SCIENTISTS, JUDGES, AND SPOTTED OWLS: POLICYMAKERS IN THE PACIFIC NORTHWEST

BRENDON SWEDLOW*

INTRODUCTION

This year, 2003, marks the ten-year anniversary of one of the most significant policy changes ever facilitated by federal judges. In 1992, district courts in the Ninth Circuit permanently enjoined all timber sales on federal lands within the range of the Northern Spotted Owl in Washington, Oregon, and Northern California. One judge ordered the Forest Service to protect "biological communities" beyond just the owl and to assess not only the impact of timber sales on the owl, but also the effect of owl protection on other species. This implied that the Forest Service should assess and manage ecosystems rather than individual species.

Responding to these injunctions and court orders, newly elected President Bill Clinton in 1993 appointed a scientific advisory committee to develop management alternatives for federal lands in the region. The Forest Ecosystem Management Assessment Team (hereinafter "FEMAT") recommended that 24 million acres of federal land, an area nearly six times the size of Connecticut, be placed under ecosystem management. Seventy percent of this area, or more than four Connecticuts, was to be newly set-aside on the advice of FEMAT. Their ecosystem management plan reduced timber harvests on fed

* Research Fellow, Center for Environmental Solutions, Duke University; Fellow, Center for Governance, University of California, Los Angeles; Ph.D., University of California, Berkeley; J.D., University of California, Hastings College of the Law. I would particularly like to thank Robert A. Kagan, who chaired the dissertation on which this article is based, as well as Martin Shapiro and Laura Stoker, who were the other members of my committee. Many thanks as well to Jonathan Wiener, faculty director of the Center for Environmental Solutions, and Kathryn Saterson, executive director, for supporting the reworking of several of my dissertation chapters into this article. Finally, many thanks to Matthew Greenley, Kristin Grenfell, and the other hard-working members of the *Duke Environmental Law and Policy Forum* editorial team. Any remaining inadequacies in this article are of course my responsibility.

eral lands by 75 percent, while seeking to protect the "old-growth habitat" of more than 1000 species.[1]

Before the President could make this ecosystem management plan his own, FEMAT's advisory activities were successfully challenged in a federal district court in another circuit. Timber industry groups argued and a D.C. federal judge agreed that FEMAT had violated ten provisions of the Federal Advisory Committee Act (hereinafter "FACA"), including requirements that the team have a balanced membership, open meetings, detailed minutes, and publicly available records. However, this judge refused to enjoin use of the report by the President.[2]

President Clinton's Northwest Forest Plan implementing FEMAT'S ecosystem management recommendations was subsequently challenged in federal court by both industry and environmental groups.[3] The same judge who had enjoined Forest Service timber sales now ruled that the National Environmental Policy Act's (hereinafter "NEPA") public comment period cured the FACA defects.[4] He also swept aside all other challenges, while extending his requirement that Forest Service lands be managed as biological communities to Bureau of Land Management lands.[5]

Ninth Circuit appellate panels were strongly supportive of owl protection. Even before district court judges held hearings to establish some basic facts about the owl, one appellate panel pronounced that "[i]t was and is no secret that the northern spotted owl disappears when its habitat is destroyed by logging."[6] Over the course of

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1. According to the leader of the FEMAT effort, Jack Ward Thomas, a Forest Service research biologist whom President Clinton subsequently appointed to head the agency, the actual reduction in timber sales far-exceeded 75 percent because "super-safe" riparian default buffers were not replaced with buffers that were the result of site-specific analysis. According to Thomas, these "super-safe" buffers also prevented access to and consequently harvest of many of the areas between the buffers. Thomas continues: the "highest [yielding] timber sites have slipped into preservation status. This result is not what was proposed by the FEMAT under Option 9 and promised in the Northwest Forest Plan." Jack Ward Thomas, *What Now? From a Former Chief of the Forest Service*, *in* A VISION FOR THE U.S. FOREST SERVICE: GOALS FOR ITS NEXT CENTURY 27 (Roger A. Sedjo ed., 2000).

2. Northwest Forest Resource Council v. Espy, 846 F. Supp. 1009, 1015 (D.D.C. 1994) ("[S]uch an injunction would exceed the injury presented to be redressed.")

3. Seattle Audubon Soc'y v. Lyons, 871 F. Supp. 1286 (D.C. Cir. 1994) (plaintiffs in this suit were: Save the West, Native Forest Council, Sierra Club); The Northwest Forest Resource Council filed two suits in the District Court of D.C. *NFRC v. Thomas*, Civil No. 94-1032 (TPJ) (D.D.C.), *NFRC v. Dombeck*, Civil No. 94-1031 (TPJ) (D.D.C.).

4. *Lyons*, 871 F. Supp. at 1310.

5. *Id*. 1316.

6. Portland Audubon Soc'y v. Hodel, 866 F.2d 302, 305 (9th Cir. 1989).

five years of litigation, from 1987 into 1992, the Ninth Circuit successfully resisted congressional, presidential, and even Supreme Court attempts to gain control of federal land management in the Pacific Northwest.

Surprisingly, this remarkable story of policy change by federal judges has never been told except by the Sierra Club Legal Defense Fund (hereinafter "SCLDF" or "Fund") attorney who headed the litigation that won this change.[7] Other accounts that discuss the litigation rely on the chronology and analysis he published in law reviews while the litigation was still underway.[8] Books on the subject devote a great deal of attention to the contributions of various actors to this policy change, but practically none to the role played by federal judges, even though judges and scientists easily were the most consequential policymakers.

This is not to say that the SCLDF's account of its own owl litigation is overtly wrong or noticeably biased, although sometimes it is both. Rather, like the many excellent briefs written by Fund attorneys, and like superior advocacy generally, SCLDF's analysis for the most part reads as if facts and law could admit of no other interpretation than the reasonable one given. However, the litigation story is messier, the outcome less certain, the law murkier, and the facts more contested than the Fund allows. This last point in particular will be emphasized because the SCLDF story often neglects contested facts and legal arguments and focuses instead on judicial rulings.

The Fund's focus on judicial rulings allows the SCLDF history of the owl litigation to skirt almost entirely the question of whether and to what extent the owl was actually threatened by continued timber

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7. Victor M. Sher & Andy Stahl, *Spotted Owls, Ancient Forests, Courts and Congress: An Overview of Citizens' Efforts to Protect Old-Growth Forests and the Species That Live in Them*, 6 NORTHWEST ENVTL. J. 361 (1990); Victor M. Sher, *Ancient Forests, Spotted Owls, and the Demise of Federal Environmental Law*, 20 ENVTL. L. REP. 10469 (1990); Victor M. Sher & Carol Sue Hunting, *Eroding the Landscape, Eroding the Laws: Congressional Exemptions From Judicial Review of Environmental Laws*, 15 HARV. ENVTL. L. REV. 435 (1991); Victor M. Sher, *Travels with Strix: The Spotted Owl's Journey Through the Federal Courts*, 14 PUB. LAND L. REV. 41 (1993); Victor M. Sher, *Surveying the Wreckage: Lessons from the 104th Congress*, 8 FORDHAM ENVTL. L.J. 589 (1997).

8. Vicki Lee Deisner, *Ancient Forests v. The Timber Industry: What are the Realities?*, 20 N. KY. L. REV. 185 (1992); Mark Bonnett and Kurt Zimmerman, *Politics and Preservation: The Endangered Species Act and the Northern Spotted Owl*, 18 ECOLOGY L.Q. 105 (1991); Erin Pitts, *Natural Resources: The ESA and the Spotted Owl*, 21 ENVTL. L. 1175 (1991); Andrea L. Hungerford, *Changing the Management of Public Land Forests: The Role of the Spotted Owl Injunctions*, 24 ENVTL. L. 1395 (1994); John Lowe Weston, *The Endangered Species Committee and the Northern Spotted Owl: Did the 'God Squad' Play God?*, 7 ADMIN. L.J. 779 (Fall 1993/Winter 1994).

harvest. Scientists who were part of advisory processes to the agencies and president and scientists who worked for timber industry groups disagreed with scientists testifying for the Fund about the extent to which owl populations were declining or dependent on vast tracks of 200 year old growth forest for their survival.

Agency wildlife biologists would sometimes testify that their agencies were not doing enough to protect the owl. When they did, their testimony was very persuasive to federal judges. But agency wildlife biologists would also question the often apocalyptic claims made by academic witnesses for the SCLDF, as would academic experts offered as witnesses by industry and community intervenor groups.[9] Such contradictory testimony (and congressional intervention removing challenges to timber sales based on new information from judicial review) made one district judge hesitant to find in the Fund's favor. Other district court judges and Ninth Circuit appellate panels appeared almost eager to conclude that the owl was threatened by continued timber harvest.

SCLDF's focus on judicial rulings also allows its history of the owl litigation to avoid recounting the contested legal terrain from which they emerged. SCLDF and Clinton Administration officials liked to quote a district court judge in the case who claimed that the owl litigation had revealed "a remarkable series of violations of the environmental laws."[10] What SCLDF and others, including this judge, failed to mention is that this "remarkable series of violations" was due in significant part to innovative judicial readings of the law in these cases. No agency could have known, for example, that it had a duty to manage "biological communities" until a judge created that duty as a result of these suits. President Clinton's Secretaries of Agriculture and Interior were more candid than this judge and SCLDF when they acknowledged the "emergent" legality of ecosystem management.[11]

For the past ten years, the strong support the Ninth Circuit appellate and district courts showed for owl protection and their ratification of President Clinton's Forest Plan has served to insulate owl

9. Portland Audubon Soc'y v. Lujan, 712 F. Supp. 1465, 1488 (D. Or. 1989) ("The BLM and intervenors argue that the new information submitted by the Portland Audubon Society id speculative in nature and is not accurate").

10. Seattle Audubon Soc'y v. Evans, 771 F. Supp. 1081, 1089 (W.D. Wash., 1991), *aff'd*, Seattle Audubon Soc'y v. Evans, 952 F.2d 297 (9th Cir. 1991).

11. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl 5 (Dep'ts. Agriculture and Interior, April 13, 1994).

facts and the Plan from legal challenges. And with President Clinton in office, the Plan was largely protected from legislative amendment, with the exception of some "salvage logging" appropriations riders.[12] With the election of President Bush, Jr., the situation has changed. Timber and environmental groups are both now challenging implementation of the Forest Plan in court, and President Bush is seeking to ease restrictions on timber harvest to prevent catastrophic forest fires.[13] This article does not seek to assess or comment upon these recent developments. However, as forest management in the Pacific Northwest again becomes contested terrain, it may be useful to revisit the factual and legal claims made a decade ago. As we watch current actors face off over the owl and the management of other species and the forests and ecosystems in the region, it may be helpful to recall what the arguments and evidence and exercises of power by judges, scientists, and others looked like then. What did scientists and judges know and believe about owls and ecosystems ten years ago? And how was that knowledge related to judicial rulings? And how were these rulings related to existing law? To answer these questions adequately, it is necessary to travel back briefly another twenty years, to the early 1970s.

Early Constructions of Spotted Owl Habitat and Decline

1971-1978

Research on the spotted owl and regulatory action to protect its habitat began almost simultaneously more than thirty years ago.[14] The

12. For a sampling of the debate ignited by these amendments, see Michael Axline, *Forest Health and the Politics of Expediency*, 26 ENVTL. L. 613 (Summer 1996); U.S. Senator Slade Gordon & Julie Kays, "Legislative History of the Timber and Salvage Amendments Enacted in the 104th Congress: A Small Victory for Timber Communities in the Pacific Northwest," 26 ENVTL. L. 641 (Summer 1996).

13. *See, e.g.,* Dep't. Interior, *Healthy Forests: An Initiative for Wildfire Prevention and Stronger Communities, available at* http://www.whitehouse.gov/infocus/healthyforests/Healthy_Forests_v2.pdf (Aug. 22, 2002). The Bush Administration's "healthy forests" initiative follows upon timber industry lawsuits alleging that the Forest Plan exceeded NFMA requirements in protecting species. In 2000, the Forest Service agreed, and removed 72 species from a list the Service and BLM must check before allowing logging in areas covered by the plan. As Forest Service spokesman Rex Holloway explained, "There were a number of species that were not related to old-growth, some were not found in the Northwest Forest Plan area, and some we found in sufficient number that they didn't need protection."

14. STEVEN L. YAFFEE, THE WISDOM OF THE SPOTTED OWL: POLICY LESSONS FOR A NEW CENTURY 14-19 (1994)

late Howard Wight, the professor whose graduate student, Eric Forsman, did most of the early research on the owl, was simultaneously chairman of his department of wildlife sciences and director of a special research unit of the U.S. Fish and Wildlife Services agency housed on his campus.[15] In other words, Wight occupied two powerful positions on the border between academic and regulatory science. Within five months of his student beginning his graduate work on the owl, the professor in his capacity as research director for the agency was telling his superiors that that the owl was dependent on old growth and endangered by continued logging of older forests.[16] Within seven months of his student beginning that research, he had succeeded in getting the head of the FWS to get the heads of the FS and BLM to order their employees in the Pacific Northwest to protect the owl.[17] All of this happened in 1972 and 1973, when the Endangered Species Act was passed. In fact, the owl was listed as one of the species that would probably need to be protected under the Act and the owl's alleged endangerment contributed to the ESA's passage.[18]

Meanwhile, Forsman wrote impassioned letters to agency officials responsible for managing land on which he found owls, testified at public hearings, and participated in heated exchanges on the opinion pages of his city paper.[19] He and Charles Meslow, another research scientist at the FWS, also went around together telling anyone who would listen about the owl.[20] Within fourteen months of Forsman beginning his research, and in significant part as a result of these proselytizing activities, Oregon had established a special interagency task force to inventory owls and their old-growth habitat throughout the state.[21] In 1978, the task force's management guidelines for the owl, which were based on the graduate student's master's thesis, were accepted by all federal and state land and wildlife management agencies in Oregon.[22] Among other things, the agencies had agreed to protect 300 acres of 200-year-old forest for each of 400 pairs of owls, about two percent of the state's remaining old growth.[23]

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15. ALSTON CHASE, IN A DARK WOOD: THE FIGHT OVER FORESTS AND THE RISING TYRANNY OF ECOLOGY 133 (1995).

16. YAFFEE, *supra* note 14, at 15.

17. *Id*. at 16.

18. CHASE, *supra* note 15, at 92 and 134.

19. YAFFEE, *supra* note 14, at 16-19.

20. *Id*. at 20.

21. *Id*.

22. *Id*. at 34.

23. *Id*.

No sooner had these management guidelines been adopted than environmentalists attacked them publicly and in administrative proceedings for lacking an adequate biological basis to support the agencies' claim that 400 pairs constituted a viable population of owls.[24] Industry groups also attacked them publicly, but on the grounds of economic consequences, claiming that the old-growth set-asides for each pair would cost $300,000.[25] New studies of owl home range sizes by Forsman led the task force to recommend that 1000 acres be set aside per pair, more than tripling the acreage reserved for each owl pair, and this recommendation now extended to Washington state.[26] Meanwhile, FS biologists, influenced by concepts from the new field of conservation biology, were re-writing their regulations concerning species diversity to include not only diversity of species, but genetic diversity within a species, as well as diversity of biological communities.[27] To preserve genetic diversity, they claimed that 500 pairs had to be protected.[28] Meanwhile, the distribution of the population in the landscape was also recognized as an important contributor to species viability. Again, FS biologists further developed these definitions of viability, settling on the rule that a species had to be well distributed throughout the planning area.[29] Their modeling efforts led to doubling the size of the habitat areas, which was anticipated to cause a five percent reduction in allowable agency timber sales.[30]

The accretion of variables that might affect owl population viability led FS biologists to undertake an unprecedented modeling effort, in which viability was conceptualized as a function of risks from a variety of sources.[31] Industry groups criticized this modeling attempt as worthless because it disguised the fact that the agency had not improved its knowledge of underlying owl biology. Such groups insisted that the agency gather more data before regulating.[32] While environmental groups agreed that the agency modeling efforts had a poor biological basis, they didn't think gathering more data was the solution; data collection would take too long.[33] Instead, they saw in the

24. *Id*. at 47.
25. *Id*. at 55.
26. *Id*. at 53.
27. *Id*. at 59-60.
28. *Id*. at 62.
29. *Id*. at 58.
30. *Id*. at 96.
31. *See id*. at 84-100.
32. *See id*. at 79-80.
33. Brendon Swedlow, Scientists, Judges, and Spotted Owls: Policymakers in the Pacific

agency's shift from studying owl populations to modeling them an opportunity to challenge the agency on new scientific territory. If they could find a scientist to do a better modeling job than agency scientists had, modeling that supported the inference that the owl was endangered by plans to protect it, they would be able to challenge those plans in court and win. Early proselytizing by agency wildlife biologists and the legitimatization of their concerns (by formation of an interagency task force and the subsequent inventorying and planning processes undertaken by the agencies) also created a foundation for the public relations campaign begun by environmentalists in advance of their litigation campaign. All of this prepared the ground for favorable judicial rulings.

1984-1987

No one better understood how to displace the agencies' presumed expertise with outside scientific authority than Andy Stahl, a resource analyst at the SCLDF, whose father was a University of Oregon professor of molecular biology.[34] Through his father's contacts at the National Academy of Sciences, Stahl located Russell Lande, a theoretical biologist at the University of Chicago.[35] "Stahl explained his problem: he needed a paper to prove logging hurt owls . . . , [which] not only would . . . have to exhibit impeccable scholarship, but also [would have] to be timely and written in terms a judge could understand."[36] Lande immediately sketched a model of species' population dynamics on a dinner napkin.[37] Stahl then put him in touch with scientists who could tell him about the spotted owl, of which he knew nothing.[38] A draft of the paper, for which Stahl obtained favorable reviews from George Barrowclough and Mark Shaffer, was ready in June 1985, while the Draft SEIS was still being developed.[39] Stahl "published" the paper at a press conference. He then promised the FS not to use it as the basis for a lawsuit until the Final SEIS was completed, provided they would halt six timber sales that were par-

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Northwes*t* 206-08 (2002) (Ph.D. dissertation, University of California, Berkeley).

34. *Id*. at 161.

35. CHASE, *supra* note 15, at 246.

36. *Id*. at 246-47.

37. Author interview, October 16, 1995.

38. In the paper, Lande thanks H. Allen, Alan Franklin, Rocky Gutierrez, and Bruce Marcot for "discussion and access to preprints and unpublished data." Russell Lande, *Demographic models of the northern spotted owl (*Strix occidentalis caurina*)*, 75 OECOLOGIA 601, 606 (1988).

39. CHASE, *supra* note 15, at 247.

ticularly odious to environmentalists. The FS agreed. "After that meeting," Stahl recalled, "we then had to twiddle our thumbs for a couple of years until the spotted owl SEIS was written."[40]

By 1985, the conditions were in place for a significant shift in the social construction of this environmental problem and its solution. The FS had attempted to act proactively to avoid the owl's listing as endangered by the FWS so as to retain control of forest management, but in trying to preempt the FWS it had legitimated and assumed responsibility for protecting a little-understood species. To retain control of forest management by assuming responsibility for owl management, forest service leadership and managers had to cede control internally to their previously least powerful members, the non-game wildlife biologists. The biologists' jurisdiction over the owl did not come to dominate forest planning or interfere with old growth timber sales until they made the owl's viability depend on its population being well-distributed in the planning area. This construction of owl habitat needs effectively ended managers' hopes that old growth in existing wilderness set-asides could fulfill the owl's habitat needs.

Wildlife biologists now had significant control of forest planning and timber sales within the agency, but their control was based on professional opinion, which was based on spotty data and untested, emerging theories. Their reading of these tea leaves was consequently vulnerable to readings that might appear to be more authoritative, and, as environmentalists understood, university biologists would be perceived as more authoritative than agency biologists. To the extent that the FS could be shown to be doing less than was necessary to protect the owl, it could also be shown to be violating its legal mandates, which agency biologists had amended in a way that almost guaranteed that the FS would fail to fulfill those mandates. One might say that they had created a legal insurance policy for their scientific risk taking. If they failed to meet the viability standards that they had set for themselves, environmentalist scientists, lawyers, and courts could hold them and the agency accountable. With scientific failings ready to trigger legal intervention, only one piece of the strategy remained out of place: public support for the owl and old-growth protection had to reach a point that would prevent Congress from amending the laws protecting wildlife upon which this whole strategy depended.

40. YAFFEE, *supra* note 14, at 98.

"We knew in 1985 that we could stop every timber sale in old growth and that we could get the owl listed," Stahl explained. "We decided that we shouldn't do it, because public opinion was not developed well enough."[41] Stahl's confidence was based in significant part on Lande's paper, which was extremely important for environmentalists. It provided the primary scientific authority for attacking the FS's and BLM's owl plans and the FWS's decision not to list or designate critical habitat for the owl. The paper was available for two years before it was used in a lawsuit, giving government and the timber industry plenty of time to recruit experts and develop an alternative owl population model, or at least a critique of Lande's model, although they did not make use of these opportunities. Stahl's confidence was also based on an earlier legal victory, where his then employer, the National Wildlife Federation, challenged forest and unit plans for the Mapleton Ranger District in the Oregon Coast Range for failing to prepare an environmental impact statement to assess the extent to which harvest practices were responsible for landslides. Stahl recalled, "We were able to get the court to enjoin all timber sales . . . . After we won the *Mapleton* case, we realized that potentially we had the ability to change the world."[42]

1986

After SCLDF recruited Russell Lande to construct owl population and habitat models, industry groups recruited Larry Irwin to do demographic research, although it appears that industry was not aware of SCLDF's recruitment of Lande or his modeling efforts.[43] Irwin was hired following a national search by the National Council on Air and Stream Improvement (hereinafter "NCASI"), an industry association founded in the 1940s to do research on the environmental impact of the pulp and paper industry. In 1986, representatives from the western states began pressing for a program of research on the owl. Irwin's job was to try to discover what the owl population might really be and what home ranges really were. Irwin and others at NCASI believed that the sampling designs used by Forsman and Meslow were flawed because they only did research from roads on federal lands, not in roadless Wilderness Areas, and federal lands only

41. *Id*. at 108.

42. *Id*. at 75.

43. This account is based on the author's communications with people other than Larry Irwin on August 22, 2000, September 19, 2000, and November 13, 2000.

consisted of recently harvested forest and forest that had either been around for hundreds of years or had been "harvested" by fire or other natural disturbance. Sampling across the full range of forest types on public and private lands led Irwin and colleagues to conclude that owls were living in second-growth. Government and university scientists argued that owls found in second-growth were refugees from old-growth areas that had been harvested, and that the owls would not persist in second-growth and certainly did not prefer it to old-growth. Irwin and colleagues were thus engaged in data gathering that would take years to falsify one or the other of these hypotheses. They did nothing to counter the modeling efforts recently done by Lande, which were published in the press, and already used by Stahl to get the FS to halt several timber sales. By the time industry got serious about doing owl research, environmental groups, as indicated by Stahl's comments, were already confident that they had produced science sufficient to shut down harvest on federal lands.

1985-1987

During the two years that Stahl and the SCLDF spent twiddling their thumbs, Lande also significantly reduced his estimates of owl population declines, but this had no effect on his conclusion that the owl was threatened with extinction by continued logging. According to Lande's 1987 published paper, all owl population models are very sensitive to assumptions about the longevity of owls, because when owl pairs reach maturity (at three years of age) they reproduce as often as once per year over their entire lifespans.[44] The owl population models used by Forest Service wildlife biologists Bruce Marcot and Dick Holthausen in the Final SEIS for the owl, released in 1986, assumed that owls lived only 10 years, an assumption similar to one Lande used in his 1985 version of the paper, and to the assumption used by members of a self-appointed 1986 Blue Ribbon panel on the owl, the only other owl population modelers at the time.[45] In his 1987 paper, by contrast, Lande assumed that owls lived 17.25 years.[46] These different assumptions made the difference between a population that in Marcot and Holthausen's analysis was expected to go extinct in 33 years (assuming 2500 pairs at the outset), and a population that in

44. Lande, *supra* note 38, at 605.

45. *Id*. at 605; William R. Dawson, et al., *Report of the Scientific Advisory Panel on the Spotted Owl*, 89 THE CONDOR 205 (1987).

46. Lande, *supra* note 38, at 606.

Lande's 1987 estimates may have been stable or declining as little as 1 percent annually, (which he noted was in line with the results of Forsman's estimates based on annual owl surveys.)[47]

Lande argued that his 1987 assumption of a longer-lived owl was more realistic than the assumption that owls lived only 10 years, an argument that Marcot and Holthausen appeared to accept in a 1987 paper where they upped the owl's life expectancy to 15 years.[48] How Lande arrived at 17.25 years is not entirely clear, but the assumption was based on animal research showing that lifespan is a function of bodyweight and bird research showing that the average lifespan of a species in the wild is about one fourth that of its longest lived members.[49] Lande also argued that estimates of spotted owl population growth were much more sensitive to assumptions about owl longevity than they were to assumptions about how many fledglings females produced and how many of these fledglings survived to reproduce.[50] Even though various population modelers used different assumptions about these biological parameters and modeled their interactions differently, the only differences that really made a significant difference in estimates of owl population growth were differences in assumptions about owl longevity, Lande argued. When he substituted his assumption that owls lived 17.25 years for the shorter life-spans assumed by others, their models yielded estimates of population growth that were very similar to his own.[51]

Although Lande's paper by no means settled the debate about the rate of decline in the owl population, it signaled an important shift in the kinds of scientific expertise and arguments that would become most important in constructing the owl problem and its solution. The federal government and industry continued to put a lot of effort into actual field research: the slow, tedious, expensive, labor-intensive process of finding owls, tagging them, and re-locating them year after year to determine trends in their population, the kinds of habitats they were using, and basic biological parameters with greater accu

47. *Id*. at 603, 605.

48. Marcot BG, Holthausen R, *Analyzing population viability of the northern spotted owl in the Pacific Northwest*, *in* TRANSFORMATION OF NORTH AMERICAN WILDLANDS NATURAL RESOURCE CONFERENCE 52: 333-347 (1987).

49. Lande, *supra* note 38, at 605. Lande calculated that owls could live to 72 years based on their estimated biological parameters and to 55 years based on their body weight relative to that of eagle owls and based on the maximum age reached by eagle owls; four times 17.25 is 69 years.

50. *Id*. at 602.

51. *Id*. at 603.

racy. Environmentalists, meanwhile, were headed in another direction, signaled by Lande's paper.

Lande used the findings of others regarding various aspects of owl biology as the building blocks for a model of owl population growth. Many of these assumptions were based on observations of only a few owls over a short period of time. His estimate of the annual survival rate of subadults, for example, was based on observation of only seven owls. In Lande's model, this particular parameter was not nearly as important as the annual survival rate of adult owls, but to the extent his estimate of longevity was based on spotted owls (rather than extrapolations from eagle owls) only 69 owls were studied. Lande suggested that because his model of owl population growth was so sensitive to owl longevity, future field research on the owl should concentrate on getting as much information on adult survival as possible. In the meantime, however, his strategy was to take the available, incomplete observations and turn them into generalizations about the owl population as a whole, and to use a series of these generalizations or assumptions as the building blocks for a model estimating the growth rate of that population. This turn away from field research and direct observation of relationships to generalization of a few observations into assumptions or parameters and the use of these parameters to specify a model of owl population growth paved the way for theory to replace research as the authoritative owl science.

1985-1987

Lande's conclusion that owl populations were declining slowly if at all but would with certainty become extinct if the FS continued logging old growth as planned depended on a second modeling effort in the same paper that was even more divorced from data and reliant upon theory for its key assumptions than the first. Lande's second model estimated the owl's habitat needs rather than its population growth rate. The minimum or threshold amount of habitat required for the owl population to keep reproducing itself, Lande reasoned, was not simply the amount of habitat that pairs in a reproducing population used for their home ranges at any given time, as the FS assumed. Rather, because "a species may not occupy all of the habitat available to it, and a population may go extinct in the presence of suitable patches of habitat," some larger amount of habitat theoretically was required by the owl than the amount it actually occupied at

any given time. Here Lande relied in part on a paper by the FWS's Mark Shaffer, who "discussed the relevance of these ideas for the owl." Lande assumed that the current population was successfully reproducing and that therefore the rate at which it occupied "suitable patches of habitat"—44 percent of the FS's spotted owl management areas (SOMAs)—could be used to estimate the additional habitat it required. Suitable habitat ("coniferous forests more than 200 years old") constituted 38 percent of national forests in Oregon and Washington. Combining these percentages in his model, Lande predicted that if old growth were reduced to less than 21percent (+/-2 percent) of the region, "owls cannot persist," and that the owl in fact would go extinct under the FS's management plans because they called for harvesting all but 7 to 16 percent of the remaining old growth. "Even a plan that would double or triple the SOMAs, assuming these to consist of 1000 acres of old growth, would be likely to rapidly (sic) extinguish the population."[52] Moreover, Lande claimed, occupancy of suitable habitat could be as high as 60 percent and "the population is still likely to become extinct under the proposed plan."[53] "This analysis of territorial occupancy indicates that only a plan involving preservation of the great majority of the remaining old-growth forest (e.g. Dawson et al. 1987) is likely to promote long-term persistence of the northern spotted owl population."[54]

Audubon Society's "Dawson Report" critical of modeling efforts in the absence of data, but recommends large set-asides for owl to hedge against uncertainty

1986

The Dawson, et al. Blue Ribbon report favorably referenced by

52. *Id*. at 605.

53. *Id*.

54. *Id*. at 606. Lande was also quick to point to various assumptions in his model that might have led him to *overestimate* the owl's chances. "This model of dispersal and habitat occupancy is optimistic in several respects because of the assumptions that there is no difficulty in finding a mate, no dispersal out of regions containing suitable habitat, no demographic or environmental stochasticity. . ., and no loss of fitness from inbreeding in small populations. In addition it is assumed that the suitability of SOMAs designated by the Forest Service is now high and will not decline in the future (e.g., due to increasing fragmentation of old forest within individual territories, or local extinction of prey species that are incapable of dispersing between SOMAs). Violation of any of these assumptions would render population persistence more difficult, hence this model is likely to underestimate the extinction threshold, or minimum proportion of suitable habitat in a region necessary to sustain a population." *Id*. 605.

Lande was another attempt by environmental groups to create scientific authority that could displace that of the Forest Service. At the instigation of the National Audubon Society's Amos Eno in Washington, D.C., presidents of the American Ornithologists' Union and the Cooper Ornithological Society recommended members of their organizations to serve on a "Blue Ribbon" owl panel. Chaired by University of Michigan professor, William Dawson, a panel of six members, including a FS biologist, recommended that at least 1500 pairs be protected across all ownerships; that this protection should include per pair set asides of 4500 acres of old growth in Washington, 2500 acres in Oregon and Northwest California, and 1400 acres in California's Sierra Nevada; and that these set-asides should be linked in a network allowing distribution of the owl among them.[55] The panel justified these large set-asides as hedges against uncertainty caused by data limitations, but they didn't accept the larger estimates of owl declines because they "could project these rates back just four generations and expect to find over 38 million pairs of owls, an absurdity."[56] More modest estimates of decline like Lande's "may be close to representative or they may be wildly optimistic. There are no data to tell us."[57] Modeling efforts like Lande's, "require more accurate estimates of the parameters and their variability than are currently available."[58] They even thought that "insufficient data exist" to say whether the northern and California spotted owls were distinct subspecies, which was why they recommended set-asides in the Sierra Nevada.[59] They also recommended an extensive research and monitoring program to remedy these uncertainties. The report was released in May, 1986, at the same time as the Draft SEIS, and, as Yaffee notes, the report "provided a scientifically legitimized alternative that critics could point to in comments on the draft study."[60]

The Dawson report provided something else as well: the basis for a tiny Massachusetts-based environmental group (with about 20 active members) calling itself GreenWorld to petition the FWS in October, 1986, and again in January, 1987, to list the owl as endangered.[61] GreenWorld's initial petition was rejected because it failed to

55. YAFFEE, *supra* note 14, at 99.
56. CHASE, *supra* note 15, at 255.
57. *Id*.
58. *Id*.
59. *Id*.
60. YAFFEE, *supra* note 14, at 99.
61. *Id*. at 108.

include the word "petition." The group also spelled the owl's scientific name wrong.[62] The FWS had to find that the petition presented "substantial evidence" of endangerment before the agency was obligated to do a "status review" of the species. In March, 1987, the FWS so found. Two teenage brothers had earlier petitioned to list the owl, but reluctantly withdrew their petition on the urging of their father and representatives from several environmental groups, including Stahl, who explained that a premature listing might cause a backlash against the Endangered Species Act.[63] GreenWorld was different, however. "[Y]ou couldn't find them and talk them into anything," Stahl recalled. As Alston Chase explained, "[t]he group's director, Max Strahan, was a longtime radical activist with . . . a deep suspicion of mainstream groups, who refused to withdraw his petition."[64]

"The GreenWorld petition forced our hand," Stahl recalls, but "we were ready by that time . . .[;] we were already drafting our petition. It just took us so long to get the national groups on board."[65] To solidify the support of national environmental groups and gain the further support of politicians and the public, petitions and lawsuits would be necessary. "The foundation had been laid. To lay more foundation, we had to push the issue to get newsworthy events."[66] By this time, Stahl was working for the SCLDF. In August, 1987, the SCLDF filed a second petition on behalf of twenty-eight environmental groups to list the owl, relying on Lande's paper. "When GreenWorld submitted its petition, there was the feeling that if there was going to be a petition, it had better be a good one," Stahl recalled. "So we wrote our own."[67]

Stahl, Victor Sher, and SCLDF lead owl litigation against federal land managers

While the lead plaintiffs in the owl suits were the Portland and

62. WILLIAM DIETRICH, THE FINAL FOREST: THE BATTLE FOR THE LAST GREAT TREES OF THE PACIFIC NORTHWEST 83 (1992).

63. CHASE, supra note 15, at 256.

64. *Id*. As Strahan explained: "We knew the spotted owl was in trouble, but National Audubon and the Sierra Club were always cutting all of these deals with the Forest Service. The bigger these clubs get, the more conservative they get. They go for quick, simple solutions. They love working with federal agencies, love getting crumbs from them. These guys become the government – there's no difference." DIETRICH, *supra* note 62, at 84.

65. YAFFEE, *supra* note 14, at 108.

66. *Id*.

67. *Id*. at 109.

Seattle chapters of the Audubon Society and the SCLDF represented these and other plaintiff environmental groups, the owl litigation strategy did not originate with nor was it run by these environmental groups. Rather, it was Andy Stahl and Victor Sher, of the SCLDF, that recruited these groups to provide seed money, an avenue for public communications, plaintiffs with legal standing to sue, and legitimacy for lawsuits.[68] The SCLDF gets right to the point in the title of its coffee table book: *The Sierra Club Legal Defense Fund and the Places **It** Has Saved*.[69] The SCLDF's leading role in organizing the owl litigation is also evident in Stahl's claim that the plaintiffs in these cases "were run-of-the-mill environmental groups that you could pick up on any street corner."[70] For their part, established national environmental groups were reluctant to join the movement that SCLDF claimed to serve. They saw SCLDF's owl litigation strategy as high risk and feared that it would provoke a public and political backlash leading to a weakening of the Endangered Species Act (ESA). Only some regional affiliates of national groups joined the litigation as plaintiffs.[71]

SCLDF shared the environmental groups' concerns about provoking a legislative backlash against the ESA. SCLDF hoped to avoid weakening the ESA by basing its owl suits on other environmental laws. This is one reason Stahl tried to talk others out of petitioning the FWS to list the owl as threatened or endangered. But there were other reasons that SCLDF did not want the owl listed as threatened. Once the owl was listed, SCLDF feared that federal judges would defer to FWS expertise on the owl and the FWS would not do enough to enforce the ESA against the land management agencies, particularly not against the FS. The FS had for many years been considered not only the premier environmental agency but also a model federal agency. At the same time, SCLDF believed that federal judges would be less likely to defer to the wildlife expertise of the

68. Sher & Stahl, *supra* note 7; Sher, *Demise of Federal Environmental Law*, *supra* note 7; Sher & Hunting, *supra* note 7; Sher, *Travels with Strix*, *supra* note 7; Sher, *Surveying the Wreckage*, *supra* note 7. *See also*, Deisner, *supra* note 8; Bonnett & Zimmerman, *supra* note 8; Pitts, *supra* note 8; Hungerford, *supra* note 8; Weston, *supra* note 8.

69. TOM TURNER, WILD BY LAW: THE SIERRA CLUB LEGAL DEFENSE FUND AND THE PLACES IT HAS SAVED (1990) (emphasis added).

70. Andy Stahl, Speech at the University of California, Berkeley (Sept. 6, 2001).

71. There was also hostility on the part of established environmental groups toward this brash upstart. Nowhere was this more so than with its creator and namesake, the Sierra Club. Not only did the Sierra Club refuse to join the owl litigation as a plaintiff, but it also successfully sued SCLDF for trademark infringement causing SCLDF to have to rename itself the Earth Justice Defense Fund.

land management agencies than that of the FWS. Consequently, SCLDF needed to find laws that would allow them to mount their scientific critique directly against federal land managers. The NEPA and the National Forest Management Act (NFMA) fit the bill.

The Continuing Construction of Owl Habitat and Decline, Now by Environmental Lawyers

In the midst of their owl suits, Stahl and Sher claimed that when the BLM (in 1983) and the FS (in 1984) issued their comprehensive forest plans, they did not provide "any more biological justification for [their owl plans] than there was in 1977 (which was none)."[72] Stahl and Sher insisted that the agencies were violating environmental laws by ignoring significant new information about the owl. Ironically, as has already been discussed, this new information consisted of increasingly sophisticated models that relied on inadequate biological knowledge, scientists' opinions based on the same inadequate biological information, and theory. Yet Stahl and Sher subtly reframed their complaint regarding missing "biological information" to claim that there was missing "scientific information." "Scientific information" could include theory, modeling efforts, and professional opinion. At the same time, they kept asserting various biological facts about the owl with great certainty. As Stahl explained to participants at the Western Public Law Conference in 1988:

> I've often thought that thank goodness the spotted owl evolved in the Northwest, for if it hadn't we'd have to genetically engineer (sic) it. It's a perfect species to use as a surrogate. First of all, it is unique to old-growth forests and there's no credible scientific dispute on that fact. Second of all, it uses a lot of old growth. That's convenient because we can use it to protect a lot of old growth. And third . . . it appears the spotted owl faces an imminent risk of extinction. That's very important, for if it didn't, federal agencies could argue that they could continue to log old growth and not hurt the spotted owl. It's important that it not only face a risk of extinction but that we haven't gone too far because then federal agencies could argue: Why should we bother to protect old growth; it's too late already; the spotted owl is doomed. In other words, we have to be right on the edge and by good fortune, it appears that we are in this decade right on the edge.[73]

This article will show how the northern spotted owl was socially

72. Sher & Stahl, *supra* note 7, at 364.

73. YAFFEE, *supra* note 14, at 215-16.

rather than genetically engineered by the SCLDF and the federal judges who acceded to their appeals. The construction of old growth owl habitat and population decline was from the start a societal, governmental, and scientific process, involving federal and university scientists, wildlife and land use agency administrators, and environmental and timber interest groups. As attorneys and judges became more fully involved, the most authoritative constructions of law and fact would occur. Judges' factual findings often determined whether or not the law had been violated, and those factual findings, in critical instances, depended on the affidavits, depositions, testimony, reports, analyses, letters, and other documentation provided by scientists.

Sher and Stahl were able subtly to reframe their argument by first stating that "[a] decision about listing a species must be made 'solely' on the basis of the best *biological* information available about the status of a species," [74] but then attributed the listing of the owl to "the best available information," dropping the modifier *biological*:

> During the rest of 1987, experts around the United States – both in and out of the FWS – examined the best available information about the owl, including Lande's study.[75] Unanimously, those experts agreed that the owl faced a significant risk of extinction from continued logging of old-growth forests. There was (and still is) continued scientific debate regarding the specifics of the analytical methods used to assess risks to the owl's extinction and the precise steps necessary to prevent it, yet *every* expert who expressed an opinion agreed that the threat to the owl's survival is real and immediate . . . .[76]

The claim of unanimous agreement among experts regarding the owl facing "a significant risk of extinction" is flatly false, as is the seemingly more qualified claim that "*every* expert who expressed an opinion" thought so. The rare acknowledgment of "continued scientific debate" is also an accomplished piece of scientific "boundary-work." This makes scientific disagreement appear to be about inconsequential matters when some scientists in fact thought the analytical

74. Sher & Stahl, *supra* note 7, at 365 (emphasis in original).

75. Without mentioning that Stahl had recruited him to write the study, Sher and Stahl note that: "In 1985, Dr. Russell Lande at the University of Chicago issued a seminal study of the spotted owl and its loss of habitat from logging. Dr. Lande, a population geneticist, was the first scientist to analyze whether the [spotted owl management plan] protected sufficient owl habitat to support a self-sustaining population. Dr. Lande used demographic data on the owl, as well as surveys of the amount of owl habitat present and actually occupied by breeding pairs of owls, to calculate an admittedly optimistic minimum amount of habitat that would sustain the owls' population." *Id.* at 364.

76. Sher & Stahl, *supra* note 7, at 365-66.

methods, i.e., the population and habitat models and demographic surveys, were too flawed to determine anything about trends in the owl population or habitat requirements and should not become the basis for listing or management decisions.

Owl Litigation Overview

Owl suits were brought primarily in federal district courts in Oregon and Washington, and were eventually also were brought in the D.C. District Court. The SCLDF brought most of these suits on behalf of a number of regional environmental groups, and the suits were directed at three federal land and wildlife management agencies, the FS, BLM, and FWS. Industry associations and timber communities usually were granted intervenor status. The owl suits began in 1987, gained their first injunctions in 1991, and ended in 1994 with the lifting of those injunctions. The suits resulted in 18 published district court opinions, seven Ninth Circuit appellate rulings, and one Supreme Court decision, which upheld the constitutionality of congressional efforts to regain control of land management. The Supreme Court also made other decisions in closely related cases.[77]

The SCLDF sued the two major federal land management agencies, the BLM and the FS, and the federal agency charged with overseeing their management of threatened and endangered species—the FWS—under a variety of federal laws. Three United States district court judges and three overlapping Ninth Circuit appellate panels interpreted federal law, agency action, and scientific opinion in ways that granted environmentalists victories. On the other side, and in the minority, one district court judge ruled in favor of rural counties and industry associations, and another initially resisted SCLDF pleadings and appellate reversals of her decisions, deferring to congressional intervention. The U.S. Supreme Court eventually upheld her. However, she then held those congressional measures had expired and then followed the rest of her colleagues in holding that the federal agency before her had acted "arbitrarily and capriciously" in decisions regarding the owl. As discussed in the introduction, the injunctions of BLM and FS timber sales in the Pacific Northwest that followed on these rulings created a crisis inviting President Clinton's

77. See Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 515 U.S. 687 (1995) (upholding the Secretary of the Interior's definition of "take," including "significant habitat modification or degradation that actually kills or injures wildlife," as a reasonable interpretation under the Endangered Species Act.

involvement. An overview of this owl litigation can be found in the accompanying table.

Owl Litigation Overview

1987 The Sierra Club Legal Defense Fund begins suing the federal land and wildlife management agencies on behalf of the Northern Spotted Owl; the FWS decides not to list the owl as threatened or endangered

1987-1992 The Ninth Circuit successfully resists congressional, presidential, and Supreme Court intervention in these suits and enjoins practically all federal timber sales in the Pacific Northwest

1987 Congress removes legal challenges based on "new information" from judicial review

1988 Ninth Circuit appellate panel repeatedly reverses district court Judge Helen Frye when she repeatedly rules for BLM on its decision not to update the agency's assessment of the effect of planned timber sales on the owl; district Judge Thomas Zilly rules that the FWS decision not to list the owl as threatened lacks sufficient explanation, i.e., is "arbitrary and capricious"

1989 Ninth Circuit holds congressional restriction of judicial review unconstitutional

1990 The Interagency Scientific Committee (ISC) releases its conservation strategy for the owl, calling for the creation of a system of reserved areas totaling six million acres

1991 District Judge William Dwyer preliminarily enjoins FS timber sales, pending assessment of their effect on the owl and development of a plan to ensure the owl's viability; district Judge Jones preliminarily enjoins planned BLM timber sales pending consultation with FWS regarding their impact on the owl; FWS biologists Ander-

son and Burnham release their meta-analysis of owl population trends, finding that decline was worse than previously thought

1992 Supreme Court unanimously reverses Ninth Circuit, holding that congressional amendment restricting judicial review is constitutional; Judge Frye holds that the amendment has expired and preliminarily enjoins BLM's planned timber sales pending further assessment of their impact on the owl; the Bush Administration unsuccessfully attempts to develop an alternative to the ISC conservation strategy and then petitions the Endangered Species Committee to exempt certain BLM timber sales from the Endangered Species Act; this so-called "God Squad" exempts thirteen timber sales; the Ninth Circuit orders an administrative law judge to conduct hearings on the propriety of these proceedings; the Forest Service adopts the ISC conservation strategy; FWS designates the owl's "critical habitat," adding 900,000 acres to the ISC reserve system; district Judge Hogan holds the designation must be accompanied by an analysis of its impact on other species, including people; Judge Dwyer permanently enjoins FS timber sales until FS better explains why the ISC strategy remains adequate in light of BLM's exemption from it and in light of the Anderson and Burnham findings on owl population decline; Judge Dwyer also orders the FS to analyze the impact of owl protection on other species and to manage "biological communities" not individual species

1993 Responding to this crisis, a scientific advisory committee appointed by President Clinton seeking to protect more than 1000 old-growth dependent species brings 24 million acres, an area nearly six times the size of Connecticut, under ecosystem management, permanently reducing federal harvests by 75 percent; a FS scientific advisory committee – the Scientific Analysis Team (SAT) composed of many of these same scientists – earlier found the ISC strategy to be adequate protection for the owl and that the Anderson and Burnham population analysis and particularly inferences made from it by University of Washington scientists most likely overstated the rate of population decline

1994 Judge Dwyer and Ninth Circuit ratify the Clinton scientists' ecosystem management plan despite a D.C. district court ruling that they had violated 10 provisions of the Federal Advisory Committee Act, including requirements that they have a balanced membership and meetings open to the public

SCLDF and the Ninth Circuit versus Congress, Judge Helen Frye, and the BLM

On October 19, 1987, SCLDF filed suit against BLM on behalf of the Portland Audubon Society and other environmental groups. In the pleadings that would prove successful SCLDF alleged that BLM's decision not to prepare a supplemental environmental impact statement (SEIS) assessing the effects of planned timber sales on the owl's viability violated the National Environmental Policy Act (NEPA) because "significant new information" about the owl had become available since BLM's original environmental impact statements had been prepared.

The alleged significant new information was the FS's draft SEIS, Russell Lande's modeling of owl population and habitat dynamics, the Audubon Society's assessment of owl science and management recommendations for the owl (the "Dawson report"), the FWS's status report on the owl, and analyses done by BLM biologists. At the request of environmental groups, the BLM assessed this new information and concluded that it was not sufficiently significant to warrant the preparation of an SEIS. Later that year the FWS decided that it would not list the owl as threatened or endangered due to "missing trend and other biological data."[78] SCLDF challenged this decision in federal court and less than a year later, on November 17, Judge Thomas Zilly ruled that the FWS had acted arbitrarily and capriciously in making it.

Congress Attempts to Regain Control of Federal Land Management

On December 21, 1987, just two months after the SCLDF had

78. Northern Spotted Owl v. Hodel, 716 F. Supp. 479, 481 (W.D. Wash. 1988).

filed suit against BLM, Congress amended the FY 1988 Continuing Budget Resolution to say that "there shall be no challenges to any existing plan . . . in the case of the Bureau of Land Management, solely on the basis that the plan does not incorporate information available subsequent to the completion of the existing plan."[79] Consequently, Judge Frye held that SCLDF's NEPA claim was moot.[80]

Ninth Circuit challenges Judge Frye's interpretation of Section 314

Within a month, a Ninth Circuit panel composed of Judges Goodwin, Schroeder, and Pregerson reversed Judge Frye. On January 24, 1989, Chief Judge Goodwin held that claims based on new information were only barred where an *entire* existing plan was being challenged, rather than where the challenge was to "any and all particular activities to be carried out under existing plans."[81] The panel further held that the trial court was incorrect in stating that the "extraordinary language" within the resolution was a clear withdrawal of jurisdiction. [82] Moreover, the panel held that SCLDF's non-NEPA claims were not based "solely on new information," implying that even if Judge Frye found that SCLDF was challenging the entire plan, she would still have to decide the merits of these other claims to the extent that they did not rely on new information.[83]

Ninth Circuit Prejudges Owl Facts

Although appellate courts are supposed to confine their analysis and rulings to legal issues, and despite the fact that Judge Frye had not made any factual findings regarding the owl in construing Section 314, the Ninth Circuit signaled in unequivocal terms that they believed the owl to be endangered by logging. The panel noted, "It was

79. Pub. L. No. 101-121, 1989 HR 2788 (1989) (adding § 312 to the National Forest Management Act, 16 U.S.C. § 1604).

80. Unreported decision, reversed by *Portland Audubon Soc'y v. Hodel*, 866 F.2d 302 (9th Cir. 1989). Judge Frye also dismissed SCLDF's pleadings under the Oregon & California Lands Act (OCLA) 43 U.S.C. § 1181; the Federal Lands Policy Management Act (FLPMA) 43 U.S.C. §§ 1701-1784; the Migratory Bird Treaty Act (MBTA) 16 U.S.C. § 703, and the Administrative Procedure Act (APA). See also Victor Sher's articles on congressional overrides of judicial rulings in note 7.

81. *Hodel*, 866 F.2d at 306.

82. *Id*. at 304.

83. *Id*. at 306.

and is no secret that the northern spotted owl disappears when its habitat is destroyed by logging."[84] "Bird experts generally agreed that the continued logging of old growth fir would probably exterminate the species in the logged off areas."[85]

Judge Frye again rules that Congressional intervention bars SCLDF's challenge

On May 18, 1989, Judge Frye ruled that SCLDF's challenge was to the entire plan, not to particular activities carried out under such a plan, and therefore was barred by Section 314.[86] This determination should have been enough to decide the case and in fact was the basis for the decision. Nevertheless, perhaps because of the Ninth Circuit's legally non-germane discussion of "owl facts," Judge Frye went through a lengthy consideration of the new information and offered her assessment of SCLDF's NEPA claim. Since BLM had "not address[ed] the critical issues of adequate population size and the effects of habitat fragmentation upon the long-range survival of the spotted owl" and "in light of the new, significant, and probably accurate information" that these factors were important to owl viability, Judge Frye concluded, in dicta, that the BLM had acted arbitrarily and capriciously in refusing to prepare a supplemental environmental impact statement.[87]

Judge Frye holds hearing; concludes there is significant, new information

Judge Frye's assessment was based on what she characterized as "an extensive evidentiary hearing in which evidence was presented by all parties as to the accuracy of the new information and the conclusions drawn from it."[88] SCLDF's experts were Dr. Russell Lande, Dr. Gordon Orians, and Alan Franklin. BLM called a number of its biologists, and the Northwest Forest Resources Council offered the testimony of Dr. Mark Boyce.[89] While the affidavits and testimony ex-

84. *Id*. at 305.

85. *Id*.

86. Portland Audubon Soc'y v. Lujan, 712 F. Supp. 1465, 1488-89 (D. Or. 1989).

87. *Id*. at 1485.

88. *Id*. at 1476.

89. Dr. Gordon Orians was "a professor of zoology and environmental studies at the University of Washington," Dr. Russell Lande was not identified, but was a theoretical biologist at

cerpted by Judge Frye did not all cover the same ground, one area of expert disagreement concerned the extent and consequences of habitat fragmentation. These differences reflected the split in the development of owl science between that based on observation and that based on modeling. Dr. Boyce's testimony, excerpted by Judge Frye, captures this disagreement most concisely:

> While Dr. Orians states that "the best analyses of the spotted owl's viability have shown that as habitat declines, due to fragmentation, the owl's population finds it increasingly difficult to replenish itself," he fails to explain that he is describing the results of assumptions built into mathematical models. While he cites to results of fragmentation which are said to create problems in replenishment of the owl population, such as high juvenile mortality, increased difficulty in finding vacant breeding territory and increased energy expenditure, he fails to observe that these factors are merely hypothesized in the models as consequences of fragmentation. To my knowledge, there is no empirical data in existence to establish that any of these factors actually occurs as a result of increased fragmentation of habitat for the spotted owl or any other avian species.[90]

In Dr. Boyce's view there was also no evidence of owl population decline. As he wrote in an affidavit, "Although nest sites have been destroyed at a rate of 1.5 percent per year . . . the ultimate fate of the occupants is unknown. Because of inadequate population surveys and small sample sizes for demographic parameter estimates, there does not appear to be any reliable evidence that spotted owl populations are indeed declining in the Pacific Northwest."[91] However, Dr. Boyce's critique of Dr. Orians' testimony and thereby Dr. Lande's modeling efforts was solitary in voice, whereas Dr. Orians' and Dr. Lande's testimony reinforced the "new information" coming from a variety of other sources.[92]

Still, as Judge Frye acknowledged, in order to grant summary judgment in SCLDF's favor, there could be "no genuine issue as to any material fact" and "[a]ll inferences drawn from underlying facts must be viewed in the light most favorable to the non-moving party" i.e., in favor of the BLM.[93] According to these rules, Dr. Boyce's tes-

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the University of Chicago; Alan Franklin was "a wildlife scientist with extensive familiarity and experience working with the spotted owl," and Dr. Mark Boyce "a professor of zoology and physiology at the University of Wyoming in Laramie." *Id*. at 1477-81.

90. *Id*. at 1481-82.

91. DIETRICH, *supra* note 62, at 218-19.

92. Portland Audubon Soc'y v. Lujan, 712 F. Supp. at 1481-82.

93. *Id*. at 1482 (quoting FED. R. CIV. P. 56(c) (citing United States v Diebold, Inc., 369 U.S. 654, 655 (1962)).

timony and affidavits alone should have been enough to require a trial in which the merits of the various claims would be tested more completely. While Judge Frye did not ultimately base her summary judgment ruling on the "new information," she did make it clear that she would have ruled against the government and the intervenor industry groups but for the section 314 prohibition on considering new information.

BLM's "Significant New Information" on the Owl

Judge Frye relied "primarily upon reports from the BLM" to conclude that the agency had acted arbitrarily and capriciously in justifying its decision not to do an SEIS.[94] These reports repeatedly refer to habitat loss and particularly habitat fragmentation as the primary threats to the owl. As the BLM wrote in the last report it produced, "Loss of old-growth forest and forest fragmentation appear to be the major contributors to spotted owl population declines."[95] The report also recounted all of the reasons for this given by Drs. Orians and Lande and challenged by Dr. Boyce.[96] A second, earlier BLM report hedged on these claims a bit, but ended up with the same conclusion: "While there is some evidence the spotted owl is being displaced in some locations by the barred owl; and predators, such as the great horned owl, are reducing spotted owl populations in some areas; in the main, the evidence indicates spotted owl decline is related to habitat loss and fragmentation of that habitat."[97] The first BLM report, produced in 1986 and 1987, conceded just how uncertain the evidence was for causes of population decline—"Inventory and monitoring data suggest a range of one to four percent annual population decline that varies by state"—but immediately conceded that "the data is [sic] weak on this subject due to annual differences in inventory and monitoring efforts."[98] BLM biologists also conceded that "Data is [sic] lacking on the demography (life expectancy, reproductive age, survivorship, age structure, longevity, population trend, age at first breed-

94. "The discovery that intervenors say is required [prior to ruling on SCLDF's motion for summary judgment] goes to the probable accuracy of Dr. Lande's 1985 article. The court has not relied upon this document in any material way. The court has relied primarily upon reports from the BLM, upon which no discovery requests have been directed." *Id*. at 1482.

95. *Id*. at 1475.

96. *Id*. at 1475.

97. *Id*. at 1474.

98. *Id*. at 1472.

ing) of spotted owls due to the short time frame [during] which research has been directed at these questions."[99] Without further explanation, the report even noted that "Cumulative inventory and monitoring records . . . may leave the false impression that the owl population is *stable to increasing*."[100]

The BLM report also claimed that "[j]uvenile mortality approached 100 percent," in their studies, but conceded that "[m]ost of the owls died or were lost making it virtually impossible to document meaningful juvenile survival rates."[101] The BLM biologists noted that this loss could be caused by the owl's dispersion pattern "up to 62 miles with the average distance in the 15 to 28 mile range."[102] They further speculated that the open areas in which the owls crossed between old-growth fragments "may contribute to the high mortality rate" but also conceded that "radio transmitters placed on owls [to monitor their dispersal] may be a cause of mortality."[103] What was their conclusion? "This subject needs further research."[104]

Judge Frye's pattern of rulings difficult to interpret

Judge Frye's pattern of rulings is difficult to interpret. She implied that she would have granted SCLDF's motion for summary judgment based on the new information regarding the owl despite conflicting evidence that would have seemed to require a trial.[105] But she ruled against SCLDF because of Congressional restriction of judicial review in section 314. Interestingly, SCLDF's motion could have been granted on their non-NEPA pleadings, which on first impression she interpreted as similarly reliant "solely on 'new information.'"[106] At that point, the Ninth Circuit court had informed her that the environmental impact analysis might have depended on old information, and thus would not have been barred by section 314.[107] But Judge Frye decided not to apply this line of reasoning because the non-NEPA claims had not been pursued by SCLDF in a "timely

99. *Id*.
100. *Id*. (emphasis added).
101. *Id*.
102. *Id*.
103. *Id*.
104. *Id*.
105. *Id*. at 1486.
106. *Id*.
107. Portland Audubon Soc'y v. Hodel, 866 F.2d 302, 306 (9th Cir. 1989).

manner."[108] The net result was that she again granted summary judgment to the BLM and industry intervenors.

Ninth Circuit remands SCLDF's non-NEPA claims to Judge Frye

On appeal by the SCLDF, the same Ninth Circuit panel on December 6, 1989 upheld Judge Frye's ruling that section 314 precluded review of SCLDF's NEPA claims based on new information, but remanded her rulings on the non-NEPA claims, holding that she had not applied the appropriate law in deciding them.[109] The panel gave a great deal of direction on the factual interpretation it thought should be applied and also granted a stay of timber sales pending appeal, which Judge Frye had refused to grant.[110] The panel further held that the SCLDF had not lacked diligence in pursuing their Migratory Bird Treaty Act (MBTA) claim, before remanding the non-NEPA claims to Judge Frye.[111]

Section 318, Congress's "Northwest Timber Compromise"

While waiting for the Ninth Circuit's ruling, the agencies and intervenors had taken the precaution of securing another appropriations rider from Congress without the ambiguous language of the prior one. More than a month prior to the panel's remand, on October 23, 1989, Congress passed Section 318 of the Department of Interior and Related Agencies Appropriations Act, known as "The Northwest Timber Compromise." Section 318 required the FS and

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108. "[S]ince the Portland Audubon Society failed to pursue its claims under OCLA, FLPMA, and the MBTA in a timely manner, they are not subject to this court's review . . . ." *Id.* at 1484.

109. "We have repeatedly cautioned against application of the equitable doctrine of laches to public interest environmental litigation," the panel wrote, going on to excerpt its own ruling in an unrelated earlier case, Preservation Coalition, Inc. v. Pierce, 667 F.2d 851, 854 (9th Cir. 1982), that the panel claimed had "found unanimous support in other circuits." "Laches must be invoked sparingly in environmental cases because ordinarily the plaintiff will not be the only victim of alleged environmental damage . . . . The forests will not be enjoyed principally by plaintiffs and their members but by many generations of the public, as well as by owls." In order to bar a claim because of laches, the court would have to have found "(a) lack of diligence by the party against whom the defense is asserted, and (b) prejudice to the party asserting the defense," neither of which had been established by the parties before Judge Frye. Portland Audubon Soc'y v. Lujan, 884 F.2d 1233, 1241-42 (9th Cir. 1989).

110. *Id.* at 1234.

111. *Id.* at 1241-42.

BLM to sell specific amounts of timber in the region, mandated that no sales were to come from spotted owl habitat areas identified in the agencies' planning documents, added specific protected areas for the owl, and directed the agencies to designate other appropriate areas as protected.[112] Section 318 also incorporated an interagency agreement [signed by the heads of the FS, BLM, FWS, and National Park Service (hereinafter "NPS") earlier the same month that the amendment was passed] directing the formation of an Interagency Scientific Committee (hereinafter "ISC") charged with developing "a scientifically credible conservation strategy" for the owl.[113] As we will see, the ISC plan would figure prominently in the subsequent litigation.

Additionally, Congress in Section 318, "[w]ithout passing on the legal and factual adequacy" of the FS and BLM's management plans, "determines and directs that management of areas according [to the guidelines in Section 318] is adequate consideration for the purpose of meeting the statutory requirements that are the basis for" the SCLDF's cases against these agencies.[114] Congress here named the cases and file numbers and, in a renewed effort to reclaim control of policymaking from the judiciary, mandated that "[t]he guidelines . . . shall not be subject to judicial review by any court of the United States."[115]

The SCLDF renewed its motions seeking summary judgment under the Oregon and California Lands Act (hereinafter "O&CLA") and MBTA, arguing that Section 318 was unconstitutional, and that even if it was constitutional, Judge Frye should retain jurisdiction of the case.[116] The SCLDF made similar arguments before Judge Dwyer regarding the FS.[117] Judge Dwyer upheld the constitutionality of the rider, but retained jurisdiction because FS planning extended beyond the time the rider was set to expire. Judge Frye adopted Judge Dwyer's "reasoning and result" regarding constitutionality, but held that she could not retain jurisdiction because BLM planning had ended with the expiration of the rider, mooting SCLDF's case.[118]

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112. Pub. L. No. 101-121, *supra* note 79. *See also* Seattle Audubon Soc'y v. Robertson, 914 F.2d 1311, 1313 (9th Cir. 1990).

113. JACK WARD THOMAS ET. AL., A CONSERVATION STRATEGY FOR THE NORTHERN SPOTTED OWL 7, 47-49 (1990).

114. Pub. L. No. 101-121, *supra* note 79, § 314(b)(6)(A) (1990).

115. *Id*.

116. Portland Audubon Soc'y v. Lujan, 21 ELR 20018 (D. Or. 1989).

117. Seattle Audubon Soc'y v. Robertson, 20 ELR 21167, 21168 (D. Or. 1989) (noting that Section 318 modified the rules of the dispute for one year, but did not end the controversy).

118. *Lujan*, 21 ELR at 20018-19.

Ninth Circuit holds Congressional amendment unconstitutional, remands

> On appeal by SCLDF, on September 18, 1990, the same Ninth Circuit panel decided that Section 318 was an unconstitutional exercise of congressional power, violating the separation of powers by usurping the judicial role: By section 318, Congress for the first time endeavors to instruct federal courts to reach a particular result in pending cases identified by caption and file number.[119] Congress can *amend or repeal* any law, even for the purpose of ending pending litigation. [But Congress] cannot prescribe a rule for decision of a cause in a certain way [where] no new circumstances have been created by legislation.[120] The language of section 318 is clear: Congress not only legislated a forest management plan, but also directed the courts to find that that plan satisfied the environmental laws underlying the ongoing litigation. In doing so, Congress did not amend or repeal laws, as it unquestionably could do, but rather prescribed a rule for the decision of a cause in a particular way, without changing the underlying laws, as it unquestionably cannot do . . . . Although the legislative history of section 318 disguises the act as changing legal standards, the statutory language itself does not do so. The first sentence [of the subsection excerpted above] violates the separation of powers doctrine.[121]

The Ninth Circuit panel reversed the district courts' rulings on the constitutionality of section 318 and remanded to Judge Frye the claims she held were barred by congressional action. Government and industry appealed the Ninth Circuit's ruling to the Supreme Court, which agreed to hear the case.[122]

Judge Frye continues to rule against SCLDF on all of its claims; Judge Dwyer enjoins FS timber sales

On remand, the SCLDF sought to renew all of its claims, including the NEPA-based claim that new information required the BLM to produce a supplemental environmental impact statement.[123]

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119. Seattle Audubon Soc'y v. Robertson, 914 F.2d 1311, 1314 (9th Cir. 1990).

120. *Id*. at 1315. (emphasis in original, citations omitted). Judge Pregerson continued, "The issue before us, then, is whether section 318 is a permissible modification of the law underlying the two cases before us, as the district courts held, or an impermissible directive from Congress to the courts to decide the cases in a particular way . . . ." *Id*. at 1316.

121. *Id*. at 1317 (citations omitted).

122. Robertson v. Seattle Audubon Soc'y, 501 U.S. 1249 (1991) (granting certiorari); reversed by Robertson v. Seattle Audubon Soc'y, 503 U.S. 429 (1992).

123. *Lujan*, 21 ELR at 21341.

SCLDF thought it should be granted summary judgment on this claim because of Judge Frye's earlier conclusion that BLM had acted arbitrarily and capriciously in deciding not to prepare an SEIS.[124] However, on May 8, 1991, Frye held that the Ninth Circuit had dismissed this claim, based on NEPA, when it upheld her ruling that Section 314 barred all NEPA claims.[125]

This time SCLDF argued that because Congress had not re-enacted section 314 for a fourth time, having re-enacted it annually for three years straight, the section (now 312) had expired, and claims based on new information could go forward.[126] However, on July 18, 1991, Judge Frye ruled that since neither the section nor the appropriation act of which it was a part contained an expiration date and since the section "applies to the completion of a process . . . Congress intended the limitation placed on judicial review . . . to be in effect until the 'completion of new plans.'"[127]

On May 23, 1991, as will be discussed below, district judge William K. Dwyer ordered the FS to prepare a SEIS and enjoined all logging on FS lands until revised standards and guidelines protecting the owl were adopted.[128] On the same day, SCLDF again asked Judge Frye to allow them to plead that BLM should be required to produce an SEIS, but Judge Frye again denied their motion, affirming that section 312 was a bar to their NEPA-based claim.[129]

The Ninth Circuit again reverses Judge Frye

The SCLDF appealed Judge Frye's ruling affirming the contin-

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124. *Id*.

125. *Id*. at 21343.

126. *Id*.

127. Portland Audubon Soc'y v. Lujan, 768 F. Supp. 755, 759 (D. Or. 1991). On May 8, 1991, Judge Frye also ruled that another Ninth Circuit decision barred SCLDF's second claim that the Oregon & California Lands Act (O&CLA) required the BLM to perform a SEIS for the owl. The O&CLA required BLM to manage "for permanent forest production," which the Ninth Circuit had previously held did not include conservation of wildlife. Consequently, Judge Frye held that this statute imposed no obligation on the BLM to assess the impacts of proposed timber sales on the owl. *Lujan*, 21 ELR at 21343. Judge Frye further ruled, following Judge Dwyer's ruling on the same issue, that the Migratory Bird Treaty Act (MBTA) "was not intended to include habitat modification or degradation in its provisions" because it did not prohibit harming owls, as the ESA did, only killing them. Consequently, Judge Frye held that BLM's planned timber sales did not violate this statute either. *Id*. at 21344.

128. Seattle Audubon Soc'y v. Evans, 771 F. Supp. 1081 (W.D. Wash. 1991).

129. Frye discusses this motion in Portland Audubon Soc'y v. Lujan, 795 F. Supp. 1489, 1495 (D. Or 1992) , but the decision is unpublished.

ued preclusion of judicial review under section 312. Furthermore, the SCLDF challenged Judge Frye and Dwyer's ruling that the MBTA did not protect owls from harm caused by habitat modification or degradation.[130] On December 23, 1991, the Ninth Circuit, this time with Judge Schroeder writing the opinion, upheld the district courts' interpretations of the MBTA for the same reasons given by Judge Dwyer, barring SCLDF's attempt to broaden the statute's application.[131] However, the panel reversed Judge Frye's ruling distinguishing failure to re-enact section 312 from its expiration. The panel did not think that the prohibition on judicial review awaited the completion of new plans and instructed Judge Frye to allow the SCLDF to amend their complaint to re-allege their NEPA-based claim.[132]

Judge Frye enjoins BLM timber sales

SCLDF now asked Judge Frye for a preliminary injunction of BLM timber sales so that SCLDF would have time to plead and Judge Frye time to decide the merits of their NEPA claim.[133] Judge Frye granted their request on February 19, 1992 estimating that the injunction would delay timber sales for sixty days.[134] SCLDF cited Judge Frye's earlier conclusion that BLM had acted arbitrarily and capriciously in deciding not to prepare a supplemental environmental impact statement, as well as FWS's subsequent decision to list the owl as threatened and ISC owl conservation recommendations, in support of their plea for an injunction.[135] The BLM argued that since it was then preparing its new generation of forest plans, including SEISs based on new information assessing their impact on the owl, it was in compliance with NEPA.[136] BLM also argued that no options for protecting the owl would be precluded by proceeding with scheduled timber sales.[137]

Judge Frye granted the preliminary injunction because she

130. Seattle Audubon Soc'y v. Evans, 952 F.2d 297 (9th Cir. 1991).

131. *Id*. at 302-03.

132. Judge Schroeder reasoned that "[h]ad Congress intended to keep the restrictions of section 312 in place more than a year at a time, it could have so provided or enacted the instructions as part of permanent, substantive legislation . . . [rather than considering] the provision on an annual basis for three years in a row." *Id*. at 304.

133. Portland Audubon Soc'y v. Lujan, 784 F. Supp. 786, 789 (D. Or. 1992).

134. *Id*. at 789.

135. *Id*. at 790.

136. *Id*.

137. *Id*. at 790-91.

thought SCLDF was likely to prevail on the merits and the "balance of harms" favored SCLDF. Judge Frye found that the injuries to the environment were "irreparable" almost by definition.[138] Frye stated, "there is evidence which (sic) supports plaintiffs' claim that further loss of spotted owl habitat will more likely than not have an adverse effect upon the survival of the northern spotted owl as a species. The loss of this habitat is irreparable injury."[139] Significantly, Judge Dwyer had already enjoined FS timber sales until that agency met its NEPA obligation.[140] This was estimated to take at least nine months.[141] The Ninth Circuit had also already upheld that injunction.[142]

Judge Frye adopted Judge Dwyer's reasoning that "[t]he argument that the mightiest economy on earth cannot afford to preserve old growth forests for a short time, while it reaches an overdue decision on how to manage them, is not convincing today. It would be even less so a year or a century from now."[143] Concluding, Judge Frye wrote, "This court is bound by the laws of Congress and judicial precedent. Unreasonable as it may seem to the timber industry and to the men and women dependent on timber supply for their very livelihood, and unreasonable as it may seem to the counties which (sic) receive funds from timber harvests . . . , the law will allow no less in this case."[144]

Supreme Court Unanimously Reverses Ninth Circuit; Holds Congressional Amendments Constitutional

On March 25, 1992, the Supreme Court unanimously reversed the Ninth Circuit's ruling that Congress had acted unconstitutionally in passing section 318. "We conclude that [section 318] compelled changes in law, not findings or results under old law," Justice

138. *Id*. at 789, 791. Judge Frye relied on the same precedent as Judge Dwyer had in Seattle Audubon Soc'y v. Evans, 771 F. Supp. 1081 (W.D. Wash.), *aff'd* 952 F.2d 297 (9th Cir. 1991), to support her weighing of harms, which held that "Environmental injury, by its nature . . . is often permanent or at least of long duration, i.e., irreparable. If such injury is sufficiently likely, therefore, the balance of harms will usually favor the issuance of an injunction to protect the environment." *Lujan*, 784 F. Supp. at 791.

139. *Id*. at 791.

140. *Id*.

141. *Id*.

142. *Id*. at 792.

143. *Id*.

144. *Id*.

Clarence Thomas wrote for the Court.[145] "Its operation, we think, modified the old provisions. Moreover, we find nothing in [section 318] that purported to direct any particular findings of fact or applications of law, old or new, to fact."[146] Consequently, the Supreme Court held that Congress had not violated the separation of powers by usurping the judicial power to apply the law and make factual findings. However, this ruling had no effect on the continuing owl litigation.

Judge Frye (sort of) holds that BLM acted "arbitrarily and capriciously" in assessing the significance of "new scientific information"

On June 8, 1992, Judge Frye ruled on SCLDF's renewed NEPA-based claim against the BLM. The agency argued that the Supreme Court's reversal of the Ninth Circuit's reversal of Judge Frye's ruling on Section 318 required reinstatement of that ruling, which would have precluded judicial review of agency action.[147] But Judge Frye claimed that the Supreme Court read section 318 as having "expired automatically" and

> [t]his interpretation . . . was consistent with the conclusion of the Court of Appeals that Section 318 expired at the end of fiscal year 1990 and that plaintiffs should be granted leave to amend their complaint to allege NEPA claims no longer barred by Section 318 . . . . The NEPA claim is now before this court, and nothing in the decision of the Supreme Court in *Robertson* requires that the amended complaint be dismissed.[148]

BLM also argued that Judge Frye should not grant SCLDF's motion for summary judgment because there were "genuine issues of material fact" in dispute regarding BLM's compliance with NEPA:[149]

> The BLM admits that some responsible experts in population ecology and related disciplines believe that new information shows that the SOHA [Spotted Owl Habitat Area] strategy is inadequate to preserve the northern spotted owl subspecies. However, the Affidavit of Joseph B. Lint and testimony of Jack Ward Thomas, both members of the ISC, contravene the implication that this new information would require the immediate adoption of the ISC strategy to avoid the extirpation of the species . . . .

145. Robertson v. Seattle Audubon Soc'y, 503 U.S. 429, 438 (1992).

146. *Id*.

147. Portland Audubon Soc'y v. Lujan, 795 F. Supp. 1489, 1502 (D. Or 1992).

148. *Id*. at 1502.

149. *Id*. at 1498.

> BLM admits that some experts believe that the "ISC strategy may not prove to be adequate to preserve the spotted owl as a species; [and] these scientists criticize the ISC strategy as overoptimistic and risky," [quoting Judge Dwyer]. However, other qualified experts believe that the ISC's conservation strategy is more than sufficiently protective . . . .
>
> BLM admits that some experts in population ecology and related disciplines believe that any further habitat loss could severely compromise the possibility that the northern spotted owl will survive. However, other qualified experts believe that Dr. Barry Noon's predictions about the fate of the northern spotted owl are in error, that the northern spotted owl is not in danger of extinction, and that BLM is responsibly conducting forest management activities in a manner that will not jeopardize the continued existence of the northern spotted owl.[150]

However, Judge Frye, rather than viewing these disputed facts as grounds for a trial, changed the subject:

> The situation the BLM is in is precisely the situation in which [an SEIS] is necessary. It is not up to the court to evaluate or discount the opinions of responsible experts in a scientific field. It is the duty of the BLM to identify, evaluate, and address the new information, allow public comment, and formulate its plans accordingly. The only credible conclusion to be reached in this controversy, regardless of which "responsible experts" the court chooses to believe, is that NEPA requires the public to be involved, and the BLM has not followed the procedures to allow the public to be involved.[151]

Unfortunately, the threshold question before Judge Frye was whether there was new scientific information significant enough to warrant an SEIS, not which experts were right about the owl, and not the adequacy of public involvement in the process by which an existing SEIS had been prepared (or new SEIS might be prepared). Judge Frye never squarely confronted this threshold question here and never assessed the significance of the new scientific information. Evidently, this was because of her reluctance to choose among experts, but while such choices are left to the agencies when justifying policy choice, they lie with the judge when evaluating the significance of new scientific information. Judge Frye only offered her opinion that "nothing has occurred in the scientific arena since May, 1989 to relieve the BLM of its obligation under NEPA . . . . The developments in the scientific community have only confirmed the need for an [SEIS]."[152]

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150. *Id*. at 1500-01.

151. *Id*. at 1502.

152. *Id*. at 1500.

Ninth Circuit strongly endorses Judge Frye's ruling against BLM, citing a (non-existent) "body of scientific evidence"

Judge Frye's 60-day injunction of BLM timber sales was upheld by the Ninth Circuit on July 8, 1993, following an appeal by the agency. As Judge Schroeder wrote for the panel:

> The record amply supports the district court's conclusion that the BLM's decision not to supplement the EISs was arbitrary and capricious. At the very least, the body of scientific evidence available by 1987 concerning the effect of continued logging on the ability of the owl to survive as a species raised serious doubts about the BLM's ability to preserve viability options for the owl if logging continued at the rates and in the areas authorized by the [Timber Management Plans] . . . . A supplemental EIS should have been prepared because the scientific evidence available to the Secretary in 1987 raised significant new information relevant to environmental concerns . . .[153]

Judge Schroeder did not state what "body of scientific evidence" or "significant new information" was available in 1987, but cited the panel's concurrent decision upholding Judge Dwyer's injunction of FS timber sales, also authored by Judge Schroeder, in support of these claims.[154] However, that decision did not cite any 1987 evidence.[155] It instead referenced the 1990 ISC report and the 1993 Anderson and Burnham report.[156]

As we have seen, the "new information" available in 1987 consisted of a status review by the FWS, the FS's draft SEIS, Lande's paper, the Dawson report, and analyses done by BLM biologists.[157] In 1989, when Judge Frye held what she characterized as "an extensive evidentiary hearing . . . as to the accuracy of the new information and the conclusions drawn from it," she claimed that she did not rely on Lande's 1985 paper "in any material way," instead relying "primarily upon reports from the BLM."[158] These reports repeatedly claimed that owl populations were in decline and that this decline primarily was due to loss of old growth forest and habitat fragmentation caused by logging. However, the reports admitted that the evidence to sup-

153. Portland Audubon Soc'y v. Babbitt, 998 F.2d 705, 708 (9th Cir. 1993).

154. *Id*.

155. Seattle Audubon Soc'y v. Espy, 998 F.2d 699 (9th Cir. 1993).

156. *Id*. at 703-4.

157. Portland Audubon Soc'y v. Lujan, 712 F. Supp. 1456, 1462 (D. Or. 1989).

158. *Id*.

port these claims was weak.[159]

As Professor Mark Boyce explained in uncontradicted testimony, "there is no empirical evidence that any of these factors actually occurs as a result of increased fragmentation" and "adequate sample sizes cannot be obtained" to determine trends in the owl population.[160] Instead, what Judge Schroeder characterized as a "body of evidence" and "significant new information" were the conclusions of owl population modeling efforts, which Boyce characterized as "the results of assumptions built into [those very same] mathematical models."[161] The Audubon Society's Dawson report also concluded that Lande, Orians, and other scientists were taking out as conclusions from their models what they had put into them as assumptions.[162]

For the Ninth Circuit panel, however, the models had transformed these assumptions into a "body of evidence." Judge Schroeder further indicated through dicta the extent to which the panel bought into a particular construction of the evidence and so helped solidify a particular construction of nature. Judge Schroeder wrote, "Without doubt, the continued viability of the northern spotted owl is tied directly to the continued existence of the old-growth forests which [sic] comprise its habitat . . . . The BLM admits that experts believe that *any* further loss of habitat could severely compromise the ability of the owl to survive as a species."[163]

Judge Frye was far more reticent than Judge Schroeder to come to such unequivocal conclusions: "It is not up to the court to evaluate or discount the opinions of responsible experts in a scientific field."[164] What the BLM admitted was that *some* experts, not all experts, as Judge Schroeder implied, believed that any further loss of habitat would threaten the owl's viability as a species. The BLM reported that "other qualified experts believe that Dr. Barry Noon's predictions about the fate of the northern spotted owl are in error, that the northern spotted owl is not in danger of extinction, and that the BLM is responsibly conducting forest management activities in a manner that will not jeopardize the continued existence of the northern spot-

159. *Id*. at 1470-71.

160. *Id*. at 1482.

161. *Id*. at 1481.

162. *Id*. at 1467-68.

163. Portland Audubon Soc'y v. Babbitt, 998 F.2d 705, 708 (9th Cir. 1993) (emphasis in original).

164. *Lujan*, 795 F. Supp. at 1502.

ted owl."[165]

According to the law governing summary judgment motions excerpted by Judge Frye, she should not have granted the SCLDF summary judgment on the issue of whether there was significant new information, because this issue was in dispute.[166] Instead, she should have allowed this issue to reach trial. At trial, she would have had to decide whether significant new information existed. If she decided that it did, then she could have ordered the BLM to prepare an SEIS in which the BLM would have to decide how that new information would influence its assessment of the impact of timber sales on the owl. These legal issues should have been the focus of appellate review, but instead, the Ninth Circuit let its conclusions about owl facts drive its decisions in this case.

The SCLDF and Judge Zilly push the FWS to list the Owl as Threatened and to Designate its Critical Habitat

The FWS decision not to list the owl is "Arbitrary and Capricious"

On December 17, 1987, the U.S. Fish and Wildlife Service decided not to list the owl as threatened or endangered and thereby denied it protection under the Endangered Species Act.[167] This resulted in a SCLDF challenge before Judge Thomas Zilly in the United States District Court for the Western District of Washington.[168] On November 17, 1988, Judge Zilly granted the SCLDF motion for summary judgment holding that the FWS had acted "arbitrarily and capriciously" and ordered the agency to provide a rational basis for its decision.[169]

As Judge Zilly stated, judicial review should be "narrow and [presume] the agency action is valid," but this general rule "does not shield agency action from a 'thorough, probing, in-depth review,'" nor does it require (or permit) courts to "'rubberstamp the agency deci-

165. *Id*. at 1501.

166. *Id*. at 1489-99.

167. Twelve-Month Petition Finding – Northern Spotted Owl, Memorandum from Regional Director, Fish and Wildlife Service, Region 1, to Director, Fish and Wildlife Service (December 17, 1987). 52 Fed. Reg. 48552.

168. Northern Spotted Owl v. Hodel, 716 F. Supp. 479 (W.D. Wash. 1988).

169. *Id*. at 482-83.

sion as correct.'"[170] Rather, a reviewing court must assure itself that the agency considered all relevant factors and engaged in a substantial, searching, and careful inquiry into the facts.[171] This is particularly true in highly technical cases such as this.[172] Applying these precedents to this case, Judge Zilly concluded that "[a]gency action is arbitrary and capricious" when it fails to "'articulate a satisfactory explanation for its action'" including a "'rational connection between the facts found and the choice made.'"[173]

Judge Zilly believed the FWS's Status Review and Findings "offer little insight into how the Service found that the owl currently has a viable population."[174] He conceded that while the FWS "cites extensive empirical data and lists various conclusions," "it fails to provide any analysis" and "provides no explanation for its findings."[175] Ironically, Judge Zilly himself provided no evidence or analysis to support these conclusory assertions. More importantly, he seriously mischaracterized the FWS findings. The FWS did NOT claim "that the owl currently has a viable population."[176] Rather, the FWS claimed they could not assess the viability of the current population due to insufficient "population trend information and other biological data."[177] The legal question that should have been addressed was whether it was rational for the FWS not to list the owl because they believed there was insufficient data.

Judge Zilly also attempted to demonstrate agency irrationality by claiming that expert opinion was entirely contrary to the agency's position, but all he was able to provide to support this assertion was four scientists who agreed that the owl was threatened with extinction by continued harvesting of old growth.[178] Dr. Mark Shaffer, the single dissenting agency biologist, claimed that "the most reasonable interpretation of current data and knowledge indicate continued old growth harvesting is likely to lead to the extinction of the subspecies in the foreseeable future, which argues strongly for listing the subspecies as threatened or endangered at this time."[179]

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170. *Id*. at 481-82.
171. *Id*. at 482.
172. *Id*.
173. *Id*.
174. *Id*.
175. *Id*.
176. Fish and Wildlife Service, s*upra* note 167,
177. *Id*.
178. *Northern Spotted Owl*, 716 F. Supp. at 482-83.
179. *Id*. at 481.

Dr. Shaffer's analysis, Judge Zilly wrote, was "peer reviewed" by "three leading U.S. experts on population viability" – Drs. Michael Soule, Bruce Wilcox, and Daniel Goodman—"all of whom agreed with Dr. Shaffer's prognosis for the owl, although each had some criticisms of his work."[180] In support of this claim, Judge Zilly excerpted a letter Dr. Soule wrote to Dr. Shaffer, regarding Dr. Shaffer's dissent from the FWS majority opinion:

I completely concur with your conclusions and the methods by which you reached them. The more one hears about *Strix occidentalis caurina*, the more concern one feels. Problems with the data base and in the models notwithstanding, and politics notwithstanding, I just can't see how a responsible biologist could reach any other conclusion than yours.[181]

This letter and Dr. Schaffer's dissenting opinion were the only evidence Judge Zilly offered to support his claim that expert opinion was entirely contrary to the FWS's decision not to list the owl.

Judge Zilly further hoped to show agency irrationality by claiming that no scientist had claimed that the owl was safe. "The only reference in the Status Review to an actual opinion that the owl does not face a significant likelihood of extinction is a mischaracterization of a conclusion of Dr. Mark Boyce."[182] The FWS claimed that "Boyce . . . concluded that there is a low probability that the owl will go extinct."[183] Dr. Boyce sought to correct this misinterpretation in a letter to the FWS: "I did not conclude that the Spotted Owl enjoys a low probability of extinction and I would be very disappointed if efforts to preserve the Spotted Owl were in any way thwarted by a misinterpretation of something I wrote."[184] However, the main thrust of Dr. Boyce's analysis was the same as his testimony quoted by Judge Frye; namely, that there was insufficient information to support any conclusions about the viability of owl populations.[185] This was the same finding made by the FWS, but Judge Zilly did not mention this.[186] In-

180. *Id*.

181. *Id*. at 483.

182. *Id*. at 481.

183. *Id*.

184. *Id*.

185. *Id*.

186. *Id*. Judge Zilly attempted to give his excursion through the scientific opinion he favored some legal relevance by claiming that "[t]he Court will reject conclusory assertions of agency 'expertise' where the agency spurns unrebutted expert opinions without itself offering a credible alternative explanation." *Id*. at 483. Conclusory assertions of agency expertise under these conditions would amount to arbitrary and capricious agency action. If Judge Zilly wanted

stead he bootstrapped this misrepresentation to the assertions of four scientists thereby canonizing those assertions and concluding that the agency acted arbitrarily and capriciously.

GAO finds that FWS management "substantively changed the body of scientific evidence" compiled by its biologists

Suspecting that the FWS decision not to list the owl as threatened had been influenced by the Reagan Administration, Congress asked the General Accounting Office (hereinafter "GAO") to investigate.[187] In 1989, the GAO reported that with respect to the owl listing the "Fish and Wildlife Service management substantively changed the body of scientific evidence."[188] The GAO found that the FWS had removed a section from the status review warning that logging would lead to the owl's extinction as well as a twenty-nine page appendix citing other scientists that supported that conclusion.[189] FWS replaced that appendix with a report from a forest industry consultant.[190] The GAO concluded "[t]he revisions had the effect of changing the report from one that emphasized the dangers facing the owl to one that could more easily support denying the listing petition."[191]

Two of the three reviewing biologists told GAO investigators that they believed the owl population on Washington's Olympic peninsula was already endangered. The regional director of the FWS

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to rely on this variant of the Administrative Procedure Act (hereinafter "APA") standard to decide the case, he arguably would have had to demonstrate that the agency's actions failed four tests, and he demonstrated none of them. First, he would have had to show that the agency made "a conclusory assertion of expertise." He did not show this, he only asserted it, and what little evidence he offered pointed toward a reasoned decision not to list based on lack of data. Second, he would have had to show that the agency "spurned unrebutted expert opinions," but he did not show that the agency spurned any expert opinions. Rather, the scientist he kept citing as most contrary-minded, Dr. Shaffer, was part of the team of wildlife biologists that made the decision. Third, he would have to show that the agency had unrebutted expert opinions before it. To the contrary, even his own selectively excerpted record reveals that experts who believed that the data was sufficient to conclude that the owl was endangered were countered by an expert who believed that the data were as insufficient to support that conclusion as they were to support any other. Fourth, Judge Zilly would have had to show that the FWS had "itself failed to offer a credible alternative explanation." Again, he did not show this, he merely asserted it, but the scant analysis he did offer suggested the very credible explanation, shared by Professor Boyce, that the owl data were insufficient to make a listing decision.

187. U.S. General Accounting Office, *Endangered Species: Spotted Owl Petition Evaluation Beset by Problems,* GAO/RCED-89-79 (February 1989).

188. *Id*. at 1.

189. *Id*. at 9-10.

190. *Id*. at 10.

191. *Id*. at 11.

also admitted that his decision not to list the owl was based in part on a belief that top FWS and Interior Department officials would not accept a decision to list. The GAO further noted that "These problems raise serious questions about whether the FWS maintained its scientific objectivity during the spotted owl petition process."[192] The GAO investigation thus reinforced Judge Zilly's finding that the FWS had acted arbitrarily and capriciously in its decision not to list the owl.

The Interagency Scientific Committee (ISC) or "Thomas Committee" Report

In May, 1990, a committee of scientists headed by FS research biologist Jack Ward Thomas released its conservation strategy for the owl.[193] This Interagency Scientific Committee (hereinafter "ISC" or "Thomas Committee") report would become very important in the continuing owl litigation. The report was the result of an unprecedented agreement among the FS, BLM, FWS, and NPS that was part of Section 318, "The Northwest Timber Compromise."[194] This interagency committee was to be composed of "educationally and professionally qualified scientists" from the agencies involved and was charged with the task of developing "a scientifically credible conservation strategy" for the owl.[195]

The ISC charter allowed representatives from affected states, the NPS, and industry and environmental groups to observe committee meetings,[196] but the Committee went further than that to create an open environment in that "[t]he entire process was open: anyone who wished to observe Committee activities was welcome, and anyone who wished to present information germane to the mission of the Committee was invited to do so."[197] In fact, Committee activities in-

192. *Id*. at 12.

193. THOMAS, *supra* note at 113, at 57.

194. *Id*. at 57. The charter, signed by the heads of each agency, specified that Thomas would be the team leader, and that the other committee members would be Charles Meslow (FWS), Eric Forsman (FS), Jared Verner (FS), Barry Noon (FS), and Butch Olendorff (BLM). *Id*. at 48. Joseph Lint was subsequently substituted for Olendorff. *Id*. at 389-414.

195. *Id*. at 47-48. Six scientists, four of whom were from the FS, were designated by the agency heads to form the committee, and one of them, Thomas, was made team leader. The team consisted of 17 other agency scientists. "Twelve of the 17 team members (and 5 of the 6 Committee members) were experienced in dealing with the biology of the northern spotted owl," their report noted. *Id*. at 389.

196. *Id*. at 389.

197. *Id*.

cluded multiple presentations from scientists affiliated with industry groups, as well as a meeting with industry executives.[198] Additionally, the Committee conducted a workshop on silvicultural methods to create owl habitat, and this resulted in an appendix written by workshop participants.[199] The open, balanced approach of the ISC presented quite a contrast to the subsequent FEMAT advisory process, which violated ten provisions of the FACA.

The report of the Committee stresses the length the members went in order to achieve consensus. "All team members participated fully in all aspects of the effort, and all were accorded the opportunity to assume the same roles in analyzing, interpreting, and formulating the plan." "Data analysis, synthesis, administrative chores, mapping, writing, technical review, and so on were assigned to the best qualified persons, regardless of their 'category' on the team." "A key objective of the process was to move toward a final decision through achieving consensus at each intermediate step. The filing of a minority report was initially considered possible if substantial disagreement developed among the Committee, but no minority report was needed."[200]

However, some decisions were made unilaterally by the Committee without input from the team.[201]

Mirroring expert disagreements expressed in federal courts, Committee members differed significantly in their interpretation of the available owl evidence, and particularly disagreed regarding its implications for owl management. Some thought that the evidence suggested that owl habitat could be created through active management. Others did not, and recommended no further harvest. This latter view was reflected in the Committee report summary, even as Committee differences on this issue were expressed in the appendices.

The Committee concluded that then-existing conservation efforts lacked "a well-coordinated, biologically-based management plan" for the spotted owl range and that the protection of single pairs was "a

198. *Id*.

199. *Id*. at 133-34, 138.

200. *Id*. at 389.

201. "On the rare occasions when all members of the team did not agree on some point, the Committee made the decision. On some other rare occasions, some members of the Committee were not present when decisions were made. Agreement or disagreement of the observer-advisor-staff group with all aspects of the report is thus not implied." THOMAS, *supra* note 113, at 389.

prescription for the extinction of spotted owls, at least in a large proportion of the owl's range."[202] Instead, the Committee recommended creating a system of habitat conservation areas (HCAs) that consisted of clusters of pairs but conceded that "[e]stimating a critical cluster size is most difficult. With the structure of our model, clusters equal to or greater than 15 pairs appeared stable . . . ."[203] Similarly, they conceded, "[e]mpirical data guided us to an HCA size large enough to support some multiple number of owl pairs, but not to a certain 'best' number."[204] Their evidence came from studies of the persistence of populations of fifteen to twenty birds, none being owls, on some British isles and the Channel Islands, off the California coast.[205]

The Committee acknowledged that "[c]larifying the role that computer simulation models, and the inferences drawn from them, played in developing our conservation plan is important."[206] "Their [computer simulation models] role was secondary. Our primary guidance derived from the results of empirical studies of the spotted owl's ecology and life history. The models provided one means of synthesizing this information . . . ."[207] But what kind of empirical guidance was this? The size of the HCAs did not rely on studies of the spotted owl but rather instead on inferences from studies of other birds on English and California islands.[208] Meanwhile, the distance between

202. *Id*. at 39.

203. *Id*. at 24.

204. *Id*.

205. *Id*. at 24. On the British isles, a population of 15-20 birds had "considerably higher persistence likelihoods" than a population of 20 birds on the Channel Islands, where the likelihood of persistence was estimated to be 85 percent over 100 years. The Committee attributed the difference to the British isles being closer to the mainland than the Channel Islands, allowing their populations a greater chance to be "rescued" by immigration of mainland birds. "The dynamics of dispersal by spotted owls in forested landscapes more closely approximate the British island situation." *Id*.

206. *Id*. at 239.

207. *Id*. at 239-40. "The output and inferences drawn from a model, however, are always a reflection of the model's structure, and our model is no exception. Clearly, the patterns we observed in our simulations reflect the model's structure and the assumptions we made about spotted owl behavior. . . For example, our model and its results are clearly the consequence of assumptions we have made about the dispersal behavior of juvenile owls within and between territory clusters. Unfortunately, little is known of spotted owl dispersal behavior and owl movement through heterogeneous landscapes. One inference drawn from our results – the positive effect of increasing cluster size – has much stronger support in both empirical and theoretical studies. Populations quickly escape from the dangers of demographic stochasticity with even slight increases in population size . . . . Rather large gains resulted in moving from clusters of size 5 to clusters of size 10; much smaller gains were realized in moving from 10 to 20 territories per cluster."

208. *Id*. at 24.

HCAs was determined by consensus among Committee members, "because we know of no objective criteria for setting such a distance . . . ."[209]

Only for "dispersal habitat" was there sufficient empirical evidence to define the conservation strategy with confidence, yet here the Committee argued that existing agency management practices were adequate. "No relation was found between the extent of forest fragmentation and either the final distance moved or the number of days survived by juveniles."[210] Consequently, the Committee "envision[ed] a general forest landscape between HCAs amendable to dispersal by juvenile owls. For the most part . . . current management practices should satisfy this objective."[211] In its summary chapter, the Committee concluded:

> Variability exits in all biological data, and answers to some important questions will probably always be uncertain, but the knowledge about spotted owls is extensive and impressive. We believe that the basic message emerging from the sum of knowledge, particularly about trends in the amount of suitable habitat and the numbers of owls, justifies a conservation strategy. In some areas of the owl's range, few habitat options remain and those are disappearing rapidly. If our true objective is to ensure a viable population of spotted owls, widely distributed throughout their current range, then delay in instituting an adequate conservation strategy for the owl cannot be justified because of inadequate knowledge or understanding.[212]

However, this claim ran directly counter to the claims of BLM and university biologists, including Dr. Boyce, appearing before Judge Frye.

So what were the trends in suitable habitat and owl numbers that the Committee claimed were important biological justifications for adopting a conservation strategy? Evidence for trends in the numbers of owls came from three demographic studies of subpopulations, only two of which the Committee considered reliable.[213] Curiously, the study they considered *un*reliable did not support the conclusion that the spotted owl population had experienced a significant population decline. The rate of annual population decline of that study was 2.5 percent. The rates for the other two study areas were 5.3 and 14.1

209. *Id*. at 26.
210. *Id*.
211. *Id*. at 26-27.
212. *Id*. at 12.
213. *Id*. at 229-34.

percent annually.[214] These were the huge rates of decline the Audubon Society's Dawson Report had previously ridiculed as absurd because they lead to estimates of a population in the millions when extrapolated only a few generations back in time.[215] Perhaps anticipating these criticisms, the Committee urged

> caution in using the computed estimates of [population change] to forecast future population sizes or to infer the size of historical populations. *Lambda* was merely an estimate of how the population was changing over the period of study . . . . This model is clearly unrealistic for the long-term growth or decline of any natural population.[216]

The Committee emphasized that suitable habitat was being removed by harvest in these study areas at similar rates, which suggested the plausibility of population declines, but this argument hardly made population studies into an independent evidentiary basis for adopting a conservation strategy.[217]

The uncertainty of owl population declines effectively pushed the Committee toward relying on evidence of habitat loss to recommend a conservation strategy. But here too the data did not provide the strong support for conservation that the Committee claimed. They found estimates of large losses, but these were based on owl habitat defined as 200 year or older old growth.[218] While the Committee remained convinced that old-growth was "superior habitat,"[219] it admitted that it could not define owl habitat,[220] constantly used the term "suitable habitat" but never specified what it was,[221] and offered a

214. *Id*. at 234.

215. CHASE, *supra* note 15, at 255.

216. *Id*. at 232.

217. *Id*. at 64.

218. The Committee wrote, "Habitat for the owl has been declining since the mid-1800s, when European settlers arrived . . . ." "Estimates of 17.5 million acres in 1800 and about 7.1 million acres remaining today indicate a reduction of about 60%. This figure may, however, underestimate the full extent of decline, based on recent inventory data collected by environmental groups. Most of this reduction occurred in the last 50 years . . . . [T]hat reduction continues at a rangewide rate of 1 to 2% per year." *Id*. at 20. The appendix, however, claims "Most of this reduction has occurred in the last 90 years" and that the 1-2 percent figure is from the National Forests. *Id*. at 62.

219. "With the exception of recent studies in the coastal redwoods of California, all studies of habitat use suggest that old-growth forests are superior habitat for spotted owls. Throughout their range and across all seasons, spotted owls consistently concentrated their foraging and roosting in old growth or mixed age stands of mature and old growth trees. For nest sites, owls used primarily old growth patches." *Id*. at 164.

220. "Although we cannot 'define' habitat, we can describe the attributes of forest stands that spotted owls use." *Id*. at 143.

221. The Committee's appendix on habitat describes "superior habitat" and "marginal habi-

non-operational, tautological definition in the glossary.[222] Most significantly, the Committee concluded (1) that stand structure was more important than age in determining suitable habitat,[223] (2) that structure sufficient to constitute suitable habitat could be found in stands as young as 80 years where there were no old growth remnants,[224] and (3) in stands as young as 50 years where there were such remnants.[225] What was declining as a result of their review of the evidence was not suitable habitat but suitable habitat that relied on old growth as the defining characteristic.

Moreover, the Committee expressed confidence that suitable owl habitat, whatever it was, could be produced through active, hands-on management:

> Past forestry practices have inadvertently produced some habitats where owls are breeding successfully 60 to 80 years after the event [that previously removed trees – whether logging, fire, windthrow, disease, or other disturbance]. Similar suitable habitat could reasonably be expected to be produced by silvicultural design . . . . Silvicultural modifications may include producing multilayered canopies in stands, and leaving structures such as large trees, snags, and fallen trees in place. If such treatments prove successful for producing owl habitat, timber sales of certain types might eventually be scheduled in HCAs.[226]

This statement reflected the optimism of the appendices on adaptive management and silviculture. The appendix on habitat struck a different tone:

> Given the current distribution of old forests, we see no alternative in the short term but to protect significant amounts of the remaining superior habitat for northern spotted owls through the creation of HCAs. Under the conservation strategy proposed here, most logging activities within HCAs would cease. The ultimate man-

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tat," but not "suitable habitat." *Id*. at 143-44.

222. The glossary defines "suitable habitat" as "an area of forest vegetation with the age-class, species of trees, structure, sufficient area, and adequate food source to meet some or all of the life needs of the northern spotted owl." *Id*. at 423.

223. "[S]tand age is probably not the best criterion for judging suitable habitat. Stand structure is clearly of overriding importance." *Id*. at 184.

224. "[W]e find the evidence compelling that suitable habitat takes somewhere between 80 and 120 years to develop from clearcut stands, depending on site conditions, elevation, and so on." *Id*.

225. "[W]e know that spotted owls in at least some portions of Oregon and Washington occur in forests 50 to 80 years old with a history of logging, fire, or windthrow going back to the late 1800s and early 1900s. These forests, however, typically are not extensive tracts of even-aged stands. Rather, most contain remnant trees and patches of forest surviving from earlier stands." *Id*.

226. *Id*. at 37.

> agement goal with HCAs, therefore, is to create a relatively unfragmented, natural landscape . . . . Until we can demonstrate that silvicultural treatments can benefit spotted owls, natural succession will be the primary means to achieve an unfragmented landscape within HCAs. In the long-term, we hope that silviculturalists, foresters, and wildlife biologists will be able to work interactively to develop techniques that produce suitable habitat within the managed forest and make the HCAs unnecessary.[227]

As a result of its analysis, the ISC recommended that almost seven million acres of federal land in Washington, Oregon, and Northern California be set aside to protect the owl. Most of the set-asides were to consist of HCAs large enough to protect at least twenty pairs of owls and spaced no more than twelve miles apart.[228] No harvest was to be allowed in these areas. Intervening federal lands were to be managed under a so-called "50-11-40" rule in which 50 percent of each quarter township (nine square miles) would consist of trees averaging at least 11 inches in diameter at breast height and provide 40 percent canopy closure.[229] Harvest respecting these constraints would be allowed in these areas.[230]

The FWS decision not to designate the owl's "critical habitat" is "arbitrary and capricious"

In a second decision made after the ISC report was released, Judge Zilly, ordered the FWS to designate the owl's "critical habitat."[231] He ruled the FWS must designate critical habitat within one year of listing the species as threatened or endangered. According to Judge Zilly's construction of congressional intent in drafting the ESA, there are no exceptions to this requirement.[232] In fact, absent two exceptions, he held that Congress required the FWS to designate "critical habitat" *concurrently* with its decision to list a species as threatened or endangered.[233] Only when it would be "imprudent" to list a species (because listing would increase the threat to or not benefit the species) or when critical habitat is "indeterminable" (because of insufficient knowledge or time to do the required biological studies or

227. *Id*. at 167.
228. *Id*. at 143- 170.
229. *Id*.
230. *Id*.
231. Northern Spotted Owl v. Lujan, 758 F. Supp. 621, 629 (W.D. Wash. 1991).
232. *Id*. at 625.
233. *Id*. at 624.

economic analyses) did Congress allow the FWS to take one additional year to designate critical habitat.[234] Beyond that there was no recourse.[235] Even if critical habitat continued to be "indeterminable" one year after listing due to insufficient knowledge or time to do the required biological studies or economic analyses, Judge Zilly held that Congress required the "initial determination of what areas constitute critical habitat . . . be made on the basis of 'the best scientific data available.'"[236]

At issue in this case was the FWS's attempt to exercise one of the exceptions to designating critical habitat concurrently with listing the owl. The SCLDF challenged as arbitrary and capricious the FWS's claim that the owl's critical habitat was not "determinable" concurrent with the FWS' decision not to list the owl as threatened or endangered.[237] Although the ESA and the congressional record were silent regarding when the FWS had to gather data, Judge Zilly held that the requirement that designation occur concurrently with listing implied a duty to collect the relevant data beforehand.[238] The expressly limited exceptions to concurrent listing and designation "necessarily impresses upon the Secretary of the Interior an affirmative duty to seek out or, at a minimum, to identify *prior* to the final listing decision the biological and economic data that will be necessary to making his designation of critical habitat."[239]

As he had previously in finding the FWS's decision not to list the owl arbitrary and capricious, Judge Zilly acknowledged the deference that must be given to decisions made by agencies.[240]

However, even as Judge Zilly preached judicial deference, he practiced judicial interference as much or more than he had in his prior ruling:

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234. *Id*. at 626.

235. *Id*.

236. *Id*. at 625-26.

237. *Id*. at 623.

238. *Id*. at 626-627.

239. *Id*. at 626. *See* 16 U.S.C. § 1533(b)(2) (2000) (Secretary required to make designation on "best scientific information available").

240. "Administrative decisions must be upheld unless 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law. The scope of judicial review under this standard is narrow, and the court is not permitted to substitute its own judgement for that of the administrative decision-maker. The relevant inquiry is whether the agency 'considered the relevant factors and articulated a rational connection between the facts found and the choice made.'" *Northern Spotted Owl*, 758 F. Supp. at 624 (quoting Pyramid Lake Paiute Tribe of Indians v. United States Dept. of Navy, 898 F.2d 1410, 1414 (9th Cir. 1990), quoting Baltimore Gas & Elec. Co. v. Natural Resources Def. Council, Inc., 462 U.S. 87 (1983)).

> Turning to the record presented, this Court is unable to find any support for the federal defendants' claim that critical habitat was not determinable in June 1989 when the Service proposed to list the species, or when the Service issued its final rule one year later . . . .[241] In its final rule the Service stated that the northern spotted owl is 'overwhelmingly associated' with mature and old growth forests. The Service further stated that, at present rates of timber harvesting, much of the remaining spotted owl habitat will be gone within 20 to 30 years. Despite such dire assessments, the Service declined to designate critical habitat in its final rule, citing the same reasons it gave a year earlier. Whatever the precise contours of the Service's obligations under the ESA, clearly the law does not approve such conduct.[242]

If this were all the FWS had asserted in support of its claim that critical habitat for the owl was indeterminable, Judge Zilly would probably have had sufficient basis for labeling their actions arbitrary and capricious. But by Zilly's own account, the FWS gave a number of reasons why what it called the owl's "overwhelming association" with old growth in itself would not allow the determination of its critical habitat:

> The extensive range of the northern spotted owl, from British Columbia to San Francisco Bay, involves over 7 million acres of its preferred old-growth and mature forest habitat and an undetermined amount of other forest types that may also be of significance to the survival and recovery of the species. Much of the habitat has been fragmented by logging, and many stands are isolated from each other or of such small size as not to support viable populations of spotted owls. The specific size, spatial configuration and juxtaposition of these essential habitats as well as vital connecting linkages between areas necessary for ensuring the conservation of the subspecies throughout its range have not been determined at this time, nor have analyses been conducted on the impacts of designation.[243]

In other words, even though the FWS believed that the owl was "overwhelmingly associated" with old growth, designating critical habitat for the owl was not simply a matter of setting aside all old growth. Some old growth might have been too fragmented or inadequately situated to provide habitat, while other age classes of forest might have been important in providing linkages between old growth and other areas that could make a contribution to species survival. However, it should be noted here that the FWS's finding of "over-

241. *Id*. at 627 (citations omitted).

242. *Id*. at 628 (citations omitted).

243. *Id*. at 627.

whelming association," as amplified by Judge Zilly, represented a significant construction of the evidence in a selective manner favoring the owl's old growth dependence.[244]

Judge Zilly evidently did not like the explanation the FWS offered for finding critical owl habitat indeterminable concurrent with listing, but it is difficult to understand how he could find it irrational. Yet he did:

> Nowhere in the proposed or final rules did the Service state what efforts had been made to determine critical habitat. Nowhere did the Service specify what additional biological and economic information was necessary to complete designation. Nowhere did the Service explain why critical habitat was not determinable."[245]

However, as can be seen from Judge Zilly's own excerpting, the FWS did specify the necessary biological information to complete the designation. This included information on the "specific size, spatial configuration and juxtaposition of essential habitats as well as [information on the] vital connecting linkages between areas necessary for ensuring the conservation of the subspecies."[246]

Moreover, Judge Zilly's claim that "nowhere . . . did the Service state what efforts had been made to determine critical habitat," is either disingenuous or narrowly legalistic. As Judge Zilly was well aware from the ISC report, the FWS was deeply involved in the unprecedented ISC effort to assess not only the owl's viability but to characterize its habitat. As Marvin Plenert, the regional director of the FWS, attempted to explain:

> Because of the funding and workload required to complete the rulemaking process for the listing decision, the need to allocate many of the [the Service's] knowledgeable biologists to conferences on Federal projects affecting the owl, and the fact that the Thomas Committee final report was not released until the month before the listing decision was due, the Service was not able at the time of listing to determine whether the areas outlined by the Thomas Committee (or other areas) met the ESA definition of "critical habitat" . . . .[247]

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244. While continuing to claim that old growth constituted superior habitat, the ISC, for example, had also claimed that forest structure was more important than forest age in defining habitat, and that structure that was favorable to owls might be found in forests as young as 80 years and even as young as 50 years, where there were some remnants of old growth. *See supra* notes 193-230 and accompanying text.

245. *Northern Spotted Owl*, 758 F. Supp. at 627-28.

246. *Id*. at 627.

247. *Id*. at 628.

The ISC conservation strategy represented a significant effort to identify the owl's habitat, and the ISC report referenced by the FWS describes that effort thoroughly. But even if Judge Zilly had been prepared to accept the ISC report as FWS's attempt to designate critical habitat he did not think this designation was legally adequate:

> The parties agree that the report, and, more particularly, the spotted owl "habitat conservation areas" identified therein, are not the final word on critical habitat for the owl. Notably, the scientific committee assumed a 50 percent decline in owl population. Such species loss appears inconsistent with the species conservation and recovery mandates of the Endangered Species Act.[248]

On these grounds, Judge Zilly found that the FWS decision not to designate the owl's critical habitat concurrently with its decision to list the owl as threatened, while in his own excerpt having many reasons, was arbitrary and capricious.

The FWS designates "Critical Habitat", significantly enlarges recommended set-asides

In January 1992, the FWS designated "critical habitat" for the owl. The Service noted that the ESA required habitat designations to be based on "the best scientific and commercial data available" and claimed that its review "had resulted in the most thorough study of owl habitat currently available."[249] The FWS also claimed that its "cumulative administrative records for the northern spotted owl contain more specific and definitive scientific information than the records for most other listed species."[250] At the same time, the Service offered the view that "[t]here were very few new references that provided additional information on characteristics of owl habitat. None of the new biological data contradicted previous studies on the ecology of the subspecies summarized in the above referenced documents."[251] The Service directed readers to the ISC report and its own earlier status review and listing decision for "a thorough discussion of the ecology and life history of this subspecies."[252]

Unlike the ISC report, the FWS acknowledged that "suitable habitat" had not yet been adequately defined and that consequently

248. *Id*. at 627 n.5.

249. 57 Fed. Reg. 1796-01, 1797 (January 15, 1992) (to be codified at 50 C.F.R. § 17).

250. *Id*. at 1797.

251. *Id*.

252. *Id*.

not much was known about how much there was:

> Presently, many definitions of "suitable" spotted owl habitat are used throughout the species' range. As a result, existing estimates of the amount of spotted owl habitat may be misleading. Current estimates of suitable habitat (i.e., for nesting, roosting, and foraging) do not contain estimates of the additional amount of forested acres that may meet only the dispersal needs of the owl."[253]

The Service felt it could define dispersal but not foraging habitat in general terms,[254] but when it came to providing estimates of owl habitat it fell back on the same ones on which the ISC relied, even though it acknowledged that these "may be misleading."[255]

However, the determination included more land because of the decision that other land was suitable for the owl. "Because habitat maps available to the Service were generally based on the varying definitions of 'suitable habitat' used by the agencies, the major focus [in designating critical habitat] was on habitat that provides nesting, roosting, and some foraging attributes."[256] In practice, the FWS wrote, critical habitat consequently amounted to the HCAs recommended by the ISC, minus areas within them that were not currently suitable habitat or that were removed for economic considerations or were already reserved, plus areas outside them supporting owl pairs, but not the dispersal or matrix lands in between.[257] "The Service thoroughly reviewed the ISC plan, strongly endorses the science and principles espoused by this plan, . . . [and t]herefore HCAs form the basis for critical habitat and were selected as the starting point for critical habitat."[258] "Final critical habitat designation includes about 6.9 million acres of non-reserved areas, a difference from the HCA network of nearly 900,000 acres . . . thus imposing restrictions on about 13 percent more acreage than those affected by HCAs."[259] The dispersal or matrix areas were expected to add another 12 to 15 million acres to this, according to ISC estimates.[260]

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253. *Id*. at 1798.

254. "Dispersal habitat, at a minimum, consists of stands with adequate tree size and canopy closure to provide protection from avian predators and at least minimal foraging opportunities . . . . Foraging habitat is more difficult to describe, but may exist in continuum between the dispersal habitat and nesting or roosting habitats described above." *Id*.

255. *Id*. at 1798.

256. *Id*. at 1803.

257. *Id*. at 1803-05.

258. *Id*. at 1804.

259. *Id*.

260. *Id*. at 1804.

Judge Hogan holds that the FWS must assess the environmental impact of its designation of critical habitat

When designating "critical habitat," the FWS was required to assess the economic impacts of its proposed designations, and where these outweighed the benefits of designation, the FWS was required to exclude those areas from designation, provided that other areas could be designated that would fulfill the function of critical habitat.[261] The FWS performed two of these economic assessments in the course of designating critical habitat for the owl, the second a more detailed, county by county analysis, including estimates of employment and revenue losses from reduced timber harvests.[262] This analysis was challenged in federal court by Douglas County, Oregon and two other counties that joined as intervenors, but in a December 22, 1992 ruling, Judge Hogan agreed that the FWS had adequately performed this analysis.[263]

Douglas County also argued that the designation of critical habitat required the preparation of an environmental impact statement. Judge Hogan agreed that the FWS was required to comply with NEPA as well as the ESA:

> The proposed agency action in this case affects approximately 6.9 million acres. The magnitude of that action in terms of numbers of acres alone leads to the conclusion that the rule constitutes a major federal action. The record reflects that the designation will impact the economy, employment, public health, and social services in the affected area. Therefore, the action clearly affects the "quality of the human environment." The issue then becomes whether there is an express or implied exemption from NEPA requirements for the designation of critical habitat under ESA.[264]

Despite numerous arguments made by FWS and the SCLDF, Judge Hogan found no such exemption. "In this case, the designation of critical habitat allegedly has beneficial effects for the Northern Spotted Owl, but adverse effects on other species and adverse socio-economic effects on the human environment. NEPA documentation must be prepared in such a mixed effects situation."[265] Judge Hogan consequently set aside the FWS's designation of critical habitat and ordered them to prepare an EIS.

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261. *Id*. at 1809.

262. *Id*. at 1816.

263. Douglas County v. Lujan, 810 F. Supp. 1470, 1475 (D. Or. 1992).

264. *Id*. at 1478.

265. *Id*. at 1484.

The Story So Far: Owl litigation against the BLM and FWS

SCLDF's litigation strategy was initially frustrated in Judge Frye's courtroom in their suits against the BLM, while finding unexpected success in Judge Zilly's in their suits against the FWS. But Judge Hogan made it more difficult for the FWS to designate critical habitat when he held that the agency must assess the environmental impact of such designations. The Ninth Circuit was uniformly supportive of SCLDF's suits from the beginning, claiming that owl was endangered by continued logging of old growth before the trial courts had even considered the issue.

Judge Frye initially did not accept academic scientists' (recruited by SCLDF) claims that there was sufficient new information to require the BLM to reassess the impact of its planned timber sales on the owl. This was in part because Judge Frye deferred to congressional amendments that removed suits based on new information from judicial review. But Ninth Circuit appellate panels signaled their strong support of SCLDF's suits, finding grounds to reverse Judge Frye on every appeal, going so far as holding that Congress had acted unconstitutionally when it restricted review of BLM timber management plans.

This ruling was in turn reversed by a unanimous Supreme Court, but the reversal would have no effect on the continuing owl litigation because Judge Frye held that congressional restrictions on judicial review had expired. She ultimately held that the BLM had acted unreasonably when it decided not to consider new information about the owl, even as she claimed not to be choosing among experts. This new information consisted of models of owl population and habitat dynamics, not of new knowledge regarding owl biology. But the Ninth Circuit appellate panel strongly endorsed Judge Frye's ruling, claiming that it was supported by a "body of scientific evidence."[266]

Meanwhile, when the FWS declined to list the owl due to "missing population trend and other biological data,"[267] the SCLDF had little difficulty in getting Judge Zilly to rule that the agency had not adequately justified its decision. Judge Zilly did not defer to FWS expertise on the owl as SCLDF had feared federal judges would. When the agency listed the owl, Judge Zilly further ruled that the FWS

266. Portland Audubon Soc'y v. Babbitt, 998 F.2d 705, 708 (9th Cir. 1993).

267. Fish and Wildlife Service, *supra*, note 103

should have designated the owl's critical habitat concurrently with that decision. In so ruling, Judge Zilly was undoubtedly influenced by the owl conservation strategy that had been produced by an unprecedented collaboration among federal owl scientists.

This Interagency Scientific Committee (ISC) claimed that models played a secondary role in developing their conservation strategy, with empirical studies of owls playing the primary role. Yet they readily conceded that apparent owl population declines observed in a couple of study areas could not be used to predict declines in owl populations. They also conceded that forest structure was a more important determinant of owl habitat than forest age, and that owls could be found reproducing in stands as young as 80 years, and even 50 years, provided that there were a few remnants of old growth. When the FWS designated the owl's critical habitat, the agency built on the ISC recommendations, expanding owl set-asides even further.

In sum, scientists' claims that the owl was threatened by continued logging of old growth were very persuasive to most federal judges. In fact, the Ninth Circuit appeared to have been persuaded by scientists that the owl was threatened before these suits were even initiated and certainly before any fact-finding was done by the trial courts. The Ninth Circuit was so committed to halting logging that it successfully resisted attempts by Congress, the President, and the Supreme Court to regain control of federal land management. Only Judge Frye initially deferred to congressional involvement, refusing to rule in SCLDF's favor. Yet Judge Frye did hold an evidentiary hearing early in the litigation, and as a result, she found that there was sufficient significant new information to require the BLM to do a supplemental environmental impact assessment for its timber sales. She was the only judge to express reluctance about choosing among conflicting experts, and the only judge to give any space in her opinion to reproducing the critique of an industry-sponsored expert. Judge Zilly, by contrast, mischaracterized the views of agency and industry scientists while rushing to embrace the critiques of scientists recruited by environmentalists.

Overview of Judge Dwyer's critical policymaking role

No judge played a more significant role in facilitating the rise of ecosystem management in the Pacific Northwest than federal district court Judge William Dwyer. Not only was he the first to enjoin federal timber sales to protect the owl, but his injunction alone funda-

mentally altered the politics of the issue. Judge Dwyer claimed that the Forest Service was one of three federal land and wildlife management agencies responsible for "a remarkable series of violations of the environmental laws."[268] This claim helped diminish the reputation of the premier federal land management agency, and his accompanying injunction effectively shut down federal timber sales because the Forest Service owned most of the federal lands in the Pacific Northwest. This temporary but 100 percent reduction in sales (when extended to BLM lands by Judge Frye's injunction) created the policy window for FEMAT and President Clinton to propose a 75 percent permanent reduction for all federal lands in the region.

The orders accompanying Judge Dwyer's injunction of FS timber sales were equally important in changing federal land management in the Pacific Northwest. Judge Dwyer ordered the agencies to develop plans that would protect not only the owl but also "biological communities."[269] This order implied that only an owl management plan that also managed ecosystems would be sufficient to lift the injunction. This order was the result of considerable judicial activism, with Judge Dwyer finding a mandate for ecosystem management in NFMA implementing regulations written by Forest Service biologists. These regulations required the agency to maintain "viable populations of vertebrates" on agency lands, arguably, going beyond the ESA's focus on the recovery of individual species, but not requiring ecosystem management *per se*, or the protection of biological communities[270]

Furthermore, Judge Dwyer interpreted these regulations as supreme over conflicting directives in other federal environmental statutes.[271] Additionally, he allowed President Clinton's scientific advisory committee (FEMAT) to extend these regulations to reach *vertebrates and invertebrates on all federal lands*, not just vertebrates on Forest Service lands.[272] Finally, Judge Dwyer embedded a number of factual findings into the record concerning the historical coverage of old growth, the owl's dependence on it, and the drastic decline of both.[273]

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268. Seattle Audubon Soc'y v. Evans, 771 F. Supp. 1081, 1089 (W.D. Wash. 1991), *aff'd*, 952 F.2d 297 (9th Cir. 1991).

269. *Id*. at 1088.

270. *Id*. at 1082.

271. Washington Audubon Soc'y v. Robertson, 1991 WL 180099, at *4-*8 (W.D. Wash. 1991).

272. Seattle Audubon Soc'y v. Lyons, 871 F. Supp. 1291, 1316-17 (W.D. Wash. 1994), *aff'd sub nom*, Seattle Audubon Soc'y v. Moseley, 80 F.3d 1401 (9th Cir. 1996).

273. *Robertson*, 1991 WL 180099, at *7-*10.

Such findings were difficult to dislodge on appeal. With respect to the owl, Judge Dwyer's findings arose from his acceptance of the most apocalyptic readings of the owl evidence offered by scientists testifying as expert witnesses for SCLDF.

Although Judge Dwyer was vital to the social construction of this policy problem and its solution, it is important to remember that he could not have played this role had the Ninth Circuit appellate panels not created the protected space in which he could act. Judge Dwyer's injunction of Forest Service timber sales and his order that the agency manage ecosystems followed the Ninth Circuit's successful challenge to congressional and presidential attempts to regain control of regional land management. The Ninth Circuit also successfully dodged the Supreme Court's attempt to hand control back to Congress. Had Judge Dwyer not been exposed to the Ninth Circuit's assertion that the owl was threatened by continued logging, or had he failed to witness repeated Ninth Circuit reversals of Judge Frye when she ruled for the government while upholding Judge Zilly when he ruled against the government, he might not have felt secure enough to take the stances that he did.

The SCLDF, Judge Dwyer, and Ninth Circuit Halt Forest Service Timber Sales

As in their initial suit against the BLM, SCLDF argued that NEPA obligated the Forest Service to assess the impacts of its timber sales on the owl. SCLDF also argued that the Forest Service should provide standards and guidelines for the owl's protection under regulations the agency promulgated pursuant to the NFMA. These regulations required that "[fish] and wildlife shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning areas."[274] On December 18, 1990, Judge Dwyer agreed: "The agency's failure to date to comply, or begin compliance, with NFMA requirements is arbitrary and capricious, and not in accordance with law."[275] The language inserted into NFMA regulations by Forest Service biologists was now gaining teeth.[276]

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274. *Id*. at *6 (citing 36 C.F.R. § 219.19 (1991)).

275. *Id*. at *1, *13 (ruling that SCLDF's motion regarding NEPA was moot "since NFMA directs that NEPA procedures be followed").

276. Seattle Audubon Soc'y v. Robertson, Order on Motions for Summary Judgment and for Dismissal (Docket #824) (arguing that the MBTA required the Forest Service to obtain permits to "take" owls, as previously discussed, but Judge Dwyer held that its provisions did not

These legal obligations were revisited after the ISC issued its report and the FWS listed the owl as threatened. On October 3, 1990, in response to these events, the Forest Service promulgated a rule stating that its obligations under NFMA were superceded by its obligations under the ESA and that it intended to meet those obligations by "conduct[ing] management activities in a manner not inconsistent with the Interagency Scientific Committee recommendations . . . ."[277] The Forest Service claimed that the ISC's conservation strategy was "more than sufficient to assure compliance with the Endangered Species Act" in the interim period "[p]ending enactment of new legislation, any applicable action by the Endangered Species Committee, adoption of a recovery plan by the [FWS], or the results of further biological consultation between the [Forest Service] and the [FWS]."[278] The SCLDF countered that NFMA obligations continued to apply *concurrently* with the requirements of the ESA and that duties under either statute could not be discharged by adopting the ISC's management recommendations without public review and comment.[279]

On March 7, 1991, Judge Dwyer granted summary judgment to the SCLDF, accepting its arguments.[280] The primary reason he gave for not allowing the ESA to displace the NFMA was that "[t]he duty [under the NFMA] to maintain viable populations of existing vertebrate species requires planning for the entire biological community–not for one species alone. It is distinct from the duty under the ESA to save a listed species from extinction."[281] This was Judge Dwyer's in-

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apply. "Whether the Forest Service's timber management plan, or timber sales fashioned pursuant to it, violate MBTA depends on the interpretation of 'taking'," Dwyer wrote. "Under the regulations promulgated pursuant to MBTA, to 'take' is to 'pursue, hunt, shoot, wound, kill, trap, capture, or collect,' or attempt any such act. Under ESA, to 'take' is to 'harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.' 'Harm' under ESA means 'an act which [sic] actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering.'" Judge Dwyer notes that while the MBTA was amended after the ESA was passed, it was not amended to make "harm" part of the definition of "take" and that "[i]t is the 'harm' part of the definition that makes 'significant habitat modification or degradation' illegal." In a show of judicial restraint, he concludes that "The court cannot do what Congress, and the Department of Interior, did not do.") Judge Dwyer's interpretation of "taking" by harming a species under the ESA would subsequently be overruled by the Supreme Court in another owl case, *Sweet Home*, to emphasize the "actually kills or injures wildlife" component of the definition. Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 515 U.S. 687 (1995).

277. *Robertson*, 1991 WL 180099 at *7.

278. *Id*.

279. *Id*.

280. *Id*. at *13.

save a listed species from extinction."[281] This was Judge Dwyer's interpretation of Forest Service biologists' amendment of NFMA regulations, which FEMAT and the Secretaries of Agriculture and Interior would later extend to all federal lands with Judge Dwyer's sanction.[282] Judge Dwyer also leveraged Judge Zilly's ruling that the FWS had violated the ESA by failing to designate the owl's critical habitat or to explain why it was not determinable; noting that "the Forest Service is arguing, in effect, that its duties are discharged by complying with the directives of another agency which [sic] itself is failing to meet its statutory duty."[283]

Not only did the ESA and NFMA mandate different kinds of management with respect to species, Judge Dwyer held, but since the NFMA incorporated NEPA procedures for adopting or significantly amending its forest plans, Judge Dwyer also ruled that "draft and final environmental impact statements were required."[284] "NFMA mandates a thorough process with participation by the public, the government, and the scientific community. The aim is to ensure both an informed public and an informed agency. The Forest Service did not follow any of the procedures required before publishing the notice and announcing that it would act 'not inconsistently' with the ISC report."[285] Judge Dwyer concluded: "The ISC report is widely regarded as thorough, careful, and scientifically credible. But an agency cannot substitute its announced intention to follow a report – even a prestigious one – for the procedures required by law."[286]

Judge Dwyer also felt it necessary to indicate that he shared Judge Zilly's and environmentalists' misgivings about the scientific adequacy of the ISC conservation strategy. Since they pre-date the litigation of such issues in his courtroom, these early rumblings are rather revealing of the judge's biases. In a complete non-sequitur to the point he was trying to make, Judge Dwyer quoted a letter by nine environmental groups to the Secretaries of Agriculture and Interior claiming that the "ISC strategy cannot withstand any further balancing or compromise. It should, in fact, be strengthened, not weakened . . . ."[287] Judge Dwyer cited another letter by the National Audubon

281. *Id*. at *6.
282. *See generally* Seattle Audubon Soc'y v. Lyons, 871 F. Supp. 1291.
283. *Robertson*, 1991 WL 180099 at *5.
284. *Id*. at *10.
285. *Id*. at *10.
286. *Id*. at *9.
287. *Id*. (citing Declaration of Allan Brock in Support of Defendants' Motion for Summary

Society to the Secretary of Agriculture claiming that "the ISC recommendations represent far less than the optimal approach to protecting the species, as these recommendations were skewed by economic and political considerations."[288] For its part, the Ninth Circuit held that Section 318 did not merely amend the duties imposed by existing environmental laws, but rather imposed new requirements.[289] Section 318 directed the Forest Service to review and revise its 1988 Record of Decision (hereinafter "ROD") by September 30, 1990.[290] In doing so, the agency was to consider any new information, including the ISC report.[291]

Judge Dwyer's ruling that the Forest Service had acted arbitrarily and capriciously was based almost entirely on the agency's failure to meet the deadline imposed by Congress.[292] Judge Dwyer found that the agency had "not shown that it could not have completed the EIS by, or at least close to, the appointed time. Most importantly, it has offered no reason why the process was never even begun."[293]

SCLDF requested that Judge Dwyer issue a permanent injunction of additional Forest Service timber sales in owl habitat areas until the agency had complied with the NFMA by creating a plan to ensure the viability of biological communities on its lands.[294] The Forest Service proposed that it be subject to a different injunction, one that would allow additional sales in the owl habitat provided that they were consistent with the ISC strategy for owl conservation.[295] Industry intervenors proposed that Judge Dwyer conduct an evidentiary hearing on the scope of injunctive relief.[296] The judge acceded to this request, holding a ten-day hearing (from April 30 to May 9, 1991) where "[e]xpert testimony of high quality from biologists, economists, and others was presented by both sides."[297] Judge Dwyer claimed that this "wealth of information" allowed him to make the factual findings

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Judgment, Ex. M (Dec. 5, 1990) (Dkt. # 740)).

288. *Id*. at *10.

289. Seattle Audubon Soc'y v. Robertson, 914 F.2d. 1311, 1316 (9th Cir. 1990).

290. Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 1990, Pub.L. No. 101-121, § 318, 103 Stat. 701, 745-50 (1989).

291. *Robertson*, 1991 WL 180099 at *10.

292. *Id*. at *13.

293. *Id*. at *10.

294. Seattle Audubon Soc'y v. Evans, 771 F. Supp. 1081, 1083 (W.D. Wash. 1991).

295. *Id*.

296. *Id*.

297. *Id*. at 1088.

to support his decision to grant the SCLDF's request for a permanent injunction of Forest Service timber sales.[298]

Environmental Harms are Presumed to be Irreparable, Justifying an Injunction

Dwyer noted that, as a general rule, injunctions are only warranted if "irreparable injury" would otherwise result.[299] Precedent suggested that injuries to the environment were inherently irreparable and would almost always meet this standard: "Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, *i.e.*, irreparable. If such injury is sufficiently likely, therefore, the balance of harms will usually favor the issuance of an injunction to protect the environment."[300] "However," Judge Dwyer continued, paraphrasing the precedent he had excerpted, "the party seeking relief must show not merely a statutory violation, but a probability of injury serious enough to outweigh any adverse effects from the issuance of an injunction."[301] After finding a long list of harms to the owl and weighing this list against a shorter inventory of economic and social harms caused by issuing an injunction, Judge Dwyer held that an injunction was in the public interest.[302]

Judge Dwyer's Evidentiary Hearing

Judge Dwyer's factual findings were important because once

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298. *Id*.

299. *Id*. at 1087 (quoting Weinberger v. Romero-Barcelo, 456 U.S. 305, 312 (1982) (discussing water pollution by the United States Navy)).

300. *Id*. at 1087-88 (quoting Amoco Prod. Co. v. Vill. of Gambell, Alaska, 480 U.S. 531, 545 (1982) (discussing sale of oil and gas leases on federally owned lands)).

301. *Id*. at 1088.

302. *Id*. at 1095-96 ("The court must weigh and consider the public interest in deciding whether to issue an injunction in an environmental case" (citing Sierra Club v. Penfold, 857 F.2d 1307, 1318 (9th Cir. 1988) (granting injunction against a mining operation); N. Alaska Envtl. Ctr. v. Hodel, 803 F.2d 466, 471 (9th Cir. 1986) (same)) Judge Dwyer concluded, finding in precedent support for his claims that the public "has a manifest interest in the preservation of old growth trees" (quoting Pilchuck Audubon Soc'y v. MacWilliams, 19 ELR 20526, 20529 (W.D. Wash. 1988) (discussing an injunction against clear-cutting 166 acres of a USFS managed forest)) and an "interest of the highest order . . . in having government officials act in accordance with law." (citing Olmstead v. United States 277 U.S. 438, 485 (1928) (Brandeis, J., dissenting) (discussing government officials violating search and seizure laws by illegally installing wire taps in order to disrupt a vast bootlegging conspiracy during Prohibition)).

imbedded in the trial court record, they could not be easily dislodged. Appellate courts were legally bound to defer to the factual findings of the trial court, as were the parties on appeal. Given the significance of Judge Dwyer's "findings of fact" to the social construction of the owl problem and its solution, it is important to understand which were the most consequential. He began with some general claims about the extensive historical coverage and biological uniqueness of old-growth forests, concluding that they were distinct ecosystems:

> A great conifer forest originally covered the western parts of Washington, Oregon, and Northern California, from the Cascade and Coast mountains to the sea. Perhaps ten percent of it remains. The spaces protected as parks or wilderness areas are not enough for the survival of the northern spotted owl. The old growth forest sustains a biological community far richer than those of managed forests or tree farms . . . . An old growth forest consists not just of ancient standing trees, but of fallen trees, snags, massive decaying vegetation, and numerous resident plant and animal species, many of which live nowhere else.[303]

Quoting Dr. William Ferrell, a forest ecologist, Judge Dwyer concluded that "logging these forests destroys not just trees, but a complex, distinctive, and unique ecosystem."[304]

Loss of One Percent of the Remaining Owl Habitat will cause "Irreparable Harm" to the Owl

Among Judge Dwyer's findings of fact that established the "probability of irreparable harm" from continued logging were his conclusions that "[t]he northern spotted owl is now threatened with extinction," and that "[t]he population of northern spotted owls continues to decline."[305] In support of these claims he offered only some conclusory assertions from the ISC report and Jack Ward Thomas's trial testimony.[306] He did not discuss the evidence or its weaknesses. Judge Dwyer then adopted verbatim the ISC's (and FWS's) lengthy, very detailed definition of "suitable owl habitat," which because of his injunction also defined what the Forest Service was prohibited from selling as timber:

> Suitable owl habitat has moderate to high canopy closure (60 to 80 percent); a multi-layered, multi-species canopy dominated by large

303. *Id*. at 1088 (edited for continuity).

304. *Id*.

305. *Id*. at 1091.

306. *Id*.

> (>30 inches in diameter at breast height (dbh)) overstory trees; a high incidence of large trees with various deformities (e.g., large cavities, broken tops, dwarf-mistletoe infections, and other evidence of decadence); numerous large snags; large accumulations of fallen trees and other woody debris on the ground; and sufficient open space below the canopy for owls to fly.[307]

Next, Judge Dwyer found that "the Forest Service estimates that an additional 66,000 acres of spotted owl habitat would be destroyed if logging went forward to the extent permitted by the ISC Report over the next sixteen months."[308] He then turned each element of the ISC conservation strategy into a factual finding. He also characterized his own further efforts at scientific boundary-work as factual findings: "The ISC Report has been described by experts on both sides as the first scientifically respectable proposal regarding spotted owl conservation to come out of the executive branch."[309] However, Dwyer also stated that "The ISC strategy may or may not prove to be adequate. While it is endorsed by well-qualified scientists, it is criticized by others, equally well-qualified, as over-optimistic and risky."[310]

Interestingly, even though he shared the skepticism of environmentalists, the FWS, and Judge Zilly regarding the adequacy of the ISC strategy, Judge Dwyer also found that:

> [t]he Forest Service now has advantages it lacked in early 1990. Much of the research and analysis has been done. The ISC Report, a thorough treatment, has been in existence for more than a year. The agency also has the benefit of an opinion letter from the FWS dated April 10, 1991, commenting at length on the ISC strategy and giving recommendations. With the knowledge at hand, there is no reason for the Forest Service to fail to develop quickly a plan to en-

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307. *Id*. (citing the ISC report at 164 and FWS regulations at 55 Fed. Reg. 26,114 and 26,116 (1990). A northern California county filed an *amicus* brief a week after the evidentiary hearing arguing, among other things, that the injunction should not extend to northern California because, as Judge Dwyer paraphrased their claim, the "owl's viability will not be harmed by habitat destruction in Northern California because habitat develops faster there—on the order of fifty or eighty years rather than perhaps a hundred and fifty years farther north." This claim pointed toward a number of anomalies in basic findings about the owl, such as absence of a preference for old-growth habitat in some parts of the range, and the adaptability of the owl to different habitats throughout its range, but Judge Dwyer did not address these inconsistencies. He simply noted that "the FWS has listed the owl as threatened in Northern California as well as elsewhere," and that the ISC "estimates only a 'low' or 'moderate' prospect of viability in three of the area's four 'physiographic provinces' in fifty years." Consequently, he found no reason to exempt Northern California from his injunction. *Id*. at 1087.

308. *Id*. at 1092.

309. *Id*.

310. *Id*. at 1093.

> sure the viability of spotted the owl in the national forests.[311]

In fact, the "knowledge at hand" had not changed since Judge Zilly's rulings. The ISC Report that Judge Zilly claimed was "not the final word on critical habitat for the owl" and that Judge Dwyer had in one place suggested might be "over-optimistic and risky" here became "a thorough treatment."

Toward the conclusion of his findings of "irreparable harm" Judge Dwyer let slip a very telling fact, the minimal impact of ISC logging on owl habitat, but quickly explained why we should not consider it reassuring:

> While the [Forest Service's] proposal [to comply with the ISC conservation strategy] would involve logging an estimated *one percent* of the remaining habitat, the experts agree that cumulative loss of habitat is what has put the owl in danger of extinction. There is a substantial risk that logging another 66,000 acres, before a plan is adopted [in addition to an estimated 400,000 acres that had already been logged while trying to develop an owl plan], would push the species past a population threshold from which it could not recover.[312]

He quoted from the trial testimony of Dr. Gordon Orians in support of this claim, allowing that "[t]he Forest Service may decide that Dr. Orians is mistaken, but it has not done so yet."[313] He also found that "[t]he logging of 66,000 acres of owl habitat, in the absence of a conservation plan, would itself constitute a form of irreparable harm. Old growth forests are lost for generations. No amount of money can replace the environmental loss."[314]

Judge Dwyer concluded, "To log tens of thousands of additional acres of spotted owl habitat before a plan is adopted would foreclose options that might later prove to have been necessary."[315] This was perhaps Dwyer's most compelling finding of "irreparable harm," and he found support for it in the FWS's biological opinion:

> We share the ISC's concern that few options remain open for managing spotted owl habitat . . . . Adoption of the conservation strategy on an interim basis [as proposed by the Forest Service] further reduces alternative conservation options by concentrating timber harvest in spotted owl habitat outside the HCAs, fragmenting remaining contiguous blocks of habitat which lay outside the HCAs, and impacting [sic] the productivity of spotted owl pairs in the for-

311. *Id*. at 1091 (citation omitted).

312. *Id*. at 1093-94 (emphasis added).

313. *Id*. at 1094.

314. *Id*. at 1093.

315. *Id*.

est matrix by further reducing the amount of suitable habitat within their home ranges.[316]

Judge Dwyer Minimizes the Economic and Social Consequences of Owl Protection

Weighing on the other side of the scale were the potentially adverse economic and social consequences of the proposed permanent injunction. Judge Dwyer's minimization of these factors played an important role in the social construction of the owl problem and its solution. It also foreshadowed FEMAT's construction of the same issues. Protecting 66,000 acres beyond what would have been protected under the ISC strategy would reduce timber sales another 2 to 3 billion board feet, or another 72 to 78 percent, over the 16-month injunction period.[317] This dramatic reduction was not readily visible in Judge Dwyer's presentation, which made comparisons difficult by itemizing the ranges of sales of board feet to three decimal places and by dividing the injunction period into fiscal years.[318] Judge Dwyer also made no mention of the reduction in sales already accounted for by the ISC strategy, which served as his baseline.[319] However, he did emphasize that there were almost 4.8 billion feet of existing sales that had not yet been harvested but that would not be affected by the injunction.[320] "When added to the amount of timber the Forest Service would sell while protecting owl habitat, that supply of timber would last about nineteen months if logging proceeded at the rate experienced during fiscal year 1990."[321] The implication was that the effects of his injunction would not be felt until after the injunction was lifted. Dwyer made no findings regarding how much a reduced timber supply would raise prices, but he did imply that increased prices would mitigate the effects of his injunction by expanding the supply from private lands and from logs that otherwise would have been exported.[322]

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316. *Id*.

317. *Id*. at 1094 (author's calculation from figures used by Judge Dwyer).

318. *Id*.

319. *Id*.

320. *Id*.

321. *Id*.

322. *Id*. Judge Dwyer suggested that a ban on exports would help ease supply problems caused by his injunction. He found that "[a]bout thirty percent of the timber harvested in Washington and eleven percent harvested in Oregon is exported. Exports from private lands in Washington, Oregon, and Northern California during 1989 totaled [sic] 3.637 billion board feet.

Judge Dwyer also downplayed the impact his injunction would have on overall employment in Oregon and Washington, and never really considered its impact on employment within the industry.[323] Dwyer stated, "the timber industry no longer drives the Pacific Northwest's economy," and pointed out that employment in "lumber and wood products" in Oregon had declined by 17 percent over the decade while the state's total employment had risen 23 percent.[324] "The wood products industry now employs about four percent of all workers in Western Oregon, two percent in Western Washington, and six percent in Northern California. Even if some jobs were affected by protecting owl habitat in the short term, any effect on the regional economy probably would be small."[325] Moreover, Judge Dwyer pointed out that "[t]oday, in contrast to earlier recession periods, states offer programs for dislocated workers that ease and facilitate the necessary adjustments."[326]

Judge Dwyer further determined that "[j]ob losses in the wood products industry will continue regardless of whether the northern spotted owl is protected. A credible estimate is that over the next twenty years more than 30,000 jobs will be lost to worker-productivity increases alone."[327] Dwyer implied that these changes in the timber-industry workforce were part of the broader, ongoing, inevitable modernization of the industry, working to the detriment of smaller mills and their owners.[328]

Judge Dwyer Exaggerates the Forest Service's Statutory Violation, while Condemning the Bush Administration's Political Meddling

In order to issue a permanent injunction of further Forest Service

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The exported logs produce no mill jobs or added value in the United States. A ban on exports would not automatically shift every log to domestic buyers, but would provide a major source of additional Supply." *Id*. at 1094-95.

323. *Id*. at 1095.

324. *Id*.

325. *Id*.

326. *Id*.

327. *Id*.

328. *Id*. (noting that "Over the past decade many timber jobs have been lost and mills closed in the Pacific Northwest . . . . The main reasons have been modernizations of plants, changes in product demand, and competition from elsewhere. Supply shortages have also played a part. Those least able to adapt and modernize, and those who have not gained alternative Supplies, have been hardest hit by the changes. By and large, the companies with major capital resources and private timber Supplies have done well; many of the smaller firms have had trouble.")

timber sales, Judge Dwyer applied the traditional standard for injunctions: finding that irreparable harm would occur if he did not issue the injunction, that this harm would outweigh that caused by the injunction (balance of harms doctrine), and that the FS had violated a statute. Judge Dwyer had previously held that the Forest Service failed to protect biological communities as required by regulations promulgated pursuant to the NFMA.[329] Since that ruling was the basis for the SCLDF's request for an injunction, it would have been legally sufficient for Judge Dwyer simply to incorporate that earlier holding in his current opinion by reference. However, he correctly sensed that the injunction would be most strongly justified if he also played up the Forest Service's statutory violation. Consequently, a significant part of the social construction of this case involves the vilification of the government, replete with accusations that the agency allowed politics to pollute scientific truth and override legal obligations.[330]

Yet, the Forest Service had arguably not committed any substantial statutory violation. Congress had directed the agency to have a revised set of guidelines for owl management in place by September 30, 1990, and it had missed that deadline.[331] Although Judge Dwyer found that "the Forest Service did not even attempt to comply," this assertion was not true, as his own opinion attested.[332] According to the trial testimony of Jack Ward Thomas (which was excerpted by Judge Dwyer), the Bush Administration had "appoint[ed] a cabinet-level review team . . . [to] examine the [ISC] report, with the idea of seeing if there was some alternative course of action that would be less dramatic economically and socially."[333] But this presidential and high level administrative action was not accorded the same interpretation or deference that Judge Dwyer would subsequently give to the Clinton Administration's FEMAT effort. Quite the opposite oc-

329. Washington Audubon Soc'y v. Robertson, 1991 WL 180099, at *10 (W.D. Wash. 1991).

330. *Evans*, 771 F. Supp. at 1089 (citing the testimony of Dr. Eric Forsman of the Forest Service and other Forest Service officials about the political pressures to develop a plan which "had a very low probability of success and which had a minimum impact on timber harvest").

331. *Id*. at 1085.

332. *Id*. at 1089. "George M. Leonard, associate chief of the Forest Service, testified that the agency experts had began in early 1990 the work needed to have a revised plan in place by September 30 of that year, as Congress mandated in section 318. But the Secretaries of Agriculture and Interior decided to drop the effort" and instead allow the Owl Recovery Team a shot at developing a plan. *Id*. Leonard testified that the "Secretary-level committee was working throughout the summer looking at options. And the thought was that they would develop an option and that would be the basis for the announcement" that the Forest Service was going to miss its deadline for publication of the plan mandated by Congress. *Id*. at 1089-90.

333. *Id*. at 1090.

curred, as Judge Dwyer included testimony that depicted the Bush Administration's Owl Recovery Team as politically motivated, law-breaking, and meddling in scientific decision making.[334]

Dwyer found that "[t]he records of this case and of [SCLDF's case against the FWS] show a remarkable series of violations of the environmental laws."[335] This authoritative claim of illegality became the most often quoted statement of the entire litigation, employed by environmentalists and Clinton Administration officials, including the President.[336] However, most of Judge Dwyer's evidence of illegal conduct came from Judge Zilly's opinion, not the Forest Service case before him.[337] Meanwhile, as we have seen, Judge Zilly's evidence that the FWS acted "arbitrarily and capriciously" when it decided not to list the owl as threatened or designate its "critical habitat" was weak to non-existent.[338] Still, Judge Dwyer felt justified in claiming that "[t]he most recent violation of NFMA exemplifies a deliberate and systematic refusal by the Forest Service and the FWS to comply with the laws protecting wildlife."[339]

Judge Dwyer further stated, "this is not the doing of the scientists, foresters, rangers, and others at the working levels of these agencies . . . . It reflects decisions made by higher authorities in the executive branch of government."[340] Judge Dwyer was correct that officials in the Bush Administration had attempted to find a solution to the owl problem, but he was not able to show that this violated any laws. Still, he suggested very strongly that the mere involvement of "higher authorities" was somehow morally wrong.[341] Judge Dwyer found "reasons for this pattern of behavior" in Forsman's testimony.[342] Forsman testified that he was unsatisfied with the results of prior planning efforts "primarily because in every instance, there was

334. *Id*. (citing primarily testimony of George Leonard, associate chief of the Forest Service).

335. *Id*. at 1089.

336. *See, e.g.*, Patti A. Goldman and Kristin L. Boyles, *Forsaking the Rule of Law: The 1995 Logging without Laws Rider and Its Legacy*, 27 ENVTL. 1035, 1040; Victor Sher, Statement at President Clinton's Forest Conference, FEMAT Appendix VII-A, 6.

337. *Id*. at 1089-90 (noting, for instance, that after "it finally listed the species as 'threatened' following Judge Zilly's order, the FWS again violated the ESA by failing to designate critical habitat as required. Another order had to be issued setting a deadline for the FWS to comply with the law").

338. Northern Spotted Owl v. Lujan, 758 F. Supp. 621, 628 (W.D. Wash. 1991).

339. *Id*. at 1090.

340. *Id*.

341. *Id*. at 1089-90.

342. *Id*. at 1089.

a considerable—I would emphasize considerable—amount of political pressure to create a plan which [sic] was an absolute minimum. That is, which had a very low probability of success and which had a minimum impact on timber harvest."[343]

In granting the permanent injunction of further Forest Service timber sales, Judge Dwyer summed up his balancing of harms this way:

> [W]hile the loss of old growth is permanent, the economic effects of the injunction are temporary and can be minimized in many ways. To bypass the environmental laws, either briefly or permanently, would not fend off the changes transforming the timber industry. The argument that the mightiest economy on earth cannot afford to preserve old growth forests for a short time, while it reaches an overdue decision on how to manage them, is not convincing today. It would be even less so a year or a century from now.[344]

If a Forest Service plan to manage its forests and wildlife was overdue, it was at least in part because the agency's attempts at management were repeatedly thwarted by SCLDF lawsuits and judicial decisions finding them inadequate. Moreover, despite Judge Dwyer's factual findings that spotted owls depend on old growth for habitat and that suitable habitat had very specific characteristics, a major obstacle to managing forests for owl protection was that no one really understood what constituted suitable owl habitat. Nevertheless, an uncertain science was made more confident by its trip through these federal courts. When it returned to the agencies accompanied by court orders and injunctions, hypothesis became established fact.

Judge Dwyer permanently enjoined new Forest Service timber sales in the Pacific Northwest on May 23, 1991.[345] A little more than four months later, on September 27, 1991, the Forest Service attempted to comply with Judge Dwyer's orders by releasing an environmental assessment draft of four management alternatives and expressing a preference for the ISC conservation strategy.[346]

Timber Association Lawyers Condemn ISC Report as "Facade of Science"

In a significant effort at scientific boundary-work, the lawyers for

343. *Id*. at 1089.

344. *Id*. at 1096.

345. Seattle Audubon Soc'y v. Evans, 771 F. Supp. 1081 (W.D. Wash. 1991).

346. Seattle Audubon Soc'y v. Moseley, 798 F. Supp. 1473, 1477 (W.D. Wash. 1992), supplemented at 798 F. Supp. 1484 (W.D. Wash. 1992).

the timber associations argued in a report to their clients that the ISC strategy was based on nothing more than "a façade of science:"

> The Committee acknowledged that there is virtually no statistically reliable relevant demographic data on any of the vital behaviors of the spotted owl (birth rates, reproduction rates, longevity, mortality rates.) This lack of data should have made it difficult for the Committee to come up with a reliable plan. However, by using the empirical data merely to attempt to disprove the validity of its hypothesis, the Committee minimized the absence of data by finding that the lack of data simply failed to disprove its hypothesized conservation strategy . . . . It could have proposed considerably smaller HCAs considerably further apart and the empirical data would no more have disproved the validity of that approach than of the approach ultimately recommended by the ISC.[347]

This basic lack of data led the ISC to fall back on professional opinion. Agency action can be based on nothing more provided that it has a rational basis, but it is doubtful whether the ISC strategy could have met this basic test. In fact, the ISC strategy was at bottom difficult to distinguish from the conclusory assertion of expertise previously condemned by Judge Dwyer when it was used by the Forest Service to justify its management plans.

ISC member Jared Verner conceded that the Committee "had no studies of owls" to indicate how large their HCAs should be.[348] Instead, the Committee relied on studies of island birds off the coasts of California and England to arrive at their recommendations.[349] These birds had been studied for forty years and no population larger than 11 pairs had become extinct during that time.[350] Based on these studies, Barry Noon estimated that 20 pairs of the species would be required for the population to survive 50 years, and this estimate became the basis for requiring HCAs to provide habitats for at least 20 pairs of owls.[351] However, Noon's modeling effort did not account for the recolonization of HCAs by owls from other HCAs, which the Committee thought was likely, nor did his estimate reflect the likelihood that the relationship between number of pairs and time to ex-

347. Preston Thorgrimson, Shidler Gates & Ellis, LLP, *A Façade of Science: An Analysis of the Jack Ward Thomas Report Based on the Sworn Testimony of Members of the Thomas Committee*, *in* NORTHWEST FOREST RESOURCE COUNCIL, A REPORT FOR THE ASSOCIATION OF O & C COUNTIES AND THE NORTHWEST FOREST RESOURCE COUNCIL 4 (1991) (citing the deposition transcript of Jared Verner in Portland Audubon Society v. Lujan, 884 F.2d 1233 (9th Cir. 1989).

348. *Id*. at 5 (citing deposition transcripts of Verner in *Lujan*, 884 F.2d 1233).

349. *Id*. at 6 (citing ISC Report, at 289).

350. *Id*.

351. *Id*. at Table O-3, and deposition transcripts of Verner in *Lujan*, at 82-84.

tinction was curvilinear rather than linear. Mark Boyce testified that each additional pair would probably buy the colony of birds more time than the previous pair had.[352] The proposed requirement that HCAs be no more than 12 miles apart was the result of Committee consensus and represented the distance traveled by 67 percent of dispersing juveniles. No ISC member was able to explain the selection of this percentage.[353]

According to the report, the "50-11-40" rule was intended to provide "dispersal habitat" for the owls, but the committee members conceded that they did not know what comprised "dispersal habitat."[354] Members of the committee admitted that all three numbers in the rule resulted from professional judgment.[355] Moreover, ISC members conceded that that judgment was based on agency rather than owl behavior. Jared Verner testified that Forest Service silviculturalists had informed the Committee that Forest Service management practices would produce conditions similar to those prescribed by the rule.[356] Meanwhile, Thomas and Forsman testified that the Committee feared that the Forest Service would intensify management in owl dispersal areas to offset the ban on harvest that the Committee proposed for HCAs. Adopting the 50-11-40 rule would lock the Forest Service into existing management practice and thus prevent intensification of harvest.[357]

"In large measure the ISC report presents a facade of science to create the appearance that the ISC Strategy is firmly grounded in objective, verifiable science when in fact it is not," according to the industry law firm. In an attempt to further de-legitimize the scientific standing of the report, it wrote:

> Every component of the ISC strategy is primarily the product of the "professional judgment" of the members of the Committee. This judgment is untested, unexplained and represents, in the words of one committee member, a "management exercise" rather than a scientific effort. This does not mean that the ISC Strategy is necessarily wrong or is fatally flawed. It means simply that the aura of

352. *Id*. at 6 (citing deposition transcripts in *Seattle Audubon Soc'y v. Robertson* of Noon, 94, and trial transcripts of Boyce in Seattle Audubon Soc'y v. Robertson, at 950-51).

353. *Id*. at 9-10 (citing deposition transcripts of Noon in Lujan, at 143-44, and Lint, at 15, 38, and 40-41, and depositions of Noon in SAS v. Robertson, at 94, 101, and Verner, at 18).

354. *Id*. at 11 (citing the deposition transcripts of Thomas in Lujan, at 104, of Forsman, at 156, of Verner, at 138, and of Noon, at 108).

355. *Id*. at 12-15 (citing deposition transcripts of Thomas in Lujan, 72, 77, 88, 118, and 204-05, of Forsman, at 151-53 and 161-63, of Lint, at 72-79, and of Verner, at 153 and 155).

356. *Id*. 10 (citing deposition transcripts of Verner in Lujan, 141-43).

357. *Id*.

> objective science that has been cast over the ISC report is not justified, and should not inhibit close scrutiny of every component of the ISC strategy by policy makers, administrative officials and legislators . . . .[358]

Scientists Anderson and Burnham Claim Owl Decline Worse than Previously Thought

In Fall of 1991, about a month after the Forest Service released its draft plan favoring the ISC strategy, it received a draft report prepared by Fish and Wildlife Service biologists David Anderson and Kenneth Burnham claiming that in five areas where the owl had been studied, the female adult population had declined at an average rate of 7.5 percent annually over the past six years.[359] Moreover, their analysis indicated that "the rate of population decline has probably accelerated" during the study period.[360] The Anderson and Burnham report was the result of two government-sponsored workshops that sought to pool owl data from all ongoing studies, including those done by industry biologists, in an effort to estimate trends in the population more accurately.[361] Industry biologists did not like the assumptions that were being used in this "meta-analysis" and walked out of the workshops, taking their data with them.[362] Their primary complaint was that Anderson and Burnham assumed that owls not recaptured every year had died, when in actuality there was a very good chance that many had simply left the study areas.[363] Anderson and Burnham claimed that they had sufficiently corrected for this potential bias by alternately using as values in their pooled analysis: (1) the highest observed rate of juvenile survival in any study area and (2) the combined rates from adjacent study areas for the year when the most owls were born.[364] They also pointed out that in order for juvenile survival

358. *Id*. at 2.

359. Seattle Audubon Soc'y v. Moseley, 798 F. Supp. 1401, 1480-81. David R. Anderson & Kenneth P. Burnham, *Demographic Analysis of Northern Spotted Owl Populations*, *in* U.S. DEP'T OF THE INTERIOR, DRAFT RECOVERY PLAN FOR THE SPOTTED OWL (1992); reprinted in JACK WARD THOMAS ET AL., VIABILITY ASSESSMENTS AND MANAGEMENT CONSIDERATIONS FOR SPECIES ASSOCIATED WITH LATE-SUCCESSIONAL AND OLD-GROWTH FORESTS OF THE PACIFIC NORTHWEST: THE REPORT OF THE SCIENTIFIC ANALYSIS TEAM, app. 4c (Forest Service, U.S. Dep't of Agric. 1993).

360. *Id*. at 252.

361. *Id*. at 245; Author interview, October 5, 1995.

362. Author interview, October 5, 1995.

363. *Id*.; Anderson and Burnham, *supra* note 359, at 179.

364. SCIENTIFIC ANALYSIS TEAM REPORT, *supra* note 359, at 249.

rates to offset the estimated population declines, these rates would have to nearly double in two of the study areas and increase by about 1.5, 3.5, and more than 6 times in each of the other three areas.[365] Anderson and Burnham concluded that to expect such large increases "seem[ed] unfounded."[366]

However, an assessment of the Anderson and Burnham report prepared by a Scientific Assessment Team (SAT) headed by Jack Ward Thomas and composed of many scientists who had also participated in the ISC effort contested these assertions.[367] They pointed to studies done by Forsman in which "it appeared that 22 to 45 percent of juveniles . . . left the study area. These birds would not have been detected and would have been presumed to have died had they not been wearing radio transmitters."[368] This led the SAT to conclude that "undetected emigration is causing a negative bias in juvenile survival estimates derived from banding data."[369] Moreover, while they conceded that "there is less evidence to indicate significant emigration by adult owls," a bias for which Anderson and Burnham did not attempt to correct, they also noted that "[e]ven a small bias in estimates of adult survival can have a considerable effect on estimates of population growth."[370]

SAT scientists were also disconcerted by the potential bias in population estimates due to the lack of industry data on owl fecundity in Anderson and Burnham's pooled analysis.[371] Birth rates in the eastern Cascades not only "averaged nearly twice the average reported in Anderson and Burnham," but they occurred on lands considered marginal owl habitat at best.[372] "[F]ecundity is [also] relatively high for owls occupying predominantly young and mixed-aged forests on private lands in northwestern California."[373] Noting that in some study areas fecundity was "fairly stable," while in others it "varied considerably," the SAT concluded that "we suspect that annual variation in fecundity is strongly influenced by variations in food supply and weather conditions" rather than habitat loss.[374]

365. *Id*. at 250.
366. *Id*. at 249-50.
367. THOMAS, *supra* note 113.
368. *Id*. at 179.
369. *Id*.
370. *Id*. at 178.
371. *Id*.
372. *Id*. at 175.
373. *Id*. at 176.
374. *Id*. at 174-75.

Unfortunately, the SAT critique of the Anderson and Burnham report would not come until significantly later in the litigation, in 1993, in response to Judge Dwyer's order that the FS consider new scientific information in its environmental impact statement.[375] This was after Gordon Orians, Peter Kareiva, and Daniel Doak offered testimony and affidavits, claiming the Anderson and Burnham report suggested that owl populations had already declined beyond a threshold from which they could not recover.[376]

> The testimony and depositions given by these respected scientists in this matter indicated to us that they were unfamiliar with the data and with the possible biases in the data . . . . They also chose not to address one of the key cautions in the report of the [ISC] in which the authors stated that "assessing population trends from data collected during periods of declining carrying capacity (for example, the harvest of suitable owl habitat) may be very difficult because of the difficulty of distinguishing a collapsing population . . . from one that eventually reaches a long-term stable equilibrium."[377]

How could "these respected scientists" have been "unfamiliar with the data and the possible biases in the data"? The first reason was a lack of preparation. One of these scientists estimated that the three of them together spent a total of only six hours preparing to give depositions and testimony.[378] The reason they had not spent more time preparing, he said (giving a second reason for their unfamiliarity), was because it was easy to cast doubt on the government's plan at a theoretical level.[379] Government scientists, this academic scientist claimed, tended to get stuck on one theory, or one way of interpreting data.[380] Academics, he said, were more used to shooting holes in theories, and to trying out different explanations for the same data.[381] If their purpose in testifying was to characterize the government plan as too risky, and they could do so on theoretical grounds, why waste valuable time and energy becoming overly familiar with the data and possible biases in it?

These academic critics were saying that the Anderson and Burnham data indicated that a threshold of population decline might already have been crossed from which the owl could not recover. The

375. SCIENTIFIC ANALYSIS TEAM REPORT, *supra* note 359, cover letter.

376. *Id*. at 186; Seattle Audubon Soc'y v. Moseley 798 F. Supp. 1473, 1482 (W.D. Wash. 1992).

377. SCIENTIFIC ANALYSIS TEAM REPORT, *supra* note 359, at 186.

378. Author interview, November 22, 1995.

379. *Id*.

380. *Id*.

381. *Id*.

ISC and SAT scientists were saying those critics could not draw such a conclusion not just because the data was biased, but also because the data would not reveal this trend until it was too late to reverse it. Thus, ISC and SAT scientists agreed that their critics' theory could have been correct, but disagreed as to whether the data revealed whether that theory was actually right. Yet instead of exercising caution in relying on a theory that couldn't be tested – i.e., couldn't be proven wrong except under conditions where, if it proved right, no conservation alternatives would remain – ISC and SAT scientists decided to act as if the theory was right and turn it into policy. Thus they wrote that "Regardless of whether the estimates of demographic data are biased, we believe that demographic data collected during a period of declining habitat are likely to reveal little about whether the population will eventually stabilize and remain viable once the amount of habitat stabilizes. . . ."[382]

This turn toward theory is captured in the following statement, in which the SAT talks about management conclusions based on models and about professional judgment based on evidence, followed directly by the admission that there were no data:

> In fact, our review of recent modeling efforts (e.g., Carroll and Lamberson) leads us to conclude that the strategy proposed by the [ISC] of maintaining a network of large blocks of suitable habitat, distributed across the range of the owl, will have a high likelihood of maintaining a viable population of owls in the long term. This viewpoint reflects our collective professional judgment based on a review of the evidence. There simply are no data that can guarantee that any plan that has never been tried will prove successful.[383]

The ISC strategy remained the Forest Service's preferred management approach even though the Scientific Panel on Late-Successional Forest Ecosystems found that it had "a low to medium-low probability of providing for viable populations of late-successional forest associated wildlife species other than northern spotted owls."[384] The ISC strategy was adopted for the Forest Service by Secretary of Agriculture James R. Moseley on March 3, 1992.[385]

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382. *Id*. at 179.

383. *Id*. at 192-93.

384. Seattle Audubon Soc'y v. Moseley 798 F. Supp. 1473, 1483 (W.D. Wash. 1992) (citing Final Environmental Impact Statement, 57 Fed. Reg. 3753 (1992) (setting forth five alternative forest management plans)).

385. *Id*. at 1477.

The Bush Administration, the BLM's "Jamison Strategy," and the "God Squad"

Meanwhile, the BLM had been pursuing what had become known as the "Jamison Strategy," named after the agency's director, Cy Jamison. The Jamison Strategy adopted the ISC habitat conservation areas that provided for twenty pairs of owls, but did not accept the ISC's restrictions on harvest for the matrix lands between HCAs.[386] The Jamison Strategy was part of a larger Bush Administration effort to find ways to minimize the social and economic impact of owl protection.[387] The Administration created a Recovery Team that proposed a recovery plan for the owl; as the SAT noted, this plan was "nearly identical" to the ISC conservation plan.[388]

Consequently, on February 14, 1992, Secretary of the Interior Manuel Lujan created The Spotted Owl Management Alternatives Work Group to devise an alternative plan relying on some of the Recovery Team's data but not its involvement in creating the plan.[389] As Secretary Lujan instructed the new team:

> I am specifically interested in formulating and evaluating options whose [sic] implementation would result in significantly lower economic impacts and in a high probability of owl preservation and persistence, even though they might not achieve recovery of the species throughout its range or even in some physiographic provinces as required by the ESA. This goal clearly distinguishes your effort from that of the recovery team, which was bound by the requirements of the ESA. Because these options may require Congressional action to implement, your considerations can vary from the requirements of the ESA and other major land management statutes.[390]

Under the ESA, all agency actions potentially affecting listed species had to be evaluated by the FWS before they could take place.[391] The BLM had submitted 174 proposed timber sales to the FWS for evaluation but not the Jamison Strategy itself.[392] In early 1991, SCLDF filed suit against the BLM, arguing that the Jamison

386. Sher, *Travels with Strix*, *supra* note 7, at 49.

387. *Id*.

388. THOMAS, *supra* note 113, at 193.

389. Weston, *supra* note 8, at 805.

390. *Id*. at 807 n.16 (quoting U.S. DEP'T OF THE INTERIOR, DRAFT RECOVERY PLAN FOR THE SPOTTED OWL, *supra* note 99, at 8).

391. Lane County Audubon Soc'y v. Jamison, 958 F.2d 290, 292 (9th Cir. 1992) (quoting Section 7 of the ESA, 15 U.S.C. § 1536 (1989)).

392. *Id*.

Strategy, not just the proposed timber sales, constituted agency action requiring review by the FWS.[393] BLM argued that its strategy, announced at a press conference, was just a "policy statement" and that it had complied with the ESA by "submitting the individual 1991 sales for Section 7 consultation."[394] District Judge Robert Jones disagreed with the BLM, as did the Ninth Circuit on appeal.[395] "We agree with the district court that 'without a doubt,' the Jamison Strategy as announced was an agency action" within the meaning of the ESA.[396] Consequently, Judge Schroeder ordered BLM to submit the Strategy to FWS for consultation and enjoined the "announcement or conduct of additional sales" pending approval by the FWS.[397] Judge Schroeder also remanded the case to Judge Jones to decide whether "sales already announced but not awarded should be enjoined."[398]

At the time of Judge Jones' original ruling, the FWS had already evaluated the 174 proposed sales, finding that 122 of them were not likely to jeopardize the owl, provided the remaining 52 were sold in compliance with the ISC conservation strategy rather than Jamison's.[399] When all announced and contemplated sales were enjoined and the BLM was ordered to submit its strategy for consultation, the BLM asked the Secretary of Interior to convene the Endangered Species Committee (ESC), and asked the Committee to exempt 44 of these sales from ESA requirements.[400] The ESC's power to exempt agency actions from ESA requirements, even if this exemption led to extinctions, caused environmentalists to call it the "God Squad."[401]

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393. *Id*.

394. *Id*. at 293.

395. Lane County Audubon Soc'y v. Jamison, 1991 WL 354885 (D. Or. 1991), *aff'd in part*, 958 F.2d 290 (9th Cir. 1992).

396. *Jamison*, 958 F.2d at 294.

397. *Id*. at 295.

398. *Id*.

399. *Id*. at 293.

400. *Id*. at 293 n.5.

401. The ESC was a creature of 1978 amendments to the ESA that attempted to build some flexibility into the Act, but required a supermajority of Committee members to grant an exemption. The law further required the committee to be composed of the Secretaries of Agriculture, Interior, and the Army; the Administrators of the EPA and the National Oceanic and Atmospheric Administration; the Chairman of the Council of Economic Advisers, and "one individual from each affected state," who would collectively have one vote. In order to grant an exemption to BLM, five of these seven committee members had to find that "(1) there were no reasonable or prudent alternatives; (2) the benefits of allowing the sales clearly outweighed any benefits of alternative courses of action; (3) the sales were of regional significance; and (4) the BLM had not made any irreversible or irretrievable commitment of resources" prior to asking for an exemption. Weston, *supra* note 8, at 808.

The Committee had only been convened twice previously, and only once had it granted an exemption.[402] On May 15, 1992, the ESC granted the BLM an exemption for 13 timber sales.[403]

SCLDF appealed the ESC exemption on the grounds that Bush White House officials had allegedly tried to influence the vote of several of the Administration's appointees on the Committee and had supposedly succeeded in changing one vote.[404] SCLDF's suspicions were based on two newspaper reports of White House arm-twisting and Sher's claims regarding conversations he had with Bush Administration figures after the ESC's decision was made.[405] The SCLDF requested the right to depose those involved.[406] The threshold questions for the Ninth Circuit were whether the APA's ban on *ex parte* contacts applied to the ESC and whether it applied specifically to *ex parte* contacts from the President and his staff.[407] Judge Reinhardt, writing for himself and Judge D.W. Nelson, answered yes to both questions; Judge Goodwin concurred with this ruling except as it applied to the President.[408] That issue did not need to be decided, Judge Goodwin reasoned, because there was no evidence that the President had been personally involved.[409] Judge Reinhardt remanded the case to the administrative law judge to develop the administrative record more fully regarding any *ex parte* contacts so that it could be reviewed by the Ninth Circuit.[410]

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402. Sher, *Travels with Strix*, *supra* note 7, at 51-52 n.66 (noting that the ESC was convened in 1978 to deal with the snail darter, but chose not to exempt the Tennessee Valley Authority from complying with the ESA with respect to its dam building activities and their impact on the snail darter. The only exemption granted by the ESC was for the Grayrock Dam's impact on the whooping crane, in 1979).

403. Portland Audubon Soc'y v. Endangered Species Committee, 984 F.2d 1534, 1537 (9th Cir. 1993).

404. *Id*. at 1536.

405. *Id*. at 1539.

406. *Id*. at 1538-39.

407. *Id*. at 1539.

408. *Id*. at 1550.

409. *Id*. at 1551.

410. *Id*. at 1550. *See also* Sher, *Travels with Strix*, *supra* note 7, at 53-54. The finding that the ESC was subject to the APA's prohibition on *ex parte* contacts would have depended in significant part on the finding that the ESC proceeding was adjudicatory in nature rather than a rulemaking, as the Secretary of Interior thought. Because of this misconception, Lujan had allowed a variety of other "improper *ex parte* contacts between decisional staff, individuals involved in closely related litigation, and third parties," Sher claimed. As an example, he cited the activities of Solicitor of the Interior, Thomas Sansonetti, who "wore at least four different hats during the proceeding: He was simultaneously counsel for the BLM in closely related pending litigation . . . , counsel for the ESC, counsel for the administrative law judge conducting the evidentiary hearing, and chief counsel for the [FWS]." While these alleged *ex parte* contacts were

As it happened, President Bush was not re-elected in 1992 and on April 19, 1993, the BLM withdrew its petition for exemption.[411] By that time, President Clinton had held a forest conference in Portland and the FEMAT planning exercise was already underway. Thus, BLM's Acting Director, Michael Penfold, wrote to Clinton's Secretary of Interior and chairman of the ESC, former Arizona Governor Bruce Babbitt: "Upon further consideration, the BLM has decided to abandon its plan to go forward with the 13 proposed sales that the Committee voted to exempt from the ESA. Accordingly, BLM hereby withdraws its request for exemption for timber sales from the Committee."[412]

Judge Dwyer Holds that the Forest Service Must Further Assess the Impact and Adequacy of ISC Strategy

Prior to BLM's withdrawal of its exemption petition to the ESC, the SCLDF argued that the Forest Service had not adequately assessed the environmental impacts of the ISC strategy or explained the rationale for its selection of the strategy.[413] The ISC said its strategy should be "applied consistently throughout the range of the owl," including BLM lands.[414] "If the Endangered Species Committee grants an exemption to the BLM," the Forest Service conceded in its environmental assessment, "this viability assessment would need to be reconsidered."[415] Judge Dwyer noted,"[t]he very event that the [Forest Service] states would demand a re-evaluation . . . has occurred. That being so, there is no choice but to remand the matter to the agency."[416]

But this was not the only reason the SCLDF and Judge Dwyer thought the ISC strategy might not maintain the viability of the owl. Additional considerations included the owl population meta-analysis by Drs. Anderson and Burnham that found higher rates of decline than those that had informed the ISC strategy, a modeling effort by Drs. Kevin McKelvey and Barry Noon of the Forest Service indicat-

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never considered by the Ninth Circuit, they throw a rather more benign cast on the Bush Administration's involvement, since Sansonetti's contacts were out in the open.

411. Sher, *Travels with Strix*, *supra* note 7, at 56-57.

412. *Id*. at 56-57.

413. Seattle Audubon Soc'y v. Moseley, 798 F. Supp. 1473, 1476-77 (W.D. Wash. 1992).

414. *Id*. at 1479.

415. *Id*. at 1480.

416. *Id*. at 1480.

ing that the shape of HCAs was important, the testimony of these scientists at the ESC hearings that further interpreted Anderson and Burnham's findings, a reassessment of the viability rating suggested by Dr. Kathy O'Halloran of the Forest Service because of these developments, and Dr. Forsman's allegedly inadequate responses to the findings.[417] As Judge Dwyer noted,

> Dr. Eric Forsman states the [Anderson and Burnham] report should not be given undue weight and that some of the data are contradictory; however, he also says that all of the expert researchers who contributed to the report are "alarmed," and that the contention of SAS's experts that the owl is at or near a fatal population threshold "may or may not be true." Dr. Forsman recommends proceeding under the ISC plan and monitoring the results but does not make clear how the situation could be rectified if the critics are correct. The agency's explanation is insufficient under NEPA – not because experts disagree, but because the Forest Service EIS lacks reasoned discussion of major scientific objections . . . . It states only [that] . . . "[a]fter a preliminary review of new studies, the demographic parameter values used in the ISC Report for determining spotted owl population status and trends have not changed significantly."[418] The Anderson and Burnham report is important enough that highly qualified experts, including some in the employ of the Forest Service, believe it means the ISC strategy must be revised. This being so, the agency cannot merely say that the report and the criticisms arising from it make no difference; to comply with NEPA, it must give a reasoned analysis and response.[419]

417. *Id*. at 1481-82.

418. *Id*. at 1482. (noting that "NEPA requires that the agency candidly disclose in its EIS the risks of its proposed action, and that it respond to adverse opinions held by respected scientists," Judge Dwyer continued, "The agency may not rely on conclusory statements unsupported by data, authorities, or explanatory information." Judge Dwyer went on to excerpt at length two cases explaining what was required for "reasoned decision" as to whether or not to supplement an environmental assessment with new information: "Reasonableness depends on the environmental significance of the new information, the probable accuracy [sic] of the information, the degree of care with which the agency considered the information and evaluated its impact, and the degree to which the agency supported its decision not to supplement with a statement of explanation or new data.") (citing *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017 (9th Cir. 1980) (holding that a federal agency has a continued duty to gather and evaluate new information relating to the environmental impact of its actions, even after preparing an EIS, and *Friends of the Earth v. Hall*, 693 F. Supp. 904 (W.D. Wash. 1988) (holding that NEPA requires agencies to disclose risks of its proposed action in an EIS, and address the objections of respected scientists)).

419. *Id*. at 1482-83.

Forest Service Must Assess Impact of Owl Protection on Other Species

Finally, Judge Dwyer held that because the Forest Service's plan to protect the owl was not likely to protect other species associated with old growth forests and was potentially adverse to those species, NEPA required the Forest Service to assess these impacts.[420] The ISC strategy, the Forest Service noted, had "a low to medium-low probability of providing for viable populations of late-successional forest associated wildlife species other than the spotted owl."[421] Judge Dwyer then reasoned that "the FEIS has thus mentioned what appears to be a major consequence of the plan – jeopardy to other species that live in old-growth forests – without explaining the magnitude of the risk or attempting to justify a potential abandonment of conservation duties imposed by law. An EIS devoid of this information does not meet the requirements of NEPA."[422]

The Forest Service challenged this last ruling, arguing, as Judge Dwyer paraphrased, "even if the rating is accurate the plan would be lawful because the agency has been required to adopt only a plan ensuring the viability of the spotted owl, not that of other species."[423] But the NFMA required the Forest Service to "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives."[424] "This section confirms the Forest Service's duty to protect wildlife," Judge Dwyer concluded, finding additional support in a "leading law review article" that claimed that "the historical context and overall purposes of the NFMA, as well as the legislative history of the section . . . requires planners to treat the wildlife resource as a controlling, co-equal factor in forest management and, in particular, a substantive limitation on timber production."[425]

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420. *Id*. at 1483.

421. *Id*. at 1483 (noting that "While the quoted passage does not identify the species, the Forest Service EIS elsewhere lists thirty-two" such species).

422. *Id*.

423. Seattle Audubon Soc'y v. Moseley, 798 F. Supp. 1484, 1488 (W.D. Wash. 1992).

424. *Id*.

425. *Id*. at 1489 (reasoning that "[t]o adopt a plan that would preserve a management indicator species ('MIS'), such as the spotted owl, in a way that exterminated other vertebrate species would defeat the purpose of monitoring to assure general wildlife viability," Judge Dwyer again excerpted the "leading law review article" for support: "The use of the MIS in no way diminishes the requirement to maintain well-distributed, viable populations of existing vertebrates; in fact, proper use of MIS should help to ensure them.") (citing Charles F. Wilkinson & H. Michael Anderson, *Land and Resource Planning in the National Forests,* 64 OR. L. REV. 1, 296

Judge Dwyer Orders Forest Service to Produce New Plan

The Forest Service requested that Judge Dwyer stay his injunction pending their appeal of his decision.[426] Judge Dwyer refused and instead set a schedule giving the Forest Service eight months to produce a new draft plan curing the defects in the prior one.[427] Judge Dwyer also made it clear that he thought compliance with his order was well within the Forest Service's technical competence: "It has the scientists who can do the job."[428] The Forest Service argued that since the adequacy of its owl plan was contingent on the actions of others, the agency had to wait until these others acted before it could act.[429] But Judge Dwyer swept these arguments aside, saying that the Forest Service should simply provide a "reasoned analysis and response" to the existing draft of the Burnham and Anderson report, rather than wait for a final version.[430] He also found that the Forest Service should analyze the effect of already authorized BLM timber sales, coordinate with the BLM regarding its future sales, and proceed with their planning responsibilities under the NFMA while the FWS completed its owl recovery plan and determined whether or not to list the Marbled Murrelet, a seabird allegedly dependent on coastal old growth.[431]

The Forest Service was particularly concerned about lacking the time and knowledge necessary to comply with what appeared to be Judge Dwyer's order to assess the owl plan's effects on other old-growth species.[432] In response, Judge Dwyer claimed that he had:

> repeatedly made clear that the agency is not required to make a study or develop standards and guidelines as to every species . . . . What is required is that it refrain from adopting an owl plan which [sic] it knows or believes, as a matter of common sense or agency

(1985)).

426. *Seattle Audubon Soc'y*, 798 F. Supp. at 1493.

427. *Id*. at 1497 (noting that, among other things, "the Forest Service argues that the court has no power to order it to perform specific tasks or to complete them by a specified time," Judge Dwyer found such authority in some broad Supreme Court language, again referencing the "long history of delays by the Forest Service," and concluding that "[i]n light of this history, a timetable is essential.")

428. *Id*.

429. *Id*. at 1498.

430. *Id*. at 1498-99.

431. *Id*.

432. *Id*. at 1499.

> expertise, will probably cause the extirpation of other native vertebrate species.[433]

Judge Dwyer, *The Final Forest*, and *The Rights of Nature*

Another part of Judge Dwyer's analysis reveals the underlying considerations driving his construction of this policy problem and solution. Citing one case, two law review articles, and William Dietrich's book *The Final Forest*,[434] Judge Dwyer wrote that:

> Many observers have noted the Forest Service's habit of maximizing timber production at the cost of other statutory values. But such a practice, no matter how long it may have gone on, cannot change what the statute requires. NFMA and the regulations direct that the forests be managed so as to preserve animal and plant communities . . . . [O]ther measures are inadequate for many species. Parks and wilderness areas alone are too small to permit the spotted owl to survive. The efforts of the [FWS] under the [ESA] come only after a species is threatened or endangered and fall short of systematic management of a biological community. In this sense the national forests offer a last chance.[435]

Judge Dwyer's reliance on law review articles and Dietrich's *The Final Forest* recall a phone conversation I had with him in which he declined to be interviewed, citing legal restrictions and noting that "it was too easy to say something that would get [him] in trouble."[436] He did, however, suggest that I read Roderick Nash's *The Rights of Nature*.[437] Taken together, these sources provide a window into the extra-legal influences on Judge Dwyer's construction of this problem and its solution.

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433. *Id*. It is difficult to see how the Forest Service could have made this assessment in the absence of studying the species involved. Moreover, Judge Dwyer had repeatedly found that the Forest Service's exercise of "common sense or agency expertise" was "arbitrary and capricious" because its assertions of expertise were too conclusory or failed to articulate a rational connection between "facts found and choices made." Since this latter formulation of the rational basis test explicitly required the finding of facts, it appears that the agency would need to know something about other species in the planning area. Judge Dwyer tried to circumvent this problem by saying that the owl was an indicator for these other species. Of course, the owl's utility as an indicator species would be questionable if the plan to protect it did not also protect these other species.

434. DIETRICH, *supra* note 62.

435. *Id*. at 1490.

436. Telephone interview with Judge William L. Dwyer in weeks of November 12th or 19th, 1995.

437. RODERICK FRAZIER NASH, THE RIGHTS OF NATURE: A HISTORY OF THE ENVIRONMENTAL ETHICS (1989).

In *The Rights of Nature*, Nash claims that he is operating as "an historian rather than a partisan. Although I have done so in other writings, I will not here advocate the extension of ethics to include the natural world."[438] Yet this is what Nash writes in *The Rights of Nature*:

> Conceived of as promoting the liberation of exploited and oppressed members of the American ecological community, even the most radical fringe of the contemporary environmental movement can be understood not so much as a revolt against traditional American ideals as an extension and new application of them. The alleged subversiveness of environmental ethics should be tempered with the recognition that its goal is the implementation of liberal values as old as the republic. This may not make modern environmentalism less radical, but it does place it more squarely in the mainstream of American liberalism, which, after all, has had its revolutionary moments, too. Finally, from this point of view the goals of ethically oriented environmentalists may be more feasible within the framework of American culture than even they themselves believe.[439]

While we cannot know the effect these passages had on Judge Dwyer, they may have helped reassure him that he was acting "within the framework of American culture," "squarely in the mainstream of American liberalism," preserving "traditional American ideals" even as he embraced the positions of "the most radical fringe of the contemporary environmental movement."[440]

Ninth Circuit Upholds Judge Dwyer's Injunction of Forest Service Timber Sales

On July 8, 1993, the Ninth Circuit upheld Judge Dwyer's injunction of Forest Service timber sales and his order that the agency prepare an SEIS.[441] On the same day, the Ninth Circuit also upheld Judge Frye's parallel injunction and order for the BLM.[442] Judge Schroeder wrote both opinions. In *Seattle Audubon Society v. Espy*, the Forest Service argued "(1) that the district court erred in finding its treatment of the so-called Anderson-Burnham Report deficient; [and] (2) that the district court erred in finding the discussion of the impact of

438. *Id*. at xi. *See also Rounding Out the American Revolution: Ethical Extension and the New Environmentalism*, *in* DEEP ECOLOGY 170 (Michael Tobias ed., 1984); *Do Rocks Have Rights? in* THE CENTER MAGAZINE, Nov.-Dec., 1977, at 2.

439. NASH, *supra* note 537, at 11-12.

440. *Id*.

441. Seattle Audubon Soc'y v. Espy, 998 F.2d 699, 703 (9th Cir. 1993).

442. Portland Audubon Soc'y v. Babbitt, 998 F.2d 705 (9th Cir. 1993).

the owl plan on other species inadequate . . . ."[443] But Judge Schroeder ruled against the agency:

> We agree with the district court's observation that "[a] chief concern of scientists of all persuasions has been whether the owl can survive the near-term loss of another half-million acres of its habitat." The Anderson-Burnham report concludes that the spotted owl population is declining more substantially and more quickly than previously thought and specifically states that "[the rate of population decline] raises serious questions about the adequacy of the ISC Conservation Strategy . . . . The EIS did not address in any meaningful way the various uncertainties surrounding the scientific evidence upon which the ISC rested. It would not further NEPA's aims for environmental protection to allow the Forest Service to ignore reputable scientific criticisms that have surfaced with regard to the once "model" ISC strategy. Even if the Forest Service concludes that it need not undertake further scientific study regarding owl viability and the impact of further habitat loss, the Service must explain in the EIS why such an undertaking is not necessary or feasible.[444]

Judge Schroeder also took the Forest Service to task for "failure to include a meaningful discussion of what effect, if any, a decrease in owl viability will have on other old-growth dependent species . . . ."[445] Judge Schroeder acknowledged but did not engage the Forest Service's argument that earlier orders by Judge Dwyer, affirmed by the Ninth Circuit, only required the Service to assess the impact of the timber sale program on the owl. This was the Forest Service's primary argument, but Judge Schroeder took another of their arguments as his main point of departure:

> The Service's position is that it will address other species in other, yet-to-be-created plans. In order to allow for the sort of reasoned decision-making contemplated by NEPA, however, an owl management plan destined to be a driving force behind various land use decisions on lands suitable for spotted owl habitat should include a discussion of the effects of various alternatives and ultimate choice would have on other old-growth dependent species found within the same locations . . . . If it is based on an incomplete NEPA analysis . . . there will be a gap in planning that cannot be closed. The district court correctly held that the Forest Service's adoption of the ISC Strategy inadequately dealt with its effect on other old growth dependent species.[446]

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443. *Espy*, 998 F.2d at 703.

444. *Id*. at 704.

445. *Id*.

446. *Id*.

In other words, the Forest Service had to consider the effects not only of timber sales on the owl, but of owl protection on the ecosystem.

IN CONCLUSION, A REPRISE

Ten years ago, in 1993, President Clinton's scientific advisory committee, FEMAT, recommended (and President Clinton and Ninth Circuit federal judges accepted) a 75 percent reduction in federal timber sales in the Pacific Northwest to protect more than 1000 species they claimed were dependent on older forest ecosystems. This dramatic change in federal land use policy was the result of SCLDF lawsuits on behalf of one of these species, the Northern Spotted Owl, which environmentalists claimed was threatened by continued logging of these forests. Ninth Circuit district and appellate judges responded to these lawsuits by enjoining all timber sales on federal lands in the region and by demanding protection of biological communities and not just the owl.

The remarkable story of the owl litigation that produced these policy changes has surprisingly only been told previously by the SCLDF attorney who brought these suits. His account focuses on the judicial rulings in these cases, not their contested legal and factual bases. This article has sought to supply these missing pieces of the story, answering questions regarding what scientists and judges knew and believed about owls and ecosystems ten years ago, how that knowledge was related to judicial rulings, and how these decisions were related to existing law. This more complete owl litigation story is important to keep in mind as federal forest management again becomes legally and scientifically contested terrain in the Pacific Northwest.

This year also marks the thirty-year anniversary of several related events: the passage of the ESA and the first research and regulatory efforts on behalf of the owl. The owl was in fact one of the species that was expected to need the Act's protection, and federal land managers were instructed to protect the owl within months of the initiation of the first owl research. Land managers assumed responsibility for protecting a little understood species in an effort to head off listing of the owl and control of federal timber sales by the FWS. In so doing, they made their management efforts vulnerable to challenge on scientific grounds. No organization understood this better than SCLDF.

While SCLDF's Victor Sher and Andy Stahl criticized federal land managers' owl plans for lacking a biological basis, the science

SCLDF sought to substitute also lacked a biological basis. Field research would take too long to establish what environmentalists already "knew": the owl and other species were old-growth dependent, these dependencies defined a unique ecosystem, and both the species and the ecosystem were severely threatened by continued logging. So, SCLDF lawyers turned to theorists and modelers like Russell Lande to critique agency management plans.

Lande developed models of owl populations and habitat that SCLDF initially used to get the FS to suspend a few timber sales and to petition the FWS to list the owl. Lande reduced his estimates of population decline to 1 percent per year when he upped the average life-expectancy of the owl from 10 to 17.5 years. However, his spatial habitat model predicted that the owl would go extinct unless the remaining 200 year old old-growth was protected. A panel of scientists assembled by the Audubon Society pointed out that modeling efforts like Lande's would remain indeterminate so long as there was insufficient data about owl biology. But this "Dawson" panel recommended vast set-asides as hedges against the uncertainty caused by data limitations.

Little new biological knowledge about the owl was developed during the years that the owl spent in federal court. But scientific opinion was piled on top of scientific opinion in a number of governmental reports and environmental assessments. Scientists acting as expert witnesses for industry groups pointed out the theoretical nature of many of these "findings," but the only criticisms that were given any credence were those of scientists acting as expert witnesses for environmental groups. Thus, when federal judges found agency owl plans and set asides inadequate, the agencies always created larger set asides and more extravagant owl plans to satisfy them.

From the beginning, Congress sought to regain control of federal land management, most notably with the "Northwest Timber Compromise." This appropriations rider required federal land management agencies in the region to sell specific amounts of timber, mandated that no sales were to come from spotted owl habitat areas identified in agencies' planning documents, added specific protected areas for the owl, and directed the agencies to designate other appropriate areas as protected. This amendment also incorporated an interagency agreement directing the formation of an Interagency Scientific Committee (ISC) charged with developing "a scientifically credible conservation strategy" for the owl. Most controversially, this amendment specified that its directives were not subject to judicial

review. The ISC conservation strategy vastly expanded forest set-asides for the owl because it recommended that owls be protected in groups of twenty pairs rather than in individual pairs. The ISC claimed that a conservation strategy was warranted because owl populations and owl habitat were both declining. However, the ISC effectively conceded that the data on owl population decline were indeterminate. The Committee expressed more confidence that owl habitat was declining, but then could not define suitable habitat. Industry lawyers emphasized that all elements of the conservation strategy were essentially the result of professional judgment.

The Bush Administration sought to regain control of land management by convening its own Owl Recovery Team, but this team produced an owl protection plan very similar to that recommended by the ISC. The Bush Administration then convened another team and instructed it to create a plan that would preserve the owl, although not necessarily throughout its entire range.

In a further attempt to influence land management in the Northwest, the Bush Administration petitioned the Endangered Species Committee to exempt from the ESA some timber sales that the FWS found would jeopardize the owl. The Committee voted to exempt thirteen of these sales, but the SCLDF challenged the vote, claiming it had been improperly influenced by the White House. The Ninth Circuit ordered an administrative law judge to hold fact finding hearings on the matter, but the BLM withdrew its petition to exempt the sales after Bush lost the 1992 presidential election to Bill Clinton.

The Ninth Circuit let it be known in their very first decision that they believed that the owl was threatened by continued logging of its old growth habitat, even though as an appellate court they were supposed to confine themselves to reviewing legal issues rather than adopting positions on the underlying facts, and even though these facts had not yet been developed in the district courts. District Court judges Frye, Zilly, and Dwyer, meanwhile, adopted very different postures toward the scientists before them. Judge Frye was very reluctant to choose among scientists, although she was the only one to give any space in her opinions to the critique of an owl expert testifying on behalf of industry intervenors. She relied primarily on owl assessments produced by BLM's own biologists to hold that the agency must reassess its timber sale program. Judge Zilly, on the other hand, sided with a lone FWS dissenter and three concurring outside scientists to find that the agency had acted arbitrarily and capriciously in deciding not to list the owl as threatened. He selectively

quoted the industry owl expert to make it appear that all scientists outside the agency thought the owl should be listed. For his part, Judge Dwyer barely even acknowledged industry experts in his opinions that lead to an injunction of Forest Service timber sales, but lent an especially sympathetic ear to critiques of agency owl plans offered by scientists testifying on behalf of environmental groups.

Even though the ISC conservation strategy afforded vastly more protection for the owl than set-asides for owl pairs, and Judge Dwyer initially was impressed by the ISC report, he was soon persuaded that their plan might not go far enough. Part of his stance may be attributed to his attitude toward the scientists appearing before him, and part may be attributed to his expansive reading of what the law required. With respect to scientists, Judge Dwyer sided with the most apocalyptic readings of the owl evidence. So, when FWS biologists Anderson and Burnham produced an analysis suggesting that owl populations were declining faster than previously thought and academic scientists testified that the owl's decline might even be worse than that, having passed a threshold from which it could not recover, Judge Dwyer enjoined further timber sales and ordered the Forest Service to do a better job of justifying its adoption of the ISC strategy.

As the Bush Administration endeavored to influence the process, federal district court judges held that the land and wildlife agencies' actions were "arbitrary and capricious." In the BLM's case, Judge Frye so ruled because the agency had failed to consider significant new information about the owl and Judge Jones so ruled because the agency had failed to consult with the FWS regarding its management plan, the Jamison Strategy. In the FWS's case, Judge Zilly held that the agency had acted arbitrarily and capriciously in refusing to list the owl without adequately explaining why it disagreed with four scientists who thought the owl should be listed and in failing to explain why it had not designated critical habitat concurrently with listing. Also in the FWS's case, Judge Hogan held that the agency was required to prepare an environmental impact statement when it designated critical habitat. In the Forest Service's case, Judge Dwyer held that the agency had acted arbitrarily and capriciously when it tried to rely on the ISC owl conservation strategy, initially without an opportunity for public review and comment, and then without adequately accounting for a FWS sponsored analysis of owl data that suggested the population might already have crossed a threshold from which it could not recover.

Most of these rulings relied on the affidavits and testimony of

scientists. Reports by BLM biologists that came after the agency had completed its assessment of the impact of planned timber sales on the owl persuaded Judge Frye that a new assessment was warranted. Affidavits by conservation biologists that supported a dissenting FWS biologist persuaded Judge Zilly that the Service had not adequately explained its decision not to list the owl as threatened. Subsequent claims by FWS biologists that the owl's critical habitat was indeterminable at the time of listing despite the owl's "overwhelming association" with old growth persuaded Judge Zilly that the Service had not adequately explained its decision not to designate that habitat. Judge Dwyer appeared to be particularly impressed with the Anderson and Burnham report on owl population declines and by university scientists who relied on it to question the ISC conservation strategy.

To be sure prior Congresses and Presidents also helped determine which scientists would be important when they passed the environmental statutes on which these judges relied. NFMA, NEPA, and the ESA each required federal agencies to hire ecologists, biologists, and other "ologists" to assess the impacts of agency actions on the environment and to design measures that would mitigate adverse impacts. In selecting these scientists and codifying their recommendations as law, prior Congresses and Presidents empowered these viewpoints at the expense of foresters and other scientists who disagreed. But federal judges decided to listen to critiques of academic scientists recruited by environmentalists, rather than to critiques by academics recruited by industry. They also decided to accept as relevant science the modeling efforts and theories of scientists offered by environmentalists, even though these were critiqued on various grounds. Judicial rulings in the owl cases consequently depended on resolving contested factual and legal issues in ways that required a dramatic reduction of federal timber sales and the implementation of ecosystem management. This is how scientists, judges, and spotted owls became policymakers in the Pacific Northwest.