation action, and prohibit certain takes under general authority. For instance, Arizona has no discrete imperiled species statute. But Arizona's legislative code defines endangered, threatened, and sensitive species;[139] it creates a special funding source for conservation;[140] and applies its general wildlife take prohibition to endangered species,[141] with penalties equal to those for illegal takes of trophy game.[142] Other state legislation is not self-implementing, merely empowering a state agency to make rules as it deems necessary to protect imperiled species.[143] Our inclusive approach results in coding more state imperiled species legislation than we would if we limited ourselves to just those states possessing the key regulatory elements we associate with the ESA. Table 1 displays the basic attributes of state imperiled species legislation.

137 *E.g.*, LA. STAT. ANN. § 56:1904(A) (2017).
138 *E.g.*, KAN. STAT. ANN. § 32-960(b)(3) (2017).
139 ARIZ. REV. STAT. ANN. § 17-296(2)–(4) (2017).
140 *Id.* § 17-298.
141 *Id.* § 17-101(20).
142 *Id.* § 17-314(A)(6).
143 *E.g.*, GA. CODE ANN. § 27-3-132(b) (2017).

State	Number of imperiled categories	Taxa below species included?	Invertebrates included?	Plants included?	Status reporting frequency (yr)	Recovery plan mandate?	Habitat protection provision for listed taxa?
AL	--	--	--	--	--	--	--
AK	1	Y	Some	N	2	N	Y
AZ	3	Y	Some	N	--	N	N
AR	--	--	--	--	--	--	--
CA	3	Y	Some	Y	5	N	N
CO	2	Y	Some	N	5	N	N
CT	3	Y	All	Y	5	N	Y
DE	1	Y	Unclear	N	--	N	N
FL	2	N	All	N	1	N	N
GA	1	N	All	N	--	N	N
HI	4	Y	All	Y	1	N	N
ID	4	Y	All	N	--	N	N
IL	2	N	All	Y	5	N	Y
IN	1	Y	Some	N	2	N	N
IA	2	Y	All	Y	2	N	N
KS	2	N	All	N	5	Y	N
KY	1	N	All	N	--	N	N
LA	2	N	All	N	--	N	N
ME	2	N	All	N	--	N	N
MD	2	Y	All	Y	--	N	N
MA	3	Y	All	Y	5	N	Y
MI	2	Y	All	Y	2	N	N
MN	3	N	All	Y	3	N	N
MS	1	Y	Some	N	2	N	N
MO	1	N	All	Y	--	N	N
MT	1	Y	Some	N	2	N	N
NE	2	Y	All	Y	--	N	N
NV	3	Y	Unclear	N	--	N	N
NH	2	N	All	N	--	N	N
NJ	1	Y	Some	N	--	N	N
NM	2	Y	Some	N	2	Y	N
NY	3	N	Some	N	--	N	Y
NC	3	N	Some	N	--	Y	N
ND	2	Y	All	N	--	N	N
OH	1	N	All	N	--	N	N
OK	2	Y	All	N	--	N	N
OR	2	Y	Some	N	5	N	N
PA	2	Y	Some	N	--	N	N
RI	1	N	All	Y	--	N	N
SC	1	Y	Some	N	2	N	N
SD	2	N	All	Y	2	N	N
TN	3	Y	Some	N	2	N	N
TX	1	Y	Some	N	--	N	N
UT	2	N	Some	N	--	N	N
VT	2	Y	All	Y	--	N	N
VA	2	N	Some	N	--	N	N
WA	1	N	All	N	--	N	N
WV	--	--	--	--	--	--	--
WI	2	N	Some	Y	--	N	N
WY	--	--	--	--	--	--	--

Table 1: Domains of Protection and Recovery Plans in State Imperiled Species Legislation

The ESA geographic scope of concern for imperilment lists a species if it is endangered in "all or a significant portion of its range."[144] This extends ESA protection to a species even if just the U.S. portion of a species is at risk.[145] Analogously, almost every state with imperiled species protection legislation includes species based on the risk of extirpation within the geographic boundaries of the state.[146] But, some other species, especially those on the ESA list, are also included in thirty-four state lists without consideration of their status within state boundaries.[147] Twenty-one state laws parallel the ESA in maintaining and protecting two lists of species: threatened and endangered.[148] Fourteen additional states maintain a single list of protected species.[149] Eleven other states maintain three or more lists, but generally only one or two categories of species receive regulatory protection.[150] Twenty-seven states list taxa narrower than biological species, such as subspecies or distinct population segments, as does the ESA.[151] The other states list only taxa at the species level.[152]

The types of animals eligible for listing defy the "charismatic megafauna" stereotype of the species lawmakers care about protecting. Obscure, comical species names, such as the Delhi Sands flower-loving fly (*Rhaphiomidas terminates abdominalis*), have been emphasized to ridicule the comprehensive extinction-protection mission of the ESA.[153] One legislator went so far as to state that, in 1973, "no member of Congress could envision application" of the ESA to "flies, mussels, snails."[154] Yet, when Congress enacted the ESA, it was already evident that the extinction

144 ESA, 16 U.S.C. § 1532(6) (2012).

145 Final Policy on Interpretation of the Phrase "Significant Portion of Its Range" in the Endangered Species Act's Definitions of "Endangered Species" and "Threatened Species," 79 Fed. Reg. 37,578, 37,592 (July 1, 2014) (to be codified at 50 C.F.R. ch. I and II) (noting that national boundaries can be the basis for designating a distinct population segment whose range ends at the border).

146 George & Snape III, *supra* note 124, at 347.

147 *See id.*

148 *E.g.*, 34 PA. CONS. STAT. § 102 (2016) (defining the two categories of endangered species and threatened species in a fashion similar to the ESA).

149 *E.g.*, N.J. STAT. ANN. 23:2A-3(c) (West 2017) (establishing just one listed category, "endangered species").

150 *E.g.*, N.C. GEN. STAT. § 113-331(2), (8)–(9) (2017) (listing three categories and defining endangered species and threatened species in a fashion similar to the ESA but also including a listing category of "special concern species" that require monitoring but not protection from takes).

151 *E.g.*, IOWA CODE § 481B.1(8) (2017) (defining species to include subspecies and "smaller taxa in common spatial arrangement that interbreed or cross-pollinate when mature"); *see also* ESA, 16 U.S.C. § 1532(16) (2012).

152 *See supra* tbl.1.

153 Eileen Campbell, *The Case of the $150,000 Fly*, ECOSYSTEM MARKETPLACE (Apr. 26, 2006), https://perma.cc/S75Y-84BW.

154 James V. Hansen, *Endangered Economies*, 16 F. FOR APPLIED RES. & PUB. POL'Y 45, 46 (2001). For a discussion on legislators' attempts to rewrite the history of taxonomic breadth from the ESA, see Robert L. Fischman, *Predictions and Prescriptions for the Endangered Species Act*, 34 ENVTL. L. 451, 467–68 (2004).

problem extended to invertebrates.[155] Most (forty-four of forty-six) state imperiled species laws clearly allow at least some invertebrates on their lists.[156] We found two state laws ambiguous about the inclusion of invertebrates,[157] or lacking definitions of covered species.[158] Many states do not exclude insect pests,[159] a category the ESA authorizes the Services to leave off of lists when their protection "would present an overwhelming and overriding risk to man."[160] Some states exclude other pests, such as "old world rats and mice of the family Muridae of the order Rodentia."[161]

Of the thirty-four states that protect plants, only fifteen do so under the imperiled species portion of their legislative codes.[162] The other nineteen states have some other (often discretionary and only applicable to state lands) plant protection provision elsewhere in their codes.[163] States often legislate plant protection under separate statutes for the same reason that the ESA has different prohibitions for plants than animals: fee simple absolute property holders own the plants that occur on their land.[164] Many states' imperiled animal regulatory programs amount to little more than takings prohibitions, which do not apply to plants.[165] This might explain the

---

155 BEAN & ROWLAND, *supra* note 46, at 199; *see also* Nagle, *supra* note 17, at 397 (citing *Endangered Species: Hearing Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the H. Comm. on Merchant Marine and Fisheries*, 93d Cong. 207 (1973) (discussing imperiled mollusks)). Still, it was not until 1976 that FWS began listing invertebrates. *First Invertebrate Species Listed As Endangered*, U.S. FISH & WILDLIFE SERV., https://perma.cc/2H3K-X67Y (last updated June 19, 2017); *e.g.*, Endangered Status for 159 Taxa of Animals, 41 Fed. Reg. 24,062, 24,064 (June 14, 1976) (listing the Curtis pearlymussel among many invertebrates added to the domain of the ESA).

156 *See, e.g.*, ME. STAT. tit. 12, § 10001(71) (2017) ("any species of the animal kingdom"); MO. REV. STAT. § 252.020(3) (2017) ("all wild birds, mammals, fish and other aquatic and amphibious forms, and all other wild animals, regardless of classification"); KY. REV. STAT. ANN. § 150.010(42) (2017) ("any normally undomesticated animal . . . without limitations"); *cf.* ALASKA STAT. § 16.20.190(a) (2017) (including fish or wildlife, but defining neither term); *id.* § 16.05.940(12) (defining "fish" to include aquatic invertebrates, but not defining wildlife); CAL. FISH & GAME CODE § 45 (West 2017) (defining "fish" to include mollusks, crustaceans, and invertebrates—although it is ambiguous whether that is just marine invertebrates or all invertebrates); TEX. PARKS & WILD. CODE ANN. § 68.001(1) (2017) (including only mollusks and crustaceans among the terrestrial invertebrates eligible for listing; all aquatic animals are eligible).

157 *See, e.g.*, NEV. REV. STAT. § 503.584(2)(a) (2017) (describing purpose as encompassing "fish and other vertebrate wildlife"); *cf. id.* § 503.585 (listing "native fish, wildlife and other fauna").

158 *See, e.g.*, DEL. CODE ANN. tit. 7, § 101 (2017) ("wildlife" undefined in code).

159 *See, e.g.*, IND. CODE § 14-22-34-1 (2017).

160 ESA, 16 U.S.C. § 1532(6) (2012); *see also* S.D. CODIFIED LAWS § 34A-8-1(1) (2017) (defining "endangered species" to exclude insect pests).

161 WASH. REV. CODE § 77.08.010(73) (2017).

162 *E.g.*, MINN. STAT. § 84.0895 subdiv. 1 (2017); *see supra* tbl.1.

163 *E.g.*, UTAH CODE ANN. §§ 53C-2-202, 65A-2-3 (West 2017) (providing discretionary authority to protect federally listed plants on state lands); *see also* CAL. FISH & GAME CODE § 2062 (West 2017) (defining "endangered species" to include plants under the California Endangered Species Act); *id.* § 1904 (authorizing the designation of endangered and rare native plants under the California Native Plant Protection Act).

164 *See, e.g.*, Falk v. Amsberry, 633 P.2d 799, 803 (Or. Ct. App. 1981).

165 George & Snape III, *supra* note 124, at 346, 353.

separate statutory treatment of plants. Two states, Maryland and Pennsylvania, implement separate acts for wildlife and for fish. This difference likely reflects a regional tradition rather than a legal distinction.

Most states rely solely on their state wildlife agencies to determine which animals warrant protection under an imperiled species law.[166] The ESA relies on the initiative of the Services but also provides a controversial petition process for citizens to force the Services to consider additions to, modifications of, or removals from the federal lists.[167] The petition process is contentious because it can derail the priorities of the federal Services.[168] However, it has resulted in many listings of species that are closer to extinction than the ones the Services evaluate on their own.[169] Only thirteen state imperiled species laws expressly allow citizens to petition the responsible agency to review the status of a listed species.[170] Western states disproportionately legislate citizen petition procedures, which is consistent with the initiative and referendum tradition in that region.[171] Other states may provide citizens the right to petition as a matter of administrative law, rather than within imperiled species legislation.

Imperiled species lists must be dynamic to reflect the changes in species populations, habitat availability, and intensity of threats. Legislation in twenty-four states requires periodic administrative updates to the status of listed species.[172] Mandates for periodic review without establishing deadlines are less likely to be effective or enforceable than those that specify a maximum time period between status reviews. Four states requiring monitoring do not establish deadlines.[173] Of the remaining twenty states, the most common time periods for reporting are every two years (ten states), followed by every five years (seven states), one year (two states), and three years (one state).[174] The ESA requires the Services to review the status of listed species every five years,[175] so twenty states meet or exceed that standard for reporting. Though many states commit to imperiled species

166 The exception to this general rule is the thirty-seven states that automatically include in their lists species designated by the Services as protected under the ESA. *See id.* at 347.

167 ESA, 16 U.S.C. §§ 1533(b)(3)(A) (2012).

168 *See* Eric Biber & Berry Brosi, *Officious Intermeddlers or Citizen Experts? Petitions and Public Production of Information in Environmental Law*, 58 UCLA L. REV. 321, 336 (2010).

169 *Id.* at 359, 361, 378.

170 *E.g.*, CAL. FISH & GAME CODE § 2071 (West 2017).

171 David B. Magleby, *Let the Voters Decide? An Assessment of the Initiative and Referendum Process*, 66 U. COLO. L. REV. 13, 14–15 (1995). More than half (nine of thirteen) of the states with imperiled species legislation providing citizens with listing petition rights occur in the nineteen states in the Association of Fish and Wildlife Agencies' western region, which extends from the Rocky Mountains to the Pacific Ocean. *About Us*, W. ASS'N FISH & WILDLIFE AGENCIES, https://perma.cc/5UPN-Z3KY (last visited Jan. 27, 2018); *Members*, W. ASS'N FISH & WILDLIFE AGENCIES, https://perma.cc/32MX-3LBC (last visited Jan. 27, 2018).

172 *E.g.*, MASS. GEN. LAWS ch. 131A, § 4 (2017) (providing that the director of the agency "shall review" imperiled species lists every five years).

173 *E.g.*, N.J. STAT. ANN. § 23:2A-4 (West 2017) ("The commissioner shall periodically review the State list of endangered species and may by regulation amend the list making such additions or deletions as are deemed appropriate.").

174 *See supra* tbl.1.

175 ESA, 16 U.S.C. § 1533(c)(2) (2012).

monitoring in SWAPs, which are revised every ten years,[176] states identify species-specific information as among their greatest unmet needs.[177] Particularly because many states within a region may have the same species on their lists, coordination among states would improve understanding of species status at both the regional and national level.[178] The ESA already mandates that the Services implement a system in cooperation with states for status monitoring of delisted species.[179]

Recovery plans typically set the benchmarks for moving a species out of an imperiled category. The ESA requires a plan for all listed species except those whose recovery would not be advanced by one.[180] The Services frequently collaborate with state agencies in recovery planning and may include other appropriate people on recovery planning teams.[181] States have been particularly critical of tardy issuance of federal recovery plans.[182] Congress is currently considering bills that would allow states to claim exclusive authority to develop or implement recovery plans for intrastate species.[183] Our research suggests that few states have experience with directing recovery planning. Only three states' laws require that agencies prepare recovery plans for their own imperiled species.[184] We coded generously, and included in our tally of recovery-plan mandates even New Mexico's provision, which requires only the development of recovery plans "to the extent practicable."[185] However, we excluded Maine's recovery plan requirement because it applies only to a narrow class of imperiled species, those that will be conserved using "transplantation, introduction or reintroduction."[186] Many state statutes provide general guidance about developing an imperiled species program that requires relevant agencies to "plan" for recovery.[187] However, we did not consider these common

176 *Id.* § 669c(d)(1)(D)(vi).

177 Meretsky et al., *supra* note 35, at 973.

178 *Id.* at 973–74.

179 16 U.S.C. § 1533(g).

180 *Id.* § 1533(f)(1).

181 *Id.* § 1533(f)(2). The Services' cooperative federalism policy is to utilize "the expertise and solicit the information and participation of State agencies in all aspects of the recovery planning process for all species under their jurisdiction." Revised Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities, 81 Fed. Reg. 8663, 8664 (Feb. 22, 2016) (to be codified at 50 C.F.R. ch. IV).

182 *See, e.g.*, WGA POLICY RESOLUTION, *supra* note 2, at 5–6 (recommending completion of recovery plans within one year of listing and calling for clearer recovery goals).

183 *See* Endangered Species Management Self-Determination Act, S. 935, 115th Cong. § 4(j)(2)(B) (2017); H.R. 2134, 115th Cong. § 4(j)(2)(B) (2017).

184 KAN. STAT. ANN. § 32-960 (2017); N.M. STAT. ANN. § 17-2-40.1 (2017); N.C. GEN. STAT. § 113-333 (2017).

185 *E.g.*, N.M. STAT. ANN. § 17-2-40.1(G) (also requiring that final plans be prepared within two years after listing).

186 ME. STAT. tit. 12, § 12804(1)(D) (2017).

187 *E.g.*, 520 ILL. COMP. STAT. 10/11(a) (2016) (stating that the department "shall actively plan and implement a program for the conservation of endangered and threatened species, by means which should include published data search, research, management, cooperative agreements with other agencies, identification, protection and acquisition of essential habitat, support of beneficial legislation, issuance of grants from appropriated funds, and education of the public").

provisions to compel recovery plans unless the legislation expressly identified a recovery plan as a particular type of mandatory document.

Critical habitat under the ESA provides limited additional protections for listed species only through its narrow applicability in the consultation process. In addition to proscribing jeopardy, ESA section 7 demands that federal agency actions not result in adverse modification of critical habitat.[188] Critical habitat is irrelevant to section 9 prohibitions. Yet it plays an outsized role in opposition to the ESA when landowners find their property within mapped areas designated for critical habitat, and potentially subject to the adverse modification test in seeking federal permits.[189] Most state legislatures wish to avoid such controversy. But, habitat degradation is the leading threat to U.S. imperiled species.[190] We coded generously to include all habitat-protecting provisions for listed taxa, even if no agency formally maps covered habitat as the Services must do under the ESA, and regardless of how the protection applies. For instance, we counted as a habitat-protection provision Alaska legislation mandating commissioners "take measures to preserve the natural habitat" of imperiled species.[191] Still, only five states legislate habitat protection for imperiled species.[192]

B. Interagency Consultation

Consultation between the Services and other federal agencies under the ESA is framed as "interagency cooperation" in section 7 to ensure that government actions and funding do not undermine the national policy of extinction prevention.[193] Table 2 shows similar coordination requirements among state agencies in eleven state legislative codes.[194] The northeastern states disproportionately impose strong interagency cooperation requirements. The strength of ESA section 7 is that it marries a detailed, required procedure with a substantive threshold limiting agency impacts; agency actions must not jeopardize the continued existence of listed species or adversely modify critical habitat.[195] We did not categorize as interagency cooperation state legislation that merely requires cooperation without

188 ESA, 16 U.S.C. § 1536(a)(2) (2012).

189 *See, e.g.*, Home Builders Ass'n of N. Cal. v. U.S. Fish & Wildlife Serv., 616 F.3d 983, 986 (9th Cir. 2010) (explaining that a party "must consult with the appropriate expert wildlife agency before any" action can be taken regarding critical habitat).

190 Wilcove et al., *supra* note 74, at 607–09 (noting habitat degradation is a threat to 85% of imperiled species); *see also* NOSS ET AL., *supra* note 74, at 2, 5–7 & fig.1.1; NAT'L RESEARCH COUNCIL ET AL., *supra* note 74, at 7, 35–38, 40.

191 ALASKA STAT. § 16.20.185 (2017).

192 *Cf.* George & Snape III, *supra* note 124, at 348–49 (tallying six states with critical habitat designation provisions employing a coding definition that appears closer to the ESA approach).

193 16 U.S.C. § 1536(a)(1).

194 *Cf.* George & Snape III, *supra* note 124, at 352 (tallying eight states with interagency consultation requirements); Camacho et al., *supra* note 26, at 10,839 (tallying twelve states with interagency consultation requirements). Our tally of state legislation for interagency cooperation includes Connecticut, Hawaii, Illinois, Maine, Maryland, Massachusetts, Nebraska, New Hampshire, Oregon, Vermont, and Wisconsin.

195 16 U.S.C. § 1536(a)(2).

specifying either a procedure or a substantive threshold of impacts to be avoided.[196] Of the eleven states requiring interagency cooperation, all impose some kind of substantive threshold beyond which adverse impacts to imperiled species will not be tolerated.[197] Most of the eleven states adopt the same substantive jeopardy standard as the ESA itself.[198]

Like the ESA, most states have an exemption or variance procedure to allow otherwise legal, but substantively barred, state actions to proceed.[199] Three of the eleven states do not establish any particular procedures for state agencies to determine whether their actions, programs, or grants might cross the threshold into impermissible adverse impacts on imperiled species.[200] Some state laws, as with the ESA, clearly include agency permitting as an action subject to substantive standards.[201] This is important because state permitting decisions are likely to most directly address private habitat-disturbing developments. However, other state legislation is ambiguous about whether the scope of agency actions subject to interagency consultation includes permitting.[202]

196 *E.g.*, VA. CODE ANN. § 29.1-570 (West 2017) (mandating cooperation but without a procedure to formalize cooperation or a substantive threshold). Other states require interagency coordination on only narrowly circumscribed matters. *E.g.*, FLA. STAT. § 379.2291(4)(c) (2017) (establishing discretionary interagency coordination for establishing road speed limits to protect listed species).

197 *E.g.*, ME. STAT. tit. 12, § 12806(1)(A) (2017) (prohibiting state agencies or municipal governments from permitting, funding, or carrying out projects that will significantly alter designated habitat or violate protection guidelines for an imperiled species).

198 *E.g.*, NEB. REV. STAT. § 37-807(3) (2017) (providing that all state agencies must "insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered or threatened species or result in the destruction or modification of habitat of such species which is determined by the commission to be critical"); HAW. REV. STAT. § 195D-5(b)(2) (2017) (providing that all state agencies must "ensure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of [imperiled] species"). Hawaii, however, like most states, neither designates critical habitat nor includes it as part of the substantive threshold.

199 *Compare* 16 U.S.C. § 1536(e)(1)–(10) (providing the federal agency action exemption process and standards), *with, e.g.*, ME. STAT. tit. 12, § 12806 (providing a variance from the substantive limitations on state action after a public hearing and commissioner certification that the action would not pose a significant risk of extinction).

200 *See infra* tbl.2.

201 *E.g.*, ME. STAT. tit. 12, § 12806.

202 *See, e.g.*, WIS. STAT. § 29.604(6r)(a) (2017).

State	No consultation requirement	Substantive standard only	Procedural and substantive standards
AL	X		
AK	X		
AZ	X		
AR	X		
CA	X		
CO	X		
CT			X
DE	X		
FL	X		
GA	X		
HI		X	
ID	X		
IL			X
IN	X		
IA	X		
KS	X		
KY	X		
LA	X		
ME		X	
MD			X
MA			X
MI	X		
MN	X		
MS	X		
MO	X		
MT	X		
NE			X
NV	X		
NH		X	
NJ	X		
NM	X		
NY	X		
NC	X		
ND	X		
OH	X		
OK	X		
OR			X
PA	X		
RI	X		
SC	X		
SD	X		
TN	X		
TX	X		
UT	X		
VT			X
VA	X		
WA	X		
WV	X		
WI			X
WY	X		

Table 2: Interagency Coordination Requirements in State Imperiled Species Legislation

Among the eight states with both procedural and substantive elements of interagency cooperation, there are some strong provisions that can serve as models for others seeking to strengthen imperiled species conservation.[203] For instance, Massachusetts requires action agencies to "use all practicable means and measures to avoid or minimize damage to [state-listed] species."[204] Wisconsin's substantive requirement for state agency action is even broader, prohibiting jeopardy to the species and adverse modification to critical habitat, but also jeopardy to "the whole plant–animal community of which [the species] is a part."[205] Wisconsin also requires that the state "alleviate, to the maximum extent practicable under the circumstances, any potential adverse effect" on the state-listed species when a "taking" occurs.[206] This provision mirrors the incidental take statement program of ESA section 7.[207]

C. Prohibited Acts and Permits

Prohibited acts of the kind banned by ESA section 9 vary from state to state. The term "take" has deep roots in wildlife law and originally applied solely to active pursuit through such activities as hunting, fishing, and trapping.[208] Most state imperiled species legislation bans take, but that fact is unrevealing because states define the term differently (or not at all). Moreover, legislation itself may not reveal the full extent of activities affected by take bans. For instance, the ESA definition of take, by itself, does not expressly reveal whether habitat destruction falls under the prohibition.[209] Instead, Service rulemaking is the key authority for extending the ESA take prohibition to certain kinds of habitat modification.[210] Because, overall, the most important role states could serve in endangered species recovery is controlling land-use degradation of habitat, this is the single most important category for indicating how well states could contribute to greater cooperative federalism in the ESA. As previously noted, some state legislation does not even ban killing an imperiled species but merely empowers agencies to implement such a ban.[211] Because our study did not analyze agency rules or enforcement proceedings, there remains ambiguity

---

203 *E.g.*, ME. STAT. tit. 12, § 12806(1)(A) (prohibiting state agencies or municipal governments from permitting, funding, or carrying out projects that will significantly alter designated habitat or violate protection guidelines for an imperiled species).

204 MASS. GEN. LAWS ch. 131A, § 4 (2017).

205 WIS. STAT. § 29.604(6r)(a).

206 *Id.* § 29.604(6r)(d).

207 *See* ESA, 16 U.S.C. § 1536(b)(4) (2012).

208 2 WILLIAM BLACKSTONE, COMMENTARIES *411 ("[E]very man . . . has an equal right of pursuing, and taking to his own use, all such creatures as are *ferae naturae* . . . ."), *quoted in Sweet Home*, 515 U.S. 687, 717 (1995) (Scalia, J., dissenting).

209 *See* 16 U.S.C. § 1532(19); *see also supra* notes 75–76 and accompanying text.

210 50 C.F.R. § 17.3 (2016).

211 *E.g.*, GA. CODE ANN. § 27-3-132 (2017) (empowering a board to make rules to protect imperiled species, but limiting them to "to the regulation of the capture, killing, or selling of protected species and the protection of the habitat of the species on public lands").

associated with the actual extent to which prohibited acts provisions actually protect state-listed species.[212] However, we were able to distinguish four different types of prohibitions in statutes: 1) trafficking; 2) purposeful actions designed to capture or kill wildlife; 3) broader bans suggesting habitat concerns; and 4) a special category of prohibitions that include "lesser acts," such as "disturbing" wildlife, which one influential court decision interpreted to ban significant habitat modification.[213]

The most common category of prohibited acts in state statutes is trafficking. Trafficking is illegal commercial trading, which legislation typically controls through limitations on the ability to import, export, sell, buy, offer to sell or buy, deliver, carry, or transport wildlife.[214] Even in the United States, trafficking remains a threat to many imperiled species, such as freshwater turtles desired in Asian medicinal and food markets, or fish harvested for edible roe.[215] Table 3 shows that legislation in forty-one states prohibits imperiled species trafficking. The nine states with no trafficking prohibition for imperiled species include the four states with no imperiled species protective legislation (Alabama, Arkansas, West Virginia, and Wyoming) and Idaho (which concerns itself only with promoting federal delisting). The remaining four states (Arizona, Florida, Nevada, and North Dakota) contain other sorts of prohibitions designed to protect imperiled species from illegal commercial activity. For instance, Arizona's general legislative provisions for "fish and game" specify the very highest civil penalties for possession of illegally taken trophy or endangered animals.[216] Most states prohibit selling, buying, or possessing any wild animal (or animal part) without a permit or some other permission from a state agency.[217] Most states have some sort of penalties for illegal commerce generally.

---

212 For example, Maryland legislation prohibits take, which it defines similarly to the ESA definition: "[H]arass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." MD. CODE ANN., NAT. RES. §§ 10-2A-01(k), 10-2A-05 (LexisNexis 2017). However, one would need to read the agency regulation to learn that it interprets harm to include some forms of significant habitat modification. MD. CODE REGS. 08.03.08.01(6)(b) (2017).

213 *Sour Mountain Realty, Inc.*, 714 N.Y.S.2d 78, 81 (N.Y. App. Div. 2000).

214 *See, e.g.*, 16 U.S.C. § 1538(a)(1) (prohibiting most of these acts).

215 *See* Inclusion of Four Native U.S. Freshwater Turtle Species in Appendix III of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 81 Fed. Reg. 32,664, 32,667–668 (May 24, 2016) (to be codified at 50 C.F.R. pt. 23) (describing trafficking threats to the turtles); NAT'L MARINE FISHERIES SERV., FINAL RECOVERY PLAN FOR THE SHORTNOSE STURGEON 45 (1998) (describing poaching for endangered shortnosed sturgeon roe), https://perma.cc/847L-XZ42.

216 ARIZ. REV. STAT. ANN. § 17-314 (2017).

217 *E.g.*, FLA. STAT. § 379.3762 (2017) (generally prohibiting personal possession of Florida wildlife without a permit, subject to certain exceptions).

State	Trafficking prohibited?	Purposeful pursuit prohibited?	Incidental habitat modification clearly prohibited?	"Take" definition includes "harm"	Take definition includes "lesser acts," such as "disturbing"	Incidental take permit authorized?
AL						
AK	X	X				
AZ		X				
AR						
CA	X	X				X
CO	X	X				
CT	X	X		X		
DE	X					
FL		X				
GA	X	X				
HI	X	X		X		X
ID						
IL	X	X		X		X
IN	X	X				
IA	X	X		X		
KS	X	X				
KY	X					
LA	X	X				
ME	X	X	X			X
MD	X	X		X		
MA	X	X	X	X		X
MI	X	X		X		
MN	X	X				
MS	X	X				
MO	X					
MT	X	X				
NE	X	X		X		
NV		X				
NH	X	X			X	
NJ	X	X				
NM	X	X				
NY	X	X			X	
NC	X	X		X		
ND						
OH	X	X				
OK	X	X			X	
OR	X	X				X
PA	X	X				
RI	X					
SC	X	X				
SD	X	X				
TN	X	X				
TX	X	X				
UT	X	X				
VT	X	X			X	
VA	X	X				
WA	X	X				
WV						
WI	X	X				X
WY						

Table 3: Prohibited Acts and Permits in State Imperiled Species Legislation

The second category of prohibitions applies to hunting and other purposeful actions (and usually intent to act) to reduce an imperiled species to possession (i.e., capture or kill). The common law of wildlife typically required this kind of effort in order for a person to claim ownership in an animal or animal part.[218] The key phrases expressing this active pursuit are pursue, hunt, shoot, wound, kill, trap, capture, or collect.[219] This roughly corresponds to the ESA section 9 prohibitions except for "harm" and "harass," which lend themselves to broader interpretations embracing incidental effects.[220] Other commonly occurring terms in this purposeful category under state law include fish, harvest, snare, and net.[221] If a statute required purposeful intent (e.g., employing words of direct action, such as kill or pursue), we coded it for active, intent-driven prohibition.[222] Actions intended to kill or wound an animal remain a threat for imperiled species such as prairie dogs and wolves.[223]

Purposeful actions, and their attempts, to take wild animals (other than those considered pests or vermin) are generally prohibited under state wildlife law, which typically bans people from engaging in the activities without a license.[224] States will not offer licenses to pursue or hunt most nongame wildlife, which compose the vast majority of animals on state imperiled species lists.[225] In order to home in on imperiled species programs, we coded only special prohibitions applying to imperiled species. This rules out the four states with no programs and Idaho.[226] In addition to those states, five others have no special prohibitions on active pursuit of imperiled species.[227] Colorado's imperiled species law bans "take" in a provision that otherwise only addresses trafficking.[228] It defines "take" in a generally applicable part of the "Parks and Wildlife" title as "to acquire possession."[229]

---

218 *See* Pierson v. Post, 3 Cai. 175, 178 (N.Y. Sup. Ct. 1805) (ruling that "actual bodily seizure is not indispensable to acquire right to, or possession of wild beasts; but that, on the contrary, the mortal wounding of such beasts, by one not abandoning his pursuit, may, with the utmost propriety, be deemed possession of him; since thereby, the pursuer manifests an unequivocal intention of appropriating the animal to his individual use, has deprived him of his natural liberty, and brought him within his certain control").

219 *See id.*

220 ESA, 16 U.S.C. § 1538 (2012); 50 C.F.R. § 17.3 (2016).

221 *E.g.*, UTAH CODE ANN. § 23-13-2 (West 2017).

222 *E.g.*, GA. CODE ANN. § 27-3-132(b) (2017) (prohibiting "capture" and "killing"); UTAH CODE ANN. § 23-13-2(48)(a) ("hunt, pursue, harass, catch, capture, possess, angle, seine, trap, or kill any protected wildlife").

223 Endangered and Threatened Wildlife and Plants; Endangered Status for the Mexican Wolf, 80 Fed. Reg. 2488, 2496 (Jan. 16, 2015) (to be codified at 50 C.F.R. pt. 17); Endangered and Threatened Wildlife and Plants; Final Rule to Reclassify the Utah Prairie Dog as Threatened, with Special Rule to Allow Regulated Taking, 49 Fed. Reg. 22,330, 22,330–31 (May 29, 1984) (to be codified at 50 C.F.R. pt. 17).

224 *E.g.*, UTAH CODE ANN. § 23-19-1(1).

225 *E.g.*, ARIZ. REV. STAT. ANN. § 17-314 (2017) (imposing civil penalties for illegally taking, wounding, killing or possessing nongame animals and endangered species animals).

226 *See supra* notes 128–133 and accompanying text.

227 Delaware, Kentucky, Missouri, North Dakota, and Rhode Island. *See supra* tbl.3.

228 COLO. REV. STAT. § 33-2-105(3)–(4) (2017).

229 *Id.* § 33-1-102(43).

We tallied this ambiguous provision as a purposeful pursuit for killing or collecting. Four states ban commerce in imperiled species but not active pursuit.[230]

The third and fourth categories of prohibitions are those that *may* or *do* prohibit certain forms of habitat degradation. Ordinarily, people impair habitat for imperiled species in the service of other, economically productive purposes. Therefore, the key interpretive question is whether legislative prohibitions apply to harms or disturbances that are incidental to an otherwise lawful purpose, such as farming, logging, or real estate development. Unfortunately, this important issue is difficult to code because of ambiguity over what text might actually ban incidental adverse impacts on imperiled species. For instance, the definition of Colorado's take ban expressly excludes "the accidental wounding or killing of wildlife by a motor vehicle, vessel, or train."[231] One could interpret the exclusion to mean that other forms of accidental wounding of wildlife are prohibited implicitly under the *expressio unius* canon of construction.[232] But an agency is likely not compelled to make that interpretation.[233] We did not count Colorado among states with legislation prohibiting incidental take through habitat degradation because we are interested in clearer legislative judgments rather than mere openings for agency discretion that *could possibly* be used to regulate incidental takes.

Other state statutes prohibit take and define the term to include "harm," the verb that the Services interpret to include certain forms of significant habitat modification.[234] Some states agencies make the same interpretation of "harm."[235] Other states do not make regulatory interpretations of "harm."[236] A recent study from the Center for Land, Environment, and Natural Resources of the University of California, Irvine School of Law reviewed state regulations and found five states that interpret terms of their prohibitions to ban forms of significant habitat alteration.[237] We found nine

---

230 Delaware, Kentucky, Missouri, and Rhode Island. *See supra* tbl.3; *see, e.g.*, MO. REV. STAT. § 252.240(1)–(2) (2017) (prohibiting trafficking of imperiled species). Missouri bans active pursuit of wildlife without a permit but has no provision that applies specifically to imperiled species. *See* MO. REV. STAT. § 252.040.

231 COLO. REV. STAT. § 33-1-102(43).

232 ESKRIDGE, JR. ET AL., *supra* note 119, at 375 (defining *expressio unius* as "expression of one thing suggests the exclusion of others"); *see, e.g.*, Circuit City Stores, Inc. v. Adams, 532 U.S. 105, 114–19 (2001) (holding that a statutory provision that excludes specifically listed employment contracts indicates that the law implicitly includes all other contracts).

233 An agency might decide that the legislative history indicates that the transportation sector objected to the broad language and received an exemption because it asked for clarification.

234 50 C.F.R. § 17.3 (2016); *see, e.g.*, NEB. REV. STAT. § 37-802(6) (2017).

235 *E.g.*, MD. CODE REGS. 08.03.08.01(6)(b) (2017) ("Harm includes an act that significantly modifies or degrades a habitat thereby killing or injuring wildlife . . . .").

236 *See, e.g.*, 163 NEB. ADMIN. CODE § 4-004 (2017) (providing no regulatory interpretation of "harm").

237 Camacho et al, *supra* note 26, at 10,841.

state statutory definitions of take that include "harm,"[238] and all but one would be amenable to administrative interpretations that include *incidental* habitat impacts.[239]

Only one state, Massachusetts, clearly prohibits habitat degradation, at least in specially designated areas. Massachusetts bans take, which it defines to include "disrupt the nesting, breeding, feeding or migratory activity," "harass," and "harm."[240] Massachusetts's implementing agency does protect habitat through this provision.[241] But, in addition to any incidental take liability, the statute also declares that "no person may alter significant habitat."[242] The geographic extent of "significant habitat" is limited to specially designated areas, akin to the ESA's "critical habitat."[243] However, the state has failed to designate any "significant habitat" to implement the direct ban on habitat alteration.[244]

Though it does not mention habitat, Maine defines "take" to include "the act or omission that results in the death of any endangered or threatened species," even if unintentional.[245] This prohibition is similar to the Services' interpretation of the ESA ban to include "an act which actually kills . . . wildlife . . . [which] may include significant habitat modification or degradation where it actually kills."[246] The Maine incidental take permit provision leads us to interpret the prohibition to include at least some incidental habitat degradation.[247] Nevada bans imperiled species from being "captured, removed, or destroyed at any time by any means, except under special permit."[248] Nevada legislation does not expressly provide for an incidental take permit, but the agency director does appear to have authority

---

238 Connecticut, Hawaii, Illinois, Iowa, Maryland, Massachusetts, Michigan, Nebraska, and North Carolina prohibit harm to imperiled species. *See supra* tbl.3.

239 North Carolina's statute defines prohibited "take" as "[a]ll operations during, immediately preparatory, and immediately subsequent to an attempt, whether successful or not, to capture, kill, pursue, hunt, or otherwise harm or reduce to possession." N.C. GEN. STAT. § 113-130(7) (2017). Therefore, we concluded that "harm" in this context excludes incidental habitat alteration. The state regulations support this interpretation. 15A N.C. ADMIN. CODE 10I.0102 (2017).

240 MASS. GEN. LAWS ch. 131A, §§ 1–2 (2017).

241 321 MASS. CODE REGS. 10.11–.26 (2017); *see* Pepin v. Div. of Fisheries & Wildlife, 4 N.E.3d 875, 881–83 (Mass. 2014) (explaining how the habitat protection program works in the context of take permits).

242 MASS. GEN. LAWS ch. 131A, § 2; *see Pepin*, 4 N.E.3d at 881–83, 887 nn.8 & 9 (explaining that the prohibition on alteration of significant habitat provides additional protection separate from the take prohibition, though both operate in practice through mitigation in permit conditions).

243 MASS. GEN. LAWS ch. 131A, § 1.

244 321 MASS. CODE REGS. 10.99.

245 ME. STAT. tit. 12, § 12808 (2017).

246 50 C.F.R. § 17.3 (2016). Though the Services define harm as resulting from an "act," they define the "harass" element of the ESA definition of take as including omissions as well. *Id.* On the significance of the "omission" element in prohibited activities, see *Sweet Home*, 515 U.S. 687, 716–20 (1995) (Scalia, J., dissenting).

247 *See* ME. STAT. tit. 12, § 12808 (including both acts and omissions that result in death of endangered or threatened species in the definition of "take").

248 NEV. REV. STAT. § 503.585 (2017).

to issue one as a "special permit."[249] The legislation, which does not define "destroyed," is thus ambiguous as to incidental takes; neither the prohibition nor the permitting directly addresses anything about incidental intent or habitat degradation. We coded only the Massachusetts and Maine legislative bans on incidental habitat impairment to be at least as stringent as the Services' interpretation of harm.

Four states share prohibitions of "take" where the legislation defines the term to include "lesser acts," such as "disturbing" and other verbs.[250] This is our fourth category. One of those states, New York, interpreted this formulation to include at least some habitat modifications. The widely cited case of *State v. Sour Mountain Realty, Inc.*[251] upheld an injunction against a mine that erected a fence to keep state-listed rattlesnakes from making their seasonal migration to their summer range on mine property.[252] Relying on the "plain and obvious" meaning of the statute, as well as legislative history that indicated an intent to complement the ESA, the state appellate court stated that "habitat interference" may sometimes rise to the level of a state-banned "take."[253] This raises the possibility that—in addition to New York, New Hampshire, Oklahoma, and Vermont—other states may ban incidental takes under their legislation.

The mere presence of an ambiguous term, such as "harm," "harass," or "worry," does not indicate whether the state legislation actually sustains the same regulatory or judicial interpretation as the ESA. On the other hand, the absence of these and like terms generally precludes enforcement against otherwise lawful habitat-disturbing activities.[254] Therefore, we conclude that, at most, thirteen state imperiled species laws could be clearly construed to prohibit incidental takes, but may not necessarily be interpreted in that manner.[255]

---

249 *Id.*

250 N.H. REV. STAT. ANN. § 207:1 (2017); N.Y. ENVTL. CONSERV. LAW § 11-0103 (McKinney 2017); OKLA. STAT. tit. 29, § 2-118 (2017); VT. STAT. ANN. tit. 10, § 4001(23) (2017).

251 714 N.Y.S.2d 78 (N.Y. App. Div. 2000).

252 *Id.* at 80, 84. On the importance of the decision, see generally Christopher A. Amato & Robert Rosenthal, *Endangered Species Protection in New York After* State v. Sour Mountain Realty, Inc., 10 N.Y.U. ENVTL. L.J. 117 (2001).

253 *Sour Mountain Realty, Inc.*, 714 N.Y.S.2d at 81–83.

254 *E.g.*, Animal Rights Front, Inc. v. Jacques, 869 A.2d 679, 681–82 (Conn. App. Ct. 2005) (rejecting application of state imperiled species legislation to private habitat disturbance based on the clear meaning of the statute); Opinion No. 94-605, 78 Cal. Attorney Gen. 137, 139, 142 (1995) (interpreting the California legislative prohibition on "take, possess, purchase, or sell" as excluding habitat modification, relying on a code definition of "take" as "hunt, pursue, catch, capture, or kill," or attempts). The California attorney general opinion was largely endorsed by the court in *San Bernardino Valley Audubon Society v. City of Moreno Valley*, 51 Cal. Rptr. 2d 897, 904 (Cal. Ct. App. 1996) (reasoning that the omission by the legislature demonstrated the prohibition does not cover habitat modification).

255 Connecticut, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Michigan, Nevada, New Hampshire, New York, Oklahoma, and Vermont. *See supra* tbl.3; *supra* note 239 and accompanying text; *cf.* Camacho et al., *supra* note 26, at 10,841 (concluding that five states clearly prohibit significant habitat modification and five state prohibitions are ambiguous but may prohibit harm).

Seven state laws provide specifically for incidental take permits. They include Maine and Massachusetts, which supports our interpretation of their statutory prohibitions.[256] Like Justice Stevens in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*,[257] we regard the enactment of such permit programs to indicate that legislators intended the statutory prohibitions to include incidental takes.[258] If they did not, then there would be no need for citizens to secure permits to legally proceed with otherwise lawful activities.[259] It is difficult to imagine an effective program for protecting imperiled species habitat without some kind of permit to allow economic development to move forward. Some states ban incidental takes without including either "harm" or "lesser acts" in prohibitions. For instance, California's imperiled species legislation prohibits take, which is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."[260] California's statutory incidental take permit program focuses on situations where there is actually a showing of a killing or likelihood of a killing that occurred or may occur as part of an otherwise lawful activity.[261] Only habitat degradation that results in the death of individual members of a listed species would need an incidental take permit to proceed legally in California.[262] Nonetheless, real estate developers do apply for permits despite the difficulties of proving an actual killing.[263]

Other states, such as Nevada, may permit incidental takes as a matter of administrative discretion but do not have express legislative authority.[264] Unlike Florida and Arkansas, the commission responsible for Nevada wildlife rulemaking does not have regulatory power outside of its statutory

256 In addition to Maine and Massachusetts, California, Hawaii, Illinois, Oregon, and Wisconsin have legislative incidental take permit programs. *See supra* tbl.3.

257 515 U.S. 687 (1995).

258 *Id.* at 700–01.

259 The important exception to this principle, noted below, is those state regulatory commissions that possess constitutional power to prohibit actions without express legislative authorization. *See infra* note 290.

260 CAL. FISH & GAME CODE § 86 (West 2017). California prohibits "take, possess, purchase, or sell" in a sentence that includes other trafficking terms. *Id.* § 2080. California then defines take to mean "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." *Id.* § 86.

261 *Id.* § 2081(b); Dep't of Fish & Game v. Anderson-Cottonwood Irrigation Dist., 11 Cal. Rptr. 2d 222, 230–31 (Cal. Ct. App. 1992) (applying the take prohibition's ban on "kill" to an irrigation that incidentally entrapped salmon in irrigation pumps, killing the fish).

262 Sierra Club v. City of Palm Desert, No. E052300, 2012 WL 951502, at *28 (Cal. Ct. App. Mar. 21, 2012) (denying a claim that construction of a real estate development would result in the killing of a bighorn sheep due to stress or habituation to people because the challengers failed to present sufficient evidence to establish a causal connection to a death of an individual sheep).

263 *See, e.g.*, Envtl. Council of Sacramento v. City of Sacramento, 48 Cal. Rptr. 3d 544, 546–47 (Cal. Ct. App. 2006) (upholding a permit for a large-scale real estate development in the Natomas Basin).

264 NEV. REV. STAT. § 503.585 (2017) (authorizing the commission to issue "special permits" for take).

authority.[265] Some of the seven state laws that mandate incidental take programs grant broad discretion to the agency and do not require habitat conservation plans.[266] Five of the seven incidental take permit provisions expressly require a habitat conservation plan in order to receive the permit.[267] Wisconsin's incidental take permits, for instance, closely tracks the terms of ESA section 10 in requiring: a habitat conservation plan, minimization and mitigation of takings impacts to the maximum extent practicable, assurance of adequate funding for the plan, that consultation thresholds are met, and "[a]ny other measures that the department may determine to be necessary or appropriate."[268] Illinois's incidental take permit criteria similarly track the ESA program.[269] Of the seven states with legislation authorizing incidental take permits, only Hawaii, Illinois, and Massachusetts have clear statutory prohibitions on "harm," and none prohibits lesser acts.[270]

Other types of permits, such as for public safety, scientific study, or education are common in state codes. Only California, Hawaii, and Kansas expressly authorize programs similar to federal safe-harbor agreements, which provide landowners with incentives to maintain or enhance unoccupied imperiled species habitat in exchange for a liability shield.[271] Some states, such as Colorado, implement other special permit programs to alleviate the burden on landowners to coexist with imperiled species.[272]

VI. DISCUSSION

Our findings support the conclusions of other researchers that, on the whole, state imperiled species legislation is weaker than the ESA, "lacking in regulatory teeth and policy innovation."[273] Compared to the key regulatory

---

265 *Id.* § 501.181(4) (2017) (providing the commission authority to "[e]stablish regulations necessary to carry out" certain parts of the Nevada statutory code).

266 *E.g.*, OR. REV. STAT. § 496.172(4) (2017) (mandating the agency "establish a system of state permits for incidental taking of state-designated . . . species . . . under such terms and conditions as the commission determines will minimize the impact on the species taken").

267 Hawaii, Illinois, Maine, Massachusetts, and Wisconsin. *See* HAW. REV. STAT. § 195D-4(g) (2017); 520 ILL. COMP. STAT. 10/5.5(a) (2016); ME. STAT. tit. 12, § 12808-A(2) (2017); MASS. GEN. LAWS ch. 131A, § 5(a) (2017); WIS. STAT. § 29.604(6m)(c) (2017). California's law is a bit convoluted because it implies that the state agency may issue incidental permits without a habitat conservation plan, but authorizes incidental takes for actions compliant with a natural communities conservation plan and other wildlife plans. CAL. FISH & GAME CODE § 2081.1 (West 2017).

268 WIS. STAT. § 29.604(6m). The Wisconsin Department of Natural Resources issues, in addition to individual permits, "broad incidental take" authorizations for common activities. *Incidental Take Permit/Authorization (ITP/A)*, WIS. DEP'T NAT. RESOURCES, https://perma.cc/D7F8-7WMC (last revised May 31, 2016).

269 *See* 520 ILL. COMP. STAT. 10/5.5.

270 *See* HAW. REV. STAT. § 195D-4; 520 ILL. COMP. STAT. 10/5.5; MASS. GEN. LAWS ch. 131A, § 5.

271 *E.g.*, KAN. STAT. ANN. § 32-962(b)(1)(B) (2017).

272 *See* COLO. REV. STAT. § 33-1-106 (2017) (permits to alleviate damage to property).

273 Ruhl, *supra* note 18, at 36; *see also* George & Snape III, *supra* note 124, at 355–56 (concluding that state legislation is far from comprehensive and needs greater authority to fill programmatic gaps).

programs of the ESA that prompt stakeholders to collaborate on conservation across property and jurisdictional boundaries, state laws *in general* reflect a more permissive attitude. Of the forty-six states possessing legislation protecting imperiled animals, only eleven require interagency consultation for state actions. Only nine prohibit harm, and only two of those clearly prohibit incidental take. Seven state laws provide for incidental take permits, but only five of those programs require habitat conservation plans for permit issuance. Unless the aim of proponents of ESA delegation is to undermine recovery, state legislative reform will need to precede greater devolution of federal authority over imperiled species.

Though current state laws, *in aggregate*, would not adequately replace the operative provisions of the ESA under cooperative federalism, some state provisions are very strong. Particularly strong provisions from individual states would support pilot delegation of some ESA programs. They also provide excellent templates for legislative reform. A program that works in another state may be a much more appealing model for state statutory revision than duplication of the federal ESA text. The states in the vanguard of protective imperiled species legislation are Illinois, Massachusetts, Oregon, and Wisconsin. They are the four states that both combine procedural and substantive requirements for state agency actions and also provide incidental take permits. The Oregon legislation is somewhat weaker than the other three because it does not require a habitat conservation plan for an incidental take permit. Hawaii could reasonably be included in the vanguard states, despite its lack of a statutory procedure for implementing its substantive interagency consultation standard, because of its combination of a statutory harm prohibition and a statutory incidental take permit program. In other respects, these states go beyond the ESA in devising promising programs for species recovery.

For instance, Oregon legislation requires the state Fish and Game Commission to adopt rules setting "quantifiable and measurable guidelines . . . necessary to ensure the survival of [imperiled] species."[274] Those guidelines serve as the substantive standards for agency consultation. This mandate to provide guidelines through rules is a model even for ESA reform. Currently, under the ESA, action agencies may have little guidance before consultation on how the Services might apply the jeopardy standard to a particular species. Action agencies may better constrain their proposed activities to meet the jeopardy standard if they knew quantitative thresholds of jeopardy or adverse modification of habitat in advance. Quantifiable standards would establish monitoring benchmarks to determine whether effects predicted in the consultation analysis actually occurred. They could serve as the backbone for an adaptive management program to adjust treatments designed to prevent extinctions.[275] This is because a common

---

274 OR. REV. STAT. § 496.182(2)(a) (2017).

275 Adaptive management is an iterative procedure for treating actions as experiments from which resource managers can learn and narrow uncertainty about modeling effects over time. *See* J.B. Ruhl & Robert L. Fischman, *Adaptive Management in the Courts*, 95 MINN. L. REV. 424, 429–30 (2010) (describing adaptive management and highlighting the consensus among scholars

hurdle for adaptive management success is the dearth of measurable triggers to force reevaluation of actions, beginning another iteration of the learning cycle.[276] The Oregon provision would help cure this problem in adaptive management practice. Also, under ESA section 9, courts have struggled with the extent of habitat alteration that constitutes prohibited harm. One of us has recommended that the Services themselves indicate what extent (size and intensity) of habitat disturbance triggers the significance threshold for harm.[277] The Oregon approach, if implemented better, may point a way forward. Currently, however, the Oregon Department of Fish and Wildlife has promulgated only two state-listed species survival guidelines (out of a list containing thirty species).[278]

Wisconsin's incidental take permit program includes all the conditions present in federal law. It also includes a rare incidental take liability shield as part of its interagency coordination program similar to the ESA incidental take statement program, which has been an effective tool in mitigating agency impacts on listed species.[279] Moreover, Wisconsin's additional substantive criterion for state agency actions—that they not jeopardize the "whole plant-animal community" of which the listed species is a part—shows how states can serve as laboratories for legal innovations that may prove more effective than the ESA, if monitored.[280] Cooperative federalism could also promote monitoring through Service oversight of grants and delegation.

If Congress wants states to assume a greater role in preventing extinctions, cooperative federalism offers a useful model.[281] However, merely transferring the Services' funding to states seems unlikely to achieve greater recovery success under most existing state laws. It might quell dissatisfaction with the federal program by blunting prohibitions and allowing more landowners to go about their business with less regulation. But, it would also undermine the goal of the ESA to improve the condition of species at the brink of extinction to a point where they no longer need intensive care. Everybody endorses collaborative conservation, but cooperative efforts depend on incentives for stakeholders to participate, often at the expense of more profitable opportunities. Short of direct payments to businesses and landowners as inducements, collaborative

---

that its approach to natural resource decision making is the best way to achieve continual improvement and to adapt to climate change).

276 Robert L. Fischman & J.B. Ruhl, *Judging Adaptive Management Practices of U.S. Agencies*, 30 CONSERVATION BIOLOGY 268, 271–72 (2016); Martin A. Nie & Courtney A. Schultz, *Decision-Making Triggers in Adaptive Management*, 26 CONSERVATION BIOLOGY 1137, 1141–42 (2012).

277 Robert L. Fischman, *The Divides of Environmental Law and the Problem of Harm in the Endangered Species Act*, 83 IND. L.J. 661, 692 (2008).

278 OR. ADMIN. R. 635-100-0135 (2017) (guidelines for Coho salmon); *id.* 635-100-0136 (Washington ground squirrel).

279 *Compare* WIS. STAT. § 29.604(6r)(d) (2017), *with* ESA, 16 U.S.C. § 1536(b)(4) (2012).

280 WIS. STAT. § 29.604(6r)(a)(2).

281 Nagle, *supra* note 17, at 388–89 (arguing that cooperative federalism was the *original understanding* of how the ESA would be implemented to achieve recovery).

conservation requires that uncooperative parties face some risk or penalty. The ESA provides those negative inducements. Current state legislation mostly provides much less.

Our results show that states are capable of enacting regulatory schemes that provide levels of imperiled species protection similar to the ESA. However, most do not. Perhaps cooperative federalism can encompass a grand bargain: more delegated authority and grants to states in exchange for stronger state programs. The pollution-control statutes are widely credited for enacting just such a deal. The Clean Air Act[282] (CAA) and the CWA both enjoy active participation from state agencies, which often assume permitting responsibility as well as front-line enforcement and planning. One approach to spur greater responsibility for extinction protection would be to delegate otherwise federal functions, such as section 10 permitting, to states fulfilling minimum standards that advance the goals of the ESA. Both the CAA and CWA condition delegated permitting authority on state legal requirements that are at least as stringent as federal standards.[283] In many cases, EPA retains state permit veto power.[284]

FWS has experimented with delegating section 10 permitting in Florida,[285] a state whose permitting standards, promulgated as an administrative rule, are at least as stringent as the corresponding federal standards.[286] FWS requires that the Florida state permits be subject to enforcement by both the Service and the state, and that the state provide for administrative challenges to final permits.[287] In that respect, the delegation parallels EPA authorization of state permits to substitute for federal permits under the CWA.[288] Though no Florida legislation authorizes the state Fish and Wildlife Conservation Commission to ban incidental take,[289] the Florida constitution provides the commission power to "exercise the regulatory and executive powers of the state" over fish and wildlife.[290] The Commission exercised its power by promulgating a rule that bans harm, employing the

---

282 42 U.S.C. §§ 7401–7671q (2012).

283 *Id.* § 7410; CWA, 33 U.S.C. § 1342(b)–(c) (2012).

284 *E.g.*, 33 U.S.C. § 1342(d).

285 *See generally* FLORIDA COOPERATIVE AGREEMENT, *supra* note 103.

286 FLA. ADMIN. CODE ANN. r. 68A-27.003 (2017) (prohibiting "take" of federally listed species); *id.* r. 68A-27.007(2)(b) (authorizing the Florida Fish and Wildlife Conservation Commission to issue permits for incidental take after taking into account several factors, including whether "the incidental take could reasonably be avoided, minimized or mitigated"). The Florida Fish and Wildlife Conservation Commission is developing species-specific permitting guidelines for its state-listed species. *Species Conservation Measures and Permitting Guidelines*, FLA. FISH & WILDLIFE CONSERVATION COMMISSION, https://perma.cc/SU4T-X859 (last visited Jan. 27, 2018). Such an effort goes beyond what the Services have been able to accomplish for federal endangered species.

287 FLORIDA COOPERATIVE AGREEMENT, *supra* note 103, at 4, 7.

288 33 U.S.C. § 1342(b).

289 FLA. STAT. § 379.101(38) (2017) (defining take as "taking, attempting to take, pursuing, hunting, molesting, capturing, or killing"). Nothing in the legislative definition of prohibited takes suggests a ban on harm, harass, or indirect/incidental injury.

290 FLA. CONST. art. 4, § 9.

same terms as the federal definition.[291] The section 6 cooperative agreement allows the state incidental take permit to substitute for a federal one in providing a liability shield for the federal take prohibition.[292] Tough regulations in Florida are built on weak statutory powers and are thus potentially more vulnerable to political shifts in administrative appointments to the commission. Nonetheless, the Florida experiment does show how existing ESA authority is flexible enough to employ some standard cooperative federalism tools.

States cooperate with the federal government, in part, to better serve their citizens and businesses with local permitting. That is what motivated the Florida Fish and Wildlife Commission to enter into its cooperative agreement with the Service.[293] The CWA lists eight prerequisites for states seeking to substitute their pollution discharge permitting for EPA's program. The list includes many requirements that depend on state statutes giving the state implementing agency powers equivalent to those the CWA gives to EPA, such as permit termination, administrative inspection and monitoring powers, public participation procedures, and enforcement tools.[294] However, unlike the major pollution-control permit programs, the ESA does not provide for states to assume permitting responsibilities. One way to induce greater cooperative federalism would be to amend the ESA to allow states to issue incidental take permits that would substitute for federal section 10 permits if state legislation contains standards at least as strict as the ones in section 10. A handful of states already qualify based on their legislation. We recommend that the Services extend the Florida experiment to other states that have strong legislation. We agree with the Western Governors' Association that the Services "[c]larify or emphasize" whatever existing authority they may have to authorize states to exercise concurrent jurisdiction for incidental take permitting.[295] A particularly important clarification would be a Service description of the minimum legal authority that would qualify a state for taking on permitting jurisdiction.

State assumption of permitting authority does more than relocate regulatory tools; it typically triggers federal grants to administer state programs. In line with the pollution-control model, the Western Governors' Association has called for new federal monies to defray additional administrative costs to states undertaking recovery programs.[296] More grants to states that take on greater responsibilities is a reasonable policy suggestion, but would need to be accompanied by a list of minimum administrative requirements that assure the public a voice in planning and permitting. The minimum standards for state programs should include the same kinds of assurances found in the CAA and CWA. Penalties for failure to meet minimum standards generally amount to loss of state control and

---

291 FLA. ADMIN. CODE r. 68A-27.001(4) (defining "take" to include "harm").

292 FLORIDA COOPERATIVE AGREEMENT, *supra* note 103, at 6–7.

293 *Id.* at 1–2.

294 CWA, 33 U.S.C. § 1342(b) (2012).

295 WGA RECOMMENDATIONS, *supra* note 91, at 4.

296 WGA POLICY RESOLUTION, *supra* note 2, at 6.

federal grants. But the CAA goes further in allowing EPA to withhold transportation funding from uncooperative states.[297]

Greater state government involvement in extinction prevention is important not just for ideological or political reasons stemming from a Jeffersonian view of the federal system. The single greatest cause of species decline into imperiled status is habitat modification or destruction.[298] Therefore, decisions about land use are paramount in achieving recovery. State laws directly, and indirectly through enabling legislation giving local jurisdictions power over land use, provide key legal tools for reducing extinction risks.[299] There are opportunities for Congress and federal agencies to strike bargains giving states a greater say over imperiled species regulation in exchange for more effective habitat protection and improvement. Three of the four vanguard states, Illinois, Massachusetts, and Wisconsin, appear to have already met any realistic minimum criteria.

The Western Governors' Association has called for more flexible approaches to conservation through ESA section 4(d) rules.[300] Yet, 4(d) rules are effective vehicles of cooperative federalism only with willing and capable state agencies. States are gun-shy about accepting certain offers of federal delegation where the regulation of private property will be unpopular. For instance, none of the Puget Sound planning jurisdictions carried out the program development needed to shield local land-use decisions from the prohibition against harm through the ESA 4(d) rule for Chinook salmon.[301] While states have largely assumed responsibility for the CWA pollutant discharge elimination system permits, they have declined to adopt permits under the politically controversial section 404 program to regulate filling wetlands.[302] State politicians do not wish to become targets

---

297 "Uncooperative federalism" is another way of describing state actions that impede federal statutory objectives. Most states act cooperatively in some areas of federal law where it suits their interests, and less so with other federal programs. In some circumstances, it can be politically advantageous for elected officials to challenge federal programs, despite lost opportunities or litigation costs. Robert L. Fischman & Jeremiah I. Williamson, *The Story of* Kleppe v. New Mexico*: The Sagebrush Rebellion as Un-Cooperative Federalism*, 83 U. COLO. L. REV. 123, 170–71 (2011). For a slightly different perspective on the meaning of the term, see Jessica Bulman-Pozen & Heather K. Gerken, *Uncooperative Federalism*, 118 YALE L.J. 1256, 1258–59 (2009) (providing additional examples of uncooperative federalism).

298 *See* Wilcove et al., *supra* note 74, at 608–09 (recognizing habitat degradation as a threat to 85% of imperiled species); *see also* NOSS ET AL., *supra* note 74, at 2, 5; NAT'L RESEARCH COUNCIL ET AL., *supra* note 74, at 35–38, 40.

299 Fischman & Hall-Rivera, *supra* note 17, at 133–36; Nagle, *supra* note 17, at 386–87.

300 WGA POLICY RESOLUTION, *supra* note 2, at 3; WGA RECOMMENDATIONS, *supra* note 91, at 4.

301 *See supra* notes 96–99 and accompanying text; *see also* Eric S. Laschever, *The Endangered Species Act and Its Role in Land Use Planning: Lessons Learned from the Pacific Northwest*, 1 SEATTLE J. ENVTL. L. 103, 111–13 (2011) (documenting the failure of a multi-county initiative to qualify for the land-use management limitation under the 4(d) rule, despite local public support for salmon recovery).

302 *See State or Tribal Assumption of the Section 404 Permit Program*, U.S. ENVTL. PROTECTION AGENCY, https://perma.cc/3CDN-PUMN (last updated Dec. 21, 2017) (describing the permitting that states may assume under state laws but noting that only Michigan and New Jersey have assumed administration of the program); *see also* Adrienne M. Sakyi, Note, *Mitigation Banking: Is State Assumption of Permitting Authority More Effective?*, 34 WM. &

for opposition from constituents who oppose constraints on private property development. That only two states have ever assumed administration of the 404 program should dampen the enthusiasm of cooperative federalists who expect states to fill the shoes of the Services in imperiled species conservation, if given the chance.[303] As with habitat modification, the filling of wetlands on private property presents circumstances where broadly shared benefits of regulation are shouldered by a concentrated class of landowners.[304] Many proposals for more delegation to states are political strategies for winning elections, not necessarily offers to assume unpopular regulatory roles.[305]

One paradox in the federalism debate over extinction prevention concerns the monitoring and listing of species on the brink of extinction. States often claim to have the best information on species because of their on-the-ground force of wildlife managers.[306] There is a theory that would support the position that states can monitor species status at a lower cost than the central government.[307] Federal listings generally occur only after species populations decline significantly below the threshold of endangerment.[308] Yet, states often express surprise when ESA listings come along, and then ask for a grace period to develop conservation plans aimed at reversing the species slide.[309] States asking for additional time to implement recovery programs after a federal ESA listing raise two key questions of state capacity.[310] First, why did the state SWAP actions fail to prevent federal listing? Second, does state legislation support a credible program that can recover the species as effectively as the ESA program? Our results suggest that, rather than more time, states need better legal tools to address habitat-altering activities that imperil species. In addition to more money to arrest species declines through implementation of SWAPs, states need to bolster their more fearsome rules to channel private behavior toward species conservation. Further research to canvass state regulations

---

MARY ENVTL. L. & POL'Y REV. 1027, 1036–39 (2010) (describing Michigan's experience with the permit program).

303 *State or Tribal Assumption of the Section 404 Permit Program*, *supra* note 302.

304 WILLIAM H. RODGERS, JR. & ELIZABETH BURLESON, RODGERS ENVIRONMENTAL LAW § 4:12 (2017), Westlaw (explaining how this political dynamic in the CWA 404 program creates litigation and anger).

305 Fischman & Williamson, *supra* note 297, at 173–74.

306 *See, e.g.*, Press Release, House Comm. on Nat. Res., *supra* note 41 (statement of Rep. Doc Hastings, Chairman, Natural Resources Committee).

307 *See* Terry L. Anderson & Lawrence Reed Watson, *An Economic Assessment of Environmental Federalism: The Optimal Locus of Endangered Species Authority*, *in* THE ENDANGERED SPECIES ACT AND FEDERALISM, *supra* note 16, at 21, 30.

308 *See* Biber & Brosi, *supra* note 168, at 394–95; David S. Wilcove & Lawrence L. Master, *How Many Endangered Species Are There in the United States?*, 3 FRONTIERS ECOLOGY & ENVT. 414, 414 (2005) (stating that only a fraction of imperiled species are listed under the ESA); *see also* David S. Wilcove et al., *What Exactly Is an Endangered Species? An Analysis of the U.S. Endangered Species List: 1985–1991*, 7 CONSERVATION BIOLOGY 87, 90 (1993) (finding the median size of animal populations listed under the ESA was approximately 1000).

309 *See* WGA POLICY RESOLUTION, *supra* note 2, at 3.

310 *Id.* at 5.

and their effectiveness in practice is needed in order to better understand what states have been able to achieve.

VII. CONCLUSION

The goal of the ESA is to conserve species to the point at which they no longer need the emergency-room programs provided by statute in order to avoid extinction.[311] In 2016, an influential resolution of the Western Governors' Association asserted that the ESA could be effective "only through a full partnership between the states, federal government, local governments and private landowners."[312] Most commentators and stakeholders across the political spectrum agree.[313] However, much of the ESA-reform debate centers only on what the federal government should do to enter into full partnership. Largely neglected in this rhetorical oasis amid ESA contention is the role of state legislative reform to support more effective recovery.

If state imperiled species laws performed better in arresting species declines, the Services would not be so overwhelmed by the flood of species eligible for listing and by implementing protective programs. If Congress and federal agencies performed better, states would spend less time on extinction prevention. States would also have greater resources and more opportunities for proactive conservation. The path forward requires all parties to step back from blaming each other and instead strengthen the ability of both state and federal actors to advance recovery goals. States that do not wish to promote imperiled species conservation through legislation could opt out of a cooperative federalism program. States that support conservation may borrow from sister state legislation containing useful models of interagency cooperation, prohibitions, and permits.

The harsh reality of recovering hundreds of species on the brink of extinction due to habitat alteration that occurred over a span of decades, if not centuries, is that it is resource intensive. Ecosystems may take many years to mature into useful habitat and still rely on continued, active management to sustain habitat quality.[314] Thus, recovery often requires expensive on-the-ground or in-the-water activities over the long term. The costs are often borne by a relatively small number of landowners. Property owners who forgo economically profitable land uses are justified in their complaints about footing the bill for reversing previous habitat harms often located elsewhere. However, the unavoidable burden of reversing long-term

311 *See* ESA, 16 U.S.C. § 1531(b) (2012).

312 WGA POLICY RESOLUTION, *supra* note 2, at 6.

313 *See* Nagle, *supra* note 17, at 387 & n.13 (2017) (citing dueling testimony from *Briefing on Improving the Endangered Species Act: Perspectives from the Fish and Wildlife Service and State Governors: Hearing Before the Subcomm. on Fisheries, Water, and Wildlife of the H. Comm. on Env. & Pub. Works*, 114th Cong. 6–7, 36 (2015)) (noting that both Dan Ashe, former Director of FWS, and Matt Mead, Governor of Wyoming, both agree about the need for state-federal partnership despite expressing diametrically opposite views on whether the ESA can be characterized as a success or failure).

314 Dale D. Goble et al., *Conservation-Reliant Species*, 62 BIOSCIENCE 869, 869–70 (2012).

trends in habitat degradation is that it costs someone something to get the job done. Some "win-win" situations may arise.[315] But generally, there are two means for prompting recovery efforts. One is to place the burden on habitat owners or users (where the habitat is unowned, as in the marine environment, or where the habitat is publicly owned but a user group has traditionally benefitted from its allocation, as in federal grazing lands). The other is public financing through taxes. The resistance of political leaders to do either characterizes the current stalemate over the ESA.

If the ESA is to work as written or to be revised constructively, something has to give. Either governments will pony up more funding or the private sector will bear more costs. Feasible political compromise likely involves some mixing of both. But, merely transferring program responsibilities from austerely funded federal agencies to even more cash-strapped state agencies will fail to advance the recovery goal of the ESA. Most existing state legislation to recover imperiled species is weaker than the ESA. There is no good reason to believe that state governments with smaller budgets and weaker laws will achieve greater conservation success than the federal program. Statutory reforms must be matched with money to carry out conservation actions.

We found wide variation in state imperiled species legislation. The legal landscape, like the physical landscape, is diverse and no single approach to cooperative federalism will optimize recovery efforts across the country. Several states are already more than capable of taking on ESA permitting and other federal programs. We suggest that the Services and Congress begin with those states in order to develop a record of conservation successes. Our hope is that those pilot projects, married to financial incentives, will spur other states to improve their legal, regulatory, and management capabilities. Rather than respond to the loudest complainers, the federal government should first pick partners who have demonstrated their commitment to species recovery.

315 Thomas O. McShane et al., *Hard Choices: Making Trade-Offs Between Biodiversity Conservation and Human Well-Being*, 144 BIOLOGICAL CONSERVATION 966, 967–68 (2011).