

Building a Better State Endangered Species Act: An Integrated Approach Toward Recovery

by Jason Totoiu

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Editors' Summary

For state endangered species protection laws to achieve their overarching purpose of species recovery, states should rethink their approaches to species conservation and adopt an integrated, recovery-oriented approach that harnesses their broad authorities as land use planners, transportation planners, and water managers. The focal point of this new approach would be multi-species recovery plans, based on the latest GIS habitat-mapping tools developed by state wildlife agencies. These plans would identify the location, type, and amount of habitat critical for the long-term conservation of listed species. State endangered species acts would require that all major land use, transportation, and water development projects be consistent with the plans' objectives. Implementing this approach could benefit, not only state and federally listed species, but also the ecosystems upon which they depend.

Since 1973, the Endangered Species Act's (ESA's)¹ core mission has been "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved."² The ESA has sought to protect roughly 1,300 endangered and threatened plant and animal species,³ some of which are on the brink of extinction.⁴ While the ESA has helped prevent many critically endangered species from going extinct, and the recent delisting of the bald eagle has been a cause for celebration,⁵ less than two dozen species have recovered to the point where they could be removed from the list.⁶

This Article explores some of the reasons why the recovery process has been slow under the ESA and what states can learn from the Act as they continue to develop their own endangered species protection laws. Almost every state in the nation has its own endangered species act, protecting both federally listed and state-listed species.⁷ Commentators have emphasized the important role of state endangered species laws in preventing the further decline of federally listed species by providing a first line of defense and preventing the need for the ESA to list additional species in the future.⁸ As most state acts are not nearly as comprehensive as the ESA,⁹ and as states such as Florida are currently updating and revising their endangered species protection laws,¹⁰ there is a tremendous opportunity for states to develop more protective mechanisms to protect imperiled species.¹¹

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1. 16 U.S.C. §§1531-1544 (2007), ELR STAT. §§ESA 2-18.
 2. §1531(b).
 3. U.S. Fish & Wildlife Service, Species Reports, General Statistics for Endangered Species, http://ecos.fws.gov/tess_public/TessStatReport.
 4. For instance, it is estimated that less than 120 Florida panthers remain in the wild. See U.S. FISH & WILDLIFE SERV., FLORIDA PANTHER RECOVERY PLAN viii (3d rev. 2008).
 5. Removing the Bald Eagle in the Lower 48 States From the List of Endangered and Threatened Wildlife, 72 Fed. Reg. 37346 (July 9, 2007) (codified at 50 C.F.R. pt. 17 (2009)).
 6. See Krishna Gifford & Deborah Crouse, *Thirty-Five Years of the Endangered Species Act*, ENDANGERED SPECIES BULL. (U.S. Fish & Wildlife Serv., Washington, D.C.), Spring 2009, at 4, 6 (noting that 13 U.S. species for which the Service has lead, and seven foreign or National Marine Fisheries Service lead species have been delisted due to recovery).
 7. A discussion of each of these statutes is beyond the scope of this Article, but for an excellent overview of these laws, see Susan George & William J. Snape III, *The State of State Endangered Species Acts*, in ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES 503 (Donald C. Bauer & William Robert Irvin eds., 2002) [hereinafter LAW, POLICY, AND PERSPECTIVES].
 8. See *id.*; see also DEFENDERS OF WILDLIFE, STATE ENDANGERED SPECIES ACTS: PAST, PRESENT & FUTURE (1998).
 9. See George & Snape, *supra* note 7, at 505. California has the most comprehensive act, as it contains almost all the elements found in the ESA.
 10. See Florida Fish and Wildlife Conservation Commission, *Draft Imperiled Species Listing Process Rule Revisions* (July 9, 2009), available at http://www.myfwc.com/docs/WildlifeHabitats/Imperiled_DraftRuleChangesForThreatenedWildlife.pdf; Interview with Tim Breault, Dir., Div. of Habitat & Species Conservation, Fla. Fish & Wildlife Conservation Comm'n (June 12, 2009) (on file with author).
 11. See Panel, *Environmental Law, Wetlands Regulation, and Reform of the Endangered Species Act*, 31 WM. & MARY ENVTL. L. & POL'Y REV. 747, 782-83 (2007) [hereinafter William & Mary Panel] (comments by John Kostyack discussing

This Article agrees with the argument made by several commentators that states should develop endangered species laws containing all the mechanisms found in the ESA.¹² The framework is a good one, and states should not attempt to reinvent the wheel.¹³ For these state laws to achieve their overarching purpose of species recovery, however, this Article contends that the manner in which these provisions operate and their relationship to other state environmental and land use laws must be reexamined. This Article proposes that states should redefine the concepts of “consultation,” “critical habitat designation,” “habitat conservation plans,” “citizen suits,” and “recovery planning” and utilize the states’ broad authorities as land use planners, transportation planners, and water managers to provide a forward-looking, recovery-oriented approach to endangered species conservation that is otherwise absent from the ESA and state statutes currently in place.

Using Florida as an example, the Article calls for the establishment of an interagency consultation process that integrates endangered species protection into state environmental, land use, and transportation laws. Recognizing that habitat loss is the greatest threat facing endangered species, the approach would require the biggest contributors to habitat loss—large development projects, state transportation projects, and large wetland fill projects to be consistent with multi-species recovery plans before receiving state approval.

These recovery plans would be the focal point of the state act and would be quite different from those currently developed under the ESA or state endangered species acts. These plans would be based on geographic information system (GIS) habitat-mapping tools, developed by many state wildlife agencies over the past decade, to identify the location, type, and amount of habitat that would be required to recover listed species. Using this information, the plans would identify those areas that are critical to the long-term survival of endangered and threatened species and would require land use, transportation, and water development projects to avoid or minimize their impacts to these critical areas. Once these plans are developed, all critical habitat, incidental take permitting, and habitat conservation planning decisions would be made, based on the specific species and habitat needs set forth in these recovery plans.

This new approach would focus on the recovery of state-listed species, many of which are keystone or indicator species and not yet listed under the ESA (such as the gopher tortoise and Florida black bear) but face future listing under the ESA if populations continue to decline. Yet, the benefits would likely extend beyond state-listed species and assist in the recovery of federally listed species that often share the same habitat needs. Further, by focusing on indicator and keystone species, these plans would protect not just individual species but larger ecosystems.

Part I begins with a discussion of the status of endangered and threatened species nationwide and in Florida. Part II follows with a discussion of the ESA, and major state environmental laws including state endangered species acts, transportation planning laws, and wetland permitting programs, with particular focus on Florida’s laws. Part III discusses how states can learn from certain limitations in the ESA to construct stronger, more effective endangered species protection laws. Part IV offers a new approach to state endangered species laws that is centered around scientifically defensible and enforceable recovery plans and a consultation process that incorporates stronger endangered species protections into state growth management, transportation planning, and water development laws. Part V discusses some of the opportunities and benefits of adopting the proposed approach. Part VI explains what steps states must take to adopt the proposed approach and discusses some of the challenges in adopting a more comprehensive, integrated approach to protecting state-listed species, including private-property concerns.

I. Endangered Species: The Current State of Affairs

Scientists estimate that the planet may be losing as many as 10,000 species each year.¹⁴ Although extinction is a naturally occurring phenomenon, humans have accelerated the natural extinction rate by thousands.¹⁵ Habitat loss and degradation is the principal cause.¹⁶

The ESA is our nation’s most comprehensive law to address the extinction problem. There are more than 1,300 endangered plants and animals in the United States that are listed under the Act.¹⁷ Of these, approximately 600 are mammals, and 700 are plant species.¹⁸ Fifty-four additional species are currently proposed for listing,¹⁹ and 252 more are “candidate species.”²⁰ Since the ESA’s enactment in 1973, less than two dozen species have been recovered, and hundreds have sadly gone extinct while awaiting federal listing.²¹ While some commentators have noted that the low proportion of recovered species to those that remain listed must be considered in light of the Act’s relatively short 35 years of existence and the even shorter time many of these species have been

14. See Union of Concerned Scientists, *The SSI and Environment Series: Human Population and the Future of Biodiversity*, <http://www.ucsusa.org/ssi/biodiversity/population-and-environment-series/population-biodiversity.html> (last visited Jan. 11, 2010).

15. Patrick Parenteau, *Rearranging the Deck Chairs: Endangered Species Act Reforms in an Era of Mass Extinction*, 22 WM. & MARY ENVTL. L. & POL’Y REV. 227, 231 (1998).

16. *Id.*

17. U.S. Fish & Wildlife Service, *supra* note 3.

18. *Id.*

19. *Id.*

20. *Id.* A “candidate species” is a species “for which the [U.S. Fish & Wildlife Service] has sufficient information on file relative to status and threats to support issuance of a proposed listing rule.” Announcement of Draft Policy for Candidate Conservation Agreements, 62 Fed. Reg. 32183, 32186 (June 12, 1997). See also 16 U.S.C. §1533(b)(3)(C)(iii) (2007).

21. See Ray Vaughan, *State of Extinction: The Case of the Alabama Sturgeon and Ways Opponents of the Endangered Species Act Thwart Protection for Rare Species*, 46 ALA. L. REV. 569, 578-79 & nn.61-62 (1995).

the need for states to become more involved in the recovery of endangered species and how state wildlife agencies could assist in that effort).

12. DEFENDERS OF WILDLIFE, *supra* note 8.

13. See *id.*

protected,²² it underscores the challenging road ahead most species face.

In Florida, alone, 114 species occur that are listed under the ESA.²³ The state's Endangered and Threatened Species Act (ETSA) lists 118 species,²⁴ significantly more than the 23 species that were originally listed as endangered in 1976 when the ETSA was enacted. While many species are listed under both the federal and state acts, others such as the gopher tortoise and Florida black bear (two keystone species) are only listed under the state act. As in the rest of the world, the loss of habitat quality and quantity is the biggest threat to listed species in Florida.²⁵ Florida has been identified as the state at greatest risk of losing its native habitats.²⁶ Yet, protecting against habitat loss and degradation is the single most difficult challenge to endangered species protection.²⁷

The largest contributor to habitat loss is development.²⁸ A recent study revealed that if Florida maintains its current development pace, roughly 7 million acres would be converted to urban use by the year 2060.²⁹ Of those lands, 2.7 million acres of native habitat, an area equivalent to the state of Vermont, will be lost.³⁰ More than 1.6 million acres of woodland habitat may be lost, and wetland habitat will become even more isolated and degraded.³¹ By 2060, habitat for the federally listed Florida scrub-jay will be limited to just 64 square miles.³²

Another major contributor to species decline is habitat fragmentation. Habitat fragmentation is the process whereby large blocks of habitat are broken into smaller, more isolated pieces.³³ Roads are a significant contributor to habitat fragmentation by acting as barriers that may isolate some species.³⁴ Roads often times have more far-reaching impacts than just the land they are built upon as they spur develop-

ment around them.³⁵ New highways or road expansions can permanently transform once rural areas into urban areas in just a few years.³⁶

Finally, more than one-half of all species listed under the ESA are endangered or threatened because of habitat destruction caused by water development projects.³⁷ Development, flood control projects, and other human activities have destroyed one-half of Florida's wetlands³⁸ as evidenced by Florida's Everglades, which is now one-half its original size.³⁹ The importance of these aquatic ecosystems to both federally and state-listed endangered and threatened species cannot be overstated as they provide habitat to dozens of protected plant and animal species.⁴⁰

The preservation of sufficient, suitable habitat is crucial for the long-term survival of Florida's listed species.⁴¹ If Florida is to protect these species and its rich biological diversity, researchers have identified nearly five million acres of habitat in private ownership that, because of their unique habitat value must be conserved.⁴²

II. Legal Framework

A. The ESA

The ESA was enacted in 1973 in recognition of the U.S. Congress' findings that:

(1) various species of fish, wildlife, and plants in the United States have been rendered extinct as a result of economic growth and development untempered by adequate concern and conservation; (2) other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger or threatened with extinction; (3) these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people.⁴³

The Secretaries of the U.S. Department of the Interior (DOI) and the U.S. Department of Commerce administer the ESA jointly through the U.S. Fish & Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS)

22. Martin F.J. Taylor et al., *The Effectiveness of the Endangered Species Act: A Quantitative Analysis*, 55 *BIOSCIENCE* 360, 366 (2005).
 23. See U.S. Fish & Wildlife Service, Species Reports: Listings and Occurrences for Each State, http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrence.jsp?state=FL (last visited Jan. 11, 2010).
 24. See FLA. ADMIN. CODE ANN. r. 68A-27.0011-.006 (2008).
 25. See U.S. FISH & WILDLIFE SERV., *Introduction, in MULTISPECIES RECOVERY PLAN FOR SOUTH FLORIDA 1:1, 1:16* (1999) [hereinafter *MULTISPECIES RECOVERY*].
 26. REED NOSS & ROBERT PETERS, DEFENDERS OF WILDLIFE, *A STATUS REPORT ON AMERICA'S VANISHING HABITAT AND WILDLIFE* 12-13 (1995).
 27. Robert L. Fischman, *The Divides of Environmental Law and the Problem of Harm in the Endangered Species Act*, 83 *IND. L.J.* 661, 687 (2008).
 28. See Linda Breggin & Susan George, *Planning for Biodiversity: Sources of Authority in State Land Use Laws*, 22 *VA. ENVTL. L.J.* 81, 87 (2003) (stating that "land development contributes to all of the leading causes of biodiversity loss including habitat destruction, degradation, and fragmentation, and non-native invasive species" and arguing that because of this, state and local land use planning can be a critical tool for protecting biological diversity).
 29. PAUL D. ZWICK & MARGARET H. CARR, *GEOPLAN CTR. AT THE UNIV. OF FLA., FLORIDA 2060: A POPULATION DISTRIBUTION SCENARIO FOR THE STATE OF FLORIDA* 7 (2006).
 30. *Id.* at 17.
 31. See FLA. FISH & WILDLIFE CONSERVATION COMM'N, *WILDLIFE 2060: WHAT'S AT STAKE FOR FLORIDA?*, at 4 (2008), available at <http://myfwc.com/docs/RecreationActivities/FWC2060.pdf>.
 32. See *id.*
 33. Reed F. Noss, *Some Suggestions for Keeping National Wildlife Refuges Healthy and Whole*, 44 *NAT. RESOURCES J.* 1093, 1099 n.23 (2004).
 34. Mark L. Watson, *HABITAT FRAGMENTATION AND THE EFFECTS OF ROADS ON WILDLIFE AND HABITATS*, New Mexico Department of Game & Fish, 3 (January 2005), available at <http://www.safepassagecoalition.org/resources/Habitat%20Fragmentation.pdf> (citing REED F. NOSS & ALLEN COOPERRIDER, *SAVING NATURE'S LEGACY: PROTECTING AND RESTORING BIODIVERSITY* (1994)).

35. See *Nat'l Wildlife Fed'n v. Coleman*, 529 F.2d 359, 6 *ELR* 20344 (5th Cir. 1976) (holding that the indirect effects of private development on endangered sandhill cranes resulting from proposed construction of highway interchanges had to be considered under §7 of the ESA).
 36. JENNIFER D. MCMURTRAY, DEFENDERS OF WILDLIFE, *SEEKING SOLUTIONS TO WILDLIFE/HIGHWAY CONFLICTS USING AN ADVOCACY-BASED APPROACH 1* (n.d.), available at <http://www.transwildalliance.org/resources/2008724101555.pdf>.
 37. Daniel McCool, *The River Commons: A New Era in U.S. Water Policy*, 83 *TEX. L. REV.* 1903, 1911 (2005).
 38. See John C. Tucker, *Biodiversity Conservation and Ecosystem Management in Florida: Obstacles and Opportunities*, 13 *FORDHAM ENVTL. L.J.* 1 (2001).
 39. See MICHAEL GRUNWALD, *THE SWAMP: THE EVERGLADES, FLORIDA, AND THE POLITICS OF PARADISE* 5-6 (2006).
 40. SE. ENVTL. RESEARCH PROGRAM ET AL., *AN ACTION PLAN TO CONSERVE THE NATIVE PLANTS OF FLORIDA* tbl.2 (1995), available at <http://everglades.fiu.edu/serp/action/>.
 41. See NOSS & PETERS, *supra* note 26, at 27.
 42. See JAMES COX ET AL., *FLA. GAME & FRESH WATER FISH COMM'N, CLOSING THE GAPS IN FLORIDA'S WILDLIFE HABITAT CONSERVATION SYSTEM* (1994).
 43. 16 U.S.C. §1531(a)(1)-(3) (2007).

(collectively, Services), respectively. The FWS has jurisdiction over terrestrial species, nonmarine aquatic species, and certain marine species, including sea turtles (while on land), manatees, and sea otters.⁴⁴ The NMFS has jurisdiction over marine species, including anadromous fish, such as salmon and shad.⁴⁵

The ESA contains several different provisions that seek to conserve species in a number of different ways. These provisions are discussed briefly below.

I. Listing

Section 4, which provides for the listing of species as “endangered” or “threatened,” is the cornerstone of the ESA.⁴⁶ An “endangered species” is “any species which is in danger of extinction throughout all or a significant portion of its range.”⁴⁷ The term “in danger of extinction” is not defined by the Act or the implementing regulations, but one court has suggested it means the minimal, viable population size.⁴⁸ A “threatened species” means “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.”⁴⁹ The Secretary may list a species⁵⁰ or “an interested person” may submit a written petition to the Secretary to list a particular species.⁵¹

2. Critical Habitat

Critical habitat is defined as the “specific areas within the geographical area occupied by the species at the time it is listed . . . on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection.”⁵² At the time of listing, the Secretary must designate critical habitat to the “maximum extent prudent and determinable.”⁵³ This designation must be based on “the best scientific data available and after taking into consideration the economic impact” of the designation.⁵⁴

Absent a determination by the agency that a broader geographic area needs to be identified, critical habitat will only include specific areas occupied by the species at the time of

listing⁵⁵ with features “essential” to the conservation of the species.⁵⁶ Once the agency designates critical habitat, it must delineate the habitat on a map.⁵⁷

3. Recovery Planning

The ESA requires the Secretary to develop and implement “recovery plans” for each listed species.⁵⁸ To the maximum extent practicable, the Secretary shall incorporate into each plan: a description of site-specific management actions to achieve the plan’s goal for the conservation and survival of the species; objective measurable criteria that, when met, would result in a determination that the species be removed from the list; and estimates of the time required and the cost to carry out those measures needed to achieve the plan’s goal and to achieve intermediate steps toward that goal.⁵⁹

Recovery plans are usually prepared by a recovery team that includes federal, state, and tribal representatives, academic institutions, and private individuals and organizations.⁶⁰ Whenever possible, recovery plans are developed for multiple species.⁶¹

Agencies have great discretion in determining whether to prepare a recovery plan,⁶² what goes into a plan,⁶³ and how to implement a plan.⁶⁴ Consistent with this discretion, courts have held that recovery plans are not documents with the “force of law.”⁶⁵

4. Consultation

Section 7 prohibits federal agencies from authorizing, funding, or otherwise carrying out any action⁶⁶ that is likely to “jeopardize the continued existence” of an endangered or threatened species.⁶⁷ An action will cause “jeopardy” if it “reasonably would be expected, directly or indirectly, to

44. See Donald C. Baur & Wm. Robert Irvin, *Overview*, in *LAW, POLICY, AND PERSPECTIVES*, *supra* note 7, at xi, xii.

45. Anadromous fish are born in freshwater, migrate to the ocean to grow as adults, and then return to freshwater to spawn. Anadromous fish include the Gulf sturgeon whose critical habitat includes parts of Florida. See 68 Fed. Reg. 13370, 13370-13418 (Mar. 19, 2003).

46. See H.R. REP. NO. 97-567, at 10 (1982), *reprinted in* 1982 U.S.C.C.A.N. 2807, 2810.

47. 16 U.S.C. §1532(6); 50 C.F.R. §424.02(e) (2009).

48. TONY A. SULLINS, *ENDANGERED SPECIES ACT* 5 n.4 (Am. Bar Ass’n, Basic Practice Series, 2001) (citing *Carlton v. Babbitt*, 26 F. Supp. 2d 102, 111 (D.D.C. 1998)).

49. 16 U.S.C. §1532(20); 50 C.F.R. §424.02(m).

50. 16 U.S.C. §1533(a).

51. §1533(b)(3)(A).

52. §1532(5)(A).

53. §1533(a)(3)(A); 50 C.F.R. §424.12(a).

54. 16 U.S.C. §1533(b)(2).

55. The regulations specify that *unoccupied* habitat can be designated as critical habitat “only when a designation limited to [the species] present range would be inadequate to ensure the conservation of the species.” 50 C.F.R. §424.12(e).

56. See §424.12(e).

57. §424.12(c).

58. 16 U.S.C. §1533(f)(1).

59. §1533(f)(1)(B)(i)-(iii).

60. SULLINS, *supra* note 48, at 35.

61. *Id.*

62. *Id.* at 35-36 (citing *Or. Natural Res. Council v. Turner*, 863 F. Supp. 1277, 1282, 25 ELR 20380 (D. Or. 1994)) (noting that the ESA provides no statutory time limit within which the Secretary is required to develop and publish a recovery plan).

63. *Id.* (citing *Strahan v. Linnon*, 967 F. Supp. 581, 597 (D. Mass. 1997) (“Case law instructs that the . . . content of recovery plans is discretionary.”); *Morrill v. Lujan*, 802 F. Supp. 424, 433, 23 ELR 20379 (S.D. Ala. 1992) (“[T]he contents of the plan are discretionary, as evidenced by the language to the ‘maximum extent practicable.’”)).

64. *Id.* (citing *Or. Natural Res. Council*, 863 F. Supp. at 1284 (stating that a recovery plan “presents a guideline for future goals, but does not mandate any actions”)).

65. *Id.* (citing *Fund for Animals, Inc. v. Rice*, 85 F.3d 535, 548, 26 ELR 21433 (11th Cir. 1996)). See also *Defenders of Wildlife v. Lujan*, 792 F. Supp. 834 (D.D.C. 1992).

66. The Supreme Court has ruled, however, that consultation is only required for actions that have “discretionary federal involvement or control.” *Nat’l Ass’n Homebuilders v. Defenders of Wildlife*, 127 S. Ct. 2518, 2538, 37 ELR 20153 (2007).

67. 16 U.S.C. §1536(a)(2) (2007).

reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.”⁶⁸

The first step in the §7 process is for the action agency (the agency authorizing the project) to determine if the proposed action “may affect” an endangered species.⁶⁹ If the action will not affect a listed species, no further action is required.⁷⁰

If, on the other hand, the action agency determines that the proposed action “may affect” a listed species or critical habitat, it may initiate “informal consultation” with the FWS or the NMFS, depending on which Service has jurisdiction over the species.⁷¹ If the action agency determines during informal consultation that the project is not likely to adversely affect a species or critical habitat, and the Service concurs, no further consultation is required.⁷² If it is determined that the action is likely to adversely affect a listed species or critical habitat, formal consultation is required.⁷³

Formal consultation is a more intensive review of the project’s impacts and culminates with a “biological opinion”⁷⁴ setting forth the Secretary’s opinion detailing how the agency action affects the species or its critical habitat.⁷⁵ Any biological opinion finding jeopardy or adverse modification of critical habitat must include “reasonable and prudent alternatives” to the proposed action.⁷⁶ Although a “jeopardy” finding is technically only guidance, an action agency that ignores such a finding risks future liability under §§7 and 9 of the Act.⁷⁷

If, after consultation, the Service concludes that the action will not jeopardize the species, then the Service will issue a “no jeopardy” opinion with an “incidental take statement” that specifies “the impact of such incidental taking on the species,”⁷⁸ “those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact,” and the “terms and conditions” that must be complied with to implement the reasonable and prudent measures.⁷⁹ A taking that is in compliance with these terms and conditions shall not be considered a prohibited taking.⁸⁰

5. Prohibition on Take

Under §9 of the ESA, it is unlawful for any person to “take” any endangered species within the United States or the territorial sea of the United States.⁸¹ “Take” is defined *very broadly*⁸² to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”⁸³ “Harm” includes “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”⁸⁴ Persons found liable of committing a “take” face criminal or civil penalties.⁸⁵

6. Habitat Conservation Planning and Incidental Take

Section 10 of the ESA authorizes otherwise prohibited taking of listed species “if such taking is incidental to, and not the purpose of the carrying out of an otherwise lawful activity.”⁸⁶ These incidental take permits (ITPs) are not mandatory, but a party that engages in an activity without an ITP faces civil and criminal penalties if the activity takes a listed species.⁸⁷ To receive an ITP, an applicant must prepare a habitat conservation plan (HCP) that specifies how the applicant will conserve the affected species’ habitat.⁸⁸ The scope of an HCP may be limited to a discrete action, such as the construction of a home, or may be broader in nature, such as a county building permit program.⁸⁹

7. Citizen Suits

Section 11 of the Act authorizes any person to commence a civil suit to enjoin any person, including federal and state government agencies, alleged to be in violation of any provision of the Act; to compel the Secretary to enforce §§4(d) and 9 of the Act; or against the Secretary for failing to perform any nondiscretionary act or duty under §4 of the Act.⁹⁰ A citizen suit may be brought 60 days after written notice has been given to the Secretary and to any alleged violator.⁹¹ Prevailing parties are entitled to the recovery of attorneys fees.⁹²

68. 50 C.F.R. §402.02 (2009).

69. §402.02.

70. See SULLINS, *supra* note 48, at 73 (citing Newton County Wildlife Ass’n v. Rogers, 141 F.3d 803, 810, 28 ELR 21125 (8th Cir. 1998) (stating that a no effect determination obviates the need for any further consultation)).

71. 50 C.F.R. §402.13.

72. §402.13.

73. §402.13.

74. §402.02.

75. 16 U.S.C. §1536(b)(3)(A).

76. §1536(b)(3)(A); 50 C.F.R. §402.14(h)(3).

77. See Bennett v. Spear, 520 U.S. 154, 169, 27 ELR 20824 (1997) (stating that “while the Service’s Biological Opinion theoretically serves an ‘advisory function,’ . . . in reality it has a powerful coercive effect on the action agency”).

78. *Id.* An Incidental Take Statement must express the amount or extent of take numerically unless it is impracticable. See Miccosukee Tribe of Indians of Fla. v. United States, 566 F.3d 1257, 39 ELR 20097 (11th Cir. 2009); Ariz. Cattle Growers’ Ass’n v. U.S. Fish & Wildlife, 273 F.3d 1229, 1250-53, 32 ELR 20392 (9th Cir. 2001).

79. 16 U.S.C. §1536(b)(4).

80. §1536(o)(2).

81. §1538(a)(1)(B).

82. Babbitt v. Sweet Home Chapter, 515 U.S. 687, 704, 25 ELR 21194 (1995) (“Take is defined . . . in the broadest possible manner to include every conceivable way in which a person can ‘take’ or attempt to ‘take’ any fish or wildlife.”) (quoting S. REP. NO. 93-307, at 7 (1973)).

83. 16 U.S.C. §1532(19).

84. 50 C.F.R. §17.3 (2009).

85. 16 U.S.C. §1540(a), (b).

86. §1539(a)(1)(B).

87. Defenders of Wildlife v. Bernal, 204 F.3d 920, 927, 30 ELR 20403 (9th Cir. 2000).

88. 16 U.S.C. §1539(a)(2)(A).

89. SULLINS, *supra* note 48, at 90 (citing U.S. FISH & WILDLIFE SERV. & NAT’L MARINE FISHERIES SERV., HABITAT CONSERVATION PLANNING HANDBOOK 3-39 (1996)).

90. 16 U.S.C. §1540(g)(1)(A)-(C).

91. §1540(g)(2)(A)-(C).

92. §1540(g)(4).

B. State Endangered Species Laws

Forty-five states have enacted endangered species acts.⁹³ These laws vary widely amongst the states. Most states provide a mechanism for listing and prohibit the taking of listed species⁹⁴ but most state acts are nowhere near as comprehensive as the ESA and have no mechanisms for recovery, consultation, habitat conservation planning, or the designation of critical habitat.⁹⁵ Other states, such as Hawaii and California, provide more substantial measures, and the latter is considered to be the most comprehensive, as it is modeled after the federal Act.⁹⁶

Commentators have noted that state endangered species acts have the potential of playing a very important role in protecting endangered species.⁹⁷ A study found that 85 of the 108 U.S. species that went extinct during the first 21 years of the ESA were not listed under the ESA, and 42 of those species went extinct during delays in the listing process.⁹⁸ Thus, these state acts may serve as a first line of defense for many imperiled species not yet listed under the ESA and help prevent the need to list them under the ESA in the future.⁹⁹

Strong state endangered species laws can also aid in the protection of species already federally listed, either directly by including federally listed species on their state lists or indirectly by protecting the habitat these federally listed species share with state-listed species.¹⁰⁰ The federal ESA was never intended to be the vehicle for protecting all species.¹⁰¹ Instead, it is simply an “emergency room” measure to prevent extinction.¹⁰² Unfortunately, the federal government’s role over the past 30 years in endangered species protection can be attributed, in part, to the failure of states to adequately protect these species.¹⁰³ More rigorous state laws, when implemented in conjunction with ESA protections, may help speed up the recovery process for these species.

Lastly, the potential exists for many of these acts to consider ecosystem needs in the conservation and protection of endangered species habitats and steer human development to the least sensitive areas.¹⁰⁴ The ways in which this can be accomplished and how state endangered species acts can be improved, so that they can achieve an integrated

approach to species recovery, will be explored in greater detail in this Article.

I. The Florida ETSA

In 1976, the Florida Legislature enacted the Florida ETSA, with the intent of conserving and protecting the state’s fish and wildlife resources.¹⁰⁵ The state agency responsible for administering the ETSA is the Florida Fish & Wildlife Conservation Commission (FWC). The FWC has the constitutional authority to promulgate rules to carry out its constitutional and statutory mandates.¹⁰⁶

In enacting the ETSA, the legislature found:

The State of Florida harbors a wide diversity of fish and wildlife and that it is the policy of this state to conserve and wisely manage these resources, with particular attention to those species defined by the Fish and Wildlife Conservation Commission, the Department of Environmental Protection, or the United States Department of Interior . . . as being endangered or threatened.¹⁰⁷

Recognizing that “Florida has more endangered and threatened species than any other continental state,” the ETSA provides that “it is the intent of the Legislature to provide for research and management to conserve and protect these species as a natural resource.”¹⁰⁸ The FWC currently lists 118 species as endangered, threatened, or species of special concern under the ETSA.¹⁰⁹ Although modeled after the ESA, the ETSA is a comparatively less comprehensive statute, as it lacks many of the elements found in the ESA, including critical habitat designation, consultation, habitat conservation planning, recovery planning, and citizen enforcement.¹¹⁰

a. Listing

The ETSA provides for the listing of endangered and threatened species and species of special concern.¹¹¹ An “endangered species” is defined as “any species of fish and wildlife naturally occurring in Florida, whose prospects of survival are in jeopardy due to modification or loss of habitat; overutilization for commercial, sporting, scientific, or educational purposes; disease; predation; inadequacy of regulatory mechanisms; or other natural or manmade factors affecting its continued existence.”¹¹² “Threatened species” means “any species of fish and wildlife naturally occurring in Florida which may not be in immediate danger of extinction, but which exists in such small populations as to become endangered if it is subjected to increased stress as a result of further

93. George & Snape, *supra* note 7, at 505.

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.*

98. KIERAN SUCKLING ET AL., CTR. FOR BIOLOGICAL DIVERSITY, EXTINCTION AND THE ENDANGERED SPECIES ACT 2 (2004), available at <http://www.biological-diversity.org/swcbd/Programs/policy/esa/EESA.pdf>.

99. DEFENDERS OF WILDLIFE, *supra* note 8; George & Snape, *supra* note 7, at 515.

100. See DEFENDERS OF WILDLIFE, *supra* note 8. For example, Florida’s imperiled oak scrub ecosystem is home to the federally listed Florida scrub-jay, blue-tailed mole skink, sand skink, eastern indigo snake, as well as the state-listed gopher tortoise. See U.S. FISH & WILDLIFE SERV., *Florida Scrub-Jay, in MULTISPECIES RECOVERY*, *supra* note 25, at 4:261, 4:270, available at <http://www.fws.gov/verobeach/images/pdflibrary/fsja.pdf>.

101. State Environmental Resource Center, Protecting Endangered Species: Fact Pack, <http://www.serconline.org/esa/fact.html> (last visited Jan. 10, 2010) (citing DEFENDERS OF WILDLIFE, STATE ENDANGERED SPECIES ACTS (2004)).

102. *Id.*; Vaughan, *supra* note 21, at 579.

103. See generally DEFENDERS OF WILDLIFE, *supra* note 8.

104. See George & Snape, *supra* note 7, at 515.

105. FLA. STAT. ANN. §379.2291 (West 2009).

106. FLA. CONST. art. 4, §9.

107. FLA. STAT. ANN. §379.2291(2).

108. §379.2291(2).

109. FLA. FISH & WILDLIFE CONSERVATION COMM’N, FLORIDA’S ENDANGERED SPECIES, THREATENED SPECIES, AND SPECIES OF SPECIAL CONCERN (2008), available at http://myfwc.com/docs/FWCG/Imperiled_Species_List_Federaland-State.pdf.

110. See FLA. STAT. ANN. §379.2291.

111. See §379.2291.

112. §379.2291(3)(b).

modification of its environment.”¹¹³ The ETSA also provides protections to “species of special concern.”¹¹⁴

b. Take and Incidental Take Permitting

The ETSA makes it unlawful to “take” protected species, that is, “intentionally kill or wound any fish or wildlife of a species designated by [the FWC] as endangered, threatened, or of special concern.”¹¹⁵ While not expressly provided for by statute, the FWC has promulgated rules to prohibit the “incidental take” of listed species. No person shall pursue, molest, harm, harass, capture, possess, or sell an endangered, threatened species, or species of special concern, except as authorized by an incidental take permit.¹¹⁶ While the federal ESA defines “harm” to include significant habitat modification,¹¹⁷ the FWC’s ETSA regulations do not contain a similar definition.

c. Annual Reporting and Management Planning

The ETSA requires the FWC to provide the cabinet and legislative leaders an annual report that contains a revised and updated plan for management and conservation of endangered and threatened species.¹¹⁸

Pursuant to FWC rules, the commission must also develop “management plans” for listed species.¹¹⁹ Although not necessarily “recovery plans,” such as those developed under §4 of the ESA, these plans describe the necessary management actions that must occur in order for the species to recover. The ETSA requires the FWC to establish “measurable biological goals” and to define “recovery” of one endangered species in particular, the Florida manatee,¹²⁰ a species listed under both the federal ESA and the ETSA.¹²¹ These measurable goals are to be used in the commission’s development

of management plans or work plans for this species, in the evaluation of existing and proposed protection rules, and in determining progress in achieving manatee recovery.¹²²

C. State Growth Management Law

Land use regulation has traditionally been the province of states¹²³ and considered part of their police powers.¹²⁴ Although many states leave land use planning to local governments, in the 1970s and 1980s, several states enacted statutes that provided states with a significant role in land use planning.¹²⁵ Under these growth management laws, states require local land use plans to be consistent with larger state-wide or regional land use plans.¹²⁶

Thirteen states have adopted growth management laws.¹²⁷ These states are: California, Delaware, Florida, Georgia, Hawaii, Maine, Maryland, New Jersey, Oregon, Rhode Island, Tennessee, Vermont, and Washington.¹²⁸ While these states have taken a wide range of approaches, in most cases, the state has taken a more active role in land use planning, either by planning directly at the state level or by providing planning direction to local government.¹²⁹

Because these growth management acts provide for strong state involvement and oversight, these planning schemes are more likely to lend themselves to the integration of state endangered species recovery planning than other land use planning schemes that leave all planning decisions to local governments. This state-level approach, and the approach taken by Florida, is the focus of this Article.

I. Florida’s Growth Management Act

The Florida Legislature enacted Florida’s Local Government Comprehensive Planning and Land Development Regulation Act¹³⁰ in 1985 to “encourage the most appropriate use of land, water, and resources.”¹³¹

The Act requires all local governments to adopt a comprehensive plan setting forth the allowable uses, densities and

113. §379.2291(3)(c).

114. §379.411; FLA. ADMIN. CODE. r. 68A-27.005 (2009). A species is categorized as a species of special concern if it is determined that the species:

(1) has a significant vulnerability to habitat modification, environmental alteration, human disturbance, or human exploitation which, in the foreseeable future, may result in its becoming a threatened species unless appropriate protective or management techniques are initiated or maintained; (2) may already meet certain criteria for designation as a threatened species but for which conclusive data are limited or lacking; (3) may occupy such an unusually vital or essential ecological niche that should it decline significantly in numbers or distribution other species would be adversely affected to a significant degree; (4) has not sufficiently recovered from past population depletion; and (5) occurs as a population either intentionally introduced or being experimentally managed to attain specific objectives.

FLA. ADMIN. CODE. r. 68A-27.005(1)(b).

115. FLA. STAT. ANN. §379.411.

116. See FLA. ADMIN. CODE. r. 68A-27.003-.005.

117. 50 C.F.R. §17.3 (2009).

118. FLA. STAT. ANN. §379.2291(5). The plan includes criteria for research and management priorities, a description of the educational program, statewide policies pertaining to protection of endangered and threatened species, additional legislation that may be required and the recommended level of funding for the following year, along with a progress report and budget request. §379.2291(5).

119. FLA. ADMIN. CODE. r. 68A-27.0012(3).

120. FLA. STAT. ANN. §379.2291(6).

121. 50 C.F.R. §17.11 (listing the manatee under the ESA); FLA. ADMIN. CODE. r. 68A-27.003(1)(dd) (listing the manatee under Florida’s ETSA).

122. FLA. STAT. ANN. §379.2291(6).

123. See Bradley C. Karkkainen, *Biodiversity and Land*, 83 CORNELL L. REV. 1, 57 (1997) (explaining that although Congress entertained the idea of a National Land Use Act in the 1970s, the federal government has viewed land use regulation as a state and local affair).

124. See James H. Wickersham, *The Quiet Revolution Continues: The Emerging New Model for State Growth Management Statutes*, 18 HARV. ENVTL. L. REV. 489, 502 (1994) (citing *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365, 387-88 (1926)).

125. See John R. Nolon, *Historical Overview of the American Land Use System: A Diagnostic Approach to Evaluating Governmental Land Use Control*, 23 PACE ENVTL. L. REV. 821, 832 (2006) (by the 1970s, concerns arose that the delegation of land use power to local governments was an ineffective method of controlling environmental damage); Jerold S. Kayden, *National Land-Use Planning in America: Something Whose Time Has Never Come*, 3 WASH. U. J.L. & POL’Y 445, 449-50 (2000) (describing a greater interest in and acceptance of state-level planning and regulation over the past 25 years as part of a “quiet revolution” in land use administration).

126. See, e.g., FLA. STAT. ANN. §163.

127. See Breggin & George, *supra* note 28.

128. *Id.*

129. *Id.* at 91-92.

130. FLA. STAT. ANN. §163.

131. §163.3161(3).

intensities, and development standards for all lands within their boundaries, and to ensure that all development be consistent with the adopted plan.¹³² All local comprehensive plans must contain several “elements,” including a “conservation element” for the conservation, use, and protection of natural resources.¹³³

Although the Act delegates significant responsibility to the local governments, the state retains oversight of local government planning. A local comprehensive plan and any subsequent amendment to the plan must be consistent with the State Comprehensive Plan. The State Plan contains goals and policies to protect water resources¹³⁴ and natural systems¹³⁵ and calls for the establishment of “an integrated regulatory program to assure the survival of endangered and threatened species within the state.”¹³⁶

Comprehensive plans and comprehensive plan amendments must not only be consistent with the State Plan but also be consistent with the relevant Regional Planning Council’s Regional Plan, which sets forth a long-term regional vision for growth.¹³⁷ Plans and plan amendments that are not consistent with the Growth Management Act and the State Plan are deemed “not in compliance” and can be challenged by the state Department of Community Affairs and/or other affected persons under the Florida Administrative Procedure Act (APA).¹³⁸

D. State Transportation Planning

Each state must develop a statewide transportation plan and a statewide transportation improvement program.¹³⁹ The planning process must provide for the “consideration and implementation of projects, strategies, and services that will . . . protect and enhance the environment.”¹⁴⁰ In consultation

with federal and state agencies, the state plan must have a discussion of the “potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan.”¹⁴¹ Despite the requirements that states must consider environmental and land use issues when creating the plan, the regulations do not require the state to include land use development considerations or environmental considerations in the final statewide transportation plan.¹⁴²

I. Transportation Planning in Florida

The state legislature provided the Florida Department of Transportation (FDOT) with broad discretionary authority to plan and construct state roads and bridges.¹⁴³ The Florida Transportation Code provides a statewide transportation system under the supervision and control of the FDOT and gives the FDOT the primary power to plan, construct, and maintain the road system.¹⁴⁴ The mission statement of the FDOT makes environmental considerations a top priority in the planning and development of that system.¹⁴⁵

Under state law, the FDOT is required to develop and annually update a statewide transportation plan.¹⁴⁶ The purpose of the Florida Transportation Plan is to establish and define the state’s long-range transportation goals and objectives to be accomplished over a period of at least 20 years within the context of the State Comprehensive Plan.¹⁴⁷ Among other things, the plan must consider projects and strategies to “protect and enhance the environment, promote energy conservation, and improve quality of life.”¹⁴⁸ Each FDOT district also develops a five-year “district work program” that provides a project-specific list of transportation-related development and improvements, that must conform to the objectives of the State Transportation Plan.¹⁴⁹

E. State Wetland Protection Laws

The federal Clean Water Act (CWA)¹⁵⁰ is our nation’s principal surface water and wetland protection law. Development projects that call for the filling of surface waters and wetlands often require a permit from the U.S. Army Corps of Engineers (the Corps) under §404 of the CWA.¹⁵¹ Section 404 prohibits the discharge of dredge or fill materials in

132. See §§163.3167, 163.3177, 163.184.

133. §163.3177(6)(d).

134. The State Plan states that Florida “shall maintain the functions of natural systems and the overall present level of surface and ground water quality.” FLA. STAT. ANN. §187.201(7)(a). It also has policies to “protect and use natural water systems,” and “protect surface and groundwater quality and quantity in the state.” §187.201(7)(b). The State Plan further seeks to “protect and acquire unique natural habitats and ecological systems, such as wetlands.” §187.201(9)(a). The plan establishes additional policies that conserve wetlands, “protect and restore the ecological functions of wetlands systems to ensure their long-term environmental, economic, and recreational value,” and “emphasize the acquisition and maintenance of ecologically intact systems in all land and water planning, management, and regulation.” §187.201(9)(a).

135. See §187.201(9)(a) (“Florida shall protect and acquire unique natural habitats and ecological systems, such as wetlands, tropical hardwood hammocks, palm hammocks, and virgin longleaf pine forests, and restore degraded natural systems to a functional condition.”). The State Plan also contains policies to “conserve forests, wetlands, fish, marine life, and wildlife to maintain their environmental, economic, aesthetic, and recreational values,” “acquire, retain, manage, and inventory public lands to provide recreation, conservation, and related public benefits,” and “prohibit the destruction of endangered species and protect their habitats.” §187.201(9)(b).

136. §187.201(9)(b) (emphasis added).

137. FLA. STAT. ANN. §§163.3177(10)(a) (discussing what is required for comprehensive plans to be consistent with regional policy plans) and 186.503 (defining “strategic regional policy plan”).

138. See FLA. STAT. ANN. §163.3184(9)(a) (providing for an administrative hearing for “affected persons” seeking to challenge a determination that a comprehensive plan or plan amendment is “in compliance” with the Act).

139. 23 U.S.C. §135 (2007).

140. §135.

141. §135.

142. See D. Brennen Keene, *Transportation Conformity and Land Use Planning: Understanding the Inconsistencies*, 30 U. RICH. L. REV. 1135, 1149 (1996).

143. See *Dep’t of Transp. v. Lopez-Torres*, 526 So. 2d 674, 675 (Fla. 1988).

144. See FLA. STAT. ANN. §§332, 334-339, 341, 348, 349, 351, 861 (2009).

145. See FLA. STAT. ANN. §334.046(2) (2009) (The statement reads that it is FDOT’s mission to “provide a safe statewide transportation system that ensures the mobility of goods and people, enhances economic prosperity, and preserves the quality of our environment and communities.”).

146. FLA. STAT. ANN. §339.155.

147. §339.155.

148. §339.155.

149. §339.135.

150. 33 U.S.C. §§1251-1387, ELR STAT. FWPCA §§101-607.

151. 33 U.S.C. §1344(a) (2007), ELR STAT. FWPCA §404(a).

navigable waters without a permit.¹⁵² “Navigable waters” is defined as “waters of the United States, including the territorial seas”¹⁵³ and the U.S. Supreme Court has defined “waters of the United States” as including waters that may not be “navigable” under the classic sense of the term, such as many types of wetlands.¹⁵⁴

The CWA reserves to states the right to implement their own surface water and wetland protection regulations within that state.¹⁵⁵ The majority of these programs are adjuncts to the §404 program.¹⁵⁶ Sixteen states have wetland regulatory programs. Oregon’s program is arguably the most progressive and comprehensive, integrating wetland protection with land use planning.¹⁵⁷ While the CWA and some state wetland permitting programs have a “no net loss” policy,¹⁵⁸ the success of such programs in actually preserving the status quo is dubious.¹⁵⁹

I. The Florida Water Resources Development Act of 1972

The Florida Water Resources Development Act governs the use of Florida’s water resources.¹⁶⁰ Under the Act, the Florida Department of Environmental Protection (DEP) supervises five “water management districts” in the state.¹⁶¹ Unlike more localized entities, these districts have the responsibility for entire watersheds, which enhances their ability to address ecosystemwide problems.¹⁶² These districts have general rulemaking authority and play a significant role in water resource planning.¹⁶³

Projects that will impact wetlands require an environmental resource permit (ERP) from the regional water manage-

ment districts or the DEP.¹⁶⁴ An applicant for an ERP must provide reasonable assurance that the project is not contrary to the public interest.¹⁶⁵ In determining whether an activity is not contrary to the public interest, the governing board or the department shall consider, among other things, whether the activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats.¹⁶⁶

State ERP rules emphasize requiring a permit applicant to make all practicable modifications to the development proposal that would reduce or eliminate wetland impacts.¹⁶⁷ The rules require the applicant to avoid wetland impacts altogether, and then to require full mitigation to offset unavoidable impacts.¹⁶⁸

In certain instances, mitigation cannot offset impacts sufficiently to yield a permissible project. Such cases often include “activities which significantly degrade Outstanding Florida Waters, adversely impact habitat for listed species, or adversely impact those wetlands or other surface waters not likely to be successfully recreated.”¹⁶⁹ In these instances, water management districts and the DEP have the discretion to reject a mitigation plan and deny a permit for any project that otherwise does not eliminate or reduce harm to wetlands.¹⁷⁰

III. What States Can Learn From the ESA

The intent of the ESA is “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.”¹⁷¹ The word “conserved” is synonymous with recovery and is defined as the “methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the

152. §1344.

153. §1362(7).

154. *See* Solid Waste Agency of N. Cook County v. U.S. Army Corps of Eng’rs, 531 U.S. 159, 31 ELR 20382 (2001); *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 133, 16 ELR 20086 (1985).

155. 33 U.S.C. §1344(i).

156. Oliver A. Houck & Michael Rolland, *Federalism in Wetlands Regulation: A Consideration of Delegation of Clean Water Act Section 404 and Related Programs to the States*, 54 MD. L. REV. 1242 (1995) (explaining that most state wetland programs include regulatory functions and provide disincentives for wetlands alteration and encourage wetlands acquisition).

157. *See* Association of State Wetland Managers, State Wetland Protection Statutes, <http://www.aswm.org/swp/states.htm> (last visited Jan. 8, 2010).

158. *See* Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines, 55 Fed. Reg. 9210, 9211 (Mar. 12, 1990).

159. The use of mitigation in Florida has resulted in substantial destruction of wildlife and habitat and does not guarantee “no net loss” of wetlands. *See* Tucker, *supra* note 38, at 53-54 (citing, among other things, a Florida Department of Environmental Protection (DEP) study); NAT’L RESEARCH COUNCIL, COMPENSATING FOR WETLAND LOSSES UNDER THE CLEAN WATER ACT 1-2 (2001) (concluding that federal agencies are not meeting the goal of “no-net loss” under §404 of the CWA).

160. FLA. STAT. ANN. §373 (2009).

161. §373.044.

162. *See* Kevin E. Regan, *Balancing Public Water Supply and Adverse Environmental Impacts Under Florida Water Law: From Water Wars Towards Adaptive Management*, 19 J. LAND USE & ENVTL. L. 123, 132 (2003).

163. *See* R. Timothy Weston, *Harmonizing Management of Ground and Surface Water Use Under Eastern Water Law Regimes*, 11 U. DENV. WATER L. REV. 239, 261 (2008); *see also* FLA. STAT. ANN. §§373.069, 373.044, 373.0695.

164. *See* §373.414. ERP applications are processed by either the DEP or the water management districts in accordance with the division of responsibilities set forth in operating agreements between the two agencies. *See* Florida DEP, Environmental Resource Permitting (ERP) Program, <http://www.dep.state.fl.us/water/wetlands/erp/index.htm> (last visited Jan. 14, 2010).

165. §373.414(1). However, if such an activity significantly degrades or is within an “Outstanding Florida Water,” the applicant must provide reasonable assurance that the proposed activity will be clearly in the public interest. *See* §373.414(1). Outstanding Florida Waters are waters that are “worthy of special protection because of their natural attributes.” FLA. ADMIN. CODE r. 62-302.200(19) (2009). *See also* r. 62-302.700.

166. §373.414(1)(a).

167. *See* FLA. ADMIN. CODE r. 62-312.060. *See also* VHQ Dev., Inc. v. Dep’t of Envtl. Prot., Case No. 92-7456, 15 FALR 3407 (Final Order, Aug. 13, 1993), *aff’d*, 642 So. 2d 755 (Fla. Dist. Ct. App. 1994).

168. *See* Sw. Fla. Water Mgmt. Dist. v. Charlotte County, 774 So. 2d 903, 910-12 (Fla. Dist. Ct. App. 2001).

169. S. FLA. WATER MGMT. DIST., BASIS OF REVIEW FOR ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT §4.3 (2007).

170. *See* Brown v. So. Fla. Water Mgmt. Dist., Case No. 04-000476 (Final Order, Sept. 13, 2004) (denying an ERP where it was determined that the proposed mitigation for a dock project would not adequately offset impacts to a listed species of seagrass); *Charlotte County v. IMC Phosphates*, 4 ER FALR 20 (Final Order, Sept. 15, 2003) (denying an application for an ERP where the applicant failed to provide reasonable assurances that its mitigation proposal would maintain or improve the natural functions of the diverse types of wetland systems present at the site prior to commencement of the project); *Kramer v. Dep’t of Envtl. Prot.*, 2 ER FALR 225 (Final Order, Feb. 26, 2002) (denying an ERP where the mitigation plan was found inadequate and “experimental”).

171. 16 U.S.C. §1531(b).

measures provided pursuant to this chapter are no longer necessary.¹⁷² As discussed below, however, the ESA has often fallen short of achieving these goals.

A. *The ESA Often Fails to Advance Species Recovery*

As Prof. Oliver Houck explains:

The purpose of the Endangered Species Act is to recover endangered species. It is not the Act's goal to catalogue them, to identify their habitats, to review and alter jeopardizing activities, to give developers a difficult time, or to perpetuate precarious populations on the brink of extinction. These aspects of the Act are but means to the end of 'conserving' these species.¹⁷³

The effectiveness of the ESA, however, in bringing about recovery remains uncertain.¹⁷⁴ Since Congress enacted the ESA in 1973, only a handful of species have been removed from the list because they were "recovered."¹⁷⁵ Hundreds more may be listed in the years to come.¹⁷⁶

There are likely many reasons why species recovery is proceeding at such a slow pace. Although recovery is the overarching purpose of the ESA, the recovery planning process is largely up to the Services' discretion and, in the end, not enforceable against the implementing Services. The ESA establishes no standards for what constitutes an acceptable recovery plan,¹⁷⁷ and therefore it is up to the Services' discretion as to what should go into these plans.¹⁷⁸ While recovery plans are required to identify which actions are necessary for the species to recover as well as provide for a specific time frame to implement these actions, these implementation schedules are unenforceable.¹⁷⁹ Moreover, courts have held that a recovery plan is not required for every species listed under the ESA,¹⁸⁰ and for those recovery plans that the agency does prepare, their contents are, for the most part, not legally enforceable against the implementing Services.¹⁸¹ To make matters worse, recovery planning is one of the least funded endangered species programs¹⁸² and plans are, in many instances,

relatively crude documents that are out of date and provide inadequate protections.¹⁸³

The fact that recovery plans are largely unenforceable documents is particularly problematic when you consider that listing, agency consultation, and conservation planning recovery should all be viewed as a means of achieving recovery,¹⁸⁴ and yet, there is nothing holding the Services to identifying what must be done to achieve the ultimate purpose of the Act. Without specific, mandatory measures for achieving species recovery, strict time lines in which to implement these measures, and a mechanism by which to enforce these recovery plans, there may be little incentive, let alone an adequate mechanism, for the Services to ensure that their consultations and permitting actions actually advance recovery.¹⁸⁵

Further adding to the problem is the fact that 7 and Section 10 decisions are not based on recovery. Under §7, an agency action may go forward if it will "not jeopardize the continued existence" of the species. Similarly, an incidental take permit may be issued under §10 if the action "will not appreciably reduce the likelihood of the survival and recovery of a listed species in the wild."¹⁸⁶ While the word "recovery" is mentioned in §10, the Services have interpreted the standard for approving federal actions under §7 and private actions under §10 as one of "no jeopardy" rather than "recovery."¹⁸⁷ As a result, few projects are ever denied because they rise to the level of causing "jeopardy" to listed species. Given the thousands of no jeopardy opinions issued over the years, compared to just a handful of jeopardy opinions,¹⁸⁸ and the recent rise in the number of HCPs approved by the agencies,¹⁸⁹ these processes may put species at risk of a "death by a thousand cuts" wherein the agencies permit thousands of takes and habitat losses that eventually drive a species to the verge of extinction.¹⁹⁰ Several commentators have argued

172. §1532(3).

173. Oliver A. Houck, *The Endangered Species Act and Its Implementation by the U.S. Departments of Interior and Commerce*, 64 U. COLO. L. REV. 277, 344 (1993).

174. *Id.* at 345.

175. Gifford & Crouse, *supra* note 6, at 6-7.

176. See U.S. Fish & Wildlife Service, *supra* note 3.

177. See Parenteau, *supra* note 15, at 264.

178. See Strahan v. Linnon, 967 F. Supp. 581 (D. Mass. 1997).

179. See Federico Cheever, *The Road to Recovery, A New Way of Thinking About the Endangered Species Act*, 23 ECOLOGY L.Q. 1, 26 (1996).

180. Nat'l Wildlife Fed'n v. Nat'l Park Serv., 669 F. Supp. 384 (D. Wyo. 1987).

181. Fund for Animals, Inc. v. Rice, 85 F.3d 535, 547, 26 ELR 21433 (11th Cir. 1996) (holding that recovery plans are for guidance purposes only and noting that "by providing general guidance as to what is required in a recovery plan, the ESA 'breath[es] discretion at every pore'" (citing Strickland v. Morton, 519 F.2d 467, 469, 5 ELR 20678 (9th Cir. 1975)). See also Cheever, *supra* note 179, at 26, 58 (arguing that recovery plans have played less than a significant role in conserving listed species at least in part because the Services do not consider their plans as binding).

182. See Parenteau, *supra* note 15, at 264.

183. See John M. Volkman, *Recovery Planning, in LAW, POLICY, AND PERSPECTIVES, supra* note 7, at 71, 81 (citing a 1993 study that suggested recovery plans "generally aim for a lesser objective than the regulatory definition of recovery"); William & Mary Panel, *supra* note 11, at 782-83 (Steven Quarles discussing how "recovery plans are not just out of date, they are woefully, even ludicrously, inadequate").

184. See generally Cheever, *supra* note 179.

185. See Daniel J. Rohlf, *Section 4 of the Endangered Species Act: Top Ten Issues for the Next Thirty Years*, 34 ENVTL. L. 483, 550 (2004) (arguing that recovery plans need to provide a blueprint for the habitat protections and the regulatory changes needed to allow the Services to support a finding that a species has recovered and to provide other agencies with a clear idea of what it will take to lead to a delisting).

186. 16 U.S.C. §1539(a)(2)(B)(iv) (2007).

187. See Houck, *supra* note 173, at 322-23 (explaining that "jeopardy" under §7 requires a showing that the action will appreciably reduce *both* survival and recovery, thus making §7 determinations essentially based on survival); Parenteau, *supra* note 15, at 307 (arguing that the services have made "survival" the de facto implementation standard for §7 and §10 decisions, rather than "recovery" and courts have interpreted jeopardy to mean actions that actually threaten the extinction of a species); Karin P. Sheldon, *Habitat Conservation Planning: Addressing the Achilles Heel of the Endangered Species Act*, 6 N.Y.U. ENVTL. L.J. 279, 308 (1998) (stating that according to the agencies, HCPs are not required to recover listed species or contribute to the recovery objectives contained in a recovery plan).

188. See Houck, *supra* note 173, at 317-23.

189. See Sheldon, *supra* note 187, at 283 (stating that since 1994 there has been a "veritable explosion in the numbers . . . of Habitat Conservation Plans").

190. See Jennifer Jester, *Habitat Conservation Plans Under Section 10 of the Endangered Species Act: The Alabama Beach Mouse and the Unfulfilled Mandate of Spe-*

that if the ESA is to be administered in a manner consistent with its overarching purpose of recovery, consultation, and incidental take permitting, actions must be interpreted to require a showing that the proposed activity will advance the recovery of the species.¹⁹¹ While agencies have, on occasion, exercised their §§7 and 10 responsibilities with an eye toward species recovery,¹⁹² without changes to the statutory wording of §§7 and 10, it would not appear that the agencies are under any obligation to apply a recovery standard to their consultation and incidental take permitting decisions.¹⁹³

Lastly, the ineffectiveness of the ESA to bring about recovery can also be attributed to the way the ESA itself has been used and perceived over the years.¹⁹⁴ As Prof. Federico Cheever explains, traditionally, lawyers and policymakers view endangered species problems in terms of a “one threat model” by applying §7 or §9 of the ESA to stop a particular project that has a single, discrete impact on a listed species.¹⁹⁵ This approach artificially isolates a single threat from a larger pattern of circumstances and conduct.¹⁹⁶ Thus, the overwhelming focus and application of these prohibitions overshadow the recovery purpose of the Act. To alleviate this, and to prevent the recovery process from being the “Achilles’ heel”¹⁹⁷ of the Act, the focus must shift from strictly prohibiting the take of individual species and toward a concept of recovery that emphasizes the need to protect larger habitats and ecosystems upon which all individual members of a particular species depend.¹⁹⁸

B. The ESA Often Fails to Preserve Ecosystems

Preserving ecosystems and protecting against habitat loss and degradation is critical to the recovery of listed species.¹⁹⁹ To accomplish this, habitat must be preserved over a large enough area to support an adequate population and range for species recovery.²⁰⁰ This will necessarily require an ecosystem approach to ESA conservation planning.²⁰¹ Unfortunately,

the regulatory processes in the ESA are not necessarily geared toward ecosystem protection.

The §7 consultation process requires the Services to evaluate agency actions to determine whether they will jeopardize the continued existence of endangered species. Although §7 requires the Services to consider the “cumulative effects” individual projects have on individual species and their habitats, the statute is lacking a mechanism by which to evaluate the cumulative take of many species.²⁰² Further, there is no ecosystem level plan that these consultation decisions can be measured against to determine the incremental effect these decisions have on habitat/ecosystem loss. While consultation decisions *could* be evaluated in consideration of species recovery plans, most often, the Services do not require consultation to advance specific recovery objectives, and even if they did, recovery plans do not contain specific minimum habitat requirements, let alone require projects to be developed so as to assure such requirements are met. As a result, there is little consideration during the consultation process of just how much habitat has been destroyed by past projects and just how much remaining habitat must be preserved for the species to recover.

The §10 incidental take permitting process calls for the Services to evaluate applications submitted by private actors seeking permission to take species in exchange for some kind of conservation commitment. Individual projects are not evaluated in consideration of how much habitat must be preserved to ensure the conservation of listed species but instead, how much mitigation must be offered to allow the project to go forward.²⁰³ Further, what is “practical” or “economically feasible” often dictates the choice of mitigation measures without concern for whether the mitigation actually offsets the harm allowed.²⁰⁴ The Services also view their authority to impose mitigation as limited to measures to prevent extinction rather than promote recovery,²⁰⁵ and, as a result, do not always require that the chosen mitigation measures fully compensate for the impact of the authorized activity.²⁰⁶

Even where the mitigation is intended to offset the impact of a particular project, it is unclear whether the mitigation measures are actually successful. Studies have shown that the mitigation measures adopted by many HCPs are untested

cies Recovery, 26 B.C. ENVTL. AFF. L. REV. 131, 157 (1998) (discussing the efficacy of mitigation and minimization efforts in HCPs for the Alabama Beach Mouse as “piecemeal development continues to eat away at ABM habitat”).

191. See Cheever, *supra* note 179, at 7 (“recovery should be the lens through which we view all of the Act’s mandates”); Jennifer Jeffers, *Reversing the Trend Towards Species Extinction, or Merely Halting It?: Incorporating the Recovery Standard Into ESA Section 7 Jeopardy Analyses*, 35 ECOLOGY L.Q. 455 (2008); Parenteau, *supra* note 15, at 307; Glen Spain, *Dams, Water Reforms, and Endangered Species in the Klamath Basin*, 22 J. ENVTL. L. & LITIG. 49, 87 (2007) (noting that “[u]nfortunately, there is also no statutory requirement that HCPs . . . actually contribute toward species recovery”).

192. Cheever, *supra* note 179, at 70-73.

193. See 16 U.S.C. §§1536, 1539 (2007).

194. Cheever, *supra* note 179, at 5.

195. *Id.* at 12.

196. *Id.* at 13.

197. See Parenteau, *supra* note 15, at 264.

198. See Cheever, *supra* note 179, at 31; Federico Cheever & Michael Balster, *The Take Prohibition in Section 9 of the Endangered Species Act: Contradictions, Ugly Ducklings, and Conservation of Species*, 34 ENVTL. L. 363, 394-96 (2004).

199. See 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, 146 (2002).

200. *Id.*

201. Kristin Carden, *Bridging the Divide: The Role of Science in Species Conservation Law*, 30 HARV. ENVTL. L. REV. 165, 248-49 (2006) (arguing that incorporating ecosystem management principles into the ESA makes sense from a sci-

entific and public interest perspective); Fischman & Hall-Rivera, *supra* note 199, at 143, 146 (explaining that meeting the goal of species recovery requires conserving ecosystems upon which the species depend and habitat protection is a prerequisite for conservation of biological diversity and protection of endangered and threatened species).

202. See U.S. GOV’T ACCOUNTABILITY OFFICE, ENDANGERED SPECIES ACT: THE U.S. FISH AND WILDLIFE SERVICE HAS INCOMPLETE INFORMATION ABOUT EFFECTS ON LISTED SPECIES FROM SECTION 7 CONSULTATIONS, GAO-09-550 (2009), available at <http://www.gao.gov/new.items/d09550.pdf>.

203. Jody Freeman, *The Contracting State*, 28 FLA. ST. U. L. REV. 155, 195 (2000) (“HCPs amount to mitigation measures designed to minimize the impact of a proposed action (usually a development project)” on listed species).

204. John Kostyack, *Tipping the Balance, in LAW, POLICY, AND PERSPECTIVES*, *supra* note 7, at 339, 351 (arguing that negotiations over HCPs are driven by what the landowner considers to be economically feasible rather than what the science indicates is required); Sheldon, *supra* note 187, at 311.

205. Sheldon, *supra* note 187, at 312.

206. *Id.*

and are not adequately based on science.²⁰⁷ Equally problematic is that many HCPs do not contain clear descriptions of the expected conservation benefits.²⁰⁸ Some HCPs merely require the applicant to pay for the loss of endangered species taken as a result of the project, and it is not always clear whether the money actually goes toward advancing a specific biological goal (such as protecting nearby habitat).²⁰⁹ These types of compensatory measures may lead to unmitigated habitat destruction.²¹⁰

Thus, the Act's consultation and incidental take permitting provisions can be viewed as largely piecemeal, highly discretionary approaches to habitat conservation. With ill-defined and haphazard mitigation and the lack of a mechanism in which to evaluate these projects as part of a larger recovery puzzle, these measures will often fail to provide the type of comprehensive planning necessary to protect large habitats and ecosystems.

Lastly, the biggest contributors to habitat loss and fragmentation are private land development, road construction, and water resource development projects.²¹¹ These types of activities are largely within the regulatory province of states, not the federal government, and the federal government is often unable to regulate such uses under the ESA.²¹² Thus, there is an untapped opportunity for states to harness their authorities as growth managers, transportation planners, and water resource regulators and take significant measures to help protect vanishing habitats and ecosystems.

IV. The Proposal

A. An Overview

For state endangered species acts to provide for the long-term conservation of listed species and the habitats they depend on, it is imperative that the states learn from the federal experience and how the ESA has fallen short of achieving its overarching purpose of species recovery and ecosystem protection and develop mechanisms that prioritize the role of recovery and ecosystem protection in their endangered species protection laws.

Recognizing that all state endangered species laws are modeled after the ESA, the proposal builds upon this framework and seeks to redefine and expand the concepts of listing,

207. See Kostyack, *supra* note 204 (citing a study prepared by the American Institute of Biological Sciences that found only one-half of HCPs have clearly articulated strategies for minimizing harmful impacts to listed species and a study prepared by Defenders of Wildlife that found most of the 24 HCPs it examined were not based on science and were not consistent with species recovery). See also Jessica Fox, *Biodiversity Protection and Mitigation: Introduction*, 38 STETSON L. REV. 205, 210 (2009) (stating that it is unclear if "mitigation banking" adequately offsets the impacts of a particular project).

208. See Kostyack, *supra* note 204, at 349.

209. See *id.* Kostyack describes an HCP that required a developer to pay \$25,000 if bald eagles were driven from their nests as a result of the construction of two residential subdivisions. Because the terms of the HCP were so vague, it was possible that the \$25,000 would be used for educational pamphlets rather than replacing the lost habitat with new habitat and a nesting site.

210. *Id.*

211. See Discussion, *supra* Part I.

212. See Discussion, *supra* Part II.

take, consultation, habitat conservation planning, critical habitat, citizen enforcement, and recovery planning, so that these mechanisms are all consistent with species recovery.²¹³ The proposal sets forth a *single* recovery-based standard for the issuance of incidental take permits, establishes an inter-agency consultation process that harnesses the state's role in growth management, transportation planning, and water resource development, links habitat conservation planning to larger recovery plans, and creates a recovery planning process that provides a scientifically based and enforceable means of advancing both species recovery and ecosystem preservation. As most states still lack many of the provisions found in the ESA,²¹⁴ there is an excellent opportunity for states to learn from the federal model and enact more comprehensive endangered species acts that make species recovery the overarching priority.

B. Toward a More Complete State Endangered Species Act: The Florida Example

I. Listing

The cornerstone of the ESA is the listing provision. The ESA prohibits the take of species listed as endangered or threatened. State acts typically mirror the ESA in classifying species as endangered or threatened,²¹⁵ but often contain an additional third category: "species of special concern."²¹⁶

A problem with the current approach taken by many states, however, is that there are often different permitting standards for each of the three categories. For example, in Florida, an incidental take permit may only be issued for "endangered species," when the permitted activity "will clearly enhance the survival potential of the species."²¹⁷ For threatened species, permits may only be issued when the permitted activity "will not have a negative impact on the survival potential of the species."²¹⁸ For species of special concern, permits may be issued where the permitted activity "will not be detrimental to the survival potential of the species."²¹⁹ The problem with this standard is that it does little to promote species recovery. Under this approach, it is much easier to obtain an incidental take permit for species of special concern and threatened species, as one only has to demonstrate that it will have "no negative impact" on survival or, even worse, "not be detrimental" to a species' survival. If the ease in which such permits may be issued is any measure of the number of permits

213. See Cheever, *supra* note 179, at 7; Parenteau, *supra* note 15, at 307. Patrick Parenteau and Federico Cheever argue that these provisions under the ESA should be reinterpreted to advance species recovery; see also DEFENDERS OF WILDLIFE, *supra* note 8 (arguing that a model state act and its provisions must be based on recovery rather than survival).

214. See George & Snape, *supra* note 7, at 505.

215. *Id.* at 507.

216. See FLA. ADMIN. CODE r. 68A-27.005 (2009) (setting forth the requirements for Florida's "species of special concern" listing); George & Snape, *supra* note 7, at 507 (discussing Minnesota's "species of special concern" designation and its application to species that are uncommon in the state or have "unique or highly specific habitat requirements").

217. See FLA. ADMIN. CODE r. 68A-27.003(1) (2009).

218. See r. 68A-27.004(1).

219. See r. 68A-27.005(1)(a).

that are issued for the take of threatened species and species of special concern, it would appear that such a system would increase the likelihood that these threatened species and species of special concern will eventually join the ranks of those species listed as endangered under the Act. Thus, the current standards for incidental take found in the ETSA, much like the “survival” standards found in the ESA, are not focused on species recovery, and at least with regards to species of special concern, may even be a step backwards in that they only require a showing that the permitted activity will “not be detrimental” to the species’ survival.

Thus, to make the incidental take process more consistent with the overarching goals of “recovery,” state acts, such as Florida’s ETSA, should provide a single standard for incidental take that is consistent with recovery. The current incidental take permitting standard for endangered species, that the permitting activity must “clearly enhance the survival potential of the species” appears to be most consistent with the species conservation mandate contained in Florida’s ETSA.²²⁰ A single, protective standard that actually advances recovery rather than merely maintains the status quo is essential to effectively implementing the recovery-oriented consultation, conservation planning, and recovery planning mechanisms discussed below. Having a single protective standard recognizes that all species have an equally important role in the state’s biodiversity²²¹ and eliminates confusion within the regulatory community and the public as to what standards apply for each of the three categories of listed species.²²²

2. Prohibition on “Take”

All state acts prohibit the “take” of listed species. Yet, the “take” definition found in most state endangered species laws is limited to the intentional killing or harming of protected species and does not extend to significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering²²³—the definition of harm under the federal ESA.²²⁴

As stated earlier, Florida prohibits the unpermitted “incidental take” of endangered species, that is, the killing of species that is not the purpose of the activity but as a result of the activity almost certain to occur. Other states, such as California, have imposed similar prohibitions on incidental take.²²⁵ Under Florida’s ETSA, no person shall harm or harass an endangered species, threatened species, or species of special concern, except as authorized by specific permit.²²⁶ FWC regulations do not define the scope of the term “harm.”²²⁷

Because the recovery planning, critical habitat, and consultation mechanisms proposed by this Article, and discussed more fully below, are premised on the notion that significant habitat modification results in the decline of endangered and threatened species, and that state wildlife agencies must work in conjunction with state growth management and water management agencies to regulate activities affecting wildlife habitat, Florida and other states should revise their definition of harm to include significant habitat modification to enable the effective and consistent implementation of these provisions.²²⁸ A definition of take that includes significant habitat modification not only provides state wildlife agencies with authority to protect species habitat, but also recognizes that to ensure long-term species survival and recovery, protections must extend to both individual species and their habitats.²²⁹

3. Recovery Plans

The foundation for any good state endangered species act must be a strong recovery planning provision.²³⁰ Recovery is the overarching purpose of endangered species protection laws, and thus a planning mechanism for species recovery must be in place if this goal is to be realized.

The type of recovery plans that are needed is of equal concern. Federal ESA recovery plans are either single-species or multi-species in nature. While single-species recovery plans have been the traditional approach to endangered species protection,²³¹ commentators have argued that planning approaches that incorporate larger ecosystem considerations

220. See r. 68A-27.003(1). See also DEFENDERS OF WILDLIFE, *supra* note 8 (asserting that a permit for incidental take under state acts should be issued only where the taking “will not impair the recovery of any endangered or threatened species”).

221. See Melanie J. Rowland, *Bargaining for Life: Protecting Biodiversity Through Mediated Agreements*, 22 ENVTL. L. 503, 506-07 (1992) (arguing that “conservationists must champion the cause of the ‘cogs and the wheels’ as well as the grizzlies and sea otters”).

222. Interview with Tim Breault, *supra* note 10. Tim Breault remarked that the state’s three-tier listing process with three different standards for the issuance of an incidental take permit has caused confusion amongst the public and regulated community. For this and other reasons, the Florida FWC is considering implementing a single classification scheme with a single incidental take permitting standard. See Internal Memorandum, Florida Fish and Wildlife Conservation Commission, Internal Review and Thoughts by Staff About FWC’s Imperiled Species Listing System (June 2008), available at <http://myfwc.com/docs/WildlifeHabitats/ListingBackgroundReportJune2008.pdf>.

223. George & Snape, *supra* note 7, at 508 (noting that only Massachusetts has followed the federal lead in defining take as including disruption of an animal’s “nesting, breeding, feeding, or migratory activity”).

224. *Babbitt v. Sweet Home Chapter*, 515 U.S. 687, 704 (1995); 50 C.F.R. §17.3 (2009).

225. See CAL. FISH & GAME CODE §2081 (West 2009).

226. See FLA. ADMIN. CODE r. 68A-27.003-.005 (2009). For endangered species, permits may only be issued when the permitted activity “will clearly enhance the survival potential of the species.” For threatened species, permits may only be issued when the permitted activity “will not have a negative impact on the survival potential of the species.” For species of special concern, permits may be issued where the permitted activity “will not be detrimental to the survival potential of the species.”

227. The FWC may have the constitutional authority to pass a rule defining harm to include habitat modification. See FLA. CONST. art. 4, §9. See also Thomas Ankersen et al., *The Gopher Tortoise and Upland Habitat Protection in Florida: Legal and Policy Considerations* (Feb. 2003) (draft for workshop presentation), available at <http://www.law.ufl.edu/conservation/pdf/gopher.pdf> (noting that the state legislature deferred to the constitutional regulatory authority of the FWC for a more nuanced definition of what constitutes a “take”).

228. See DEFENDERS OF WILDLIFE, *supra* note 8 (arguing that state acts should adopt the federal “take” definition).

229. See Cheever & Balster, *supra* note 198, at 394-96.

230. A study performed by the U.S. Government Accountability Office revealed that federally listed species with recovery plans fare better than those without such plans. U.S. GOV’T ACCOUNTABILITY OFFICE, *ENDANGERED SPECIES: MANY FACTORS AFFECT THE LENGTH OF TIME TO RECOVER SELECT SPECIES* 31, GAO-06-730 (2006), available at <http://www.gao.gov/new.items/d06730.pdf>.

231. Taylor et al., *supra* note 22, at 364.

offer the greatest potential of providing for maximum habitat protection.²³² The FWS and the NMFS have also adopted a policy indicating the Services' preference for multi-species, ecosystem-based recovery planning where possible.²³³ Further, by focusing on indicator species (species whose viability correlate with the health of the ecosystems in which they live) and keystone species (species whose continued presence in an ecosystem is critical for the long-term sustainability of that ecosystem),²³⁴ recovery planning could lead to better habitat and ecosystem management.²³⁵

States should adopt multi-species, ecosystem-based recovery plans that focus on preserving habitat, preventing further habitat fragmentation, and where possible reconnecting habitats. Much like federal recovery plans, these plans would identify recovery goals, provide strategies on how to accomplish these goals, and implement timetables for their completion. State plans would go further, however, by identifying the location, type, and amount of habitat that would be required to preserve these species. Using this information, the plans would identify those areas that are critical to the long-term survival of these species and would require development and transportation projects to avoid or minimize their impacts to these critical areas. The plans would also identify those areas where habitat fragmentation has occurred and where wildlife corridors are needed to reconnect fragmented habitats. Plans could also identify other areas that because of their proximity to existing conservation lands should be managed or developed in a manner that reduces secondary impacts to these natural areas. Lastly, recovery plans could identify which areas are in need of restoration and require actions that may impact these areas to engage in certain restoration efforts in exchange for the development of other less important areas.

To accomplish this, recovery plans would be developed utilizing the latest GIS-based biodiversity planning tools that rank landscapes based upon the habitat needs of listed wildlife species and assess the potential impacts of specific projects. Many states, including Florida, Maryland, Massachusetts, New Jersey, and Oregon have, over the past decade, developed and updated a variety of GIS habitat-mapping systems to assist them in carrying out their wildlife conservation

goals.²³⁶ Florida's habitat and endangered species mapping projects, developed by the FWC, are of particular interest and could serve as a model for other states.

In 1994, Florida's the FWC published a report entitled *Closing the Gaps in Florida's Wildlife Habitat Conservation System*.²³⁷ Through the use of extensive GIS mapping, the report identified habitat areas that should be conserved if key components of the state's biological diversity are to be maintained. The report recommended the designation of Strategic Habitat Conservation Areas (SHCAs) to depict lands needed to meet minimum conservation goals. These goals included the conservation of 30 species of wildlife inadequately protected by the current system of conservation lands and lands important to the long-term survival of 105 rare plant species.²³⁸

Recently, the FWC has developed perhaps the most ambitious and comprehensive GIS-based habitat-mapping project for the specific purpose of protecting listed species. The Integrated Wildlife Habitat Ranking System (IWHRS) ranks the Florida landscape based upon the habitat needs of listed species to identify ecologically significant lands in the state and to assess the potential impacts of development projects. The IWHRS presents a wide variety of land cover and species-specific data and ranks habitat based on the number of types of listed species that are present in the area.

These habitat-mapping tools provide the necessary foundation for an effective multi-species recovery planning approach. Recovery plans could be developed based on the specific habitat needs identified and described by the IWHRS tools and others. Comprehensive plan amendments, transportation plans and projects, and other habitat-disturbing activities could all be evaluated based on the data generated by these tools²³⁹ and through consultation and habitat conservation planning, development, roads, and other structures could be diverted away from the highest ranking habitat and those areas needed to maintain the state's long-term biodiversity.

Although the FWS has utilized GIS habitat-mapping to a limited extent in their recovery planning efforts, it has been used primarily for monitoring purposes and as a basis for making management recommendations.²⁴⁰ Similarly, the

232. See Oliver A. Houck, *On the Law of Biodiversity and Ecosystem Management*, 81 MINN. L. REV. 869, 976 (1997) (arguing that the use of umbrella species, keystone species, and indicator species is the key to successful ecosystem management); William J. Snape, *The Endangered Species Act: Anatomy of an Environmental Scapegoat*, in LAW, POLICY, AND PERSPECTIVE, *supra* note 7, at 519, 523 (stating that keystone, umbrella, and indicator species should all be better utilized under the Act).

233. Notice of Interagency Cooperative Policy for the Ecosystem Approach to the Endangered Species Act, 59 Fed. Reg. 34273 (July 1, 1994). The Services explain that this approach is most consistent with the primary purpose of the ESA, which is "to provide a means whereby the ecosystems upon which endangered [and] threatened species depend may be conserved." 59 Fed. Reg. at 34274 (quoting 16 U.S.C. §1531(b)).

234. See J.B. Ruhl, *Biodiversity Conservation and the Ever-Expanding Web of Federal Laws Regulating Nonfederal Lands: Time for Something Completely Different?*, 66 U. COLO. L. REV. 555, 591 (1995) (discussing the use of indicator and keystone species in ecosystem conservation).

235. See *id.* (stating that "protecting indicator and keystone species may indirectly result in the protection of whole ecosystems in which they exist, and consequently the biodiversity values of the ecosystems").

236. See JEFFREY P. COHN & JEFFREY A. LERNER, INTEGRATING LAND USE PLANNING AND BIODIVERSITY (2003), available at http://www.defenders.org/resources/publications/programs_and_policy/habitat_conservation/conservation_planning/integrating_land_use_planning_and_biodiversity.pdf. In 2003, Defenders of Wildlife performed a comprehensive assessment of state habitat-mapping initiatives discussing how these and other initiatives are being linked to local land use planning to achieve greater wildlife protections.

237. COX ET AL., *supra* note 42. The "Gaps" report was supplemented in 2000. See JAMES COX & RANDY KAUTZ, HABITAT CONSERVATION NEEDS OF RARE AND IMPERILED WILDLIFE IN FLORIDA (2000).

238. See *id.*

239. See HENRY LEE MORGENSTERN ET AL., DEFENDERS OF WILDLIFE, PROTECTING THREATENED ECOSYSTEMS THROUGH FLORIDA'S GROWTH MANAGEMENT SYSTEM (2001), available at http://www.law.ufl.edu/conservation/pdf/gopher_ems.pdf (discussing the "Gaps" report and how the SCHA recommendations can be utilized to improve land use decisionmaking).

240. See, e.g., U.S. FISH & WILDLIFE SERV., *Lower Keys Rabbit*, in MULTISPECIES RECOVERY, *supra* note 25, at 4:151, 4:161, available at <http://www.fws.gov/verobeach/images/pdf/library/lkmr.pdf> (referencing the use of GIS-based mapping to identify suitable habitat to assist in making better management and monitoring decisions and recognizing the need to improve the GIS database for marsh rabbit information).

IWHRS tool has been utilized only in an advisory capacity by the FWC. The FWC has provided the IWHRS tool to various local, regional, state, and federal agencies to assist them in finding ways to avoid or minimize project impacts during transportation planning, assess impacts to wildlife and habitat, and identify parcels for mitigation purposes.²⁴¹

Under this proposal, these habitat-mapping tools would form the basis of state recovery plans and would provide states with the means of transforming this research and technology into an *enforceable* mechanism for species recovery by enabling states to harness their authorities as growth managers, transportation planners, and water managers to ensure that planning and permitting decisions are consistent with the habitat requirements identified by the mapping tools and set forth in these recovery plans.

4. Critical Habitat

As habitat loss and fragmentation are the greatest threats to global biodiversity, protection mechanisms must be in place to ensure that the richest habitats are largely free from development.²⁴² To this end, the proposal calls for states to identify those areas most critical to the recovery of state-listed species and designate these areas as “critical habitat,” similar to the process found in the ESA. To the extent that certain areas may already be designated critical habitat under the federal ESA, however, no such duplicative designation would be needed.²⁴³ But for those habitats that remain unprotected under the ESA and are of the greatest biological importance, these areas should be designated under the state act. This could be accomplished, in large part, through GIS-based habitat-mapping tools. As discussed earlier, these tools have already identified the richest habitats based on their value to listed species, and areas such as the SHCAs identified in Florida’s “Gaps” project could be utilized to provide needed critical habitat protection.

The number of important habitats that could be protected through state acts could be significant, given that well less than one-half of all federally listed species have designated critical habitat²⁴⁴ and in view of the tremendous discretion the Services have in excluding areas from critical habitat designations. Under the ESA, critical habitat refers to those specific areas occupied by the species “which may require special management considerations or protection.”²⁴⁵ Unoccupied areas may only be included in a critical habitat designation if the Secretaries of the Interior or Commerce determine that they are “essential” for conserving the species.²⁴⁶ Further, the

Services may elect not to designate critical habitat if it is “not prudent,” such as when the Service determines that critical habitat would not be beneficial to the species.²⁴⁷ The Services may also exclude areas if, after taking into consideration the economic impact of a critical habitat designation, the benefits of such exclusion outweigh the benefits of designating these areas.²⁴⁸

Thus, state acts may be in the position to aid in the protection of areas that provide important habitat for both state and federally listed species but are not designated as critical habitat under the ESA. State critical habitat designations could be applied to those areas that are used by federally listed species and identified by the Services as appropriate for critical habitat designation but which are not designated as critical habitat under the ESA,²⁴⁹ areas that are critical habitat for state-listed species and if restored or reconnected to other landscapes could provide habitat for federally listed species,²⁵⁰ and areas that currently support state-listed species and could be used for reintroducing certain federally listed species back into the wild.²⁵¹ Further, to reduce the amount of agency discretion in designating critical habitat, state designations would be designated based almost entirely on a scientific evaluation of these areas and their importance to the recovery of listed species. Economic impacts would only be considered and factored into a final determination in those instances where an area would “inordinately burden”²⁵² a property owner, such as where a proposed area for designation consisted mainly of land owned by a particular landowner and subsequent development restrictions would interfere with that property owner’s vested development rights. Once these areas are designated, projects that could infringe on these areas would be carefully scrutinized to ensure that they would not diminish the value of these areas for species recovery.

5. Interagency Consultation

An interagency consultation process must be established, so that the recovery plans and critical habitat designations actually mean something.²⁵³ Using Florida as an example, the pro-

241. See MARK ENDRIES ET AL., THE INTEGRATED WILDLIFE HABITAT RANKING SYSTEM (2008), available at <http://ocean.floridamarine.org/iwhrs/IWHRS%202008%20report.pdf>.

242. DEFENDERS OF WILDLIFE, *supra* note 8.

243. See *id.* (arguing that state acts should not duplicate federal critical habitat designation). To avoid regulatory confusion, states could incorporate existing federal critical habitat designations into their state designations by reference.

244. See U.S. Fish & Wildlife Service, Listed Species With Critical Habitat, http://ecos.fws.gov/tess_public/pub/criticalHabitat.jsp?nmfs=1 (indicating that 544 of more than 1,300 species have critical habitat) (last visited Jan. 12, 2010).

245. 16 U.S.C. §1532(5)(A)(i)(II) (2007).

246. §1532(5)(A)(ii).

247. 50 C.F.R. §424.12(a) (2009).

248. §424.12(a).

249. See *Fund for Animals, Inc. v. Rice*, 85 F.3d 535, 26 ELR 21433 (11th Cir. 1996) (upholding a “no jeopardy” biological opinion and §404 permit where a proposed landfill was within the footprint of an area that a species recovery plan had identified should be included in a designation of critical habitat, but because no critical habitat had yet been designated, the court found the project would not adversely modify critical habitat).

250. See Parenteau, *supra* note 15, at 303 (arguing that one key to endangered species reform is providing for increased attention to habitat restoration; “unless the rate of habitat loss is halted, and reversed through a concerted restoration effort, there is little hope that listed species will recover or that additional listings can be prevented”).

251. See Holly Doremus, *Restoring Endangered Species: The Importance of Being Wild*, 23 HARV. ENVTL. L. REV. 1, 87 (1999) (stating that the reintroduction of endangered species into an ecosystem can only be successful if sufficient suitable but unoccupied habitat is available).

252. This would be in keeping with Florida’s Bert J. Harris Jr. Private Property Rights Protection Act, FLA. STAT. ANN. §70.001 (2009) (protecting against state government actions that “inordinately burden” one’s use of their property).

253. See Robert B. McKinstry Jr. et al., *Coordination and Planning Tools That Can Be Applied to Biodiversity Conservation*, 16 WIDENER L.J. 879, 903 (2007) (“While [biodiversity] planning can provide an important mechanism for co-

posals calls for interagency consultation for all comprehensive plan amendments, road building projects, and wetland fill actions that could impede the recovery of state-listed species or diminish the value of critical habitat for species recovery.

Like the federal consultation model that may ultimately culminate with the preparation of a biological opinion on the project's impacts to listed species, the proposed consultation process would also call for the preparation of a biological opinion of the project's impacts on state-listed species. The proposed approach would go one step further, however, and require that the project "further the recovery of state listed species," rather than merely demonstrate that such actions would not "jeopardize" these species. Similarly, the proposed approach would reject the federal standard that only requires projects not to "adversely modify or destroy critical habitat," and would instead prohibit the approval of a project if it would "diminish the value of critical habitat for the species' recovery."²⁵⁴

All consultations would require a detailed analysis of the impacts of the particular project, and the applicant would be required to demonstrate through project design and mitigation how the particular action is consistent with the species and habitat needs found in the relevant multi-species recovery plan. The biological opinion would identify those areas where development would and would not occur and explain in sufficient detail how the applicant's mitigation plans advance species recovery. If the FWC determines the project would further species recovery, the agency would issue an incidental take statement that would permit the applicant to incidentally take listed species in a manner consistent with the biological opinion. As discussed below, this consultation process can be tailored to the requirements of the growth management, transportation, and water resource laws and the uniquely different impacts these decisions have on listed species.

The proposed model would also provide the state with a system to track the cumulative effect its permitting and planning decisions have on listed species, a system that is missing from the Services' administration of the ESA.²⁵⁵ By linking all consultation decisions to recovery plans that identify, qualify, and quantify the habitat requirements of listed species, the proposed model provides state wildlife agencies with a potential mechanism for tracking the cumulative effect of their consultation decisions and a basis for modifying their actions if it is later determined that state planning and permitting decisions are impeding the recovery of listed species.²⁵⁶

ordinating actions to protect biodiversity, the plan will not be effective unless it is implemented.").

254. The proposed standard would be consistent with the Fifth Circuit's ruling in *Sierra Club v. U.S. Fish & Wildlife Serv.*, 245 F.3d 434, 441-42, 31 ELR 20500 (5th Cir. 2001), which struck down the regulatory definition of "destruction or adverse modification" requiring consultation under the ESA only where an action affected the value of critical habitat to *both* the recovery and survival of a species. The court ruled that by requiring consultation only when the impairment of critical habitat would put the survival of the species at stake imposes a higher threshold than what the ESA allows. See 50 C.F.R. §402.02 (2009).

255. See U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 202.

256. The proposed model would offer some of the same benefits as a tracking system the U.S. Fish and Wildlife Service has developed for the northern spotted owl.

The following section explains how the consultation process would be incorporated into the state's growth management, transportation planning, and water resource permitting decisionmaking processes. This comprehensive, integrated approach to endangered species protection would help eliminate the problems posed by the balkanized approach to resource protection currently found in the state's land use, wetland protection, and transportation planning laws.

a. Consultation for Development Projects Requiring Comprehensive Plan Amendments

To accommodate an ever-increasing population, local governments in Florida have amended their comprehensive plans to change current low-intensity, low-density land use designations, such as rural and agricultural uses, to more intense residential or mixed use development.²⁵⁷ Unfortunately, many of these rural and agricultural lands provide some of the last remaining habitat for several listed species.

To reduce the impact these projects have on listed species, the Department of Community Affairs (DCA) should be required with every large-scale comprehensive plan amendment, such as those authorizing "developments of regional impact"²⁵⁸ or "rural land stewardship projects,"²⁵⁹ to consult with the FWC to determine the impact that plan amendment will have on endangered and threatened species recovery. This consultation process, similar to that already required with the regional planning councils to ensure consistency with "regional policy plans," would utilize the GIS computer assessment tools as data and analysis to identify the most ecologically significant lands and to assess the potential impacts of that particular comprehensive plan amendment. If the amendment would be inconsistent with the recovery

In response to a federal law suit, the Service has developed a database that tracks the cumulative take of the species by tracking the acres of nesting or foraging habitat permanently removed or degraded as permitted by each biological opinion issued for the species. This information allows the Service to generate reports on the cumulative take of owls across its range or within smaller geographic units. See *id.* at 18.

257. A recent study reveals that by the year 2060, Florida will have 36 million residents. ZWICK & CARR, *supra* note 29, at 7. As of 2007, there were 18 proposed large-scale comprehensive plan amendments, developments of regional impact, and rural land stewardship areas, totaling almost 700,000 acres. Florida Department of Community Affairs, *South Central Florida Existing and Proposed Rural Land Stewardship Areas, Large Scale Future Land Use Map Amendments, DRI's & FDOT Road Corridor Study Areas* (2007) (on file with author).

258. FLA. STAT. ANN. §380.06(1) (2009) defines a Development of Regional Impact (DRI) as "any development which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety, or welfare of citizens of more than one county." While DRIs are governed by §380 and not §163 (the Growth Management Act) many DRIs require comprehensive plan amendments pursuant to §163 because of their location in rural or agricultural areas where existing land uses are at a much lower density and intensity than those contemplated by the DRI.

259. In 2001, the Florida Legislature established the Rural Land Stewardship Area Program. FLA. STAT. ANN. §163.3177(11)(d). Under the program, counties may designate properties that are at least 10,000 acres in size, "rural land stewardship areas" (RLSAs), to encourage the preservation of agricultural lands and natural systems. §163.3177(11)(d). Through transferrable "rural land use credits," development is permitted in "receiving areas" that are more suitable for development. §163.3177(11)(d)(6). If listed species occur within a site, developers are required to coordinate with state and federal agencies to ensure that "adequate provisions" have been made to protect those species "in accordance with applicable regulations." See §163.3177(11)(d)(5).

plans applicable to that area, the DCA would be required to issue a finding of “not in compliance” similar to that which already exists for comprehensive plan amendments that are not consistent with the state comprehensive plan or inconsistent with the local plan.²⁶⁰ The applicant could avoid a “not in compliance” determination by undertaking certain project design modifications that would direct development away from the most sensitive areas and by developing a mitigation plan that furthers specific, identifiable habitat preservation goals. Local governments could also revise their local comprehensive plans to make them more consistent with the relevant multi-species recovery plans, so as to reduce the potential that subsequent comprehensive plan amendments would be found “not in compliance” because they would not further the recovery of listed species.²⁶¹

Of Florida’s laws, the Growth Management Act is perhaps the most amenable to an integrated endangered and threatened species recovery program like the one proposed here.²⁶² The state has used its planning and zoning laws in the past to protect endangered species, and the Florida Supreme Court has upheld the use of land use regulations to protect listed species as a valid exercise of the state’s police powers and constitutional authority.²⁶³ Further, requiring comprehensive plan amendments to be consistent with species recovery plans fits rather neatly into the existing framework, as the Act already requires comprehensive plan amendments to be consistent with the local plan, a regional plan, and the State Plan. Both the Growth Management Act and the State Plan contain several provisions aimed at protecting endangered and threatened wildlife.²⁶⁴ What is perhaps most appealing is that the State Plan specifically calls for “*the establishment of an integrated regulatory program to assure the survival of endangered and threatened species within the state.*”²⁶⁵ To date, it does not appear that an integrated regulatory program exists. Thus, the proposed approach offers a unique opportunity to provide for such a program.

b. Consultation During the Transportation Planning Process

Transportation projects cause significant impacts to wildlife habitat and are a primary contributor to habitat fragmentation. To help combat this problem, the FDOT would be

required to consult with the FWC during the development of the state’s transportation plan and before FDOT districts approve any project for inclusion in the agency’s five-year work program.

The FWC already consults to some extent with the FDOT in the review of new transportation routes and the FDOT has funded a computer modeling system that identifies and prioritizes habitat corridors or underpasses where wildlife collisions are most likely to occur.²⁶⁶ While these mapping and coordination efforts are helpful in identifying important natural areas, the FWC functions merely in an advisory capacity and does not review transportation projects for their consistency with the recovery needs of listed species.²⁶⁷ Most efforts are made in securing mitigation, establishing underpasses, bridging, fencing, or other modifications to reduce wildlife impacts.²⁶⁸ What is absent from this process is a big-picture analysis that requires the agencies to develop their plans around strict, species-based, minimum requirements (such as habitat needs) before a project can be approved.

Under the proposed approach, computer modeling and GIS habitat-mapping systems would no longer serve as merely guidance documents. Instead, they would be incorporated into larger multi-species recovery plans that the FDOT must abide by in their planning endeavors. The FDOT would be required to take measures to avoid the sensitive areas identified in these plans, and if a project would significantly impact these sensitive areas or otherwise not further the recovery of a species, that project would not be approved unless the FDOT developed certain project modifications that would eliminate these impacts. By requiring early interagency consultation, before projects enter the project development and design phase, the state can avoid those projects that may have significant, irreversible damage to protected species and their habitats.

c. Consultation Before the Issuance of Environmental Resource Permits

Many of Florida’s listed species, as well as federally listed species that are found in Florida, like the endangered wood stork,²⁶⁹ have experienced significant habitat loss as a result of development and flood control projects.²⁷⁰

The ERP criteria, however, do not provide complete protection for these species, as they address only the value of the

260. See §163.3184.

261. See MORGENSTERN ET AL., *supra* note 239 (discussing ways in which Chapter 163, Florida Statutes may be amended to require local governments to adopt plans that are consistent with the ecosystem needs identified in the “Gaps” report).

262. See Tucker, *supra* note 38, at 99 (noting that the Growth Management Act provides an excellent institutional mechanism to implement statewide ecosystem management because it already addresses many key components such as conservation of wildlife habitat and sensitive lands).

263. See *Dep’t of Cmty. Affairs v. Moorman*, 664 So. 2d 930 (Fla. 1995) (relying on Article II, Section 7 of the Florida Constitution which directs the state to conserve and protect its natural resources, to uphold a local ordinance that protected the endangered Florida key deer).

264. See FLA. STAT. ANN. §163.3177(11)(d)(5) (2009) (requiring developers to coordinate with state and federal agencies if listed species may be affected by rural land stewardship projects); see also §§163.3177(6)(d), 187.201(9)(b).

265. §187.201(9)(b).

266. See McMURTRAY, *supra* note 36 at 6; (citing FLA DEP’T OF TRANSP., HIGHWAY-WILDLIFE RELATIONSHIPS: DEVELOPMENT OF A DECISION-BASED WILDLIFE UNDERPASS ROAD PROJECT PRIORITIZATION MODEL ON GIS WITH STATEWIDE APPLICATION (1998)).

267. See ENDRIES ET AL., *supra* note 241, at 17 (discussing how the FWC uses the natural resource information in the IWHRS to make “recommendations” to the FDOT, the DCA, and county governments on ways to avoid, minimize or mitigate impacts of development and road construction projects).

268. See *id.* at 2 (discussing the FWC’s role of providing technical assistance to other governmental agencies in project planning and mitigation).

269. See U.S. Fish & Wildlife Serv., *Wood Stork*, in MULTISPECIES RECOVERY, *supra* note 25, at 4:393, available at <http://www.fws.gov/southeast/vbpdfs/species/birds/wost.pdf>.

270. See *supra* notes 37-38 and accompanying text.

wetland functions provided to listed species.²⁷¹ Further, any mitigation that the water management districts or the DEP may require to offset impacts does not necessarily require the preservation of habitat for these species. If Florida is to save its wetland-dependent species and prevent the listing of additional species in the future, it must evaluate its permitting decisions in view of species recovery goals. To accomplish this, permit applications that would call for significant wetland impacts or impacts to the state's most unique and sensitive wetlands would be reviewed for their consistency with recovery plans. Before receiving approval, applicants would have to demonstrate that they have eliminated or minimized impacts to state-listed species and that the proposed mitigation actually advances larger recovery and habitat needs for wetland-dependent species, either through preservation or restoration.

6. Habitat Conservation Planning and Incidental Take Permitting

While the consultation process would help protect species from the adverse effects of large development and transportation projects, a mechanism needs to be in place to protect state-listed species from those projects that would not be subject to interagency consultation but could otherwise have an adverse cumulative effect on these species. To avoid or minimize these effects and ensure that these projects are consistent with applicable recovery plans, an HCP would be required for all projects that would require the issuance of an incidental take permit.

The proposed state HCP process, however, would differ from the HCP model currently found in the ESA. Under the federal model, HCPs are not developed with an eye toward recovery or ecosystem protection, but rather an eye toward how much mitigation must be provided in order for a particular project to get approved. HCPs fall short of reconnecting fragmented landscapes to reduce the chance of losing small, isolated populations of wildlife, they do not require that certain management activities be undertaken to maintain species over the long term, and above all they do not call for ecosystem management.²⁷² Further, the standard for issuing an incidental take permit and approving a HCP is not one of recovery, but one merely requiring that incidental take permits "do not appreciably reduce the likelihood of the survival" of a listed species.²⁷³ A standard much like the no jeopardy standard found in the §7 consultation process.²⁷⁴

271. See Mary Jane Angelo, *Integrating Water Management and Land Use Planning: Uncovering the Missing Link in the Protection of Florida's Water Resources?*, 12 U. FLA. J.L. & PUB. POL'Y 223, 234 (2001). The process only requires applicants to establish that the project "will not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters." FLA. ADMIN. CODE r. 40 E-4.301(1)(d) (2009) (emphasis added). See S. FLA. WATER MGMT. DIST., *supra* note 169, §4.2.2.

272. See Sheldon, *supra* note 187, at 339 (discussing the failure of HCPs to affirmatively protect large, contiguous habitat areas needed for species survival).

273. See 16 U.S.C. §1539(a)(2)(B)(iv) (2007).

274. See Parenteau, *supra* note 15, at 307 (arguing that the services have made "survival" the de facto implementation standard for §7 and §10 decisions, rather than "recovery").

This has led some commentators to conclude that the HCPs are not really effective habitat protection mechanisms.²⁷⁵

The proposed approach attempts to strengthen the role state habitat conservation planning has in species recovery by connecting HCPs to larger recovery plans. HCPs would be required to advance species recovery by preserving those species and pieces of the ecosystem most in need of protection. By using the larger recovery plan as a big-picture frame of reference, the HCP process envisioned here would attempt to connect the pieces of the larger puzzle. Thus, these HCPs provide more than just mitigation or maintaining the status quo and actually advance species recovery in exchange for some level of incidental take. Moreover, the standard for approval of an HCP would not be based on the federal standard but on the more stringent standard for the issuance of an ITP for state-listed endangered species—that the project "will clearly enhance the survival potential of the species."²⁷⁶

The coupling of recovery planning with an HCP-like process provides states with a mechanism to achieve the habitat preservation goals of recovery plans.²⁷⁷ Using the bigger GIS-based, multi-species recovery plans as a guide, HCPs could be developed to create a system of biological reserves containing relatively undisturbed habitats and high levels of species diversity.²⁷⁸ Where appropriate, these HCPs could together create a network of wildlife corridors and reconnect once-fragmented areas. By functioning as smaller pieces of the larger recovery plan, HCPs would be developed with an eye toward recovery and, much like the consultation process would do, allow wildlife managers to track the cumulative effect individually approved projects have on listed species. Moreover, unlike federal HCPs, the HCP proposed here seeks to preserve enough habitat to allow for the delisting of the species, rather than just simply requiring mitigation with no consideration of how that mitigation will help the species in the long run.²⁷⁹

7. Citizen Enforcement

Currently, no state endangered species act provides citizens with the ability to sue to enforce the act.²⁸⁰ Given that the citizen suit provision under §9 of the ESA has provided citizens with the opportunity to secure greater species protection

275. Sheldon, *supra* note 187, at 340.

276. See FLA. ADMIN. CODE r. 68A-27.003 (emphasis added). See also DEFENDERS OF WILDLIFE, *supra* note 8 (arguing that one key standard for a good state HCP is that it will enhance recovery).

277. See Cheever, *supra* note 179, at 72 (arguing that the coupling of recovery plans with HCPs allows HCPs to be used as a vehicle for rendering recovery planning provisions enforceable); John P. Tasso, *Habitat Conservation Plans as Recovery Vehicles: Jump-Starting the Endangered Species Act*, 16 UCLA J. ENVTL. L. & POL'Y 297, 308-09 (1997) (arguing for the integration of recovery plans and HCPs).

278. Most conservation biologists agree that a sound conservation strategy should be built around the creation of biological reserves. See Karkkainen, *supra* note 123, at 10-11.

279. See Tasso, *supra* note 277, at 307-08 (explaining that HCPs typically require the permittee to preserve some habitat in exchange for an incidental take permit whereas recovery plans try to preserve enough habitat to allow the FWS to delist the species).

280. DEFENDERS OF WILDLIFE, *supra* note 8.

when the government fails to prosecute violations of §9,²⁸¹ or when the government fails to adequately protect listed species,²⁸² a similar provision must be included in state acts.²⁸³

Because the proposed approach is one focused on species recovery, citizen enforcement provisions should not focus solely on the unlawful take of species by private actors. Rather, the predominate focus of any citizen suit provision should be on judicial or administrative review of biological opinions and incidental take permits that might not further larger recovery goals, because of their authorization of activities that are of significant size and impact.²⁸⁴ Under the Florida model, interagency consultation decisions would be reviewable under the state APA, much like biological opinions prepared pursuant to §7 of the ESA are reviewable under the federal APA.²⁸⁵ Under the Florida APA, persons whose “substantial interests” are or may be affected by an agency action have the right to file a petition for an administrative hearing challenging certain agency actions, including comprehensive plan amendments and environmental resource permits.²⁸⁶ Accordingly, citizens would have the right to challenge the FWC’s approval of a particular project at the time they file a petition to challenge the underlying agency action. This approach would provide citizens with a voice in the process and serve as a final check on agency actions that might impede the recovery of state-listed species.²⁸⁷

V. Benefits and Opportunities

A. *The Proposal Picks Up Where Federal Regulatory Authority Leaves Off*

Perhaps one of the primary reasons why states should enact more protective endangered species laws is that they stand in the best position to protect species that are in decline but have not reached the point that they must be listed as endangered or threatened under the ESA. The ESA, for the most part, only extends protections to species that are at risk of extinction.²⁸⁸ The ESA’s only mechanism that seeks to protect imperiled species that are not yet listed under the Act is the candidate conservation agreement (CCA), which allows landowners to agree to take conservation measures to protect “candidate species” (some of which may be state-listed species) in exchange for the FWS agreeing not to list these species in the future.²⁸⁹ The CCA is a completely voluntary case-by-case approach to protecting nonfederally listed species, and its success in preventing the listing of species in the future remains uncertain.²⁹⁰ Because state lists often include species that are not federally listed but are potential candidates for future listing if their numbers do not improve, state acts help protect species that may otherwise not be protected under the ESA. By adopting more protective measures, state acts may help prevent the need to list these species under the ESA.

State acts can also protect both federally and state-listed species by regulating activities that are otherwise not subject to review under the ESA. For instance, while the need for a §404 permit under the CWA may trigger §7 consultation, not all land use activities trigger this kind of federal involvement or oversight. For those development activities where no federal permit or authorization is required, but where activities may still “take” endangered species, the federal government is left in a position of relying on private landowners to make the first move and apply for an incidental take permit and prepare an HCP. For those activities that would not “take” endangered species but would otherwise degrade potential, suitable, or unoccupied habitat for listed species, the ESA usually does not apply.²⁹¹

Therefore, states stand in a unique position to pick up where the ESA leaves off and regulate those activities that would escape ESA review but would otherwise contribute to habitat loss. States are largely responsible for regulating the land use, transportation, and water management activities that occur within their borders. By adopting an integrated approach to endangered species protection, states can uti-

281. See *Bennett v. Spear*, 520 U.S. 154, 165, 27 ELR 20824 (1997) (stating that the purpose of the citizen suit provision of the ESA “is to encourage enforcement by so-called ‘private attorneys general’” as evidenced by, among other things, “its reservation to the Government of a right of first refusal to pursue the action initially and a right to intervene later”).

282. For instance, citizens may sue a federal agency for failing to consult. See *Nat’l Wildlife Fed’n v. Brownlee*, 402 F. Supp. 2d 1 (D.D.C. 2005) (finding that the Corps had failed to consult with the U.S. Fish and Wildlife Service as required by §7 of the ESA). See also *Snappe*, *supra* note 232, at 521 (discussing how following a suit filed by local citizens to stop construction on occupied pygmy owl habitat, a local desert protection strategy was developed, which became a template for a regional conservation plan and included proposals for congressional land-acquisition funding and new local zoning and land use restrictions).

283. See DEFENDERS OF WILDLIFE, *supra* note 8 (arguing for a citizen enforcement provision for state acts).

284. See *Cheever & Balster*, *supra* note 198, at 394-96 (arguing that to make the take prohibition an effective tool to further the purpose of the ESA, §9 cannot be limited to protecting individual members and must be extended to protect habitat essential for species conservation).

285. See *Bennett*, 520 U.S. at 169 (holding that Biological Opinions are reviewable under the APA).

286. See FLA. STAT. ANN. §§120.569, 120.57 (2009).

287. It must be noted that not all agency actions are subject to the same standard of review. For instance, comprehensive plan amendments deemed “in compliance” by the DCA are subject to a “fairly debatable” standard of review, see FLA. STAT. ANN. §163.3184(9)(a), whereas environmental resource permits are subject to a “preponderance of the evidence” standard. See FLA. STAT. ANN. §§120.57(1)(j), (1)(l); see also *Cordes v. Fla. Dep’t of Envtl. Regulation*, 582 So. 2d 652, 654 (Fla. Dist. Ct. App. 1991). To ensure that consultation decisions are reviewed in a consistent manner, a single standard of review should be adopted. Given that an underlying policy of endangered species conservation is to give the benefit of the doubt to endangered species in the decision-making process, the preponderance of the evidence standard would appear to be the most appropriate standard as it puts the burden on the regulatory agency to prove that its actions will further species recovery. H.R. CONF. REP. NO. 697, 96th Cong., at 12 (1979); U.S. FISH & WILDLIFE SERV. & NAT’L MARINE FISHERIES SERV., ENDANGERED SPECIES CONSULTATION HANDBOOK, 1-7, 3-12, 5-8 (1998), available at http://www.nmfs.noaa.gov/pr/pdfs/laws/esa_section7_handbook.pdf.

288. See *Parenteau*, *supra* note 15, at 278 (stating that the Act does not kick in until a species has declined to the point where heroic efforts are needed to rescue it).

289. See Announcement of Final Policy for Candidate Conservation Agreements With Assurances, 64 Fed. Reg. 32726 (June 17, 1999).

290. See *Parenteau*, *supra* note 15, at 279 (noting that courts ultimately frown upon deferring listings based on agency promises).

291. An exception is where unoccupied habitat is designated as critical habitat and a project could adversely modify that habitat. In that instance, §7 would apply. For unoccupied habitat to be included in a critical habitat designation, however, the Services must determine that the areas are “essential” for the conservation of the species. See 16 U.S.C. §1532(5)(A)(ii) (2007).

lize their broad authority as growth managers, transportation planners, and water managers to maximize the protection of imperiled species.²⁹² Because state acts include both federally listed and state-listed species, the proposal not only provides an extra layer of protection for federally listed species by regulating those activities that do not fall subject to the ESA, but also helps protect species that are not yet listed under the federal Act but face future listing if their populations and habitat further deteriorate. The proposed approach also ensures that endangered species needs are considered early on, particularly during the planning phase, when the widest range of less harmful project alternatives is likely to exist.²⁹³ This is particularly true during the comprehensive plan amendment process, as development projects are often still in the planning stage and await additional permitting approvals by federal, state, or local governments. By taking an integrated, early approach to endangered species protection, and developing multi-species recovery plans that set forth the amount, location, and type of habitats that must be preserved to ensure the long-term survival of listed species, states can do more than just duplicate federal efforts under the ESA and take affirmative steps to recovering listed species, protecting habitat, and helping prevent the listing of more species under the ESA in the future.

B. *The Proposal Is Based on Ecosystem Boundaries and Not Governmental Boundaries*

Large development projects often have an impact on natural resources that extends far beyond local government boundaries. For instance, while a comprehensive plan amendment may cover only those lands within a particular county, these lands may be part of a larger ecosystem that includes several other counties. Local planning alone, without a larger state planning mechanism, very often fails to ensure habitat protection for species that depend on these larger ecosystems for their survival, because the county boundaries are often much smaller than the habitat boundaries of these species.²⁹⁴ Through multi-species-based recovery planning, the needs of these larger ecosystems will be considered in the review process of a particular comprehensive plan amendment. Recovery plans that are more regional in focus are more likely to function at a scale sufficient to conserve these species.²⁹⁵

The state's approach to land use, water management, and transportation planning provides a workable framework in which to make ecosystem-based decisions.²⁹⁶ While Florida's

Growth Management Act emphasizes the role of local governments to plan for growth and to protect the county or city's natural resources, like other growth management acts in the country, the Act provides significant state and regional oversight and coordination to ensure that projects are consistent with larger regional and state goals and policies. A preference for ecosystem management is also found in state water management practices. States such as Florida have water management agencies with broad geographic responsibilities that encompass entire watersheds and regional ecosystems. The FDOT also takes a regional approach to transportation planning, as it is divided into five districts that have direct responsibility over the development of planning, design, and engineering of state projects within their particular geographic area. Thus, the introduction of multi-species planning that focuses on ecosystem protection at a regional level would appear to provide a functional and practical framework and be consistent with the state's approach to land use, water management, and transportation planning.²⁹⁷

C. *The Approach Advances Larger Biodiversity Protection Goals*

Biodiversity can be described as the full range and variety and variability within and among living organisms and the ecological complexes in which they occur.²⁹⁸ One of the primary causes of biodiversity loss is the fragmentation, degradation, and destruction of ecosystems and habitats through the conversion of land to economically productive uses, including urban development.²⁹⁹

The approach outlined in this Article seeks to advance larger biodiversity goals through a multi-species recovery planning approach that focuses on the use of indicator and keystone species. As Professor Houck explains, the most promising planning efforts to date at the federal level have focused on protecting large ecosystems, through the use of keystone, umbrella, and indicator species.³⁰⁰ For example, to protect approximately 400,000 acres of privately owned old growth forests in the Cascade Mountains of Washington from the damaging effects of logging, the DOI worked with the local timber company to develop an HCP that focused on four species—the spotted owl, marled murrelet, grizzly bear, and gray wolf.³⁰¹ The plan's protections radiated from the owl, as each owl was allotted a 1.8-mile habitat circle and

292. See Rohlfs, *supra* note 185, at 550 (explaining that given widespread habitat loss, if nonfederal landowners and state and local governments do not provide long-term protection for species recovery in the absence of the ESA, delisting will not occur).

293. Fischman & Hall-Rivera, *supra* note 199, at 147-48. See Karkkainen, *supra* note 123, at 97.

294. See A. Dan Tarlock, *Local Government Protection of Biodiversity: What Is Its Niche?*, 60 U. CHI. L. REV. 555, 557-58 (1993).

295. See McKinstry et al., *supra* note 253, at 895-96 (arguing that for biodiversity planning to function at a scale sufficient to conserve significant biodiversity it must consist of a geographic area larger than local government boundaries).

296. See Tucker, *supra* note 38, at 32-33 (noting that Florida has substantial statutory authority to regulate the environment and conservation of natural resources and ecosystem management are central themes of many of these programs).

297. See *id.* at 29, 105. John Tucker notes that to promote ecosystem and biodiversity principles in Florida's growth management and water resource permitting laws, these statutes would likely have to be amended to regulate for the benefit of biodiversity. To integrate comprehensive endangered species considerations into state agency planning and permitting actions similar action may be required by the legislature.

298. Houck, *supra* note 232, at 973-74 (citing National Biological Diversity Conservation and Environmental Research Act, H.R. 585, 102d Cong. §3(1) (1991)).

299. Karkkainen, *supra* note 123, at 7; Tarlock, *supra* note 294, at 558-59.

300. Houck, *supra* note 232, at 976.

301. The bear and wolf could be considered keystone predator species. See David Maehr, *Keystones, Flagships, Umbrellas, and Indicators: The Role of Charismatic Species and Ecologically Influential Species in Protecting Whole Ecosystems* (n.d.), available at <http://www.duke.edu/~mmv3/biocon/documents/Maehr1998.pdf>.

additional protections were extended for foraging and dispersal habitat.³⁰² Leave areas for wolves and bears were also added to the plan, along with enlarged stream and wetland buffers. Limits on road densities and ground-cover retention requirements were also imposed.³⁰³ When implemented, harvests could be reduced by 90% in some areas.³⁰⁴

A similar indicator-species approach was used to protect some of the last remaining California coastal shrub habitat in Orange County, California, a hotbed for residential development.³⁰⁵ Focusing on three species distributed throughout the planning area, the California gnatcatcher, the coastal cactus wren, and the orange-throated whiptail lizard, development interests partnered with the DOI to develop an HCP that focused on the avoidance of certain “hotspots” of biodiversity, the establishment of corridors linking the hotspots to other critical areas, and a habitat ranking system.³⁰⁶ In all, 80% of the area was protected, with the remaining 20% of mostly “low-value” habitat subject to development.³⁰⁷

By using indicator species, such as the northern spotted owl and California gnatcatcher, these plans imposed an enforceable bottomline of just how much habitat must be protected to ensure the long-term conservation of these species.³⁰⁸ This, in turn, contributed to enhanced protection of the greater ecosystem and the protection of a host of other species that also depended on that ecosystem for their survival.³⁰⁹

The recovery planning approach advocated in this Article may provide for similar promising opportunities. Using Florida as an example, the states could develop multi-species recovery plans for indicator species, such as the Florida black bear and gopher tortoise. Both the gopher tortoise and black bear are listed as “threatened” under the ETSA, and the latter has been the subject of more than one attempt to have it federally listed.³¹⁰

The gopher tortoise is a keystone species in many of Florida’s vanishing ecosystems (such as scrub), and its burrows provide refuge for more than 360 other species.³¹¹ Many of these spe-

cies depend on these burrows to escape from predators, fire, and inclement weather.³¹² These species include the federally listed eastern indigo snake, as well as other protected species, such as the scarab beetle, Florida mouse, pine snake, gopher frog, and burrowing owl.³¹³ Unfortunately over the years, the gopher tortoise population has plummeted by 80% as a result of development.³¹⁴ Aside from those tortoises found on protected lands, the gopher tortoise and the mini-ecosystems that gopher tortoise burrows provide, could be eliminated from the state by the year 2025, according to some researchers.³¹⁵ While the FWC has taken significant steps in slowing this trend by requiring the on-site preservation or relocation of these species and prohibiting the “entombment” of gopher tortoises once allowed under the issuance of an incidental take permit,³¹⁶ greater steps need to be taken to ensure that the habitat of these animals is preserved in the long term.

The Florida black bear is a subspecies of the American black bear and one of three subspecies of bears recognized in the southeastern United States.³¹⁷ Before European settlers arrived, the Florida black bear occupied all of mainland Florida, including coastal islands and the Keys.³¹⁸ Their numbers have dwindled to approximately 3,000 individuals,³¹⁹ and their range has been reduced to six core areas and two remnant areas in the state.³²⁰ Some of these areas are isolated from other areas as a result of habitat loss and fragmentation, and only within two of these areas is the majority of the bear’s habitat in public ownership.³²¹ Black bears require on average 15,000 acres of habitat for survival.³²² Bear habitat, which includes sand-pine scrub, oak scrub, upland hardwood forests, and forested wetlands and swamps, is continually being carved apart by highways and roads,³²³ which has resulted in vehicular collisions contributing to approximately 90% of all bear mortalities.³²⁴ Although conservation efforts to reduce collisions, such as warning signs, slower posted speed limits, and wildlife underpasses, help, much like the feder-

302. Houck, *supra* note 232, at 968-70.

303. *Id.*

304. *Id.*

305. *Id.* at 960-65.

306. *Id.*

307. *Id.*

308. *Id.* at 959, 972.

309. What makes these success stories even more remarkable is that the spotted owl and gnatcatcher plans occurred within some of the most expensive, desirable timberlands and real estate in the country. *See id.* at 960-70. The gnatcatcher story may be particularly instructive for development driven states such as Florida.

310. Efforts to list the Florida black bear as a threatened species under the ESA date back to 1990. In 1998, the U.S. Fish and Wildlife Service denied listing under the Act and in 2001 several conservation groups successfully obtained a court order overturning that decision. In 2003, the Service once again denied a petition to list the bear. This prompted another round of litigation resulting in the affirmation, at least for now, of the Service’s decision not to list the species. *See* Defenders of Wildlife v. Kempthorne, 535 F. Supp. 2d 121 (D.D.C. 2008) (upholding the DOI’s decision not to list the black bear as “threatened” under the ESA); *see also* Ivan J. Lieben, *Political Influences on USFWS Listing Decisions Under the ESA: Time to Rethink Priorities*, 27 ENVTL. L. 1323, 1327 (1997) (arguing that the Service has failed to extend ESA protection to deserving imperiled species such as the Florida black bear).

311. *See* Blake Hudson, *Promoting and Establishing the Recovery of Endangered Species on Private Lands: A Case Study of the Gopher Tortoise*, 18 DUKE ENVTL. L. & POL’Y F. 163, 165 (2007).

312. *Id.*

313. *Id.*; FLA. FISH & WILDLIFE CONSERVATION COMM’N, GOPHER TORTOISE MANAGEMENT PLAN 1 (2007), available at <http://www.gophertortoise.org/tortoise/pdf/9-2007-GT-Mgmt-Plan.pdf>.

314. Hudson, *supra* note 311, at 164-65.

315. *Id.* at 175.

316. *See* FLA. FISH & WILDLIFE CONSERVATION COMM’N, GOPHER TORTOISE PERMITTING GUIDELINES (2008), available at http://www.myfwc.com/docs/LicensesPermits/PW_GopherTortoisePermitGuidelines.pdf. Entombment is the filling in of a gopher tortoise burrow preventing the escape of the tortoise and other cohabitants.

317. Florida Fish and Wildlife Conservation Commission, The “Bear” Facts, http://myfwc.com/WildlifeHabitats/Bear_appearance.htm (last visited Jan. 12, 2010).

318. Florida Fish and Wildlife Conservation Commission, Black Bear Distribution Map, http://myfwc.com/WildlifeHabitats/Bear_distribution.htm (last visited Jan. 12, 2010).

319. Florida Fish and Wildlife Conservation Commission, Species Information: Florida Black Bear, http://myfwc.com/wildlifehabitats/SpeciesInfo_BlackBear.htm (last visited Jan. 12, 2010).

320. *Id.*

321. Defenders of Wildlife, Florida Black Bear Background and Recovery, http://www.defenders.org/programs_and_policy/wildlife_conservation/imperiled_species/florida_black_bear/background/index.php (last visited Jan. 12, 2010).

322. *See* Lieben, *supra* note 310 n.253.

323. *See id.*

324. Florida Fish and Wildlife Conservation Commission, Bears and Roads, http://myfwc.com/WildlifeHabitats/Bear_roads.htm (last visited Jan. 12, 2010).

ally endangered Florida panther, an increase in habitat loss will likely lead to higher mortality rates. Many consider the black bear a keystone or umbrella species because its habitat requirements, when properly managed, are protective of all other species in the habitat.³²⁵

With dwindling populations and the possibility that further declines may eventually warrant the federal listing of the black bear and gopher tortoise, these two species provide an example of the types of keystone and/or indicator species multi-species recovery plans can be built around. Much like the planning efforts in Orange County, California, and western old growth forests, similar planning measures could be developed around these species to protect Florida's remaining scrub, pine flatwoods,³²⁶ and other ecological communities. Further, the use of charismatic species, such as the black bear,³²⁷ may provide an extra degree of motivation to plan for their protection and, in turn, the protection of a host of other less popular but arguably equally as important species and the ecosystems upon which they depend.³²⁸ Finally, many of the existing habitat-mapping and ecosystem-planning approaches developed by state agencies such as the FWC in recent years (as discussed in the preceding section) stress the importance of keystone species in their design of conservation blueprints.³²⁹ Thus, the necessary foundation may already exist for the development and implementation of the multi-species recovery planning approach proposed in this Article.³³⁰

D. *The Approach May Appeal to a Variety of Conservation, Development, and Agency Interests*

The proposed approach offers an opportunity for states to get ahead of the curve by protecting early protection for listed species. If species are to be recovered, it is imperative

325. See Maehr, *supra* note 301; see also 142 CONG. REC. S1612 (Mar. 7, 1996) (statement of Senator Reid) (stating that the Florida black bear is "an umbrella threshold species, whose own population well-being is reflective of the health of the rest of the habitat area and the other species in that same ecosystem").

326. The U.S. Fish and Wildlife Service has identified pine flatwoods and scrub as specific habitats with the highest likelihood of threats or habitats that have a substantial resource value to federally listed species. See U.S. FISH & WILDLIFE SERV., STRATEGIC PLAN: FLORIDA app. A, available at <http://www.fws.gov/southeast/es/partners/StrategicPlan/Appendix%20A%20FL.pdf>.

327. Much of the black bear's fame could probably be traced to a single hunting trip in 1902 where President Theodore Roosevelt refused to shoot a black bear tied to a willow tree because it was unsportsmanlike. The incident led to a political cartoon in the Washington Post depicting the event and ultimately the creation of a new toy called the "Teddy Bear." The rest is history. See Minor Ferris Buchanan, Holt Collier: Guiding Roosevelt Through the Mississippi Canebreaks, http://library.fws.gov/refuges/HoltCollier_history.pdf (last visited Jan. 12, 2010).

328. See Maehr, *supra* note 301, at 1 (discussing the Florida black bear and quoting eminent conservation biologist Reed Noss: "Something about the brink of extinction—at least for charismatic species—seems to wake people up and motivate them to do something.").

329. See *id.* (describing the Florida Greenways Project as one example of landscape planning projects that emphasizes the role and importance of keystone species).

330. It is also worth noting that a single-species approach to managing listed species can be more expensive to develop and implement than a multi-species approach. Interview with Tim Breault, *supra* note 10. This is an important consideration for state agencies that may not have the budgets to develop a recovery plan for each and every species.

that species are listed and protected early, while they are less imperiled, rather than waiting until populations decline and habitat degrades to the point that the species is on the verge of extinction. Initiating or expanding efforts before a species and its habitat are critically imperiled increases the likelihood that such efforts will be more successful, more cost-effective, and easier to implement.³³¹ As species become more imperiled, not only does the amount of available habitat diminish, but the flexibility to allow for more habitat degradation in exchange for habitat conservation also diminishes, and mitigation costs increase.³³² Waiting until species go into further decline also reduces the availability of certain trade offs that assist in making endangered species-related decisions more politically acceptable.³³³ Thus, if past experiences with the ESA are any indication, similar opportunities and incentives may exist for states under the proposed approach. As state-listed species and their habitats have not yet been diminished to the point that federal listing is required, the proposal provides significant opportunities to preserve critical habitat for these species while these habitats still remain.

A more planned approach to protecting state-listed species may also have its appeal to those in the development community. Taking proactive steps now to protect state-listed species may reduce the chance that these species will later be listed under the ESA, thus providing some degree of certainty to the regulatory process. As Professor Houck notes, the impending and eventual federal listing of several species was a primary factor in motivating industries to cooperate with the government in developing the HCPs for the northern spotted owl and California gnatcatcher.³³⁴ Indeed, some states have shown a willingness to develop species conservation plans now in order to avoid an endangerment listing down the road.³³⁵

The proposed approach provides developers with a significant amount of flexibility and fairness as all large-scale projects are measured against a larger recovery plan. The proposal provides a mechanism for protecting the most critical areas while providing development opportunities on less sensitive lands. Without such a planning mechanism however, attempts to conserve habitat under the current approach that provides no mechanism in which to determine how each discrete activity fits into the larger recovery puzzle, may not ultimately yield a sufficient population and distribution of species over large enough areas to avoid federal listing and impose disproportionately high mitigation and development costs when those same species become federally endangered. By that time, the development process may become an even more contentious, less flexible, and more costly process as fed-

331. See Announcement of Final Policy for Candidate Conservation Agreements With Assurances, 64 Fed. Reg. 32726 (June 17, 1999); Fischman & Hall-Rivera, *supra* note 199, at 147-48.

332. See Fischman & Hall-Rivera, *supra* note 199, at 147-48; Karkkainen, *supra* note 123, at 97.

333. See Fischman & Hall-Rivera, *supra* note 199, at 147-48.

334. See Houck, *supra* note 232, at 960-70.

335. See Fischman & Hall-Rivera, *supra* note 199, at 147-48.

eral and state governments may no longer be in the position to negotiate given the unavailability of remaining habitat.³³⁶

As Professor Cheever remarks, a recovery-oriented approach could also improve the public's perception of endangered species laws by placing all the Act's provisions in a "problem-solving context."³³⁷ An approach that emphasizes recovery shifts the emphasis away from a series of prohibitions to a series of steps that are necessary to reach the ultimate goal of the Act.³³⁸ Because the proposal emphasizes ways in which projects can be developed and implemented in a way that protects the most sensitive habitat based on some "greater vision" of what must be accomplished for these species to survive, this type of approach may highlight the real purpose underlying these laws and help change the perceptions of some members of the regulated community who otherwise see endangered species laws as consisting of little more than a series of impediments to development.³³⁹

Through consultation, and the development of HCPs that are developed by the applicant and the state wildlife agency to advance the habitat needs of larger multi-species recovery plans, the approach attempts to connect individual development and transportation projects to the ultimate goal of achieving species recovery. Large landowners, environmental and conservation groups, local governments, and other interested and affected stakeholders could provide their relative scientific and policy expertise in assisting in the development of these plans.³⁴⁰ Such a cooperative process would allow stakeholders to see that their interests are represented and addressed in the decisionmaking process.³⁴¹

E. Funding

A critical element lacking in state endangered species programs is sufficient funding.³⁴² Section 6 of the ESA could offer one source of funding. Section 6 directs federal agencies to take a cooperative approach to endangered species conservation³⁴³ and allows them to enter into management agreements "with any State for the administration and management of any area established for the conservation of endangered species or threatened species."³⁴⁴ Section 6 enables the federal government to "enter into a cooperative agreement . . . with any State which establishes and maintains an adequate and active program for the conservation of endangered species and threatened species."³⁴⁵ Section 6 provides federal funding to states that develop programs, regulations, and reserves for listed species,³⁴⁶ and states may be funded up to 90% of

the cost of an approved cooperative agreement.³⁴⁷ In recent years, federal funding for §6 programs has risen steadily.³⁴⁸ Although the proposed approach focuses on state-listed species, federally listed species that depend on the same habitats for their survival would indirectly benefit from such an approach and could provide the basis for additional funding opportunities for state endangered species programs.

Additional sources of funding for more comprehensive state endangered species protection laws could be derived from the sale of automobile license plates,³⁴⁹ state forest and park entrance fees, bond programs,³⁵⁰ conservation trust funds,³⁵¹ revenues from state income, sales,³⁵² outdoor equipment taxes,³⁵³ state income tax check-offs,³⁵⁴ and lottery revenues.³⁵⁵ All of these programs have provided millions in dollars of revenue to the states to advance conservation goals³⁵⁶ and it would appear that similar programs could be adopted specifically for expanding endangered species conservation efforts.

347. 16 U.S.C. §1535(d)(2).

348. See Fischman & Hall-Rivera, *supra* note 199, at 80; but see DEFENDERS OF WILDLIFE, *supra* note 8 (noting that survey respondents suggested that federal §6 monies must be increased if states assume additional responsibilities).

349. DEFENDERS OF WILDLIFE, *supra* note 8. License plate programs may have particular appeal because they tend to be easy to establish and administer. See CINDY MCKINNEY ET AL., UNIV. OF MICH. SCH. OF NATURAL RES. & ENV'T, INVESTING IN WILDLIFE: STATE WILDLIFE FUNDING CAMPAIGNS, SUMMARY OF FINDINGS 17 (2005), available at <http://www.snre.umich.edu/ecomgt/pubs/documents/SummaryOffFindings.pdf> (discussing the reasons why Pennsylvania chose a license plate program to fund conservation initiatives). Florida has several environmental specialty license plates including a plate dedicated to the conservation of the federally endangered Florida panther. The state-listed Florida black bear is depicted on a general "Conserve Wildlife" license plate. See Florida Department of Highway Safety and Motor Vehicles, Florida License Plates, <http://www.flhsmv.gov/html/all-h.pdf> (last visited Jan. 12, 2010). The use of the monies generated from the sales of these plates is governed by statute. See FLA. STAT. ANN. §§320, 372 (2009) (governing the use of revenue generated from the sale of Florida panther plates). Texas' environmental specialty license plates have generated over \$4 million in revenue since their creation 10 years ago. See News Release, Tex. Parks & Wildlife Dept., Conservation License Plates Support Texas Wildlife, Parks, Fisheries (June 23, 2008), available at <http://www.tpwd.state.tx.us/newsmedia/releases/?req=20080623a>.

350. See DEFENDERS OF WILDLIFE, *supra* note 8.

351. In 1998, Colorado initiated a Native Species Conservation Trust Fund with a legislative appropriation of \$10 million. Funding goes in part towards studies and programs that assist in the endangered species recovery or protection of species to avoid listing of the species. See LAND TRUST ALLIANCE, STATE LEVEL CONSERVATION FUNDING MECHANISMS (2004), available at <http://www.landtrustalliance.org/policy/documents/TNC-funding-summary>.

352. The "Lands for You Program" in Martin County, Florida is an example of a successful conservation program funded by a half-penny sales tax. To date, \$50 million has been leveraged for land acquisition. See The Trust for Public Land, 2008 Conservation Awards Winners, http://www.tpl.org/tier3_cd.cfm?content_item_id=22135&folder_id=2867 (last visited Jan. 12, 2010). See also DEFENDERS OF WILDLIFE, *supra* note 8 (discussing Washington's use of marine fuel tax revenues to support critical habitat preservation).

353. Texas has adopted a "user pays, user-benefits" approach by imposing a tax on the sale of outdoor sports equipment to support wildlife conservation. See MCKINNEY ET AL., *supra* note 349, at 36.

354. Several states have non-game tax check-off programs. California's Endangered Species Tax Check Off program generates approximately \$1 million per year for endangered species and habitat protection. See LAND TRUST ALLIANCE, *supra* note 351, at 3.

355. See DEFENDERS OF WILDLIFE, *supra* note 8 (discussing Colorado's use of state lottery revenues to protect crucial wildlife habitats).

356. For a comprehensive listing of all state conservation funding mechanisms and the revenues generated from these programs, see LAND TRUST ALLIANCE, *supra* note 351.

336. See DEFENDERS OF WILDLIFE, *supra* note 8 (by not waiting until a species is at the brink of extinction, taxpayer dollars along with our natural heritage can be saved).

337. Cheever, *supra* note 179, at 7.

338. *Id.*

339. *Id.*

340. See DEFENDERS OF WILDLIFE, *supra* note 8 (suggesting a team approach to state recovery planning).

341. See *id.*

342. See *id.*

343. 16 U.S.C. §1535(a) (2007).

344. §1535(b).

345. §1535(c)(1).

346. Fischman & Hall-Rivera, *supra* note 199, at 80.

F. A More Comprehensive, Integrated Approach to Endangered Species Protection May Help Reduce the Potential for Vicarious Liability Under the ESA

An emerging theory of liability under the ESA is the vicarious or indirect liability of state and local governments that permit actions that lead to the take of federally listed species.

Section 9 of the ESA prohibits any person to take any endangered species.³⁵⁷ Persons include “any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State.”³⁵⁸ Courts have found that governmental actions may cause a take if they authorize activities that result in a death or injury to listed species.³⁵⁹ In *Defenders of Wildlife v. Environmental Protection Agency*, the U.S. Court of Appeals for the Eighth Circuit held that EPA’s registration of certain pesticides containing strychnine, which resulted in poisonings of endangered species, constituted a violation of the Act. Similarly, in *Sierra Club v. Yeutter*, the Fifth Circuit ruled that the Forest Service was liable when its approval of a national forest timber management plan (that was carried out by a private timber harvester) degraded red cockaded woodpecker habitat. Since *Defenders of Wildlife* and *Yeutter*, courts have applied a similar theory of liability to hold several state agencies liable for authorizing actions that result in a taking.³⁶⁰

In *Strahan v. Coxe*, the court found that state licensing of fishing and lobstering equipment that led to subsequent entanglement in the equipment by endangered whales³⁶¹ constituted an unlawful take. In *United States v. Plymouth*,³⁶² the town’s permitting of vehicles on beaches that resulted in the crushing deaths of endangered plovers was also a “take” under the Act. Most recently, in *Animal Protection Institute v. Holsten*,³⁶³ a state wildlife agency’s authorization of trapping and snaring within the range of endangered lynx led to the “take” of the species. Several other courts have recognized that state and local governments could be liable for permitting activities that result in the taking of listed species, such as permitting artificial lighting on beaches that disturb sea turtle nesting³⁶⁴ and authorizing logging operations that are

likely to take listed species of owls and salmon,³⁶⁵ although these courts ultimately found that no violation occurred. These courts have reasoned that, even though a private actor actually sets the trap, operates the vehicle, uses the nets, or logs the timber that leads to the death of a listed species, the state or local government’s authorization of such activities is a “proximate cause” of the take and, thus, the government can be held liable under the Act.³⁶⁶

The theory that state and local governments could be held liable for permitting activities that result in the take of listed species has been criticized by several commentators as a theory that will not be able to withstand judicial scrutiny.³⁶⁷ Nevertheless, courts have continued to recognize that state governments can be indirectly liable for the actions of those permitted under government regulatory programs.³⁶⁸

It is unlikely that state and local governments would be found liable under the ESA for the take of listed species by third parties under a theory that an existing state regulatory scheme in and of itself is so inadequate that it is the cause of a species take. This sort of “inadequate regulation” theory of liability was ultimately rejected in *Loggerhead Turtle v. Volusia County*,³⁶⁹ and would lead to absurd results, because if just having a land use regulation that insufficiently protects endangered species constitutes harm, then states are taking species if absolutely no change to the habitat results.³⁷⁰

The government’s decision to permit or license an activity, however, paints a different picture. It is when governments have taken affirmative steps to permit, license, or otherwise authorize activities that result in the take of listed species that courts have held such regulatory practices may also constitute a taking for purposes of §9 of the ESA.³⁷¹ While the success of such suits would depend on the specific regulatory action and the ability of plaintiffs to actually prove that listed species were harmed as a result of the permitted action,

sions to the county’s lighting ordinances, that the county was in compliance with the ESA. See *Loggerhead Turtle v. County Council*, 120 F. Supp. 2d 1005 (M.D. Fla. 2000).

365. *Seattle Audubon Soc’y v. Sutherland*, 2007 U.S. Dist. LEXIS 31880, 37 ELR 20207 (W.D. Wash. 2007) (holding the authorization of logging operations that are likely to result in takes of endangered spotted owls could be a taking but ultimately determined that Plaintiffs failed to prove that the logging authorized by the state is likely to harm spotted owls); *Pac. Rivers Council v. Brown*, 2002 U.S. Dist. LEXIS 28121 (D. Or. 2002) (holding the authorization of logging operations that are likely to result in takes of threatened coho salmon could constitute a taking but ultimately dismissed the case on mootness when the species was delisted).

366. See *Holsten*, 541 F. Supp. 2d at 1077-80 (citing *Strahan*, 127 F.3d at 163) (explaining that “[w]e do not believe . . . that an interpretation of ‘cause’ that includes the ‘indirect causation’ of a taking by the [state] through its licensing scheme falls without the normal boundaries); *Sutherland*, 2007 U.S. Dist. LEXIS 31880 (finding that by regulating logging on private lands, the state has injected itself into a position in which it may be the proximate cause of an ESA take).

367. See Jonathan H. Adler, *Judicial Federalism and the Future of Federal Environmental Regulation*, 90 IOWA L. REV. 377, 429 (2005); Valerie J.M. Brader, *Shell Games: Vicarious Liability of State and Local Governments for Insufficiently Protective Regulations Under the ESA*, 45 NAT. RESOURCES J. 103 (2005); Shannon Petersen, *Endangered Species in the Urban Jungle: How the ESA Will Reshape American Cities*, 19 STAN. ENVTL. L.J. 423 (2000); Ruhl, *supra* note 360.

368. See *Holsten*, 541 F. Supp. 2d 1073; *Sutherland*, 2007 U.S. Dist. LEXIS 31880.

369. Ruhl, *supra* note 360, at 75 (citing *Loggerhead Turtle v. City Council*, 92 F. Supp. 2d 1296, 1308, 30 ELR 20621 (M.D. Fla. 2000)).

370. Brader, *supra* note 367, at 110-11.

371. See *supra* notes 359-63.

357. 16 U.S.C. §1538(a)(1)(B) (2007).

358. 16 U.S.C. §1532(13).

359. See *Strahan v. Coxe*, 127 F.3d 155, 28 ELR 20114 (1st Cir. 1997); *Sierra Club v. Yeutter*, 926 F.2d 429, 21 ELR 20755 (5th Cir. 1991); *Defenders of Wildlife v. Envtl. Prot. Agency*, 882 F.2d 1294, 1300-01 (8th Cir. 1989).

360. See J.B. Ruhl, *State and Local Government Vicarious Liability Under the ESA*, 16 NAT. RESOURCES & ENVT. 70, 71 (2001) (noting that although both these cases concerned federal agency violations of §7 of the ESA, they “laid the seeds of a broader vicarious liability theory” that reached state and local governments).

361. *Strahan*, 127 F.3d at 159.

362. 6 F. Supp. 2d 81 (D. Mass. 1998).

363. 541 F. Supp. 2d 1073, 1081 (D. Minn. 2008). See also *Animal Welfare Inst. v. Martin*, 588 F. Supp. 2d 110 (D. Me. 2008) (ruling that the state’s licensure and regulation of trapping may be a taking if it is proven that the regulation leads to the take of endangered lynx but plaintiffs were not entitled to an emergency temporary restraining order because they did not demonstrate that trappers acting in compliance with state regulations have taken lynx).

364. *Loggerhead Turtle v. County Council*, 148 F.3d 1231, 28 ELR 21546 (11th Cir. 1998) (holding that the permitting of beachfront lighting that leads to the disorientation of nesting sea turtles could amount to a taking and reversing the lower court’s decision). Upon remand, it was determined that following the preparation of a habitat conservation plan and incidental take permit and revi-

given this interpretation of what may constitute a take under the ESA, local and state governments should be mindful of whether or not their planning, permitting, and licensing decisions could lead to the take of endangered species and whether they too could be held liable.³⁷²

Discretionary actions, such as the granting of permits and decisions to change allowable land uses, would appear to be a conceivable basis for vicarious liability under the ESA. In *Strahan*, the court drew a distinction between those instances where a permitting scheme, such as the issuance of driver licenses, provides the licensing agency with no discretion to deny the license and those instances where the permitting agency has discretion to deny a permit but chooses not to.³⁷³ Because the licensing agency has no discretion to deny the driver's license after certain minimum criteria have been met, it cannot be held liable for the negligent acts of the driver who holds that license.³⁷⁴ However, if discretion exists, the permitting agency may accept liability for the consequences of the permittee's actions.³⁷⁵ It would appear, then, that changes in allowable land uses and water resource permitting decisions would be discretionary actions and fall into this latter category, because no party is entitled to a change in land use or a permit to fill over wetlands.³⁷⁶

A more rigorous review of these projects through an integrated approach to state endangered species protection laws could help prevent future liability down the road. An inter-agency consultation system could help identify potential impacts to both federally and state-listed species in the planning and permitting phase long before take would occur. Where it is determined that federally listed species could be harmed, consultation could help identify what measures should be taken for states to avoid liability (such as apply-

ing for an incidental take permit under the ESA). Thus, state endangered species acts could not only provide an extra measure of protection for federally listed species but also help avoid the potential threat of state or local government liability under the ESA by identifying those instances where a project's impacts necessitate the preparation of an incidental take permit and HCP under the ESA.³⁷⁷

VI. Legal Considerations

A. Enacting and Implementing the Proposal

To implement the mechanism proposed by this Article, legislative action will be required because state administrative laws may prevent state agencies from adopting more comprehensive endangered species rules and policies absent specific legislative direction in their enabling acts.³⁷⁸ Therefore, the state legislature should amend the state's growth management, transportation planning, and wetland permitting laws to provide for an integrated program for endangered species recovery.

Yet, states such as Florida that vest broad discretionary authority over imperiled wildlife in their state wildlife agency may be able to jump-start the process and improve their state endangered species protection laws without relying solely on their state legislatures.³⁷⁹ Florida amended its constitution to create the FWC.³⁸⁰ The FWC is responsible for administering the state's wildlife laws, and its constitutional powers and authorities include the regulation of terrestrial and freshwater-dependent listed species.³⁸¹ The fact that the FWC is a constitutionally created entity is signifi-

372. See Jean O. Melious, *Enforcing the Endangered Species Act Against the States*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 605 (2001). Melious argues that the precise state actions that would rise to a "take" under §9 will vary depending on the species and the program involved. The case law suggests, however, that state programs that take species, as well as state licensing programs that specifically allow activities that take species, could lead to liability under the ESA. To avoid such liability, states could take advantage of flexible ESA mechanisms such as habitat conservation plans, candidate conservation agreements and special rules for threatened species.

373. *Strahan v. Cox*, 127 F.3d 155, 159, 28 ELR 20114 (1st Cir. 1997).

374. *Id.*

375. *Id.*

376. See *Citrus County v. Halls River Dev., Inc.*, 8 So. 3d 413, 421 (Fla. Dist. Ct. App. 2009) ("Zoning involves the exercise of discretionary powers within limits imposed by the comprehensive plan" and "[a] zoning decision that is not in accordance with [those limits] is unlawful"); *Fla. Power Corp. v. Dep't of Envtl. Regulation*, 638 So. 2d 545 (Fla. Dist. Ct. App. 1994) (the agency's weighing of permitting criteria and ultimate denial of a wetland resource permit was a discretionary matter and not a question of fact to be resolved by an administrative law judge); see also *Fischman & Hall-Rivera*, *supra* note 199, at 87 (noting that governmental land use regulations could be close to the affirmative authorizations found in *Strahan* that resulted in a taking; thus, there is a strong incentive for states to take a cooperative approach to endangered species protection); but see *Ruhl*, *supra* note 360, at 73. *Ruhl* notes that the court in *Strahan* found that the state had licensed commercial fishing operations to use gillnets and lobster pots in "specifically the manner that is likely to result in a violation" of the ESA. *Id.* at 72 (quoting *Strahan*, 127 F.3d at 164) (emphasis added). *Ruhl* argues that if the court meant what it implies it would not for example, hold a local government liable in those instances where it rezoned property to allow development at a higher density because the rezoning does not require a particular development in a *specific* manner and thus it is possible to develop the site without threat to protected species.

377. See *Loggerhead Turtle v. County Council*, 120 F. Supp. 2d 1005 (M.D. Fla. 2000) (finding that following the preparation of an HCP and incidental take permit the county was in compliance with the ESA).

378. See FLA. STAT. ANN. §§120.52(8), 120.536(1) (2009). The Florida APA greatly restricts agency discretion. An agency may only adopt rules that implement or interpret the specific powers and duties granted by the enabling statute. See also *Tucker*, *supra* note 38, at 29. As *Tucker* explains, the Florida APA has the potential to hinder agency development of new regulatory programs to implement concepts (such as biodiversity protection) that may not be explicitly found in the agency's enabling statute.

379. Arkansas, Florida, and Missouri have fish and wildlife agencies created by their state constitutions. Article IV, §9 of the Florida Constitution provides in part that:

"the [Florida Fish and Wildlife Conservation] commission shall exercise the regulatory authority and executive powers of the state with respect to wild animal life and fresh water aquatic life, and shall also exercise regulatory and executive powers of the state with respect to marine life.

Arkansas' Game and Fish Commission has complete and exclusive authority under the state constitution to promulgate rules and regulations for the protection of fish and wildlife within its borders. ARK. CONST. amend. 35. The Missouri Constitution vests the Missouri Conservation Commission with "control, management, restoration, conservation, and regulation of the bird, fish, game, forestry and all wildlife resources of the state." MO. CONST. art. 4, §40(a).

380. FLA. CONST. art. 4, §9.

381. The Florida Supreme Court has held that the FWC does not retain constitutional authority over endangered and threatened marine species such as the Florida manatee, whales, and sea turtles. The FWC's authority to regulate these species is derived from statute and not the constitution because at the time of the FWC's creation, the Florida Department of Environmental Protection (DEP) retained some authority over the regulation of endangered and threatened marine species. See *Caribbean Conservation Corp. v. Fla. Fish & Wildlife Conservation Comm'n*, 838 So. 2d 492 (Fla. 2003).

cant because unlike state agencies that are exercising their regulatory authorities pursuant to a specific enabling statute enacted by the state legislature, the FWC is not required to go through formal rulemaking under the state APA when adopting rules that implement the commission's constitutional powers and authorities.³⁸² Indeed, the FWC has relied on its constitutional authority in promulgating its own set of listed species regulations that go beyond what is required under the state ETSA, such as the prohibition of "incidental take" of imperiled species.³⁸³ Thus, the ETSA can be viewed in some way as an aid to, but not a legislatively imposed limit on, the FWC's authority to protect listed species.³⁸⁴ Accordingly, the FWC may have sufficient authority to implement some, if not all, of the proposed mechanisms, such as habitat conservation planning and recovery planning through their own rulemaking powers.³⁸⁵ However, to effectively integrate these procedures into the state's growth management, transportation, and wetland permitting schemes, and to require other state agency actions to be consistent with these rules, legislative amendments to growth management, transportation, and water management laws would likely be required.

B. The Approach Is Not Preempted by the ESA

The doctrine of preemption holds that where state laws conflict with federal laws, the former must yield to the latter.³⁸⁶ A state seeking to implement a vigorous approach to endangered species protection is expressly not preempted under the federal ESA from doing so. Section 6 of the Act provides that while state laws cannot be less restrictive than the federal ESA, state laws can be more restrictive.³⁸⁷ Indeed, states have long exercised their authority to protect both federally

and state-listed species under their state endangered species acts.³⁸⁸ The approach recommended here is by no means less restrictive, as it requires a comprehensive act similar to that found in the ESA and regulates both state-listed and federally listed species. Moreover, the proposed approach does not apply to federal actions, and the state act would not render ESA "take" prohibitions inapplicable.³⁸⁹ Activities that may take federally listed species would be required to comply with applicable ESA provisions.

C. Recovery Planning Can Respect Property Rights Without Losing Its Teeth

The Fifth Amendment to the U.S. Constitution guarantees that "private property [shall not] be taken for public use, without just compensation." The Fifth Amendment applies to the states through the Fourteenth Amendment.³⁹⁰ Florida's Constitution provides essentially the same guarantee.³⁹¹

A taking occurs where a regulation goes "too far" and takes the form of inverse condemnation, wherein the government must compensate a landowner for the government action.³⁹² These types of "regulatory takings" take two forms: (1) a categorical taking wherein a regulation "compel[s] the property owner to suffer a physical 'invasion' of his property" or "denies all economically beneficial or productive use of land"³⁹³; or (2) a taking that otherwise deprives the landowner of the use of its land and requires the court to engage in an ad hoc balancing test.³⁹⁴ The balancing test requires the court to consider several factors, which include, the economic impact of the regulation on the property owner, the extent to which the regulation interferes with distinct, investment-backed expectations, and the character of the government's action.

Stronger, more enforceable endangered species protections will undoubtedly raise regulatory takings concerns.³⁹⁵ The development of recovery plans and HCPs that may have site-specific implications, call for the dedication of land for reserves, or impose other obstacles to development may be

382. Rulemaking under the Florida APA is required when the commission is acting pursuant to its statutory responsibilities. See Clay Henderson, *The Conservation Amendment*, 52 FLA. L. REV. 285 (2000); see also FLA. STAT. ANN. §20.331(9) (c) (stating that "the commission shall follow the provisions of chapter 120 when adopting rules in the performance of its statutory duties or responsibilities"). For all other constitutional responsibilities, the FWC is merely encouraged to adopt rules in the spirit of FLA. STAT. ANN. §120.

383. See FLA. ADMIN. CODE r. 68A-27 (2009).

384. Interview with Tim Breault, *supra* note 10.

385. For instance, the FWC has a division of habitat and species conservation tasked with the "powers, duties, responsibilities, and functions as are necessary to protect and conserve the state's diverse and unique fish and wildlife animal life." These "powers, duties, responsibilities, and functions" "must be focused at the ecosystem or landscape level" and must include (among other things) "the . . . development and implementation of imperiled species recovery plans." See FLA. STAT. ANN. §20.331 (codifying FWC's constitutional powers and responsibilities). At this time, it appears the FWC has only developed management plans for listed species as provided for in the Florida Endangered and Threatened Species Act and has not yet developed "recovery" plans for these species. Further, in *Mangrove Chapter of the Izaak Walton League of America v. Fla. Game & Freshwater Fish Comm'n*, the FWC's predecessor adopted a recommended order upholding the issuance of an Incidental Take Permit under the state ETSA for the endangered Key Largo woodrat. The Game and Fish Commission determined that while the ETSA was silent on the issue of its powers to require habitat conservation and mitigation as part of the issuance of an ITP and the agency had not promulgated a rule defining this practice, it had the discretion to require an HCP based in part on its constitutional authority to regulate all wildlife. 91 ER FALR 17 (Final Order, Jan. 9, 1991).

386. See *Cipollone v. Liggett Group*, 505 U.S. 504 (1992).

387. See 16 U.S.C. §1535(f); see also *Swan View Coal. v. Turner*, 824 F. Supp. 923, 938, 24 ELR 20318 (D. Mont. 1992) (finding that less restrictive take 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) (noting

that to the extent that California's law on the taking of endangered species is less protective than the ESA, it is preempted).

388. See *George & Snape, supra* note 7 at 505 (citing *Nettleton Co. v. Diamond*, 315 N.Y.S.2d 625 (1970)).

389. The Supremacy Clause of the U.S. Constitution prevents state laws from directly conflicting with federal laws and thus no state act could enact laws that attempt to shield parties from liability under the ESA. U.S. CONST. art. VI, §2. Nor could any state act be binding on federal agencies due to principles of intergovernmental immunity. See *Fischman & Hall-Rivera, supra* note 199, at 80 n.174 (citing *Kleppe v. New Mexico*, 426 U.S. 529, 6 ELR 20545 (1976)).

390. See *Chicago, B. & Q.R. Co. v. City of Chicago*, 166 U.S. 258 (1897).

391. See FLA. CONST. art. 10, §6; see also FLA. STAT. ANN. §70.001 (2009) (providing for essentially the same property rights protections found in Florida's Constitution by prohibiting government actions that "inordinately burden" one's recognized property rights).

392. *Pa. Coal Co. v. Mahon*, 260 U.S. 393, 415 (1922).

393. *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1015, 22 ELR 21104 (1992).

394. *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978).

395. As John Echeverria and Julie Lurman put it, if nothing else, "regulations protecting endangered species generate a disproportionately large volume of rhetorical attacks based on their supposedly oppressive impact on developers and other property owners." John D. Echeverria & Julie Lurman, "Perfectly Astounding" *Public Rights: Wildlife Protection and the Takings Clause*, 16 TUL. ENVTL. L.J. 331, 334 (2003).

viewed or even challenged as takings of private property without just compensation.³⁹⁶

The law of regulatory takings is one of the most conceptually cloudy areas of constitutional law³⁹⁷ and the likelihood of a governmental action amounting to a taking is difficult to predict and would depend on the individual facts of that case. Thus, a complete takings analysis is beyond the scope of this Article.³⁹⁸ A few key considerations, however, are worth mentioning.

First, a landowner bringing a takings claim as a result of a permit denial or limited approval must show that he or she has been denied *all* economically viable use of one's land, not what one considers to be the most desirable or profitable.³⁹⁹ Further, most courts agree that there is a taking only when "the property as a whole" has no remaining economic uses without the permit.⁴⁰⁰ Because the regulations proposed in this Article apply to large development projects affecting large blocks of land, the requirement that a claimant must demonstrate that they have been denied all economically viable use of their entire property, where through an HCP or biological opinion they are permitted to develop a portion of their property while protecting the rest, makes it exceedingly unlikely that the landowner would suffer a taking.

There are instances that even where a regulation does not deprive a landowner of "all economically viable use" of one's property that a regulation still goes "too far" and denies a landowner substantially all of the property's economic value.⁴⁰¹ Yet, the economic impact of any regulation is likely to vary depending on the landowner affected, and it should be noted that governmental actions have survived takings challenges even where there has been a drastic (85%-90%) reduction in value.⁴⁰² Because the proposed approach is a planning

scheme that inherently would have some degree of flexibility and would allow for appropriate development where it is most suitable, it is doubtful that development restrictions would be so severe that a landowner would incur such a significant reduction in value.⁴⁰³

Notwithstanding these challenges, some landowners may still take issue with the state's efforts to utilize habitat-mapping to develop the recovery plans and any subsequent HCPs to make development compatible with those recovery plans. The fact that mapping would identify specific areas and their relative habitat value might lead some to analogize this process to the "official map" or "maps of reservation cases"⁴⁰⁴ and spark concern that the state is attempting to hold conservation land for future acquisition. This approach, they would likely argue, is a ruse for eventually acquiring these lands without paying just compensation.⁴⁰⁵ Indeed, there are cases where courts have struck down such attempts by governments (typically state transportation departments) that sought to acquire properties (usually for roads) by identifying them on maps as areas of "reservation" hoping that such identification would lead to their depreciation and make it easier for the government to later acquire.⁴⁰⁶

However, the mapping system envisioned here would likely not present the same situation found in these "official map" or "maps of reservation" cases. First, it must be noted that even in the maps of reservation cases, courts, at least in Florida, have refused to find such practices constitute "per se" takings because every landowner will be affected differently.⁴⁰⁷ Moreover, even in those cases, courts will look to see if the landowner experiences a total or near total loss in economic value.⁴⁰⁸ As explained earlier, the proposal would not likely deprive the property owner of all or substantial eco-

396. Tarlock, *supra* note 294, at 586.

397. Karkkainen, *supra* note 123, at 85.

398. For an in-depth analysis of takings claims and wildlife protection laws, see Echeverria & Lurman, *supra* note 395.

399. Key Haven Associated Enters., Inc. v. Bd. of Trustees of Internal Improvement Trust Fund, 427 So. 2d 153, 159-60 (Fla. 1983); *accord* Fla. Dep't Env'tl. Prot. v. Burgess, 772 So. 2d 540 (Fla. Dist. Ct. App. 2000); Fla. Dep't of Env'tl. Regulation v. MacKay, 544 So. 2d 1065 (Fla. Dist. Ct. App. 1989).

400. See *Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l. Planning Agency*, 535 U.S. 302, 32 ELR 20627 (2002); *Lucas*, 505 U.S. at 1016 (comparing *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470, 497-502, 17 ELR 20440 (1987) with *Pennsylvania Coal Co.*, 260 U.S. 393); *MacKay*, 544 So. 2d at 1066. In *Fla. Dep't of Env'tl. Regulation v. Schindler*, 604 So. 2d 565 (Fla. Dist. Ct. App. 1992), a takings claim was rejected where 1.65 acres of uplands could be built upon even without a permit for the 1.85 acres of wetlands. Similarly, the court in *Fla. Game & Fresh Water Fish Comm'n. v. Flotilla Inc.*, 636 So. 2d 761 (Fla. Dist. Ct. App. 1994) found the restriction on development of 48 acres of a 173-acre parcel to protect bald eagle nesting sites did not deprive the developer of most or all of its interests in the property. *But see* *Fla. Rock Indus. v. United States*, 18 F.3d 1560, 1578, 24 ELR 21036 (Fed. Cir. 1994); *Loveladies Harbors v. United States*, 28 F.3d 1171, 24 ELR 21072 (Fed. Cir. 1994), wherein the Federal Circuit recognized the concept of a "partial taking." Under this theory, the government may be required to compensate a landowner for any regulation that causes a less than total or near total diminution in value. The court, however, did not indicate just how much a diminution must occur to constitute a taking.

401. See *Tahoe-Sierra Pres. Council*, 535 U.S. at 322 n.17 (noting that a regulation amounts to a taking when it includes "restrictions so severe that they are tantamount to a condemnation or appropriation).

402. See *Penn Cent.*, 438 U.S. at 124 (noting that a governmental action resulting in a 95% loss in value may not be a taking); *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926) (approximately a 75% loss in value was not a taking); *Hadacheck v. Sebastian*, 239 U.S. 394 (1915) (government action reduc-

ing property value by 92.5% not a taking); *Walcek v. United States*, 49 Fed. Cl. 248, 271, 33 ELR 20049 (2001), *aff'd*, 303 F.3d 1349 (Fed. Cir. 2002) (stating that the Court of Federal Claims generally has "relied on diminutions well in excess of 85 percent before finding a regulatory taking"); *Graham v. Estuary Properties*, 399 So. 2d 1374, 1382, 11 ELR 20992 (Fla. 1981) (75% reduction in value not a taking); *Susan L. Trevarthen, Advising the Client Regarding Protection of Property Rights: Harris Act and Inverse Condemnation Claims*, 78 FLA. B.J. 61, 61 (2004) (explaining just how substantial a deprivation in loss must be to result in a taking and citing Justice Antonin Scalia's footnote in *Lucas*, 505 U.S. at 1003 n.8, that even a 95% reduction in value is not always enough to establish a taking).

403. Tarlock, *supra* note 294, at 596 (noting that regional ecosystem planning has the potential to avoid takings problems because the larger geographic scale affords regulators more flexibility to permit compatible development).

404. *Id.* at 596 n.208.

405. *Id.*

406. See, e.g., *Joint Ventures, Inc. v. Dep't of Transp.*, 563 So. 2d 622, 625 (Fla. 1990).

407. See *Tampa-Hillsborough County Expressway Auth. v. A.G.W.S. Corp.*, 640 So. 2d 54 (Fla. 1994) (although roadway reservations were found invalid in a previous case, landowners with property inside the boundaries of the map were not entitled to a per se finding of taking); *Palm Beach County v. Wright*, 641 So. 2d 50, 54 (1994) (explaining that a taking may only be determined upon an individualized basis because "the various property owners' interests will be different and will be affected by the thoroughfare map in a differing manner"). Courts have rarely held reservation or official map laws to be facially unconstitutional as an improper use of the police power. See Alan Roddy, *Takings—Isn't There a Better Approach to Planned Condemnations*, 19 FLA. ST. U. L. REV. 1169 (1992).

408. A map of reservation by the FDOT does not constitute a regulatory taking unless the landowner can show that the map deprived him of all or substantial economic use of his property. *Weisenfeld v. Dep't of Transp.*, 640 So. 2d 73 (Fla. 1994), *aff'd*, 617 So. 2d 1071 (Fla. Dist. Ct. App. 1993).

conomic use of one's property, and the recovery planning process envisioned here would not create areas of reservation but merely identify those lands that are richest in habitat value and are in most need of preservation. While some of these areas would be designated critical habitat, the consultation and HCP processes would have some degree of flexibility in regulating the use and management of these lands, such as the inclusion of variance provisions to recognize existing uses. The planning process would also be subject to modification as more data is gathered or "ground truthing" reveals that circumstances have changed since the original data was collected and analyzed. This lack of finality and allowance for adaptive management in the end would likely help prevent the Act's application from resulting in an inordinate burden on property owners and render any future takings claims unripe.⁴⁰⁹

Perhaps most importantly, however, the proposal set forth in this Article can be distinguished from those maps of reservation cases. The overarching purpose for the proposed planning process is not to depress land values so as to reduce the cost of public acquisition, but rather to advance a legitimate state interest in planning for development in a manner that diverts the most intense and incompatible development away from those areas most needed for endangered species recovery.⁴¹⁰ An approach that is central to the Florida Growth Management Act for instance.⁴¹¹ Indeed, courts have reacted favorably to properly designed programs that seek to preserve valuable habitat and have distinguished regulations that preclude reasonable use of one's property from those that merely alter the configuration of a reasonable use to protect the public as a whole. The latter are not takings, but rather exercises of sound planning.⁴¹²

There is also the potential that endangered species protection mechanisms, such as habitat conservation planning and consultation determinations, could be considered unconstitutional "exactions." In the land use context, exactions occur where a government conditions development approval on a commitment by the landowner to dedicate a portion of his property for a public use such as conservation.⁴¹³ The Supreme Court has held that government exactions are unconstitutional when there is no nexus between the exac-

tion and the interest the state seeks to advance.⁴¹⁴ Further, an exaction can result in a taking where the burden imposed on the landowner is not roughly proportional to the impact of the development.⁴¹⁵

It would follow, then, that under a proposed model, an HCP or consultation decision that demands too much from a landowner could be considered an unlawful exaction and would entitle the landowner to compensation. Although several commentators have questioned the likelihood that HCPs or consultation decisions could ever amount to unlawful exactions,⁴¹⁶ to avoid potential claims, states should ensure that flexible and adaptive planning mechanisms exist and that impositions on landowners are proportional to the impacts of the particular project. All biological opinions and HCPs should provide a detailed discussion of the type of harm that would likely result from the project as planned and a reasoned explanation why the chosen approach to habitat preservation advances the state's interest in avoiding or minimizing such harm and is roughly proportional to the landowner's impact on the species.⁴¹⁷ While the lack of successful endangered species-based takings claims should give state agencies some comfort, and there is no evidence to suggest that the federal agencies are demanding disproportionate mitigation under the ESA's §10 habitat conservation planning process that should make states leery of adopting their own planning processes,⁴¹⁸ states should still be mindful of the potential for such claims when they impose more rigorous state endangered species act regulations⁴¹⁹ and ensure that where lands should be dedicated for preservation that

414. *Nollan v. Cal. Coastal Comm'n*, 483 U.S. 825, 837, 17 ELR 20918 (1987).

415. *Dolan v. City of Tigard*, 512 U.S. 374, 388, 24 ELR 21083 (1994).

416. See Murray D. Feldman & Michael J. Brennan, *Judicial Application of the Endangered Species Act and the Implications for Takings of Protected Species and Private Property*, 32 LAND & WATER L. REV. 509, 529-30 (1997) (arguing that perhaps only in the case of a "jeopardy" determination that prevents development and precludes all economically viable use of property would agency consultation result in a compensable taking); Patrick Parenteau, *Who's Taking What? Property Rights, Endangered Species, and the Constitution*, 6 FORDHAM ENVTL. L.J. 619 (1995) (arguing that so long as the permitting record can show that the landowner is not being "singled out" to bear the coast of what should be borne by the public, permitting decisions should not be an unlawful exaction). In addition, the habitat conservation plans proposed here would not be project driven and would be regional in nature, lessening the chance that the government is singling out a particular landowner and demanding an unlawful exaction.

417. See Srinath Jay Govindan, "Taking" Steps to Protect Private Property and Endangered Species: *Constitutional Implications of Habitat Conservation Planning After Dolan v. Tigard*, 47 EMORY L.J. 311, 340 (1998) (explaining that one way in which the government may insulate itself from takings claims is to adopt the precise language suggested by the Court in *Dolan* and state what findings show that the land use restriction is "roughly proportional" to the landowner's impact on a species).

418. See Blaine I. Green, *The Endangered Species Act and Fifth Amendment Takings: Constitutional Limits of Species Protection*, 15 YALE J. ON REG. 329, 383 (1998) (stating that there is no evidence that the U.S. Fish and Wildlife Service in developing HCPs demands mitigation measures disproportionate to the project's environmental impacts).

419. See *St. John's Water Mgmt. Dist. v. Koontz*, 5 So. 3d 8 (Fla. Dist. Ct. App. 2009) (upholding trial court's finding that permitting agency's permitting condition of off-site mitigation was an exaction because it was not "roughly proportional" to the harm contemplated by the proposed project). The Fifth District Court of Appeals has certified the case for review before the Florida Supreme Court. See *St. John's Water Management District v. Koontz*, Case No. 94-CA-5673 (Fla.).

409. See A. Dan Tarlock, *The Nonequilibrium Paradigm in Ecology and the Partial Unraveling of Environmental Law*, 27 LOY. L.A. L. REV. 1121, 1142 (1994) (discussing the potential for takings claims against California's Natural Community Conservation Planning Act but explaining the difficulty in bringing such challenges because the land use plans are seldom final due to the use of adaptive management); see also *Southview Assocs. v. Bongartz*, 980 F.2d 84, 23 ELR 20132 (2d Cir. 1992) (holding that plaintiff's takings claims were unripe because even though their development application was denied, the developer was not precluded from submitting a new proposal and until the development board reached a final determination there was no taking).

410. *Joint Ventures*, 563 So. 2d 622 (distinguishing regulations that are for a legitimate state interest and reasonable use of the state's police powers and those that are confiscatory and are attempts to reserve land for illegitimate reasons).

411. See FLA. STAT. ANN. §163.3161(3) (2009) (stating that the intent of the Act is to "encourage the most appropriate use of land, water, and resources" through the process of comprehensive planning so that local governments can conserve and protect natural resources).

412. See Roddy, *supra* note 407, at 1190.

413. See *City of Monterey v. Del Monte Dunes at Monterey Ltd.*, 526 U.S. 687, 702, 29 ELR 21133 (1999) (defining exactions as "land use decisions conditioning approval of development on the dedication of property to public use").

the preservation plan is related both in nature and extent to the impact of the project.⁴²⁰

Finally, it is worth noting that to date, no federal or state court has found a federal or state law protecting threatened or endangered wildlife has effectuated a compensable taking.⁴²¹ Claims challenging federal and state land use restriction to protect endangered species have been consistently rejected by the courts⁴²² as has been the case in Florida.⁴²³ Given the government's traditional sovereign ownership rights in wildlife and the flexible regulatory tools contained in statutes such as the ESA, wildlife laws appear to be well protected from claims arising under the Takings Clause.⁴²⁴

VII. Conclusion

In recent years, there has been a renewed focus on the role of states in protecting endangered species.⁴²⁵ Given that states have long been the primary regulators of wildlife within their borders,⁴²⁶ states are in a strong position to respond to the needs of listed species and utilize their broad powers and discretion to conserve wildlife.⁴²⁷

The notion of expanding the role of states, however, cannot be used to justify weakening the ESA.⁴²⁸ Despite its shortcomings, the ESA has played a significant role in preventing a number of critically endangered species from going extinct,⁴²⁹ and any revisions should focus on building upon these successes.⁴³⁰ The proposal set forth in this Article recognizes both the strengths and limitations of the ESA and seeks to augment, not replace, the ESA in recovering endangered species.⁴³¹ By incorporating endangered species protection considerations into state environmental, transportation, and land use planning laws, states can pick up where the ESA leaves off and assist federal agencies in protecting species that are federally listed and get ahead of the curve by protecting those imperiled species that have not yet declined to the point where listing under the ESA is currently necessary. Through an integrated, recovery planning-based approach that is centered around enforceable multi-species recovery plans, states may be able to effectively utilize their role as wildlife managers and implement all the research they have developed over the years to make a real difference in the conservation of endangered and threatened species.

420. Feldman & Brennan, *supra* note 416, at 529 (noting that in consideration of *Dolan*, the Services may be required to undertake a more detailed inquiry and link specific mitigation measures and permit requirements to identifiable development impacts).

421. Echeverria & Lurman, *supra* note 395, at 335; Ruhl, *supra* note 234, at 633-34 (noting that no case has found the exercise of ESA jurisdiction to be a taking and only in cases of outright permit denial has §404 of the CWA been found to cause a taking).

422. See Echeverria & Lurman, *supra* note 395, at 355 n.11.

423. See Fla. Game & Fresh Water Fish Comm'n v. Flotilla Inc., 636 So. 2d 761, 763-66 (Fla. Dist. Ct. App. 1994).

424. Echeverria & Lurman, *supra* note 395, at 338.

425. See Steven A. Burns & Jeffrey H. Wood, *Moving Toward Recovery: A South-eastern Analysis of the Threatened & Endangered Species Recovery Act of 2005 (H.R. 3824)*, 21 J. LAND USE & ENVTL. L. 23, 49 (2005) (discussing legislation proposed in 2005 that seeks to focus on private landowner incentives, increasing the role of the states, improving the quality of science in listing decisions, and increasing the emphasis on recovery); Robert B. Keiter, *Breaking Faith With Nature: The Bush Administration and Public Land Policy*, 27 J. LAND RESOURCES & ENVTL. L. 195, 210 (2007) (noting that the FWS has internally circulated draft revisions of the ESA regulations that could give states a greater role in implementing the Act).

426. See Oliver A. Houck, *Why Do We Protect Endangered Species, and What Does That Say About Whether Restrictions on Private Property to Protect Them Constitute "Takings"?*, 80 IOWA L. REV. 297, 309 (1995) (noting that since the mid-1800s, states have regulated the use of their fishing grounds, restricted hunting and terminated certain commerce in wildlife all together).

427. See DEFENDERS OF WILDLIFE, *supra* note 8 (noting a long line of federal cases delineating the federal and state roles in controlling wildlife, culminating in a doctrine that recognizes a state's primary responsibility over wildlife subject to constitutional limits); see also Hughes v. Oklahoma, 441 U.S. 322, 9 ELR 20360 (1979) (ruling that states have the ability to protect the wildlife within their borders if it is consistent with the Constitution).

428. William & Mary Panel, *supra* note 11, at 767 (comments by John Kostyack discussing why the National Wildlife Federation cannot support some legislative proposals to amend the ESA).

429. Cheever, *supra* note 179, at 78 ("The Endangered Species Act's power and simplicity have made it effective in protecting biological diversity, while allowing flexibility to protect human economic interests through the reasonable and prudent alternatives process and the various exceptions to the taking prohibition.").

430. Jeffrey J. Rachlinski, *Noah by the Numbers: An Empirical Evaluation of the Endangered Species Act*, 82 CORNELL L. REV. 356, 357 (1997) (book review).

431. See DEFENDERS OF WILDLIFE, *supra* note 8 (noting that state acts should serve a complementary role in endangered species protection).