

No Relief: How the Ninth Circuit’s New Standard for Injunctions Threatens the Precautionary Nature of the Endangered Species Act

Emma Kennedy*

Cottonwood Environmental Law Center v. United States Forest Service presents a troubling development for environmental plaintiffs seeking injunctive relief for procedural violations of the Endangered Species Act. The panel majority overturned a thirty-year-old presumption of irreparable harm, in a move that undermines the precautionary purpose of the Endangered Species Act. This Note first describes the relevant parts of the Act for understanding the Cottonwood case and its consequences and then provides a summary of the Cottonwood decision and its departure from Ninth Circuit precedent. Next, this Note explains how the Endangered Species Act mandates a precautionary approach and how the prior presumption of irreparable harm was more consistent with the Act’s precautionary purpose than the new standard, which requires plaintiffs to show irreparable harm to justify injunctive relief. Finally, this Note explains that the practical consequences of this decision will be to increase the barrier to injunctive relief for plaintiffs that lack the funding and expertise to establish irreparable harm, and to place district courts in the uneasy position of weighing more technical scientific information.

Introduction.....	276
I. Background	276
A. The ESA.....	276
B. Cottonwood Environmental Law Center v. United States	280
1. Forest Service	280
2. The Ninth Circuit’s ESA Injunctive Relief Precedent.....	283
3. The Ninth Circuit’s Departure from Precedent.....	284
4. Monsanto and Winter Need Not Control the Standard for Injunctive Relief	286

Copyright © 2016 Regents of the University of California.

* J.D. Candidate, University of California, Berkeley, School of Law (Boalt Hall), 2017.

II. Discussion	287
A. The Precautionary Principle in Environmental Law	287
B. The Precautionary Nature of the ESA.....	288
C. The Cottonwood Standard Is Inconsistent with the ESA’s Precautionary Purpose	291
D. Practical Consequences of Eliminating the Thomas Presumption	292
1. An Unclear Legal Standard.....	292
2. The Cottonwood Standard Places an Unfair Burden on Plaintiffs.....	295
3. A Challenge for Courts	297
Conclusion	298

INTRODUCTION

The Canada lynx faced a tough legal battle to gain the protection of the Endangered Species Act (ESA).¹ Now, the Ninth Circuit’s decision in *Cottonwood Environmental Law Center v. U.S. Forest Service* alters the standard for injunctive relief, threatening to make it more difficult for the lynx and other listed species to receive the protection that the ESA promises.² Injunctions are important in environmental cases because the threatened harm is almost always irreparable—money cannot fix it.³ This dynamic is especially true for endangered species, as extinction cannot be rectified at all.⁴ In this Note, I will argue that requiring plaintiffs to prove a likelihood of irreparable harm in order to obtain injunctive relief following a defendant’s substantial procedural violation of the ESA is incompatible with the precautionary nature of the Act. I predict that the new standard announced by the *Cottonwood* court will result in an increased burden on plaintiffs and on judges, who must now weigh more scientific evidence, without leaving much guidance as to what will satisfy this new test.

I. BACKGROUND

A. *The ESA*

Congress enacted the ESA in 1973 with the stated purpose of “provid[ing] a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved [and of] provid[ing] a program for

1. Determination of Threatened Status for the Contiguous U.S. Distinct Population Segment of the Canada Lynx and Related Rule, 65 Fed. Reg. 16,052, 16,061 (Mar. 24, 2000).
2. *Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1088-89 (9th Cir. 2015).
3. *Amoco Prod. Co. v. Vill. of Gambell*, 480 U.S. 531, 545 (1987).
4. See 16 U.S.C. § 1532(6) (2012) (defining “endangered species”).

the conservation of such endangered and threatened species.”⁵ It followed two much shorter-lived conservation acts, the Endangered Species Preservation Act of 1966 and the Endangered Species Conservation Act of 1969.⁶ The drafters of the 1973 version of the ESA found that these laws were inadequate and made several changes designed to provide stronger protections to species.⁷ These changes included extending protection to threatened species that are likely to become endangered, protecting species from extinction in “any significant portion of their range”—as opposed to only global extinction—and making the “taking” of listed species a federal offense.⁸ The drafters of the ESA recognized that while plant and animal extinctions have occurred throughout the earth’s history, contemporary species extinctions and the fairly recent revelation that humankind possessed the “ability to destroy . . . all intelligent life on the planet”⁹ called for “caution, for self-searching and for understanding.”¹⁰

Protection under the ESA begins with the federal “listing” of endangered and threatened plant and animal species.¹¹ Under the ESA, an “endangered species” is “any species which is in danger of extinction throughout all or a significant portion of its range.”¹² The term “[t]hreatened species” refers to “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.”¹³ The U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (collectively, “the Services”) share responsibility for implementing the ESA.¹⁴ The Services can list species on their own initiative

5. 16 U.S.C. § 1531(b) (2012). The U.S. District Court for the District of Columbia overturned FWS’s decision not to list the Canada lynx, on the ground that “the agency ma[de] a number of unsupported statements which contain significant factual errors contradicted by overwhelming record evidence.” *Def. of Wildlife v. Babbitt*, 958 F. Supp. 670, 682 (D.D.C. 1997).

6. The 1966 Act provided a means for listing species native to the United States that qualified as endangered. The 1969 Act expanded the 1966 Act by prohibiting the importation of fish and wildlife species threatened with extinction (with exceptions for scientific, educational, zoological, and propagational purposes), making it illegal to buy or sell any animal taken in violation of the laws of any state or foreign country, increasing the authorization for funds, and designating certain ports of entry for import of wildlife or wildlife products. It also established the framework for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), an international agreement meant to restrict international trade in plant and animals to protect them from overexploitation. Congress passed the 1973 Act soon after as the enacting legislation to carry out the CITES provisions. H.R. REP. NO. 93-412, at 141–42 (1973).

7. S. COMM. ON ENV’T. & PUB. WORKS, A LEGISLATIVE HISTORY OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED IN 1976, 1977, 1978, 1979, AND 1980, S. REP. NO. 97-6, at 1–2 (1982).

8. H.R. REP. NO. 93-412, at 141 (1973).

9. *Id.* at 143.

10. *Id.*

11. 16 U.S.C. § 1533(a)(2) (2012).

12. § 1532(6).

13. § 1532(20).

14. *Endangered Species Act: Overview*, U.S. FISH & WILDLIFE SERV., <http://www.fws.gov/endangered/laws-policies/> (last updated Dec. 8, 2015). FWS is responsible for terrestrial and freshwater organisms while NMFS is responsible mainly for marine wildlife and anadromous fish. *Id.*

and in response to citizen petitions. They must base listing determinations solely on “the best scientific and commercial data available.”¹⁵

Once a species is listed, the Services must consider the habitat areas that are essential to conserve the species, assessing elements such as breeding sites, feeding sites, water quality and quantity, vegetation type, and other important biological and physical characteristics of the area.¹⁶ Habitat that meets specific criteria is proposed as “critical habitat” and undergoes public review and comment as part of the rulemaking process.¹⁷ “Critical habitat” includes (1) geographical areas occupied by a species that are “essential to [its] conservation” and that “may require special management considerations or protection,” and (2) “specific areas outside the area occupied by the species at the time it is listed if essential to the conservation of the species.”¹⁸

Section 7 is the “consultation” provision of the ESA, which the Ninth Circuit has described as the “heart of the ESA.”¹⁹ Section 7 requires each federal agency to insure that none of its actions are “likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species.”²⁰ Agency “action” includes “any action authorized, funded, or carried out by [a federal] agency.”²¹ In order to enforce the jeopardy and adverse habitat modification prohibitions, this section requires the federal agency that proposes to carry out an action (“the action agency”) to engage in an interagency consultation process with either FWS or NMFS (“the consultation agency”).²²

First, the action agency must ask the consultation agency for information about the presence of listed or proposed-to-be-listed species in the proposed action area.²³ If the consultation agency advises the action agency that protected species may be present in the area, the action agency may then prepare a “biological assessment” to identify any listed species likely to be affected by the action or may proceed through informal consultation to determine if the action may affect listed species or critical habitat.²⁴ When the

15. § 1533(b)(1)(A).

16. § 1533(a)(3)(A); 50 C.F.R. § 424.12 (2015).

17. § 1533(b)(4). Additionally, unlike any other provision of the ESA, FWS and NMFS must consider the economic impact of designating any area as critical habitat, and may exclude areas if “the benefits of such exclusion outweigh the benefits of specifying such area, unless . . . the failure to designate such area as critical habitat will result in the extinction of the species concerned.” § 1533(b)(2).

18. 50 C.F.R. § 424.12(b). More detailed criteria for designating critical habitat are described in 50 C.F.R. §§ 424.12(b)(1)–(5).

19. *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 495 (9th Cir. 2011).

20. 16 U.S.C. § 1536(a)(2).

21. *Id.*

22. See Federico Cheever, *The Road to Recovery: A New Way of Thinking About the Endangered Species Act*, 23 *ECOLOGY L.Q.* 1, 17–18 (1996).

23. § 1536(c)(1).

24. *Id.* If the activity is a “major construction activity,” the agency must conduct a biological assessment.

agency's proposed action "may pose any effects on a listed species or designated critical habitat," the action agency should make a "may affect" determination.²⁵ If the action agency makes a "may affect" determination, it must then initiate formal consultation with the consultation agency.²⁶ If, through informal consultation or the preparation of a biological assessment, the agency believes its action is not likely to adversely affect any listed species, then it may seek written concurrence from the consultation agency.²⁷ If the consultation agency concurs, no formal consultation is required.

If formal consultation occurs, the agencies are supposed to complete the process within ninety days of the consultation agency's receipt of all necessary information.²⁸ However, the agencies can extend this time period by agreement.²⁹ During this time, the consultation agency will assess the available scientific information and prepare a "biological opinion."³⁰ The biological opinion consists of a detailed description of the effects of the proposed action on listed species or critical habitat and the consultation agency's opinion regarding whether the action will likely jeopardize³¹ the species or cause adverse modification³² to the species' critical habitat.³³ If the consultation agency makes a finding of jeopardy or adverse modification, it must also suggest any reasonable and prudent alternatives that could allow the action to move forward without causing jeopardy or adverse modification.³⁴ Beginning

25. U.S. FISH & WILDLIFE SERV. & NAT'L MARINE FISHERIES SERV., CONSULTATION HANDBOOK: PROCEDURES FOR CONDUCTING CONSULTATION AND CONFERENCE ACTIVITIES UNDER SECTION 7 OF THE ENDANGERED SPECIES ACT xvi (1998).

26. *Id.* at 2-6.; 50 C.F.R. § 402.14(a) (2015).

27. 50 C.F.R. § 402.12(j),(k) (2015).

28. § 402.14(e).

29. *Id.*

30. § 402.14(g).

31. The regulations define "jeopardize the continued existence of" as "to engage in an action that reasonably would be expected, directly or indirectly, to 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." § 402.02.

32. The regulations define "adverse modification" as "a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species." However, the Ninth Circuit has held this definition invalid. The "both . . . and" language in the definition impermissibly "reads the 'recovery' goal out of the adverse modification inquiry; [under this definition] a proposed action 'adversely modifies' critical habitat if, and only if, the value of the critical habitat for *survival* is appreciably diminished," which is "contradictory to Congress' express command." The definition "[gave] too little protection to designated critical habitat." *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1069–71 (9th Cir. 2004).

33. § 402.14(h).

34. 16 U.S.C. § 1536(b)(3)(A) (2012). These "reasonable and prudent alternatives" must be consistent with the intended purpose of the proposed action, within the agency's authority, and economically and technologically feasible. 50 C.F.R. § 402.02. The action agency can choose to adopt the suggested alternatives, to not proceed with the project, to request an exemption from the requirements of section 7(a)(2), to modify the action or develop a new reasonable and prudent alternative and reinstate consultation, or to proceed with the action if it believes, upon review of the biological opinion, that the action satisfies section 7(a)(2). *See* § 402.14(h); *Consultations: Frequently*

with the initiation of formal consultation and throughout the process, the ESA forbids the action agency from taking any action that would have the effect of ruling out any such reasonable and prudent measures.³⁵ In addition to specify[ing] reasonable and prudent measures to minimize take,³⁶ the consultation agency must also prepare a statement of anticipated incidental take.³⁷ The incidental take statement provides an exemption from ESA section 9's taking prohibition, as long as the federal agency—or the applicant seeking a permit from the agency—demonstrates clear compliance with the implementing terms and conditions.³⁸

As long as it remains involved in or retains control over the action, the action agency has an ongoing duty to reinitiate formal consultation if certain circumstances arise: (1) the taking amount specified in the incidental take statement is exceeded; (2) new information reveals that the action may have previously unconsidered effects on listed species or critical habitat; (3) changes in the agency action cause previously unconsidered effects on the listed species or critical habitat; or (4) the Services list a new species or designate critical habitat that the identified action could affect.³⁹

B. *Cottonwood Environmental Law Center v. United States*

1. *Forest Service*

In 2000 FWS listed the population of Canada lynx in the contiguous forty-eight states as a threatened species.⁴⁰ In 2006 FWS designated 1841 square miles of land as critical habitat for the Canada lynx.⁴¹ None of this land was part of the National Forest System, so it was not within the jurisdiction of the Forest Service.⁴² The following year, the Forest Service adopted the Northern Rocky Mountains Lynx Management Direction (“Lynx Amendments”), a set of land management plans designed to protect the Canada lynx.⁴³

Asked Questions, U.S. FISH & WILDLIFE SERV., <http://www.fws.gov/endangered/what-we-do/faq.html> (last updated July 15, 2013).

35. § 1536(d); 50 C.F.R. § 402.09.

36. 50 C.F.R. § 402.14(i)(1)(iii).

37. The term “take” is defined in the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. §1532(19). The Supreme Court upheld FWS’s definition of harm within the take provision to include “significant habitat modification or degradation that actually kills or injures wildlife.” *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687, 708 (1995). In order to be considered incidental take, the take must be “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.” 50 C.F.R. § 17.3(e)(3).

38. 16 U.S.C. § 1536(o)(2).

39. 50 C.F.R. §§ 402.16(a)–(d).

40. *Cottonwood Env'tl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1077 (9th Cir. 2015).

41. *Id.*

42. *Id.* at 1078.

43. *Id.*

The Lynx Amendments set specific guidelines and standards for permitting activities on Forest Service land that are likely to have an adverse effect on the Canada lynx, including over-the-snow recreation activity, wildland fire management, and pre-commercial forest thinning.⁴⁴ The Forest Service incorporated the Lynx Amendments into its Forest Plans for eighteen National Forests.⁴⁵ As required by section 7, the Forest Service also initiated consultation with FWS regarding the Lynx Amendments.⁴⁶ FWS determined that the management measures in the Lynx Amendments would not jeopardize the Canada lynx.⁴⁷ Since FWS had not yet designated any federal lands as critical habitat for the lynx, it also determined that the management measures would not affect any critical habitat for the species on federal lands.⁴⁸

However, only a few months later, FWS announced that its critical habitat designation had been “improperly influenced” by the former Deputy Assistant Secretary of the Interior.⁴⁹ FWS revised its critical habitat designation for the Canada lynx to 39,000 square miles of land, more than twenty times the initial amount designated.⁵⁰ This revised designation included critical habitat in eleven National Forests: areas that would be governed by the Forest Service’s Lynx Amendments.⁵¹ Despite the significant addition of critical habitat in those National Forests, the Forest Service did not reinitiate section 7 consultation with FWS regarding potential effects of the Lynx Amendments, thus failing to insure that the management measures would not adversely affect the newly designated critical habitat.⁵²

In 2012 the environmental nonprofit group Cottonwood Environmental Law Center (Cottonwood) sued the Forest Service, alleging that the Forest Service had violated section 7 of the ESA by failing to reinitiate consultation.⁵³ The Cottonwood plaintiffs asked the court for an injunction against “actions that ‘may affect’ lynx critical habitat while consultation on the Lynx Amendment occurs.”⁵⁴ The District Court for the District of Montana found for Cottonwood on the merits and ordered the Forest Service to reinitiate consultation, but it declined to enjoin any specific projects.⁵⁵ On appeal, the

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.* An investigation found that Deputy Assistant Secretary Julia MacDonald had “repeatedly overruled agency scientists’ recommendations on endangered-species decisions.” Juliet Eilperin, *7 Decisions on Species Revised*, WASH. POST (Nov. 28, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/11/27/AR2007112702234.html>.

50. *Cottonwood*, 789 F.3d at 1078.

51. *Id.*

52. *Id.*

53. *Id.* at 1078–79.

54. Plaintiff/Appellee/Cross-Appellant’s Reply Brief at 2, *Cottonwood*, 789 F.3d 1075 (2015) (Nos. 13-35624, 13-35631).

55. *Cottonwood*, 789 F.3d at 1079.

Ninth Circuit panel affirmed the lower court's holding that the ESA required the Forest Service to reinitiate consultation when FWS designated critical habitat in the National Forests.⁵⁶

But the critical aspect of the Ninth Circuit's opinion was the court's decision on the proper remedy for procedural violations of the ESA.⁵⁷ The court began its consideration of injunctive relief by noting that under the "traditional" test for permanent injunctive relief,⁵⁸ a plaintiff must satisfy a four-factor test by showing:

- (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.⁵⁹

In endangered species cases and for environmental harms in general, the second factor is nearly always met, as awarding monetary damages are rarely sufficient to recompense for these harms.⁶⁰ In ESA cases, the Supreme Court has historically removed the third and fourth factors from the equation by ruling that courts cannot balance hardships between plaintiffs and defendants,⁶¹ and that Congress, in passing the ESA, "established an unparalleled public interest in the 'incalculable' value of preserving endangered species."⁶² In *Cottonwood*, then, only the question of irreparable injury remained in determining if injunctive relief was appropriate.⁶³ *Cottonwood* argued that the court should follow a long line of Ninth Circuit precedent, starting with *Thomas v. Peterson*, where courts presumed that the irreparable harm prong of the injunctive relief test was met upon finding a procedural violation of the ESA and accordingly issue an injunction pending the Forest Service's compliance with section 7.⁶⁴

56. *Id.* at 1077.

57. *Id.* at 1088–92.

58. Though the *Cottonwood* court and other courts have described the four-factor test as "traditional," some legal scholars have pointed out that this four-factor test in fact differs from traditional equitable principles in several ways, such as by "redundantly stat[ing] requirements of irreparable injury and inadequacy of legal remedies" which "are, traditionally speaking, one and the same," and by seemingly suggesting that plaintiffs must show all four prongs, which removes traditional discretion from the district courts. Mark P. Gergen et al., *The Supreme Court's Accidental Revolution? The Test for Permanent Injunctions*, 112 COLUM. L. REV. 203, 207, 210 (2012).

59. *Cottonwood*, 789 F.3d at 1088.

60. *Id.* at 1090.

61. See *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 194 (1978) ("We have no expert knowledge on the subject of endangered species, much less do we have a mandate from the people to strike a balance of equities on the side of the Tellico Dam. Congress has spoken in the plainest of words, making it abundantly clear that the balance has been struck in favor of affording endangered species the highest of priorities.").

62. *Cottonwood*, 789 F.3d at 1090 (citing *Tenn. Valley Auth.*, 437 U.S. at 187–88).

63. *Id.* at 1090.

64. *Id.* at 1088; *Thomas v. Peterson*, 753 F.2d 754, 764 (9th Cir. 1985).

2. *The Ninth Circuit's ESA Injunctive Relief Precedent*

The aforementioned *Thomas* case involved a proposed timber road and timber sales that the road was designed to facilitate.⁶⁵ The action agency in that case, also the Forest Service, knew that the endangered Rocky Mountain gray wolf might be present in the proposed action area, but it did not prepare a biological assessment to determine whether its proposed action was “likely to affect” the species and therefore whether it was required to engage in formal consultation with FWS.⁶⁶

The Ninth Circuit held that the ESA did require the Forest Service to prepare a biological assessment and that the remedy for such a “substantial procedural violation of the ESA . . . must be an injunction of the project pending compliance with the ESA.”⁶⁷ The court analogized to its National Environmental Policy Act (NEPA) precedent, in which it had held that “absent ‘unusual circumstances,’ an injunction is the appropriate remedy for a violation of NEPA’s procedural requirements.”⁶⁸ The court explained that NEPA’s procedural requirements, which mandate that federal agencies evaluate the environmental impacts of federal actions with significant environmental effects, were analogous to the ESA’s procedural requirements that federal agencies assess the effects of projects on endangered species and critical habitat that may be present in the project area.⁶⁹ Thus, failure to prepare a biological assessment under the ESA was comparable to a failure to prepare an Environmental Impact Statement under NEPA.⁷⁰ Further, compared to the lack of any substantive provisions in NEPA, the court stated that the presence of strict substantive provisions in the ESA justified “*more* stringent enforcement of [the ESA’s] procedural requirements, because the procedural requirements [were] designed to ensure compliance with the substantive provisions.”⁷¹ The court reasoned that “[i]f a project is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA’s substantive provisions will not result,” which would be an “impermissible” result.⁷² The court also emphasized that “[i]t is not the responsibility of the plaintiffs to prove, nor the function of the courts to judge,

65. 753 F.2d at 755.

66. *Id.* at 763.

67. *Id.* at 764.

68. *Id.* (citing *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1250 (9th Cir. 1984); *Alpine Lakes Prot. Soc’y v. Schlapfer*, 518 F.2d 1089 (9th Cir. 1975); *Lathan v. Volpe*, 455 F.2d 1111, 1116–17 (9th Cir. 1971)).

69. *Thomas*, 753 F.2d at 764 (citing 42 U.S.C. § 4332(2)(C) (2012) and 16 U.S.C. § 1536(c) (2012)).

70. *Id.*

71. *Id.*

72. *Id.*

the effect of a proposed action on an endangered species when proper procedures have not been followed.”⁷³

Following *Thomas*, in *Sierra Club v. Marsh*, the Ninth Circuit reiterated that a federal agency’s procedural violation of section 7, such as a failure to reinstate consultation, warranted an injunction against the defendant agency’s activities.⁷⁴ Nearly twenty years later, in *Washington Toxics Coalition v. EPA*, the Ninth Circuit again emphasized that “[i]t is well-settled that a court can enjoin agency action pending completion of section 7(a)(2) requirements” and that an injunction was “the appropriate remedy.”⁷⁵ In the thirty years since *Thomas* was written, many decisions have reaffirmed this presumption of irreparable harm and issued injunctions following procedural violations of the ESA.⁷⁶

3. *The Ninth Circuit’s Departure from Precedent*

In *Cottonwood*, the Ninth Circuit declined to presume irreparable harm after finding that the defendant agency committed a substantial procedural violation of the ESA, breaking with its *Thomas* line of precedent.⁷⁷ The Forest

73. *Id.* at 765.

74. *Sierra Club v. Marsh*, 816 F.2d 1376, 1389 (9th Cir. 1987) (“The institutionalized caution mandated by section 7 of the ESA requires the COE to halt all construction that may adversely affect the habitat until it insures the acquisition of the mitigation lands or modifies the project accordingly.”).

75. *Wash. Toxics Coal. v. EPA*, 413 F.3d 1024, 1034–35 (9th Cir. 2005).

76. *See Pac. Coast Fed’n of Fishermen’s Ass’ns v. U.S. Bureau of Reclamation*, 138 F. Supp. 2d 1228, 1243 (N.D. Cal. 2001) (issuing an injunction after finding that the Bureau of Reclamation committed a substantial procedural violation of the ESA by implementing an operations plan for water diversion without completing a biological assessment or obtaining a biological opinion concerning the likely impact of that plan on threatened coho salmon or its critical habitat); *Bob Marshall All. v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988) (enjoining the defendant agencies from making lease recommendations or lease sales after finding that they violated the ESA by issuing leases without preparing a comprehensive biological opinion as to the effects of the leases and of post-leasing activities on listed species); *Citizens for Better Forestry v. U.S. Dept. of Agric.*, 481 F. Supp. 2d 1059, 1098 (N.D. Cal. 2007) (“[I]n the context of the ESA, the test for determining if equitable relief is appropriate is whether an injunction is necessary to effectuate the congressional purpose behind the statute.” The Ninth Circuit has repeatedly held that injunctive relief is necessary to effectuate Congress’ intent by requiring compliance with the substantive and procedural provisions of ESA.”); *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 500 (9th Cir. 2010) (affirming injunction of BLM regulations); *see also S. Yuba River Citizens League v. Nat’l Marine Fisheries Serv.*, 804 F. Supp. 2d 1045, 1053–55 (E.D. Cal. 2011). Both the majority and dissent in *Cottonwood* cited *South Yuba River Citizens League*, where the court required a showing of irreparable harm to justify the specific injunctive measures that the plaintiffs requested. *Cottonwood Env’tl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1091, 1094, 1095 n.1 (2015). However, the court in *South Yuba River Citizens League* still issued an injunction because of the biological opinion’s “failure to produce the data and analysis necessary to determine what measures, precisely, are needed in order to avoid jeopardizing the listed species,” stating that

it [was] impossible for the court to tailor a remedy that goes no further than the bare minimum needed to protect the species. Since the irreparable harm that the court [was] obligated to prevent [was] jeopardy to the very survival of the species, the court [would] err on the side of a more protective injunction.

804 F. Supp. 2d at 1055.

77. *Cottonwood*, 789 F.3d at 1090–91.

Service had argued that the Supreme Court's *Winter v. Natural Resources Defense Council* and *Monsanto v. Geertson Seed Farms* decisions addressing injunctive relief under NEPA overruled the *Thomas* standard for injunctive relief.⁷⁸ In *Winter*, a case involving U.S. Navy sonar training activity, the Supreme Court rejected the Ninth Circuit's test for preliminary injunctive relief in NEPA cases, characterizing its "possibility" standard as "too lenient" and stating that "plaintiffs seeking preliminary relief [must] demonstrate that irreparable injury is likely in the absence of an injunction."⁷⁹ In *Monsanto*, the Supreme Court addressed permanent injunctive relief in the context of a NEPA challenge to the Department of Agriculture's deregulation of genetically engineered alfalfa without first completing an Environmental Impact Statement.⁸⁰ There, the Court expressed its disapproval of cases that do not apply the traditional four-factor test for injunctive relief, explaining that "there is nothing in NEPA that allows courts considering injunctive relief to put their 'thumb on the scales.'"⁸¹

In *Cottonwood*, the Ninth Circuit panel majority was ultimately persuaded that "even though *Winter* and *Monsanto* address[ed] NEPA, not the ESA, they nonetheless undermine[d] the theoretical foundation for . . . prior rulings on injunctive relief in *Thomas* and its progeny."⁸² The court rationalized that

78. *Id.* at 1089 (citing *Winter v. Nat. Res. Def. Council*, 555 U.S. 7 (2008) and *Monsanto v. Geertson Seed Farms*, 561 U.S. 139 (2010)).

79. *Id.* (citing 555 U.S. at 22). The Court's extreme deference to military concerns unquestionably decided that case. See Peter Manus, *Five Against the Environment*, 44 NEW ENG. L. REV. 221, 224 (2010). ("The decision to allow the Navy to bypass NEPA, in short, was a product of the unarticulated personal value system shared by five Supreme Court Justices under which preparedness for war with unidentified foreign nations outranks environmental stewardship to the extent that war preparation exercises may not be postponed or otherwise hampered by a federal law requiring reflection on environmental interests.")

80. 561 U.S. at 146–47 (2010).

81. *Cottonwood*, 789 F.3d at 1089 (citing *Monsanto*, 561 U.S. at 157). Daniel Mach, for one, has criticized the *Monsanto* decision for its failure to consider Congress's intent with respect to NEPA "in contradiction to the notion that equitable judgments 'cannot ignore the judgment of Congress, deliberately expressed in legislation.'" Daniel Mach, *Rules Without Reasons: The Diminishing Role of Statutory Policy and Equitable Discretion in the Law of NEPA Remedies*, 35 HARVARD ENVTL. L. REV. 205, 223–24 (2011).

82. *Cottonwood*, 789 F.3d at 1090. Commentators have debated *Winter*'s significance; some speculated that because of the military context, the decision would be limited to cases in which military is pitted against the environment. See Stephen M. Johnson, *The Roberts Court and the Environment*, 37 B.C. ENVTL. AFF. L. REV. 317, 343 (2010) ("[T]he *Winter* Court focused heavily on the importance of military readiness in its opinion, so the decision might be limited to disputes arising in similar contexts in the future."); Joel R. Reynolds, Taryn G. Kiekow & Stephen Zak Smith, *No Whale of a Tale: Legal Implications of Winter v. NRDC*, 36 ECOLOGY L.Q. 753, 755 (2009) ("Together with the majority's disregard of critical factual findings by the lower courts regarding environmental harm, the combination of distinctive facts at the heart of the majority opinion—forty years of training in the area, no documentation of harm, and a threat to national security—suggest that *Winter* is likely to be limited in its persuasive and precedential effect."). While courts have applied its holding outside the NEPA context, the wisdom of doing so is debatable. Furthermore, the Ninth Circuit did not need to apply *Winter* to ESA cases, at least not run-of-the-mill ESA cases like *Cottonwood* with no national security implications. Some also have criticized the decision for its "perfunctory" treatment of NEPA. See Sarah

“[w]here Supreme Court precedent [had] ‘undercut the theory or reasoning underlying the prior circuit precedent in such a way that the cases [we]re clearly irreconcilable,’ the prior circuit precedent [in this case, *Thomas*] [was] no longer binding.”⁸³ For that reason, the court held that plaintiffs must satisfy the irreparable injury prong of the traditional test to justify injunctive relief following procedural violations of the ESA.⁸⁴ The court then remanded the case to give Cottonwood the opportunity to show irreparable injury.⁸⁵

4. *Monsanto and Winter Need Not Control the Standard for Injunctive Relief*

In the *Cottonwood* dissent, Judge Pregerson argued that “*Winter* and *Monsanto* are not ‘clearly irreconcilable’ with *Thomas* as required for a three-judge panel to overturn settled Ninth Circuit case law.”⁸⁶ Unlike the majority, Judge Pregerson gave significant weight to the purpose of the underlying statute. He distinguished *Winter* and *Monsanto* by reasoning that the ESA “justifies more protective processes” because of its purpose to “conserve endangered and threatened species and their ecosystems.”⁸⁷ The majority failed to consider the ESA’s distinct purpose and substantive requirements as a potential reason to distinguish ESA cases from NEPA cases.⁸⁸ The two statutes impose different obligations on federal actors.⁸⁹ Unlike NEPA, which requires federal agencies to consider the environmental impacts of their proposed actions⁹⁰ but does not demand that the substantive outcome favor the environment,⁹¹ the ESA creates both a positive duty on federal agency to

J. Morath, *A Mild Winter: The Status of Environmental Preliminary Injunctions*, 37 SEATTLE U. L. REV. 155, 174 (2013) (“[T]he Court’s unwillingness to examine the merits of the case—whether NEPA was violated—allowed the Court in *Winter* to avoid any serious consideration of NEPA or its purposes.”); Ian K. London, *Winter v. Natural Resources Defense Council: Enabling the Military’s Ongoing Rollback of Environmental Legislation*, 87 DENV. U. L. REV. 197 (2009).

83. *Cottonwood Env’t. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1090–91 (9th Cir. 2015) (citing *Miller v. Gammie*, 335 F.3d 889, 900 (9th Cir. 2003)).

84. *Id.* at 1091.

85. *Id.* at 1092.

86. *Id.* (Pregerson, J., dissenting in part) (“The majority’s analogy between NEPA and the ESA fails to appreciate the critical difference between these statutes.”)

87. *Id.* at 1093 (Pregerson, J., dissenting in part).

88. *See id.* at 1090, 1093 (Pregerson, J., dissenting in part).

89. *Compare* National Environmental Policy Act, 42 U.S.C. § 4332(c) (2012) (describing how federal agencies must include a statement on the environmental impact of any proposed action significantly affecting the environment), *with* Endangered Species Act, 16 U.S.C. § 1536 (2012) (describing how federal agencies must insure any action is not likely to jeopardize or cause adverse modification of habitat to any endangered species).

90. 42 U.S.C. § 4332(c) requires federal agencies to “include in every recommendation or report . . . a detailed statement” of the environmental impacts for “major Federal actions significantly affecting the quality of the human environment.”

91. *See* *Strycker’s Bay Neighborhood Council v. Karlen*, 444 U.S. 223, 227 (1980) (citing *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council*, 435 U.S. 519, 558 (1978)); *see also* *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989).

conserve listed species⁹² and an obligation to protect against jeopardy and habitat destruction.⁹³ In Part II, I argue that the Ninth Circuit could have reconciled the *Monsanto* and *Winter* decisions with *Thomas* by distinguishing the purposes and substantive requirements of the two statutes.

II. DISCUSSION

The ESA is protective in purpose and precautionary in nature.⁹⁴ In the seminal ESA case, *Tennessee Valley Authority v. Hill*, the Supreme Court famously declared that the “plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost.”⁹⁵ The Court determined that, by enacting the ESA, “Congress ha[d] spoken in the plainest of words, making it abundantly clear that the balance ha[d] been struck in favor of affording endangered species the highest of priorities, thereby adopting a policy which it described as ‘institutionalized caution.’”⁹⁶ In departing from the *Thomas* precedent, the Ninth Circuit also departed from the ESA’s precautionary nature. Given the protective congressional purpose of the ESA, *Cottonwood*’s denial of injunctive relief on the basis of failure to show irreparable harm is inappropriate and will lead to an unjustified increase in the burden on both plaintiffs and courts.

A. *The Precautionary Principle in Environmental Law*

There are multiple definitions of the precautionary principle, expressed in various environmental agreements and laws.⁹⁷ At the root of these formulations is the idea that environmental protection should be a consideration of paramount value when weighing scientific, economic, social, and political information and deciding how to manage risks.⁹⁸ Essentially, the precautionary principle stands for the proposition that when there is a threat of environmental harm, lack of scientific certainty regarding the risk should not be used as a reason to justify failure to take precautionary steps to prevent the threatened harm.⁹⁹ The precautionary principle “does not answer the question of how

92. 16 U.S.C. §§ 1531(c)(1), 1536(a)(2); see also Joe Mann, *Making Sense of the Endangered Species Act: A Human-Centered Justification*, 7 N.Y.U. ENVTL. L.J. 246, 248 (1999).

93. 16 U.S.C. § 1536(a)(2).

94. See §§ 1531, 1536(a); *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978).

95. *Tenn. Valley Auth.*, 437 U.S. at 184.

96. *Id.* at 194.

97. Phillip M. Kannan, *The Precautionary Principle: More Than a Cameo Appearance in United States Environmental Law?*, 31 WM. & MARY ENVTL. L. & POL’Y REV. 409, 416–18 (2007). A commonly-cited definition of the precautionary principle was articulated in the Rio Declaration. U.N. Conference on Env’t & Dev., *Rio Declaration on Environment and Development Principle 15*, U.N. Doc. A/CONF.151/26 (Aug. 12, 1992) (“Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”).

98. Kannan, *supra* note 97, at 418.

99. *Id.* at 428.

precautionary regulatory policy should be, but it can serve as an important reminder that regulatory policy should seek to prevent harm before it occurs.”¹⁰⁰ In the late 1960s and 1970s, Congress embraced this principle, adopting legislation establishing comprehensive environmental protection programs, such as NEPA, the Clean Air Act, the Clean Water Act, the Toxic Substances Control Act, and the ESA.¹⁰¹ This legislation “represent[ed] a sharp departure from the common law approach to environmental protection by endorsing precautionary measures to prevent environmental damage before it occur[red].”¹⁰²

Professor Phillip Kannan has described the precautionary principle as consisting of three elements.¹⁰³ The first is “fully assessing possible impacts of an action,”¹⁰⁴ which enables precaution by equipping the decision maker with environmental information.¹⁰⁵ The second element is “shifting the burden of proof to those whose activities pose a threat to the environment.”¹⁰⁶ Under variations on this element, the level of precaution varies depending on (1) the party who bears the burden of proof and (2) the requisite level of proof.¹⁰⁷ Placing the burden on the party proposing the action and requiring scientific certainty that the action would not cause harm would be the most precautionary method of acting, while placing the burden on the party opposing the action to show that harm will definitely occur absent regulation is a much less precautionary approach.¹⁰⁸ The third and final element consists of “not acting if there is significant uncertainty or risk of irreversible harm.”¹⁰⁹ This element is substantive, compared to the more procedural nature of the first two, as it “requires a proposed action to be blocked if there is significant uncertainty or risk of irreversible harm.”¹¹⁰ As explained by Kannan, “[t]his element represents the normative judgment that the proper role of the government is to protect against potential harms in addition to those established by scientific certainty.”¹¹¹

B. *The Precautionary Nature of the ESA*

Precaution is embedded into the ESA. As the Supreme Court emphasized in *Tennessee Valley Authority v. Hill*, Congress’s intent “to halt and reverse the

100. Robert V. Percival, *Who’s Afraid of the Precautionary Principle?*, 23 PACE ENVTL. L. REV. 21, 79 (2005–06).

101. *Id.* at 57; Kannan, *supra* note 97, at 441–51, 453–54.

102. Percival, *supra* note 100, at 57.

103. Kannan, *supra* note 97, at 422–23.

104. *Id.* at 422.

105. *Id.* at 423.

106. *Id.* at 422.

107. *Id.* at 422–23.

108. *Id.*

109. *Id.*

110. *Id.* at 426.

111. *Id.*

trend toward species extinction” is reflected “in literally every section of the statute.”¹¹² In fact, all three of Kannan’s elements of the precautionary principle are present in the ESA.¹¹³

Kannan’s first element—gathering and assessing environmental information—is present throughout the ESA.¹¹⁴ Listing,¹¹⁵ critical habitat designation,¹¹⁶ and recovery planning¹¹⁷ require the Services to determine which species are endangered or threatened and what their requirements for survival are.¹¹⁸ Informal consultation makes other federal agencies more cognizant of the presence of listed species and important habitat in the areas that they manage or act in, and formal consultation requires more detailed consideration of potential impacts and measures that they could take to avoid harm to the species in question.¹¹⁹

Kannan’s second element is present in the ESA in that the Act places the burden of proof on the party proposing the action, the action agency.¹²⁰ On its face, section 7 makes it the duty of the action agency to “insure” that the proposed action in question is not likely to jeopardize a listed species or adversely affect its critical habitat.¹²¹ However, section 7 uses “not likely” instead of “will not,”¹²² demonstrating a lower bar for certainty than scientific certainty. Furthermore, the level of proof required to meet this burden must be

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

113. *See* Kannan, *supra* note 97, at 422–23.

114. 16 U.S.C. §§ 1533(a) (2012) (listing), 1536(a)(2) (consultation), 1533(a)(3)(A) (critical habitat designation), 1533(g) (monitoring the status of recovered species).

115. The Services determine whether to list any species based on any of five factors: 1) “the present or threatened destruction, modification, or curtailment of its habitat or range”; 2) “overutilization for commercial, recreational, scientific, or educational purposes”; 3) “disease or predation”; 4) “the inadequacy of existing regulatory mechanisms”; or 5) “other natural or manmade factors affecting [the species’] continued existence.” § 1533(1)(A)–(E). The Services are required to review listing classifications at least once every five years to determine whether any listed species should be removed, reclassified from endangered to threatened, or reclassified from threatened to endangered. § 1533(c)(2); *see also* 50 C.F.R. § 424.21 (2015). These decisions must be made on the basis of the best available science. 16 U.S.C. § 1533(b)(1)(A). The Services review and evaluate various materials—including primary sources—such as published peer-reviewed studies, and status surveys and biological assessments from other agencies and experts. *See* Endangered and Threatened Wildlife and Plants: Notice of Interagency Cooperative Policy on Information Standards Under the Endangered Species Act, 59 Fed. Reg. 34,271 (July 1, 1994); Kristin Carden, *Bridging the Divide: The Role of Science in Species Conservation Law*, 30 HARV. ENVTL. L. REV. 165, 190–93 (2006).

116. 16 U.S.C. § 1533(a)(3)(A)(i).

117. The Services are supposed to develop recovery plans for listed species that include site-specific management actions necessary to conserve the species, and criteria for measuring the species’ recovery, which requires gathering information about the life history of the species, biotic and abiotic factors that affect the species’ survival, etc. *See* 16 U.S.C. § 1533(f); U.S. FISH & WILDLIFE SERV. & NAT’L MARINE FISHERIES SERV., *supra* note 25, at 2-1.

118. *See* 16 U.S.C. §§ 1533(a)(1) (listing), 1533(a)(3)(A) (critical habitat designation), 1533(f)(1)–(5) (recovery plans).

119. *See* §§ 1536(b)(3)(A) (biological opinion), 1536(c) (biological assessment)..

120. *See* § 1536(a)(2); Kannan, *supra* note 97.

121. § 1536(a)(2).

122. § 1536(a)(2).

less than scientific certainty, because such certainty is impossible and requiring it would preclude any agency action.¹²³ Still, the ESA requires that agencies take seriously their duty to insure their actions will not cause jeopardy and to base the conclusions in their biological opinions on “the best scientific and commercial data available.”¹²⁴

Though the statute does not precisely define this standard, it may still contribute to “stiffening agencies’ conservation backbones,” because it keeps agencies from openly acknowledging economic and political factors, rather than scientific information, as the basis for a decision.¹²⁵ Challenges to biological opinions are reviewed under the Administrative Procedure Act’s arbitrary or capricious standard,¹²⁶ and is set aside on this basis if it “fails to articulate a satisfactory explanation for its conclusions, relies on factors which Congress did not intend for it to consider, or fails to consider an important aspect of the problem.”¹²⁷ Though the burden on agencies to justify their conclusions that particular actions will not cause jeopardy or adverse modification may not be very demanding, placing the burden of proof on the action agencies still demonstrates a fairly precautionary approach.

The ESA, as a statute concerned with threats, also embodies the principle behind Kannan’s third element, that we should “protect against potential harms in addition to those established by scientific certainty.”¹²⁸ For example, basing listing decisions on the basis of available information, rather than demanding “conclusive evidence” of the vulnerability of a species, reflects Congress’s intention “to require the FWS to take preventive measures *before* a species is ‘conclusively’ headed for extinction.”¹²⁹ The ESA’s two-tiered listing structure also reflects this precautionary aim of protecting species sooner rather than later.¹³⁰ Similarly, ESA section 9 prohibits “take” of a species, defined very

123. See Julie Lurman Joly et al., *Recognizing When the “Best Scientific Data Available” Isn’t*, 29 STAN. ENVTL. L.J. 247, 251–52 (2010) (“It is important that an agency not be confined to the use of only conclusive findings; such a restriction would seriously impair agencies’ decision-making capabilities. ‘Judicial and administrative interpretations of the ESA, for example, have consistently construed the statute’s “best available data” standard as requiring far less than “conclusive evidence.”’” (quoting *Defs. of Wildlife v. Babbitt*, 958 F. Supp. 670, 680 (D.D.C. 1997))).

124. *Id.*

125. Holly Doremus, *The Purposes, Effects, and Future of the Endangered Species Act’s Best Available Science Mandate*, 34 ENVTL. L. 397, 435 (2004).

126. *Greenpeace v. Nat’l Marine Fisheries Serv.*, 237 F. Supp. 2d 1181, 1187 (W.D. Wash. 2002).

127. *Id.* at 1187; see also *Defs. of Wildlife v. Babbitt*, 130 F. Supp. 2d 121, 127 (D. D.C. 2001) (finding insufficient FWS’s biological opinions that did not analyze the effects from other federal activities in in the action area, which constitute the environmental baseline, in conjunction with the effects of its proposed action). An agency’s reliance on a biological opinion can also be challenged on the basis of being arbitrary and capricious. See *Pyramid Lake Paiute Tribe v. U.S. Dep’t of the Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990).

128. Kannan, *supra* note 97, at 426.

129. *Defs. of Wildlife v. Babbitt*, 958 F. Supp. 670, 679–80 (D.D.C. 1997).

130. Kannan, *supra* note 97, at 435–36.

broadly, and prohibits the take of even a single member of a listed species.¹³¹ Prohibiting take of an individual member of a listed species shows that “Congress has implied the necessity of stronger protections to keep listed species from backsliding into extinction.”¹³² In section 7, when there is a lack of information regarding potential impacts on species, Congress intended for the Services to “give the benefit of the doubt to the species.”¹³³ Consistent with this intent, if there are gaps in data regarding potential effects of an action, the Services’ guidance provides for two options: (1) if the action agency concurs, extend the due date of the biological opinion until sufficient information is developed for a more complete analysis, or (2) develop the biological opinion with the available information, giving the benefit of the doubt to the species.¹³⁴

Further, the decision to protect endangered species was itself a precautionary choice. This decision could not be based on cost-benefit analysis, as it is impossible to quantify the costs and benefits associated with the loss of endangered species, yet Congress declared an unequivocal intent to protect species.¹³⁵ This choice was precautionary because it demonstrated the intent to make protection of species a paramount concern, in the face of uncertainty regarding the exact consequences of species loss and the costs of protecting against species loss.

*C. The Cottonwood Standard Is Inconsistent with the ESA’s
Precautionary Purpose*

Cottonwood’s eradication of the presumption of irreparable harm, and its demand that environmental plaintiffs demonstrate a likelihood of irreparable harm in order to gain an injunction, renders remedies under the ESA less precautionary. The Ninth Circuit’s decision erodes the aspects of the prior *Thomas* presumption that were more consistent with the precautionary nature of the ESA. The *Thomas* presumption and holding that an injunction against a proposed action is the proper remedy when an agency has not followed the consultation procedures was better aligned with the information-gathering element of precaution because it emphasized the importance of evaluating impacts prior to acting.¹³⁶ This requirement ensured that the agency would be

131. See 16 U.S.C. §§ 1532(19), 1538(a)(1) (2012); Danny Lutz, *Harming the Tinkerer: The Case for Aligning Standing and Preliminary Injunction Analysis in the Endangered Species Act*, 20 ANIMAL L. 311, 332 (2014).

132. Lutz, *supra* note 131, at 332.

133. H.R. REP. NO. 96-697, at 12 (1979) (Conf. Rep.); see also *Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988) (recognizing the conference report).

134. U.S. FISH & WILDLIFE SERV. & NAT’L MARINE FISHERIES SERV., *supra* note 25, at 1-7. The legislative history provides that “[i]f a federal agency proceeds with the action in the face of inadequate knowledge or information, the agency does so with the risk that it has not satisfied the standard of Section 7(a)(2).” H.R. REP. NO. 96-697, at 12.

135. See Percival, *supra* note 100, at 78 (discussing the use of the precautionary approach when the costs and benefits of environmental regulations cannot be determined).

136. See *Thomas v. Peterson*, 753 F.2d 754, 765 (9th Cir. 1985).

able to take the information learned from the consultation process to make more informed decisions about how to avoid jeopardy. The *Cottonwood* decision undermines this information assessment process by giving the action agency the chance to proceed with actions that may impact the listed species or its critical habitat prior to finishing consultation, unless the plaintiff can show irreparable harm to the court's satisfaction.

The *Thomas* presumption of irreparable harm, which placed the burden of proof on the party proposing the potentially harmful action, was also consistent with the language of section 7 and its precautionary approach. The *Cottonwood* court flipped the burden onto the party opposed to the action, requiring a plaintiff to show a "likelihood" of irreparable harm.¹³⁷ The Ninth Circuit's decision in *Cottonwood* makes it the default position of courts to allow federal actions to continue without the action agency first ensuring that its action will not jeopardize the species or cause adverse habitat modification. This change is inconsistent with the precautionary principle and the plain language of the statute.

Requiring plaintiffs to show a likelihood of irreparable harm is also inconsistent with the ESA's goal of protecting against potential harms, not just harms that are highly likely to occur. Any time an agency has violated the consultation provision of the ESA, there is a risk that continuing with the unexamined action will cause harm before the procedural violation is remedied. For that reason, injunctions are important even when the agency is only required to complete its consultation requirement. This was one of the rationales behind the *Thomas* presumption of irreparable harm.¹³⁸ The *Cottonwood* standard fails to take seriously the threat posed by agencies acting prior to full procedural compliance.

D. Practical Consequences of Eliminating the Thomas Presumption

1. An Unclear Legal Standard

After *Cottonwood*, the legal standard for proving that federal actions will likely cause irreparable injury is unclear for plaintiffs.¹³⁹ For this reason, *Cottonwood* has filed a petition with the Ninth Circuit for limited rehearing regarding clarification of this new standard.¹⁴⁰

First, there is the problem of what "likely" means. In the part of the *Cottonwood* opinion that discusses injunctive relief, the majority does not use

137. *Cottonwood Env'tl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1088 (9th Cir. 2015).

138. See *Thomas*, 753 F.2d at 764 ("If a project is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA's substantive provisions will not result. The latter, of course, is impermissible.").

139. See *Cottonwood*, 789 F.3d at 1091; Petition for Limited Panel Rehearing at 1–2, *Cottonwood*, 789 F.3d 1075 (No. 13-35631) (seeking "clarifying language regarding the new burden of showing irreparable harm").

140. Petition for Limited Panel Rehearing, *Cottonwood*, 789 F.3d 1075 (No. 13-35631).

the term “likelihood” or “likely.” Rather, the court states that “a plaintiff must show irreparable injury to justify injunctive relief.”¹⁴¹ Given the intricate ecological science involved, it seems very difficult to prove with certainty that harm will occur in ESA cases.¹⁴² It also seems unreasonable for the court to demand a showing that the harm will more likely than not occur.¹⁴³ What, then, is the probability threshold the court will require plaintiffs to meet? The fact that the majority thought that meeting this part of the test should not be particularly burdensome in light of the ESA’s purpose indicates that it may be willing to accept a lower level of proof, but this decision provides no guidance as to what level of probability the plaintiffs must meet or what district courts must look for in order to avoid having the remedy it crafts overturned on appeal.

Second, there are multiple ways for courts to characterize irreparable harm, and it is unclear which one the *Cottonwood* court had in mind. Courts could find that only actions that jeopardize the species or population as a whole warrant injunctive relief, as the D.C. Circuit held in a NEPA case, *Fund for Animals v. Frizzell*.¹⁴⁴ However, requiring demonstration of likely harm to the species as a whole would mean that an injunction could not issue until the species was on the edge of extinction, which would be completely contrary to the precautionary purpose of the ESA.¹⁴⁵ In contrast, a court could find that a single taking of a listed species is irreparable harm even when it would not impact the overall health of the population. The District Court for the Middle District of Florida took this approach in *Loggerhead Turtle v. County Council of Volusia County, Florida* when it found that “any threatened harm is *per se* irreparable harm” and issued an injunction based on a reasonable likelihood of take of listed sea turtles.¹⁴⁶ Or, rather than looking at harm to the species, courts could instead look to the threatened harm to the plaintiff’s interests.¹⁴⁷

141. *Cottonwood*, 789 F.3d at 1091.

142. See, e.g., Robert L. Fischman, *The Divides of Environmental Law and the Problem of Harm in the Endangered Species Act*, 83 IND. L.J. 661, 689 (2008).

143. See Mach, *supra* note 81, at 209 (discussing this problem in relation to the Court’s decision in *Winter*).

144. *Fund for Animals v. Frizzell*, 530 F.2d 982 (D.C. Cir. 1975). It seems unlikely that a court deciding whether to grant injunctive relief in an ESA case would apply the *Frizzell* analysis, though, because the bird species at issue in that case were not endangered or threatened.

145. See Avalyn Taylor, *Rethinking the Irreparable Harm Factor in Wildlife Mortality Cases*, 2 STAN. J. ANIMAL L. & POL’Y 113, 135 (2009).

146. *Loggerhead Turtle v. Cty. Council of Volusia Cty, Fla.*, 896 F. Supp. 1170, 1178, 1180, 1182 (M.D. Fla. 1995) (“[T]he Act does not distinguish between a taking of the whole species or only one member of the species. Any taking and every taking—even of a single individual of the protected species—is prohibited by the Act. See 16 U.S.C. § 1538 (2012). Hence the future threat of a even single taking is sufficient to invoke the authority of the Act.”); see also Lutz, *supra* note 131, at 338–39; Taylor, *supra* note 145.

147. See, e.g., *Fund for Animals v. Espy*, 814 F. Supp. 142, 151 (D.D.C. 1993) (finding the irreparable harm prong satisfied by a showing of a threat to plaintiffs’ aesthetic interests in viewing Yellowstone bison).

Some commentators, as well as the Cottonwood plaintiffs on appeal, have advocated the approach of considering harm to human plaintiffs' aesthetic interests.¹⁴⁸ In its petition for rehearing, Cottonwood argues that the court should take this aesthetic injury approach and find harm to an individual member of the species or to a portion of critical habitat sufficient to meet the irreparable harm standard when it would injure the plaintiff's interests.¹⁴⁹ While this approach might have some advantages,¹⁵⁰ it would also be inconsistent with the statute and might ultimately put injunctive relief further out of reach for environmental plaintiffs. The harm that the statute seeks to prevent is harm to a listed species, not harm to plaintiffs' aesthetic interest in that species.¹⁵¹

The danger of this kind of reframing of environmental concerns in terms of human self-interest has been pointed out in the standing context.¹⁵² Some commentators have expressed concern that this kind of reframing risks "erod[ing] the very values that bring us to feel an obligation to ecosystems and other life."¹⁵³ Additionally, since aesthetic harm is a vague standard for plaintiffs to demonstrate, the increased flexibility that this standard would allow plaintiffs may cause backlash from some judges who will then try to tighten the standard by construing it more narrowly.¹⁵⁴ Thus while an aesthetic harm standard may not be more difficult for plaintiffs to meet than other possible standards, neither does it appear to be an optimal solution.¹⁵⁵

In its discussion on injunctive relief, it seems unclear whether the *Cottonwood* majority had harm to the plaintiff or to the species in mind. In some parts of the opinion, the court seemed to contemplate some sort of harm to the species.¹⁵⁶ For example, in discussing why *Tennessee Valley Authority v.*

148. See, e.g., Lutz, *supra* note 131, at 342.

149. Petition for Limited Panel Rehearing at 1–6, *Cottonwood Env'tl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1088 (9th Cir. 2015) (No. 13-35631); see also Center for Biological Diversity Amicus Curiae Brief in Support of Limited Petition for Panel Rehearing at 6–7, *Cottonwood*, 789 F.3d 1075 (No. 13-35631).

150. For example, Danny Lutz argues that looking at harm to the plaintiff rather than to the animal will create logical consistency between theories of standing and injunctive relief. This will avoid infringement on separation of powers issues that result when courts make judgments about effects on a species, which Congress delegated to NMFS and FWS. Lutz, *supra* note 131, at 345.

151. See 16 U.S.C. § 1531 (2012). While the legislative history of the ESA certainly shows an instrumental concern for protecting species, this concern seems to be more related to the lack of knowledge regarding the consequences of mass extinction, rather than purely for aesthetic interest in species. See Mann, *supra* note 92, at 254–55.

152. Francisco Benzoni, *Environmental Standing: Who Determines the Value of Other Life?*, 18 DUKE ENVTL. L. & POL'Y F. 347, 350–51 (2008).

153. *Id.* at 351.

154. Such a response has been seen with standing requirements, as in *Lujan v. National Wildlife Federation*, 497 U.S. 871 (1990), where the Court was very strict about what it would accept as alleged aesthetic injury sufficient to confer standing. See Sarah A. Robichaud, Note, *Lujan v. National Wildlife Federation: The Supreme Court Tightens the Reins on Standing for Environmental Groups*, 40 CATH. U. L. REV. 443, 445 (1991).

155. See *id.*

156. *Cottonwood Env'tl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1090 (9th Cir. 2015).

Hill does not resolve the question on the irreparable harm factor, the court explained that irreparable injury was not at issue in that case, as “there was uncontroverted scientific evidence that completion and operation of the disputed project would ‘either eradicate the known population of [the listed species] or destroy their critical habitat.’”¹⁵⁷ It also stated that “district courts are quite capable of identifying harm to protected species.”¹⁵⁸ Yet, in explaining why it thinks the presumption of irreparable harm can no longer stand, the court said that “there is nothing in the ESA that . . . restricts a court’s discretion to decide whether a plaintiff has suffered irreparable injury.”¹⁵⁹ Then, the court concluded by remanding the case in order to give Cottonwood the chance to make an “evidentiary showing that specific projects will likely cause irreparable damage to its members’ interests.”¹⁶⁰ As with the ambiguity surrounding what is “likely,” this inconsistent language does nothing to help plaintiffs or district courts figure out what type of injury is sufficient.

2. *The Cottonwood Standard Places an Unfair Burden on Plaintiffs*

No matter how the harm is defined, this standard will place a higher burden on plaintiffs, exposing the species at issue to increased levels of threat. It will be difficult, time consuming, and expensive for plaintiffs to make an evidentiary showing sufficient to warrant injunctive relief because of the type of scientific information it will likely require of them.¹⁶¹ Especially when the primary harm of concern is harm to critical habitat, meeting the irreparable harm prong of the test is likely to be a substantial obstacle for plaintiffs. Habitat loss is the biggest threat to biodiversity,¹⁶² but its effects are particularly hard to map onto the requirement of showing irreparable harm.¹⁶³

The situation of the Canada lynx provides a good example of the complexities involved in analyzing potential effects of habitat changes on species. Conservation of the Canada lynx in the lower forty-eight states depends on managing the habitat for the lynx’s prey, mainly the snowshoe hare.¹⁶⁴ Therefore, a determination of the Lynx Amendments’ potential effects on the Canada lynx population depends in part on analyzing how the allowable

157. *Id.* at 1090 (citing *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 at 1071 (1978)).

158. *Id.* at 1091.

159. *Id.* at 1090 (emphasis added).

160. *Id.* at 1092.

161. See Sarah Axtell, *Reframing the Judicial Approach to Injunctive Relief for Environmental Plaintiffs in Monsanto Co. v. Geertson Seed Farms*, 38 *ECOLOGY L.Q.* 317, 335 (2011).

162. See David S. Wilcove et al., *Quantifying Threats to Imperiled Species in the United States*, 48 *BIOSCIENCE* 607, 607 (1998).

163. See *Cottonwood*, 789 F.3d at 1092.

164. See *Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx and Revised Distinct Population Segment Boundary*, 79 *Fed. Reg.* 54,782, 54,807–09 (Sep. 12, 2014); also INTERAGENCY LYNX BIOLOGY TEAM, CANADA LYNX CONSERVATION ASSESSMENT AND STRATEGY 90–93, (3d ed. 2013) (describing conservation measures to conserve snowshoe hare habitat).

actions may impact the snowshoe hare and how that will in turn affect the lynx population. The relationship between the Canada lynx and the snowshoe hare is taught to biology students around the country as a classic example of how the population dynamics of a prey species can influence the population of its predator.¹⁶⁵

Despite scientists studying this population dynamic for years, there are still questions left unanswered.¹⁶⁶ Fluctuations in the density of the snowshoe hare population follow an approximately ten-year cycle, but scientists still do not fully understand all of the factors involved in driving and synchronizing this population cycle. The cycle likely involves an interaction between predation and available food supplies that is influenced by other factors such as fires and their effect on forest succession.¹⁶⁷ However, managing the snowshoe hare population is not enough to protect the Canada lynx, which has requirements beyond feeding such as the presence of certain habitat structure for successful reproduction.¹⁶⁸ These many complex factors and interactions make it difficult to predict the effects that management actions might have on lynx critical habitat and how those changes could ultimately affect survival of the lynx. Climate change further complicates this equation, as it will cause as-yet-unknown changes to snowfall, fire, and pest outbreaks. The Canada lynx, with its giant snowshoe-like feet and thick fur coat, is adapted to life in a snowy environment.¹⁶⁹ Climate change will likely drive the Canada lynx to the northern part of its range,¹⁷⁰ so forming a more complete understanding of potential adverse effects would require taking into account conditions in areas that the lynx might not currently use but might need in the future.

165. When snowshoe hares are abundant, lynx populations expand in response. When the population of snowshoe hares drops, Canada lynx are forced to hunt other prey and their population also drops. See Nils C. Stenseth et al., *Population Regulation in Snowshoe Hare and Canadian Lynx: Asymmetric Food Web Configurations Between Hare and Lynx*, 94 PROC. NAT'L ACAD. SCI. 5147, 5147 (1997), <http://www.pnas.org/content/94/10/5147.full.pdf> ("These [nine]- to [eleven]-year fluctuations are commonly discussed in ecology texts . . . as examples of coupled predator-prey cycles. . .").

166. See Charles J. Krebs et al., *What Drives the 10-year Cycle of Snowshoe Hares?*, 51 BIOSCIENCE 25, 25 (2005).

167. See John F. Fox, *Forest Fires and the Snowshoe Hare-Canada Lynx Cycle*, 31 OECOLOGIA 349, 361-62 (1978); Rebecca Tyson et al., *Modeling the Canada Lynx and Snowshoe Hare Population Cycle: The Role of Specialist Predators*, 3 THEORETICAL ECOLOGY 97, 97 (2009); Jerry O. Wolff, *The Role of Habitat Patchiness in the Population Dynamics of Snowshoe Hares*, 50 ECOLOGICAL MONOGRAPHS 111, 111 (1980).

168. See James K. Agee, *Disturbance Ecology of North American Boreal Forests and Associated Northern Mixed/Subalpine Forests*, in ECOLOGY AND CONSERVATION OF LYNX IN THE UNITED STATES 39, 72 (Lane Eskew, ed., 1999) (describing the habitat type required for lynx to successfully breed and den).

169. 50 C.F.R. § 17 (2016).

170. See Bill Butcher, *Canada Lynx and Climate Change: Rising Temperatures and Declining Snow Fall Spell Trouble for Canada lynx*, U.S. FISH & WILDLIFE SERV. (May 16, 2011), <https://www.fws.gov/northeast/climatechange/stories/lynx.html>.

The fact-intensiveness of the irreparable harm inquiry is likely to be costly to plaintiffs, as scientific experts and commissioned reports are expensive.¹⁷¹ Even if plaintiffs can get scientific studies from the defendant agency through discovery or from the consultation agency through a Freedom of Information Act request,¹⁷² using that information requires some scientific understanding to draw conclusions about the effects of particular activities. If potential ESA plaintiffs know that this kind of time or cost-prohibitive evidentiary showing will be required in order to get an injunction, some plaintiffs may not bring section 7 claims to court.¹⁷³

It would be fairer and more logical to place the burden of proof on the action agency. The action agency—in consultation with the Services—is likely to have more scientific expertise than the plaintiffs bringing suit to enforce the agency’s statutory duties.¹⁷⁴ It is also unfair to essentially allow the agency, which has violated the law, to benefit from its failure to gather and assess the relevant information by potentially allowing it to proceed with its action anyway.¹⁷⁵ In *Cottonwood*, the uncertainty about the likelihood of irreparable harm—the thing standing in the way of issuing an injunction—exists precisely because the agency has not yet followed section 7’s mandated procedures to produce the information relevant to the question of harm. It is also less burdensome to impose an injunction on the agency in cases like *Cottonwood*, because injunctions issued following procedural violations of section 7 are only in place until the agency has followed the proper consultation procedure.

3. *A Challenge for Courts*

Another consequence of the Ninth Circuit’s rejection of the presumption of irreparable harm is that it forces courts to weigh scientific information. This requirement puts courts in an uncomfortable position, as they are “acutely aware that they lack specialized scientific expertise.”¹⁷⁶ Typically, courts are very deferential when examining agency’s scientific determinations, including biological opinions.¹⁷⁷ Further, Congress delegated implementation of the ESA

171. See *Axtell*, *supra* note 161, at 335.

172. For an explanation about the use of the Freedom of Information Act to access information about endangered species, see Robert L. Fischman & Vicky J. Meretsky, *Endangered Species Information: Access and Control*, 41 WASHBURN L.J. 90 (2001).

173. See *id.*

174. See *Doremus*, *supra* note 125, at 416.

175. In her dissent in *Winter*, Justice Ginsburg expressed her concern that under the majority’s new standard, environmental plaintiffs with claims based on an agency’s unjustified failure to prepare an Environmental Impact Statement may often have a more difficult time showing a likelihood of harm, since the agency’s “[Environmental Impact Statement] is the tool for *uncovering* environmental harm.” *Winter v. Nat. Res. Def. Council*, 555 U.S. 7, 51 (2008) (Ginsburg, J., dissenting).

176. Holly Doremus & A. Dan Tarlock, *Science, Judgment, and Controversy in Natural Resource Regulation*, 26 PUB. LAND & RESOURCES L. REV. 1, 18 (2005).

177. See, e.g., *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 377 (1989) (“Because analysis of the relevant documents ‘requires a high level of technical expertise,’ we must defer to ‘the informed

to FWS and NMFS; it is their job to determine if federal actions will likely cause jeopardy or adverse habitat modification.¹⁷⁸ To have judges determine whether plaintiffs have presented sufficient evidence to prove a likelihood of irreparable harm to the listed species may require judges to make determinations that are analogous to jeopardy determinations that agencies are required to make. Rather than simply reviewing whether an agency adequately supported its determination—as judges typically do when reviewing biological opinions—judges will have to analyze scientific information more directly and draw independent conclusions.

Additionally, determinations of jeopardy and adverse habitat modification are not solely questions of science.¹⁷⁹ As discussed above, the need to grapple with uncertainty is particularly pronounced when it comes to how agencies decide to implement the ESA, because predicting impacts on species almost always involves a lot of uncertainty.¹⁸⁰ Agencies must make decisions on how to resolve this scientific uncertainty, which involves policy judgments regarding how much certainty of harm is required before an agency will list a species or find jeopardy to be likely, and how much risk to tolerate—for example, there is not usually an easy line to draw between jeopardy and nonjeopardy.¹⁸¹ Putting judges in this position may infringe upon the separation of powers, as it is generally inappropriate for courts to make the technical findings or policy judgments that have been delegated to executive agencies.¹⁸² The presumption of irreparable harm freed judges from having to make policy calls about how much risk they are willing to accept each time a plaintiff moves for an injunction pending section 7 consultation.

CONCLUSION

By removing the presumption of irreparable harm and increasing the burden on plaintiffs, the *Cottonwood* court announced a standard for injunctive relief that does not comport with the precautionary nature of the ESA. Going forward, when determining whether plaintiffs have met the burden to show irreparable harm, courts should consider the precautionary nature of the ESA

discretion of the responsible federal agencies.”) (citing *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976)); *Micosukee Tribe of Indians of Fla. v. United States*, 566 F.3d 1257, 1271 (11th Cir. 2009) (“[W]e do owe a high level of deference to the Service’s scientific determinations. The deference owed the 2006 biological opinion is especially strong because the agency had to predict future hydrological conditions and estimate the likelihood, extent, and duration of injury to a species.”).

178. See 16 U.S.C. § 1536(a)(2) (2012).

179. See Katherine Renshaw, *Leaving the Fox to Guard the Henhouse: Bringing Accountability to Consultation Under the Endangered Species Act*, 32 COLUM. J. ENVTL. L. 161, 183 (2007).

180. See Doremus, *supra* note 125, at 438–39.

181. See Renshaw, *supra* note 179, at 183.

182. This was part of the rationale underlying *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 845 (1984). See Lutz, *supra* note 131, at 346 (“A judicial determination that a single take is insufficient for irreparable harm – regardless of its impact on a human plaintiff—thus supplants the expert role that Congress assigned to the [NMFS] and the [FWS] in Sections 7 and 10 of the ESA.”).

and its purpose to protect against potential harms. They should remember that ESA's legislative history itself shows a preference for injunctive relief, as "injunctions provide greater opportunity to attempt resolution of conflicts before harm to a species occurs."¹⁸³

If an agency argues that it has a pressing need to carry out a particular project during the consultation period, a court, in tailoring the injunction, could put the burden on the agency by requiring an affirmative showing that the particular part of the proposed action would not cause irreparable harm. However, in the absence of any analysis regarding the potential impacts of an agency's action, a court has two options: (1) risk overprotection by temporarily enjoining an action that is later determined to pose no threat; or (2) risk underprotection by failing to enjoin an action that ends up causing harm. Considering the current biodiversity crises our planet is facing,¹⁸⁴ I argue that it is wiser to err on the side of the precautionary principle if we are serious about furthering the ESA's goals.

183. S. REP. NO. 97-418, at 24 (May 26, 1982).

184. See, e.g., S.L. Pimms et al., *The Biodiversity of Species and Their Rates of Extinction, Distribution, and Protection*, 344 *SCIENCE* 1246752-1 (2014), <http://science.sciencemag.org/content/344/6187/1246752.long>; Gerardo Ceballos et al., *Accelerated Modern Human-Induced Species Losses: Entering the Sixth Mass Extinction*, 1 *SCI. ADVANCES* 1 (2015) (using "extremely conservative assumptions" and finding "the average rate of vertebrate species loss over the last century is up to 100 times higher than the background rate").

We welcome responses to this Article. If you are interested in submitting a response for our online companion journal, Ecology Law Currents, please contact cse.elq@law.berkeley.edu. Responses to articles may be viewed at our website, <http://www.ecologylawquarterly.org>.

