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Old-Growth Forests, the Owl, and Yew: Environmental Ethics Versus Traditional Dispute Resolution Under the Endangered Species Act and Other Public Lands and Resources Laws

by

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OLD-GROWTH FORESTS, THE OWL, AND YEW: ENVIRONMENTAL ETHICS VERSUS TRADITIONAL DISPUTE RESOLUTION UNDER THE ENDANGERED SPECIES ACT AND OTHER PUBLIC LANDS AND RESOURCES LAWS

Gary D. Meyers[*]

I. INTRODUCTION

The ongoing controversy over the management, use, and preservation of the last remnants of the nation's "old-growth"[1] forests in the Pacific Northwest is a highly charged, complex dispute. This dispute pits loggers against environmentalists, local against national interests, and long-term protection of wildlife and wildlife habitat against short-term timber production profit. Politically and administratively, the federal government is caught in the middle of the controversy, as are the states of Oregon, Washington, and California. Most importantly, allocation and protection of public forest resources calls into question the resolution of conflicting values regarding the place of science, economics, law, and ethics in resource management decisions.

The catalyst for this clash of values in the Pacific Northwest "is a medium-sized bird with a round head, dark-brown plumage, and dark eyes . . ., [with] white spots on the head and nape, and mottling on the breast and abdomen; thus the name 'spotted owl.'"[2] The northern

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[1] Old-growth forests are more than forests with tree species 150 to 200 years old or older. Their unifying feature is the diversity of species of flora and fauna they support and the diversity of functions they perform. *See infra* notes 75–89 and accompanying text.

[2] INTERAGENCY SCIENTIFIC COMM. TO ADDRESS THE CONSERVATION OF THE NORTHERN SPOTTED OWL, A CONSERVATION STRATEGY FOR THE NORTHERN SPOTTED OWL 59 (1990) (interagency committee chaired by Jack Ward Thomas) [hereinafter THOMAS REPORT].

spotted owl, (*strix occidentalis caurina*)[3] is one of three distinct subspecies of the spotted owl recognized by the American Ornithologists Union.[4] After a long and controversial history of action (and inaction), on June 26, 1990, the United States Fish and Wildlife Service (FWS) listed the northern spotted owl as "threatened"[5] pursuant to provisions of the Endangered Species Act of 1973 (ESA or Act), as amended.[6]

While the FWS action is designated a "final rule,"[7] this is not the end of the controversy. Rather, it is only the beginning of the next round of conflict between those who would protect the owl's old-growth habitat and those who depend upon Northwest old-growth forests to produce jobs, timber, and revenue.

The owl is not the only species at risk in the forest.[8] On September 19, 1990, the Environmental Defense Fund (EDF) in a letter to Secretary Manuel Lujan petitioned the United States Department of the Interior to list the pacific yew (*taxus brevifolia*) as a threatened species.[9] According to the EDF, the pacific yew occurs predominantly as an understory tree in Pacific Northwest old-growth and has declined significantly in numbers due to logging of those same forests.[10] The yew is not merely a cuddly critter with no known economic value. It is a different kind of weapon for environmentalists. The yew has been recognized by the National Cancer Institute as a principal source of a chemical that has been shown to be highly effective in treating ovarian cancer.[11] By proposing its addition as a threatened species under the ESA, the EDF has enlisted a new and potentially powerful constituency, women who face the threat of ovarian cancer, to help the "greens" to protect old-growth forests.

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[3] *Id.*

[4] Final Rule Determination of Threatened Status for the Northern Spotted Owl, 55 Fed. Reg. 26,114 (1989) [hereinafter Final Rule].

[5] *Id.*

[6] 16 U.S.C. §§ 1531–1544 (1988).

[7] Final Rule, *supra* note 4, at 26,114.

[8] As Portland wildlife biologist David Marshall, who served with the Fish & Wildlife Service for more than 30 years, notes, there are a number of species at risk from clear-cut logging in the Pacific Northwest, including: the white-headed woodpecker, flammulated owl, three-toed woodpecker, great gray owl, marbled murrelet, fisher and marten, and some species of bats and amphibians. Marshall, *The Owl Is Not Alone in the Forest*, Oregonian, June 24, 1990, at M1, col. 2.

[9] Letter from Environmental Defense Fund to Manuel Lujan, Secretary, Department of the Interior (Sept. 19, 1990).

[10] *Id.*

[11] Bean, *We Don't Know the Benefits Side of the Equation*, ENVTL. F., July–Aug. 1990, at 29.

This Article examines the use of the Endangered Species Act as a tool to preserve the remaining old-growth forests. The ESA primarily protects specific species of animals and plants and only secondarily protects habitat as a means of conserving species.[12] The question for this author is whether using the Act to implement land management policies and decisions is appropriate and effective or whether alternative means need to be created to achieve these policy goals.

Part II of this Article examines the background of the old-growth/owl controversy and the events leading up to listing the owl as a threatened species. This section reviews the ecological and other scientific bases for, and the economic impacts of, listing the owl as a threatened species. Part III looks at the law, focusing primarily on the Endangered Species Act, and briefly examines related environmental protection and resource management statutes. Part IV considers the management recommendations of *A Conservation Strategy for the Northern Spotted Owl* (*Thomas Report*),[13] a report by a committee that is chaired by Jack Ward Thomas and comprised of representatives from the Forest Service, Bureau of Land Management, Fish and Wildlife Service, and National Park Service. Part IV concludes with suggestions for reforming resource preservation and management statutes. In Part V, the Article concludes that what is needed is a greater delineation of and reliance upon an environmental ethic. We ought to be able to protect old-growth forests because of their inherent worth and ecological value, not merely because they provide living space for northern spotted owls and pacific yews.[14]

II. A LOOK BACK AT THE HISTORY OF THE OWL/OLD-GROWTH CONTROVERSY, OR "HOW THE BATTLE WAS JOINED"

> It's a war out there in the greatest temperate rain forest in the world, and it is no mere metaphor that clear-cuts look like battlefields.[15]

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[12] *See* 16 U.S.C. § 1533(a)(3)(A).

[13] THOMAS REPORT, *supra* note 1.

[14] In fact, § 1539(a)(1)(B) and § 1539(a)(2)(A) of the Endangered Species Act (ESA or Act) may provide the genesis for a model of ecosystemic decisionmaking. *See id.* § 1539(a)(1)(B), (a)(2)(A). These sections are specifically tailored for private actions that affect endangered species. *See id.*

[15] Findley, *Will We Save Our Own*, NAT'L GEOGRAPHIC, Sept. 1990, at 106, 112.

A. How the Forests Were Lost

As early as 1976 a Bureau of Land Management (BLM) biologist warned that the northern spotted owl might have to be placed on the Endangered Species List unless forest management practices on federal lands were revised.[16] The dispute over the owl has simmered for more than fifteen years,[17] and no party to the controversy is blameless in the failure to achieve a resolution. "Efforts to find a solution were thwarted by the power of the timber industry, the bungling and inertia of the federal bureaucracy and the stridency of an environmental movement as quick to alienate as to persuade."[18] And yet, the roots of the current old-growth crisis are at least half a century deep.[19]

According to the *Thomas Report*, although suitable owl habitat has been in decline since the mid-1800s, most of the reduction has occurred in the past fifty years.[20] The interagency committee that authored the *Thomas Report* estimates that old-growth forest acreage has declined from 17.5 million acres in 1800 to about 7 million acres today, a decline of sixty percent.[21] This figure may be misleading. In a special six-part series on the old-growth controversy, *The Oregonian* reports that remaining old-growth is only twelve to fifteen percent of what existed in 1800, and according to a Wilderness Society study, only 2.3 million acres remain west of the Cascades in Oregon and Washington.[22] According to the FWS, at least three recent studies report a decline of eighty-three percent to eighty-eight percent in historical owl habitat.[23] Whatever the exact amount of forest habitat remaining, it is clear that the reduction has severely affected the ability of the owl to survive.

Public forests did not begin to be logged in significant amounts until after World War II.[24] Following the war, with the end of old-growth on private lands in sight, timber operators turned to the public lands to supply the needs of the post-war boom.[25] Beginning

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[16] Gup, *Owl vs. Man*, TIME June 25, 1990, at 56, 63.

[17] *Id.*

[18] *Id.*

[19] Durbin & Koberstein, *Northwest Forests: Day of Reckoning*, Oregonian, Sept. 16, 1990, at A1, col. 1, A26, col. 1 (first part of six-part series) [hereinafter *Day of Reckoning Part I*].

[20] THOMAS REPORT, *supra* note 2, at 20.

[21] *Id.*

[22] *Day of Reckoning Part I*, *supra* note 19, at A26, col. 5.

[23] Final Rule, *supra* note 4, at 26, 175.

[24] *Day of Reckoning Part I*, *supra* note 19, at A26, col. 2.

[25] *Id.*

in the 1950s, and accelerating through the 1960s, 1970s, and 1980s, the cutting of public timber continued unabated until 1987 to 1989, when a record twenty billion board feet of timber were logged from federally managed forests in Oregon and Washington.[26]

Virtually all old-growth on private lands has been logged.[27] What remains of the owl's habitat is located almost exclusively on federal lands. According to the *Thomas Report*, seventy-four percent of that habitat is managed by the United States Forest Service (USFS), twelve percent by the BLM, and all of it is subject to logging.[28] Small amounts of old-growth remain in state forests and on Indian lands, also subject to logging, while the remaining eight percent of suitable owl habitat is managed by the National Park Service (NPS).[29] According to the Interagency Scientific Committee, current management policies in Oregon and Washington national forests, which allow 71,000 acres of old-growth to be cut each year, cannot continue if the owl is to survive.[30]

B. Discovery of the Owl

The official history of concern for the owl is more recent than the interest in boosting timber production.[31] Beginning in the 1960s the northern spotted owl was the subject of various studies.[32] In 1972, researchers at Oregon State University first relayed to state officials at the Oregon Department of Fish and Wildlife (ODFW) and federal officials at the FWS, the USFS, and the BLM concern over the issue of sufficient habitat to support the owl.[33] Federal studies of owl populations in northern California were conducted in 1973 to 1974.[34] While passage of the Endangered Species Act in 1973 had no appreciable impact on forest management policy, a national reference list of possible species for listing under the Act included the owl.[35]

The Oregon Endangered Species Task Force (OESTF), established in 1973, was the first interagency task force to address en-

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[26] *Id.* at A26, col. 5.

[27] *Id.* at A26, col. 4.

[28] THOMAS REPORT, *supra* note 2, at 14–15.

[29] *Id.* at 15–16.

[30] *Id.* at 1, 14. This average results in a supply of approximately five billion board feet of timber each year. Gup, *supra* note 16, at 59.

[31] *See Day of Reckoning Part I*, *supra* note 19, at A27, col. 2.

[32] *See* THOMAS REPORT, *supra* note 2, at 51.

[33] *Id.*

[34] *Id.*

[35] *Id.* at 51–52.

dangered species management, and it soon proposed that priority be given to managing old-growth dependent species, especially the spotted owl.[36] As USFS biologist Eric Forsman, the author of the earliest owl study in 1968, and others note, concerted action should have been taken in the mid-1970s to wean the timber industry from its dependence on old-growth by gradually reducing harvest levels.[37] Instead, federal agencies stalled for time, requesting additional studies.[38] As the *Thomas Report* documents, both the USFS regional office and BLM state office rejected interim regulations to protect the owl proposed by the OESTF.[39] The studies continued, and the regional USFS and state BLM offices finally agreed to a plan for interim protection of owl habitat that excluded existing timber sales contracts in 1977.[40] The effectiveness of this plan and other early efforts to protect owl habitat will be discussed in the next section.

The first regional interagency organization, the Oregon-Washington Interagency Wildlife Committee (OWIWC) was established in 1978, and one of its first acts was to replace the OESTF with the Spotted Owl Subcommittee.[41] Public and private studies of the owl proliferated in the late 1970s and early 1980s, as did reviews of timber management plans by the USFS and the BLM in Oregon, Washington, and northern California.[42] The first USFS guidelines for management of owl habitat in northern California, modeled on earlier efforts in Oregon, were formulated in 1981 and implemented in 1982.[43]

Reviews, studies, and evaluations continued without much substantive effect in the early and mid-1980s. The first owl status review pursuant to ESA guidelines was conducted in 1981, but concluded that, although the owl was "vulnerable" due to declines in old-growth habitat, the species did not meet requirements for listing under the Act.[44] Although the owl was not listed as "endangered" under Washington state law or as "threatened" under Oregon law until 1988, the BLM was constrained in the years 1982 and 1983 to revise logging plans in Oregon.[45] For the most part, however, federal agen-

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[36] *Id.*
[37] Gup, *supra* note 16, at 63.
[38] *Id.*
[39] THOMAS REPORT, *supra* note 2, at 52.
[40] *Id.*
[41] *Id.* at 53.
[42] *Id.*
[43] *Id.*
[44] *Id.* at 54.
[45] *Id.*

cies were slow to respond to state recommendations with substantive action.[46] As late as 1986 and 1987, the BLM conducted a state-wide environmental assessment of the spotted owl in Oregon, but concluded that no new information warranted preparation of a supplemental environmental impact statement (EIS) for existing timber management plans[47] under the National Environmental Policy Act (NEPA).[48]

The battle of scientific experts and competing ideologies of forest management expanded in the 1980s to include national environmental groups, like the National Audubon Society, and private industry researchers.[49] As timber harvests increased in volume and accelerated in pace due to congressional action by influential legislators,[50] legal efforts to protect the owl also heated up. In January 1987, Greenworld, a Massachusetts environmental group, petitioned the Department of the Interior (DOI) through the FWS to list the spotted owl as an endangered species.[51] On July 23, 1987, the FWS accepted the petition "as presenting substantial information indicating that listing might be warranted [under the ESA] and initiated a status review."[52] Shortly thereafter on August 4, 1987, a second petition submitted by the Sierra Club Legal Defense Fund (SCLDF) on behalf of twenty-nine local, regional, and national conservation organizations, requested that the northern spotted owl be listed as "endangered" in Washington's Olympic Penninsula and Oregon's Coastal Range and as "threatened" throughout the remainder of the owl's range in Oregon, Washington, and California.[53]

On December 23, 1987, the Region I FWS Director rejected both petitions on the basis that additional study was needed to develop population trend information and other biological data.[54] In May 1988, the Sierra Club Legal Defense Fund and twenty-two other conservation groups filed suit. In November of that year, the Federal District Court for the Western District of Washington concluded that the FWS finding was arbitrary and capricious and remanded

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[46] *See id.* at 55. For example, the Oregon Department of Fish and Wildlife recommended in 1985 that the BLM establish additional spotted owl habitat areas, but the BLM failed to act on the request for two years. *Id.*

[47] *Id.* at 55.

[48] 42 U.S.C.A. §§ 4321–4370b (West 1977 & Supp. 1990).

[49] THOMAS REPORT, *supra* note 2, at 55.

[50] *Day of Reckoning Part I*, *supra* note 19, at A27, col. 2.

[51] Final Rule, *supra* note 4, at 26,118.

[52] *Id.*

[53] *Id.*

[54] *Id.*

the matter to the FWS for further review.[55] Concurrently with these legal proceedings, Washington listed the owl as "endangered," and Oregon listed it as "threatened."[56] Additionally, in April 1988, the Regional Interagency Spotted Owl Subcommittee proposed, for the first time, a comprehensive management plan for the owl's range in Washington, Oregon, and California.[57] In late 1988, the USFS issued a supplemental EIS directing the region's national forests to establish a network of Spotted Owl Habitat Areas (SOHA), which set aside significant, although ultimately judged insufficient, acreage to protect spotted owl pairs.[58]

Clearly, the issue of protection for the owl was coming to a head. The timber industry, environmentalists, state and federal agencies, and Congress all were moving at once. Unfortunately, this movement looked like a square dance without a caller. Timber purchasers and environmentalists filed numerous lawsuits between October 1986 and October 1990, to move timber sales forward,[59] halt USFS and BLM timber sales,[60] to compel listing of the owl under the ESA,[61] and to declare an act of Congress unconstitutional.[62]

As a result of one of those lawsuits,[63] the FWS reevaluated its data and decided to list the owl as "threatened" throughout its range.[64] As a result of another, *Seattle Audubon Society v. Robertson*,[65] Congress's attempt to move timber sales forward and bypass judicial review of USFS and BLM action was declared unconstitutional in two consolidated cases before the Court of Appeals for the Ninth Circuit.[66]

Meanwhile, the genesis of the Interagency Scientific Committee that resulted in the issuance of the *Thomas Report*, took place when the heads of the USFS, the BLM, the FWS, and the NPS signed a new interagency agreement.[67] The Committee was established for-

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[55] Northern Spotted Owl v. Hodel, 716 F. Supp. 479, 483 (W.D. Wash. 1988).

[56] THOMAS REPORT, *supra* note 2, at 56.

[57] *Id.*

[58] *Id.* at 57.

[59] Gifford Pinchot Alliance v. Butruille, 742 F. Supp. 1077 (D. Or. 1990).

[60] *E.g.*, Portland Audubon Soc'y v. Lujan, 884 F.2d 1233 (9th Cir. 1989), *cert. denied*, 110 S. Ct. 1470 (1990).

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

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

[63] *Northern Spotted Owl*, 716 F. Supp. at 479.

[64] *See* THOMAS REPORT, *supra* note 2, at 56.

[65] *Seattle Audubon Soc'y*, 914 F.2d at 1311; *see also* Blumm, *Ancient Forests, Spotted Owls, and Modern Public Land Law*, 18 B.C. ENVTL. AFF. L. REV. 605, 614–16 (1991).

[66] Seattle Audubon Soc'y, 914 F.2d at 1316–17.

[67] THOMAS REPORT, *supra* note 2, at 57.

mally in October 1989, to create an ecologically reliable conservation strategy for the northern spotted owl,[68] ten months after the FWS reopened its initial decision not to list the owl under the ESA.[69]

The FWS listed the owl as a threatened species effective July 23, 1990.[70] But that is not nearly the end of the story. Now the USFS and BLM must determine whether to implement the management plan contained in the *Thomas Report*. Moreover, the issue may find its way back to the Halls of Congress as it did when Oregon Senator Robert Packwood's amendment to the ESA, offered as a rider to the 1991 Department of the Interior appropriations bill, was defeated.[71] And finally, the owl now has flown into the Oval Office, where a Presidential Task Force not only has issued a report somewhat at odds with the *Thomas Report* strategy for preserving owl habitat, but also has called for legislative action to consider an exemption under the ESA.[72]

C. What the Scientists Found

> The keystone of western civilization is the assumption of absolute truth. Our theologies, philosophies, science, and law, among other endeavours, require for their existence if not the tangible presence then the certain promise of unequivocally true answers. . . . The unavailability of proof and thus of ultimate truth is a severe limitation to any conservation argument, but nowhere is it quite so bothersome as it is in the sorry burlesque that is 'environmental impact assessment' from the ecologic point of view.[73]
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> The Status Review and the Finding to the listing petition offer little insight into how the Service found that the owl currently had a viable population . . . , it fails to provide any analysis.[74]

What is old-growth? What functions does it serve for wildlife and humans alike? How much do we need to preserve the viability of old-growth dependent species like the northern spotted owl (or pacific yew)? Are owls and other wildlife species really dependent on old-growth? These are the questions federal, state, public-interest,

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[68] *Id.*

[69] *Id.* at 56.

[70] Final Rule, *supra* note 4, at 26,114.

[71] 136 CONG. REC. S16,775, S16,804 (daily ed. Oct. 23, 1990) (amendment no. 3112). Senator Packwood's amendment to circumvent the ESA's legislative scheme and congressionally convene the ESA committee was tabled by a vote of 62 to 31. *Id.* at S16,804.

[72] Lancaster, *Panel Unveils Plan to Save Owl*, Boston Globe, Sept. 22, 1990, at 1, col. 1.

[73] J. LIVINGSTONE, THE FALLACY OF WILDLIFE CONSERVATION 64–65 (1981).

[74] Northern Spotted Owl v. Hodel, 716 F. Supp. 479, 482 (W.D. Wash. 1988).

and private scientists have tried to answer. This section of the Article examines how the "scientific truth" of the owl—its numbers, habits, and needs, including its dependence upon old-growth habitat for its continued existence—was established. The section provides first a general characterization of old-growth forests, followed by a description of the findings of the United States Fish and Wildlife Service in its determination to list the northern spotted owl as a threatened species.

1. A Definition of Old-Growth

Adoption of a universal definition of old-growth is difficult. The most concise definition—an area "of at least eight 200-year-old trees an acre, with appropriate numbers of snags and downed logs and undercanopies of shade-tolerant growth"[75]—tells little about the functions of ancient forest ecosystems. The hallmark of old-growth forests, though, is biodiversity[76]—diversity of habitat types, diversity of ecological functions, and diversity of species. For example, biologists have found "at least 116 vertebrates at home in an old-growth stand, and more than 40 species may need such a habitat to survive."[77]

Old-growth forests provide a multitude of ecosystemic services upon which humans and wildlife alike depend. The multilayered forest canopy provides a vital link between the ecosystem and the atmosphere, producing oxygen and trapping dust and other particles.[78] As noted, from top to bottom, standing trees provide habitat for a variety of species, including birds, deer, and rodents.[79] Once dead and downed, these same trees serve as nesting sites for other wildlife and support an immense life colony of insects and fungi; the insects and fungi, in turn, serve as food and recycle soil nutrients.[80] When these same downed logs rot in streams, they create pools for fish, retard erosion, and enrich fisheries by providing breeding areas for aquatic insects.[81] The fallen logs and needles decompose and nurture the soils for shrubs and small trees while the root structures brace the soil against landslide erosion.[82] Additionally, old-growth

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[75] Findley, *supra* note 15, at 128.
[76] Gup, *supra* note 16, at 59.
[77] *Deadwood Metropolis*, NAT'L GEOGRAPHIC, Sept. 1990, at 119.
[78] Gup, *supra* note 16, at 62.
[79] *Id.*
[80] *See Deadwood Metropolis*, *supra* note 77, at 119.
[81] *Id.*
[82] Gup, *supra* note 16, at 62.

serves as a giant filtration system providing humans with clean water and maintaining water quality for fish spawning grounds.[83]

To summarize, according to Dr. Jerry Franklin, Chief Plant Ecologist for the USFS and Bloedel Professor of Ecosystem Analysis at the University of Washington, "old-growth forests typically contrast with early successional stages in composition, structure, and function."[84] Old-growth forests usually have trees over two hundred years old, have a highly diverse genetic content, and provide essential habitat for thousands of vertebrate and invertebrate species, including the northern spotted owl.[85] As Professor Franklin points out, the "functional differences between old-growth and younger forests are often qualitative rather than quantitative . . ., [but old-growth typically is more] effective at regulating water flows and reducing nutrient losses."[86]

The structural aspects of old-growth forest provide the most profound contrast with early successional stage and second growth forests: they have a greater range of tree sizes and conditions and, generally, a more heterogeneous forest understory than younger tree stands.[87] Large live trees, standing dead trees (snags), and fallen logs are the distinguishing structural features of old-growth forests.[88] Most importantly, these structural features "are often the key to the unique compositional and functional attributes of the forest, such as habitat for the northern spotted owl and its prey."[89]

2. To List or Not to List—The Findings of the Fish and Wildlife Service

In *Northern Spotted Owl v. Hodel*[90] the court concluded that the FWS refusal to list the owl as "endangered" or "threatened" lacked scientific credibility.[91] Moreover, the court noted that all the expert opinion was entirely contrary to the FWS's conclusion that the owl was not in jeopardy.[92] In fact, all of the population biology experts

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[83] *Id.*

[84] Franklin, *Structural and Functional Diversity in Temperate Forests*, in BIODIVERSITY 166, 167 (E.O. Wilson ed. 1988).

[85] *Id.*

[86] *Id.* at 167–68.

[87] *Id.* at 169.

[88] *Id.*

[89] *Id.*

[90] 716 F. Supp. 479 (W.D. Wash. 1988).

[91] *See id.* at 482.

[92] *Id.*

relied upon, some employed by the FWS and some independent, concluded that the owl was at risk of extinction.[93] As noted by the court, this extinction would occur from continued logging in old-growth forests.[94] Therefore, the court held that the decision not to list the owl under the ESA was arbitrary, capricious, and contrary to law. The court remanded the listing petition to the FWS to provide an analysis of its decision.[95] Later, the United States General Accounting Office determined that, under political pressure, "Fish and Wildlife officials had rewritten portions of a major study, expunging critical references suggesting that the owl was endangered."[96]

In response to the *Northern Spotted Owl* decision, the FWS Director in December 1988 established a new status review team of twelve Service biologists, which concluded that "considerable new information" was available. Therefore, with the court's permission the Director reopened the status review administrative record.[97] On April 25, five days prior to a court-imposed deadline, the Region I FWS Director issued a revised finding that proposed to list the owl as "threatened" throughout its range.[98] The proposal to list the owl as a threatened species was published on June 23, 1989,[99] and a year later on June 26, 1990, the final rule and supportive findings were published, listing the owl as a threatened species effective July 23, 1990.[100]

In brief, the FWS determined that the northern spotted owl is a threatened species under the ESA throughout its range, from southwestern British Columbia, through western Washington and Oregon, into the Coast Range of northern California.[101] The FWS further determined that the northern spotted owl occurs primarily in old-growth and mature forest habitats and that the principal cause for declining populations is the "loss and adverse modification of suitable habitat as a result of timber harvesting."[102] These findings parallel and, in fact, rely substantially upon those in the *Thomas Report*, as well as other studies.[103]

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[93] *Id.* at 482–83.
[94] *Id.* at 482.
[95] *Id.* at 483.
[96] Gup, *supra* note 16, at 63.
[97] Final Rule, *supra* note 4, at 26,118.
[98] *See id.*
[99] 54 Fed. Reg. 26,666 (1989) (proposed June 23, 1989).
[100] Final Rule, *supra* note 4, at 26,114.
[101] *Id.*
[102] *Id.*
[103] *See, e.g., id.* at 26,115–18, 26,175–92.

The FWS determined that spotted owl habitat had declined at least sixty percent and possibly as much as eighty-eight percent, to the point where more than ninety percent of the remaining habitat occurs on federal lands.[104] The primary cause of the loss since 1960 is conversion of multispecies forests to mono-culture "tree farms" due to timber harvesting in the lower ranges of the Pacific Northwest Coast Ranges, as well some loss to natural causes, such as forest fires.[105] Most critically, the FWS found that, if present harvesting trends continued unchecked, the remaining unprotected owl habitat would disappear completely in twenty to thirty years.[106] The FWS noted that clear-cutting,[107] which results in even-aged stands of trees in second-growth forests, as opposed to multistory canopies in old-growth forests, is the preferred logging method in more than ninety percent of the owl's range.[108] Thus, given current management practices, which rely on cutting rotations of 70 to 120 years and produce significant habitat fragmentation, the FWS found that it is highly unlikely that any old-growth lost today will ever flourish again in these ranges.[109]

As the *Thomas Report* noted, the USFS had designated the owl as an old-growth "indicator species," a species whose rise or fall in population mirrors the health of all the plant and animal species in that ecosystem type.[110] Thus, it was no surprise that the FWS determined that "[n]orthern spotted owl abundance and productivity decreased steadily as the amount of older forest decreased."[111]

The loss in volume of habitat is critical. Just as critical, however, is the distribution of remaining habitat. As a result of past and present harvest patterns, remaining old-growth has been fragmented, that is, separated in distance to such a degree that the potential isolation of many subpopulations of spotted owls is of spe-

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[104] *Id.* at 26,175.

[105] *Id.*

[106] *Id.* Some unprotected habitat could disappear within 10 years. *Id.*

[107] THOMAS REPORT, *supra* note 2, app. S, at 368 (definition of "clear-cut" and "even-aged management with reserved trees").

[108] Final Rule, *supra* note 4, at 26,177.

[109] *See id.*

[110] THOMAS REPORT, *supra* note 2, app. C, at 60. The committee did not go so far as to label the owl a "keystone" species, i.e., one whose removal from an ecosystem produces profound and immediate adverse affects on the ecosystem. *See id.*, app. N, at 175. The Committee, however, did state that the owl's role "as a predator of numerous small mammals makes it an apt example of [a species whose loss] might well compromise ecosystem integrity and affect the population dynamics of co-occurring species." *Id.*

[111] Final Rule, *supra* note 4, at 26,177.

cial concern.[112] According to the FWS, fragmentation induced by timber harvest may adversely affect the owl's chance of survival in a number of ways: by directly reducing key roosting, nesting, or feeding stands; by indirectly reducing survival rates of dispersing juvenile owls; by potentially increasing competition or predation; by reducing population densities and interaction; as well as by producing harmful genetic consequences for the entire population.[113]

With respect to the number of owls remaining, the FWS determined that "[a]lthough the actual numbers of owl sites and pairs [of owls][114] on all lands is not precisely known, recent surveys (1988–1989) indicate that there are about two thousand known pairs of northern spotted owls within the present range of the subspecies, although three thousand to four thousand pairs are suspected."[115] Approximately ninety percent of all known owls and owl nesting sites are on federally managed lands.[116] Moreover, while the number of known owls has increased over twenty years of study, the FWS determined that this "increase" was due to an increase in, and improvement of, surveys rather than any indication of an upswing in population trends.[117]

Territory is critical for spotted owls. The FWS found that adult owls maintain a year-round territory though they may shift "home ranges" between breeding and non-breeding seasons.[118] Most importantly, regarding the type of preferred territory, the FWS determined, on the basis of a number of studies, that the spotted owl is dependent on old-growth forests for its continued survival.[119]

FWS biologists found that owl habitat is most commonly associated with old-growth forests or mixed stands of old-growth and mature trees, which do not acquire the functional and structural attributes to support spotted owls until the trees reach 150 to 200 years of age.[120] Vegetational and structural components are more critical than the mere age of the forest. These features include: a multilayered, multispecies canopy dominated by large trees; high

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[112] *Id.* at 26,182.

[113] *Id.* at 26,183.

[114] The data regarding owl population is reported in terms of owl pairs because the biological evidence indicates that these long-lived birds are monogamous and tend to mate for life. *Id.* at 26,114.

[115] *Id.* at 26,183–84.

[116] *Id.* at 26,184.

[117] *Id.*

[118] *Id.* at 26,114.

[119] *Id.* at 26,116–18.

[120] *Id.* at 26,116.

canopy closure; a high incidence of large trees with deformities and other evidence of decadence, such as broken tops, cavities, and snags; large amounts of downed and decomposing trees and other forest debris; and open space below the trees for owls to fly.[121] Further, while some of these attributes occur in younger and mixed forests, nests and owl roosting sites were found to be located almost exclusively in old-growth stands.[122] As the Interagency Scientific Committee noted, the one exception to this general pattern of owl preference for forest habitat 150 years old or older occurs in the California Redwoods.[123] However, the Committee also concluded that this exception is due to a unique set of climatological and ecological conditions, including abundant prey, which foster the structural attributes that allow the forest to support owl breeding, nesting, and roosting sites within 80 to 100 years, rather than in 150 to 200 years.[124] The *Thomas Report* cautions, though, that these unique conditions occur only in seven percent of the owl's range, and that it therefore should not be assumed that these conditions will occur elsewhere in Oregon or Washington.[125] FWS findings and conclusions mirror this data.[126]

Current USFS and BLM management practices that set aside Spotted Owl Habitat Areas (SOHA) where logging is restricted have been seriously criticized. When the BLM failed to adopt the recommendations of the Interagency Scientific Committee because they would result in a sixty-percent reduction in timber sales, the Committee Chair, Dr. Jack Ward Thomas, wrote to the BLM's Northwest Regional Director that its alternative plan "lacked a scientific basis" and failed to analyze how continued logging would affect owl population viability.[127]

The principal criticisms of the current USFS/BLM SOHA network include: inadequate SOHA size and failure to designate acreage on some lands; lack of existing owls in some SOHAs; SOHA isolation and fragmentation; adjacent logging on private, state, and federal lands; and lack of SOHA contiguity with other federal lands.[128] Ac-

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[121] *Id.*

[122] *Id.*

[123] THOMAS REPORT, *supra* note 2, at 19.

[124] *Id.*

[125] *See id.*

[126] Final Rule, *supra* note 4, at 26,116–18.

[127] Durbin, *BLM Mandate Collides with Owl*, Oregonian, Sept. 18, 1990, at A14, col. 4.

[128] Final Rule, *supra* note 4, at 26,190; THOMAS REPORT, *supra* note 2, at 17–19, app. C, at 69–97.

cording to the *Thomas Report*, the large number of agencies involved in owl habitat management and the failure to coordinate plans among agencies, and even between divisions within the same agency, are major impediments to a consistent, biologically based owl management plan; these factors all contribute to a high risk of extinction.[129] Moreover, state forest agencies that regulate logging on both private and state lands have failed to respond seriously to wildlife agencies' pressing concerns for the owl. This failure, along with the state forest agencies' failure to coordinate efforts with state wildlife agencies, has exacerbated seriously the threat to the owl and other old-growth dependent wildlife species.[130]

As the FWS notes, there is no indication that current harvest practices are likely to change, or that the rate of decrease in old-growth is likely to diminish.[131] Therefore, the FWS concluded after its status review that "[e]xisting regulatory mechanisms are insufficient to protect either the northern spotted owl or its habitat."[132]

D. Humans as Part of the Ecosystem—Economic, Social, and Other Political Considerations or How the Invisible Hand Is Not

Modern humans have been a part of Northwest old-growth ecosystems for over a hundred years. Resolution of the dispute over how much old-growth to preserve for the owl and other wildlife and plant species, for ecological purposes as well as for aesthetic purposes and recreational uses, must recognize that human use and economic dependence on the forest is a crucial element in the equation. The debate over the quantity of old-growth forests we need to preserve encompasses much more than aesthetics and recreational needs.[133] Nor is it enough to consider the biological needs of wildlife or the ecological demands for preservation in isolation from other perspectives. This section of the Article describes the economic, social, and political consequences and considerations that need to be addressed "to sustain an intricate and little understood ecosystem upon which animals and plants, and yes, man too, depend."[134]

Old-growth forests provide significant direct economic benefits and products. Old-growth, which consists of stands of a variety of fir,

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[129] THOMAS REPORT, *supra* note 2, at 17–19.

[130] *See Day of Reckoning Part I*, *supra* note 19, at A27, col. 5.

[131] Final Rule, *supra* note 4, at 26,190.

[132] *Id.*

[133] Gup, *supra* note 16, at 59.

[134] *Id.*

redwood, cedar, spruce, and pine trees,[135] is an excellent source of timber products. The outermost portions of the trees yield high-grade wood free of knots while the interior wood is used in construction for supports such as joists and trusses.[136] The bark is used for fuel to generate steam electricity,[137] and the sawdust is manufactured into particle board.[138] The wood just inside the bark is chipped and made into pulp to supply an array of paper products.[139] Old-growth logs also can be peeled into veneers and made into plywood flooring, walls, and other products.[140] Other products derived from Pacific Northwest old-growth include wood for shingles, windows, and door frames; cedar for decking and fence posts; and foliage for Christmas wreaths, arrow shafts, and pencils.[141]

To highlight the economic value that the Northwest Region's national forests have for the federal government alone, it is important to understand that, although Oregon and Washington contain less than thirteen percent of all national forest land, in 1987 the region produced sixty-one percent of the nationwide system's timber revenue.[142] For the region as a whole, the figures are even more dramatic. Forest products are an eighteen billion dollar a year industry, second only to aerospace in size.[143] The industry employs 135,000 workers, widely dispersed, often in communities where timber harvesting is the only economic base.[144] In Oregon, the wood products industry is the state's largest employer, with about one-third of all state jobs directly or indirectly relating to logging, processing, transportation, and other activities.[145]

Tourism and recreational activities, such as skiing and sport fishing, provide significant revenue for the states in the Pacific Northwest. To date, "no one has seriously studied the dollar benefits of not cutting down the remaining old-growth forests . . . . But undeniably, mature forests are the backdrop for a tourist industry that brings six billion dollars a year into Washington and Oregon."[146]

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[135] *See Day of Reckoning Part I*, *supra* note 19, at A27, col. 1.

[136] Gup, *supra* note 16, at 62.

[137] *Id.*

[138] *Id.*

[139] *Id.*

[140] *Id.*

[141] *Day of Reckoning Part I*, *supra* note 19, at A27, col. 1.

[142] Williams, *Timber: Trouble in the Colonies*, PAC. NORTHWEST, Dec. 1988, at 48.

[143] *Id.*

[144] *Id.*

[145] Lonsdale, *Can Both Old-Growth Trees, Timber Industry Be Saved?* Oregonian, Apr. 26, 1988, at B11.

[146] Williams, *Timber: Our Vanishing Forests*, PAC. NORTHWEST, Jan. 1989, at 38, 39.

Though no one has completed a study of the economic value of the ecological services these forests provide, as with benefits from recreation and tourism, these benefits are real.[147] What is known is that clear-cut logging of old-growth threatens anadromous fish runs throughout the region[148] and may have serious consequences for regional ecosystems and their functions—from providing clean water[149] to controlling the climate.[150]

It is, however, neither the potential loss of federal revenue[151] nor the need to protect recreational amenities or ecological services that has driven the political protection of the old-growth dependent forest products industry. Rather, what has driven the region's politicians is the potential impact that the proposed reduction in timber harvesting[152] will have on many rural communities, including loss of jobs and loss of direct revenues that support city and county governments.[153]

Estimates of direct timber job losses range from a low of ten thousand by the Bush administration,[154] to thirteen thousand in Oregon, Washington, and California by the year 2000,[155] to eighteen thousand in Oregon and Washington alone as predicted by the Northwest Forestry Association,[156] to the twenty-five thousand estimated by the USFS and the BLM,[157] to a high of thirty thousand as a result of mill closings and cutbacks over the next decade.[158] Environmentalists, economists, and others counter that, even without old-growth protection measures, the number of timber jobs has been in decline over the last ten to fifteen years as a result of recessions, mill

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[147] *Id.*

[148] Koberstein, *Northwest Forests: Day of Reckoning—Logging That Buries Rivers Threatens Fish*, Oregonian, Sept. 19, 1990, at A1, col. 1 (fourth part of six-part series).

[149] Durbin, *Watershed Logging Ignites Fight over Clean Rivers*, Oregonian, Sept. 19, 1990, at A14, col. 1.

[150] Williams, *supra* note 146, at 39, 70.

[151] Loss of revenue is estimated to be 229 million dollars each year for the next decade. Gup, *supra* note 16, at 57. The conservation plan proposed by the Interagency Scientific Committee would withdraw three million acres of federal land from logging. Durbin, *Timber Towns in NW Brace for Owl Ruling*, Oregonian, June 17, 1990, at A1, col. 5, A19, col. 2.

[152] Durbin, *supra* note 151, at A1, cols. 5–6.

[153] *See* Sample & O'Toole, *At Issue: What's Really Driving National Forest Management?*, AM. FORESTS, Jan.–Feb. 1989, at 58, 68 (segment authored by A. Sample).

[154] Lancaster, *supra* note 72, at 7, col. 3.

[155] Durbin, *supra* note 151, at A19, col. 2.

[156] Ota, *Timber Jobs Face Decline, GAO Says*, Oregonian, Apr. 18, 1990, at B1, col. 6.

[157] Ulrich, *Assistance Plan Could Help Displaced Timber Workers*, Oregonian, May 30, 1990, at D3, col. 2.

[158] Gup, *supra* note 16, at 57.

modernizations, timber shortages, export of raw logs, and cutbacks in domestic finishing and manufacturing operations.[159]

For example, a new study by the General Accounting Office estimates that even without further restrictions on old-growth harvesting, one in four timber jobs will be lost as a result of mill modernization.[160] According to another report, the timber cut in the Northwest over the five-year period ending in December 1988 increased forty percent while employment per board feet cut declined by thirty-three percent due to increased efficiency and a shift to a more extractive export-based industry.[161] Moreover, timber analysts argue that a shift in the economic management of private forests from agricultural/resource management policies to corporate commodity asset management techniques has added incentive for logging practices that provide quick profits. Profits from these exports exceed annual revenues available from sustained-yield forestry.[162]

The picture that the conflicting data, concerns, and perspectives leave of the region's employment trends is as muddy as some of the region's silted streams. Clearer, however, is the impact of timber withdrawals on Northwest logging communities, and the importance to influential Northwest legislators of protecting those communities.

As one commentator notes, creating and maintaining timber jobs in congressional districts is important, "[b]ut to a much greater extent, higher timber harvests on the National Forests are simply a means to another end—federal revenue sharing with local governments."[163] For example, in Skamania County in southwest Washington, while three-fourths of the county's nineteen hundred jobs depend on public forest resources, forty-six percent of the county's total revenue is a result of the federally directed return of twenty-five percent of the total timber revenue.[164] Additionally, the local school system also receives millions of dollars.[165]

Skamania County is not alone. In some Northwest counties, timber revenues account for nearly two-thirds of annual budgets.[166] In

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[159] *Id.* at 61.

[160] Ota, *supra* note 156, at B1, col. 6.

[161] Williams, *supra* note 142, at 79. Oregon and Washington combined exported nearly 3.7 billion board feet of timber in 1987, and export was predicted to rise to over four billion board feet in 1989. *Id.* Export is attractive because the Japanese, for example, have been willing to pay 5% to 10% more for unfinished timber than United States purchasers. *Id.*

[162] *See* Williams, *supra* note 146, at 71.

[163] Sample & O'Toole, *supra* note 153, at 68 (segment authored by A. Sample).

[164] Findley, *supra* note 15, at 127.

[165] *Id.*

[166] Sample & O'Toole, *supra* note 153, at 68.

many cases, local governments are sacrificing stability and long-term timber production for a short-term quick fix. Relying on a single industry rather than diversifying economic bases has placed local governments in a precarious position and forced Congress to act continually to increase the allowable harvest, bringing closer the day when the resource is exhausted.[167]

And to be sure, Congress and the executive branch in the Reagan-Bush era have responded to support the Northwest forest product industry. In response to successful lawsuits,[168] Representative Les Aucoin (D. Or.) and Senator Mark Hatfield (R. Or.) sponsored legislation effectively ending court-imposed injunctions that temporarily had halted harvesting.[169] Earlier, when Congress passed the National Forest Management Act[170] in 1976, Senator Hatfield, a cosponsor of the legislation, successfully pressed for an amendment to allow the USFS to exceed sustained-yield timber sales, in order to close a timber supply gap on private lands with public timber.[171] Moreover, throughout the 1980s, Congress, propelled chiefly by Representative Aucoin and Senator Hatfield, consistently added to appropriation measures riders that had the effect of boosting USFS-proposed logging levels by well over a billion board feet.[172]

Throughout the decade, the executive branch, under the auspices of the Department of Agriculture and the USFS, "operating on old plans and outdated inventories, justified the level of cutting with a blizzard of calculations that obscured what has now become evident: The forests could not sustain the level of logging that occurred . . .

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[167] *Id.* at 68–69. As the authors note, congressional appropriations for the timber portion of the total USFS budget has risen from 65% in 1974 to over 80% a decade later, despite increasing demand on the USFS for wildlife and recreation enhancement programs. The result, in part, is increased emphasis on harvest, not only to provide county governments with revenue, but also to generate funds that the USFS can retain for non-timber-related projects. *Id.* at 65–68.

Another critic notes that wildlife and water quality programs have received only two to three percent of the total USFS appropriation over the last two decades, or almost 10 times less than that of timber programs. Wolf, *Promises to Keep*, ENVTL. F., July–Aug. 1990, at 12–13.

[168] Northern Spotted Owl v. Hodel, 716 F. Supp. 479 (W.D. Wash. 1988); National Wildlife Fed'n v. United States Forest Serv., 592 F. Supp. 931 (D. Or. 1984), *appeal dismissed*, 801 F.2d 360 (9th Cir. 1986).

[169] Durbin, *Northwest Forests: Day of Reckoning—Politics Helped Delay Timber Management Plans*, Oregonian, Sept. 18, 1990, at A12, col. 1, A15, col. 6 (third part of six-part series) [hereinafter *Day of Reckoning Part III*].

[170] 16 U.S.C. §§ 1600–1687 (1988).

[171] *Day of Reckoning Part III*, *supra* note 169, at A15, col. 6.

[172] *Id.*

without severe environmental impacts."[173] In 1983, for example, Assistant Secretary of Agriculture for Natural Resources, John B. Crowell, Jr. ordered new management plans after seeing early projections that large acreage was to be removed from logging to comply with resource protection laws.[174]

Clearly, despite the warnings of the public, public interest groups, biologists, foresters, ecologists, and other scientists, politics played a major role in exacerbating the problems of old-growth loss. Rather than prepare early for the inevitable consequences of unsustainable timber harvests, most officials within state and federal governments turned a blind eye to the problem, hoping it might go away of its own accord. When it did not, and the FWS proposed listing the owl as "threatened," legislators responded typically, by considering means to avoid the prescriptions of the ESA.[175]

III. Looking for Law in All the Wrong Places

A. A Brief Review of the Endangered Species Act

In *Tennessee Valley Authority (TVA) v. Hill*[176] the United States Supreme Court called the ESA "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation."[177] More recently, the program for protection of endangered species spawned by the Act has been under investigation by the Inspector General of the United States Department of the Interior, raising criticism that the program is "so mismanaged that hundreds of threatened species face extinction without any Federal effort to save them."[178]

What accounts for the failure of the ESA's implementation to live up to the promise of its enactment? Arguably, that failure is inherent in the nature of the ESA, which is intended to protect primarily specific species, and only secondarily, the habitat upon which they depend. The Act is especially inappropriate when a controversy concerns habitat use and preservation and where parties use a particular animal, like the spotted owl, or plant, like the pacific yew, as

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[173] *Id.* at A12, col. 6.

[174] *Id.* at A15, col. 6.

[175] *See, e.g.*, 136 Cong. Rec. S16,775 (daily ed. Oct. 23, 1990) (proposed Endangered Species Act amendment by Senator Packwood).

[176] 437 U.S. 153 (1978).

[177] *Id.* at 180.

[178] Shenon, *Agency's Flaws Linked to Extinction of Endangered Species*, N.Y. Times, Oct. 18, 1990, at A18, col. 1.

the tools to achieve that goal. That is exactly the type of controversy that the owl/old-growth forest debate really is.[179] As the *Thomas Report* makes clear, the spotted owl issue is in large part a surrogate for determining where and how much old-growth will be preserved.[180]

The problem of how to protect sensitive and scarce public land resources does not lend itself to easy solutions. Federal land management statutes such as the National Forest Management Act (NFMA),[181] the Multiple-Use Sustained-Yield Act (MUSY),[182] and the Federal Land Policy and Management Act (FLPMA)[183] provide little enforceable guidance for management agencies. Moreover, NEPA, in its present form,[184] fails to address substantive environmental and resource preservation concerns. Thus, as with the spotted owl, conservation groups are forced to use a statute such as the ESA to achieve desired public goals, such as the preservation of old-growth forests. This section of the Article briefly reviews the provisions of the ESA[185]and includes an even briefer review of land management and environmental policy statutes.

In passing the ESA in 1973, Congress found that "various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation; [and that these species] . . . are of aesthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people."[186]

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[179] Representative Don Young (R. Alaska), Vice-Chairman of the House Interior and Insular Affairs Committee, has been particularly critical of this strategy. He writes that "[t]he ESA was not intended as a tool to effect regional economic development decisions." Young, *Survival of the Fittest*, ENVTL. F., July–Aug. 1990, at 34, 35. Representative Young bases his reaction on comments by a senior Sierra Club Legal Defense Fund (a principal plaintiff in the spotted owl litigation) staffer, who, at the Sixth Annual Western Public Interest Law Conference in Seattle in March 1988, said:

> The Northern Spotted Owl is the wildlife species of choice to act as a surrogate for old-growth protection, and 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 it. It's a perfect species for use as a surrogate.

Id.

[180] *See* THOMAS REPORT, *supra* note 2, at 1–2.

[181] 16 U.S.C. §§ 1600–1687 (1988).

[182] 16 U.S.C. §§ 528–531 (1988).

[183] 43 U.S.C. §§ 1701–1784 (1988).

[184] National Environmental Policy Act of 1969 (NEPA), 42 U.S.C.A. §§ 4321–4370b (West 1977 & Supp. 1990).

[185] For an in-depth review of the ESA, see D. ROHLF, THE ENDANGERED SPECIES ACT: A GUIDE TO ITS PROTECTIONS AND IMPLEMENTATION (1989).

[186] 16 U.S.C. § 1531(a)(1), (3) (1988).

The Act declared as its purposes the conservation of ecosystems upon which endangered and threatened species depend for survival and the provision of a program to conserve those species.[187]

To achieve the purposes set out in the ESA, Congress enacted a scheme for listing endangered and threatened species;[188] provided for designation of critical habitat needed to preserve the listed species;[189] required the executive branch to develop recovery plans for listed species;[190] prohibited any action carried out, funded or authorized by a federal agency that is likely to jeopardize the continued existence of a listed species, including the destruction or adverse modification of critical habitat;[191] and prohibited private actions detrimental to listed species, including the taking of such species, importing or exporting those species, or possession or delivery of listed species,[192] unless permitted in exceptional cases where incidental takings of a species will not appreciably reduce the likelihood of its survival.[193] Following the Supreme Court's decision in *TVA v. Hill*,[194] Congress added a provision to exempt federal projects from strict compliance with the Act's prohibitions when certain conditions are met.[195] To enforce ESA provisions, Congress provided for both civil penalties[196] and criminal penalties.[197] Additionally, the Act contains a citizen suit provision that grants standing to any person to compel compliance with non-discretionary duties contained in section 1533, to enjoin federal actions that violate the Act, or to enforce prohibitions of private actions enacted in section 1538.[198]

The heart and soul of the ESA is contained in the provisions for listing species and habitat,[199] the provisions that require federal agencies to consult with the FWS before proceeding with any project likely to jeopardize a listed species,[200] and the provisions that prohibit, with some exceptions, private actions detrimental to listed

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[187] *Id.* § 1531(b).
[188] *Id.* § 1533(a).
[189] *Id.* § 1533(a)(3).
[190] *Id.* § 1533(f).
[191] *Id.* § 1536(a)(2).
[192] *Id.* § 1538.
[193] *Id.* § 1539.
[194] 437 U.S. 153 (1988).
[195] *Id.* § 1536(h)(1)(A)–(B).
[196] *Id.* § 1540(a).
[197] *Id.* § 1540(b).
[198] *Id.* § 1540(g).
[199] *Id.* § 1533.
[200] *Id.* § 1536.

species.[201] The responsibility for listing endangered and threatened species,[202] in response to a petition like the one filed for the spotted owl, is vested in the Secretary of Commerce acting through the National Marine Fisheries Service (NMFS) for marine mammals, and the Secretary of the Interior acting through the FWS for all other species.[203] The determination to list a species is to be made solely on the basis of scientific evidence;[204] economic considerations do not play a role in the decision.[205]

The decision, however, to list critical habitat[206] is both more discretionary than listing of a species and subject to a weighing process that includes consideration of the economic impacts of designation.[207] The Secretary is required to list habitat concurrent with the listing of a species, but only "to the maximum extent prudent and determinable."[208] In addition to considering the economic and other relevant impacts of a habitat listing, the Secretary may exclude areas from listing if the benefits of exclusion outweigh the benefits of inclusion.[209] The only limit on this discretion is when the Secretary determines that failure to designate habitat will result in species extinction.[210] As one commentator has noted, while Congress may have intended to subscribe narrowly the discretion not to list critical habitat to those "rare circumstances" where concurrent listing of

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[201] *Id.* §§ 1538–1539.

[202] "Endangered species" means any species, excluding insects determined to be pests that pose an overriding risk to human health, that is endangered throughout all or a significant portion of its range, and includes any sub-species of wildlife or plant and any distinct population segment of any vertebrate fish or wildlife. *Id.* § 1532(6), (16). A "threatened species" is one which is likely to become endangered. *Id.* § 1532(20).

[203] *Id.* § 1533(a). Throughout the remainder of this Article, the term "Secretary" will be used to refer to the Secretary of the Interior.

[204] The Act requires the Secretary to make listing determinations solely on the basis of the best scientific and commercial data available. *Id.* § 1533(b)(1)(A).

[205] To eliminate any ambiguity in the phrase "best scientific and commercial data," Congress in 1982 added the word "solely" to ensure that science, not economics, guides the listing process. H.R. REP. NO. 567, 97th Cong., 2d Sess. 20, *reprinted in* 1982 U.S. CODE CONG. & ADMIN. NEWS 2820, 2820. Legislative history indicates that "[t]he addition of the word 'solely' is intended to remove from the process of the listing or delisting of species any factor not related to the biological status of the species."

[206] "Critical habitat" is defined as the specific areas, occupied by a species within a specified geographic area, that have the essential physical and biological features for conservation of the species and that may require special management protection; "critical habitat" includes areas outside the current geographic region if these are essential for species conservation. 16 U.S.C. § 1532(5)(A)(i)–(ii).

[207] *Id.* § 1533(2).

[208] *Id.* § 1533(a)(3)(A).

[209] *Id.* § 1533(b)(2).

[210] *Id.*

habitat would not be beneficial to species conservation, this discretion has been expanded considerably in practice.[211] Thus, in 1986 alone, concurrent habitat designation was not considered prudent in forty-one of forty-five final species listing cases.[212]

If the listing provisions and prohibitions are the heart and soul of the ESA, the consultation requirements imposed on federal agencies contained in section 1536 are the Act's brains and brawn. Section 1536 imposes a duty on all federal agencies to ensure that their actions are not likely to jeopardize the existence of an endangered or threatened species or to destroy or adversely modify critical habitat.[213] The same section mandates collection and analysis of data regarding potential effects of agency actions on listed species and habitat, and consultation with the FWS to produce the information necessary to determine the likelihood of jeopardy to a species or adverse modification of habitat.[214]

First, the Act requires federal agencies at the project planning stage to request information from the FWS about whether listed species or species proposed for listing may be present in the project area.[215] If the Secretary indicates that such species might be present, the project agency must prepare a "biological assessment" that both identifies species likely to be affected and assesses probable impacts.[216] This process is required for any agency or permit applicant who may wish to apply for an exemption from the Endangered Species Committee.[217] Moreover, agencies are precluded from making an irretrievable or irreversible commitment of resources that might foreclose reasonable and prudent alternative agency action.[218]

If the agency determines in the biological assessment that its proposed action is not likely to affect either a species or its critical habitat, the Assistant Administrator for Fisheries for the National Oceanic and Atmospheric Administration or a Regional Director of the FWS must concur in writing.[219] If the agency fails to obtain such an agreement, or if the agency's biological assessment indicates that proposed action is likely to jeopardize a protected species or ad-

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[211] D. ROHLF, *supra* note 185, at 50–51.
[212] *Id.* at 51.
[213] 16 U.S.C. § 1536(a)(2).
[214] *Id.* § 1536(a)–(c).
[215] *Id.* § 1536(c)(1).
[216] *Id.*
[217] *Id.* § 1536(c)(2).
[218] *Id.* § 1536(d).
[219] 50 C.F.R. § 402.14(b)(1) (1989).

versely affect habitat, then the Act imposes a further consultation process between the agency and the Secretary.[220]

At the conclusion of the formal consultation period, the Secretary provides a written opinion to the agency.[221] If the Secretary determines after consultation that agency action is not likely to violate the Act and specifies measures and conditions to be implemented to minimize any adverse impacts, the agency may proceed with its project.[222] If, on the other hand, jeopardy or adverse habitat modification is found to be likely, the Secretary is required to suggest reasonable and prudent alternative courses of action.[223]

The decision to proceed is the agency's, but proceeding without implementing suggested alternatives is likely to be met with a successful legal challenge.[224] The agency's other option is to seek an exemption from compliance. The complex exemption process has been described as "Congress's version of due process for a species essentially on trial for its very existence."[225] The exemption process, used very rarely,[226] requires as a prerequisite that agencies strictly comply with the consultation provisions in section 1536(a) and 1536(c), as well as with the mandate in section 1536(d) to avoid any irreversible or irretrievable commitment of resources during consultation.[227] Moreover, to grant an exemption, the Committee must determine that: there are no reasonable and prudent alternatives to the proposed action; the project's benefits clearly outweigh the benefits of other alternatives; the action is in the public interest; the action is of national or regional significance; and the Committee also must establish reasonable mitigation and enhancement measures to minimize adverse impacts on species or habitat.[228]

What appears to be a straightforward process, from submission of a petition for listing a species, to consideration of biological bases for listing, to a determination that the species should be listed with concurrent designation of habitat, to the promulgation of protective regulations and a conservation plan, is actually far more discretion-

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[220] 16 U.S.C. § 1536(a)–(b).

[221] *Id.* § 1536(b)(3)(A).

[222] *Id.* § 1536(b)(4).

[223] *Id.* § 1536(b)(3)(A).

[224] *See* Village of False Pass v. Watt, 565 F. Supp. 1123, 1163 (D. Alaska 1983), *aff'd sub nom.* Village of False Pass v. Clark, 733 F.2d 605 (9th Cir. 1984).

[225] D. ROHLF, *supra* note 185, at 135.

[226] *Id.* at 136.

[227] 16 U.S.C. § 1536(g)(3)(A).

[228] *Id.* § 1536(h)(1)(A)–(B).

ary than it appears.[229] The decision that a project will or will not adversely affect a listed species and the agency's decision to proceed are both discretionary.[230] Courts generally defer to the expert findings contained in a biological opinion.[231] Thus, when the Secretary's opinion concludes that a project is not likely to jeopardize a species, any challenge to that finding is likely to fail, unless plaintiffs are able to present conflicting evidence not considered in the record of decision.[232] Equally true, however, when the agency action fails to adopt or comply substantially with alternatives recommended by the Secretary, courts are likely to find a violation of the ESA.[233]

The discretion inherent in the listing process is even more apparent when one considers the data collected by the DOI Inspector General. The Inspector General's report criticized the effectiveness of the current program, given the extinction of thirty-four unlisted species in the last decade due to inadequate protection by the FWS.[234] The report questioned whether accomplishment of the Act's goals was even possible under the program's current structure and funding.[235] While thirty-three million dollars was allocated to the FWS for the ESA program, the report estimates a need for $4.6 billion "to carry out the law properly and to rescue hundreds of endangered species."[236] The same report also estimates that the FWS has not listed from six hundred known to three thousand probable endangered or threatened species.[237] The high-end estimate is confirmed by the FWS itself. As of March 1990, more than three thousand species were candidates for listing.[238] These findings give

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[229] *See* D. ROHLF, *supra* note 185, at 191–99.

[230] *See id.* at 193–94.

[231] *See, e.g.*, Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 983–84 (9th Cir. 1985). What distinguishes *Northern Spotted Owl* from *Jantzen* was the ability of plaintiffs to point to the FWS's own scientific record and the testimony of the agency's own experts, which contradicted the FWS decision to deny listing for the owl. *Compare* Northern Spotted Owl v. Hodel, 716 F. Supp. 479, 482 (W.D. Wash. 1988) *with Jantzen*, 760 F.2d at 983.

[232] *See, e.g.*, Stop H-3 Ass'n v. Dole, 740 F.2d 1442, 1459–60 (9th Cir. 1984), *cert. denied*, 471 U.S. 1108 (1985); Roosevelt Campobello Int'l Park Comm'n v. EPA, 684 F.2d 1041, 1048–50 (1st Cir. 1982).

[233] *See, e.g.*, Village of False Pass v. Watt, 565 F. Supp. 1123, 1163 (D. Alaska 1983), *aff'd sub nom.* Village of False Pass v. Clark, 733 F.2d 605 (9th Cir. 1984).

[234] Shenon, *supra* note 178, at A18.

[235] *Id.*

[236] *Id.*

[237] *Id.*

[238] Irvin, *When Survival Is at Stake: A Proposal for Expanding the Emergency Exception to the Sixty-Day Notice Requirement of the Endangered Species Act's Citizen Suit Provision*, 14 HARV. ENVTL. L. REV. 343, 349 (1990).

rise to the next question of whether listing the owl is an effective means of preserving the owl or its old-growth habitat.

B. The Thomas Report *Recommendations and the Failure of the FWS to Designate Critical Habitat*

The Interagency Scientific Committee's recommendations for conservation of the spotted owl can be understood best, and the likelihood of their implementation can be judged best, in the context of a proposal for critical habitat designation. In essence, the committee determined that the spotted owl is an old-growth dependent species.[239] With the exception of California coastal redwoods, which exhibit many of the functions and features of old-growth, the committee found that all of the research on owl habitat use suggests that old-growth forests are superior to other forest habitat types, that in all seasons the owls concentrate their foraging and roosting in old-growth, and that nesting and breeding occur primarily in old-growth.[240] These findings are echoed throughout the FWS decision to list the owl as a threatened species.[241]

Responding to its findings and conclusions that current management is uncoordinated and biologically unacceptable and poses a high risk that the owls would be extirpated from their range, the committee proposed a strategy significantly different from the current SOHA methodology.[242] As summarized in the FWS final rule, the *Thomas Report* conservation plan proposed establishing larger habitat blocks (Habitat Conservation Areas or HCAs), ideally containing twenty or more pairs, as opposed to the present practice of isolating pairs, distributed throughout the owls' range, and spaced closely enough to facilitate dispersal among HCAs.[243] Most importantly for the owl and most damaging to the plan's chances for implementation, the committee proposed ceasing all logging activities within HCAs,[244] discouraged road building in HCAs,[245] recommended that logging in other areas be modified to eliminate clear-cutting,[246] and recommends an ongoing monitoring and interagency coordination mechanism.[247]

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[239] *See* THOMAS REPORT, *supra* note 2, at 1–2.
[240] *Id.* at 164.
[241] *See* Final Rule, *supra* note 4, at 26,177–84.
[242] THOMAS REPORT, *supra* note 2, at 18–40.
[243] *Id.* at 28, 35, 38–39.
[244] *Id.* at 30.
[245] *Id.*
[246] *See id.* at 368.
[247] *Id.* at 36–37, 40–43.

The Interagency Committee strategy does not call for saving all old-growth.[248] Its recommendation would result in the withdrawal of nearly three million acres of federal land from logging,[249] implicitly resulting in a significant reduction from the current 3.85 billion board feet cut annually in Oregon and Washington, to approximately 2.6 billion board feet per year.[250]

Predictably, the reaction of the Bush administration is less than enthusiastic, and a Presidential Task Force has proposed a much smaller reduction to 3.2 million board feet cut annually.[251] Despite the Interagency Scientific Committee's findings and the reliance on those findings throughout its decision document, the FWS declined to list habitat concurrently with listing the owl as a threatened species.[252] Based on a lack of sufficient biological information regarding the needs of the species and on an analysis of the impact of a habitat listing decision, the FWS found that critical habitat for the northern spotted owl could not be determined at this time.[253]

The Fish and Wildlife Service's schizophrenic refusal to designate critical habitat for the owl is precisely why the ESA fails to protect any species adequately. Specifically, in the context of the owl/old-growth controversy, the ESA fails as a means to effect land management and preservation policy. Only twenty-two percent of all listed species in the United States have designated habitat, one-third of which are reserved for fish.[254] With the exception of clams and crustaceans, listed birds have the smallest amount of designated critical habitat.[255] As one commentator reports, from 1980 through 1988, the FWS declined to list habitat in 320 cases of species listings, in 317 of those because it would not be "prudent."[256]

Even though it is extremely rare for a project to be blocked by a critical habitat designation, consideration of the data reveals that

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[248] *Id.* at 34.

[249] Durbin, *supra* note 151, at A19, col. 2.

[250] Lancaster, *supra* note 72, at 7, col. 4.

[251] *Id.*

[252] Final Rule, *supra* note 4, at 26,192.

[253] *Id.* The rationale for the FWS decision escapes this reader. The *Thomas Report* is 427 pages long and completely summarizes all known biological data on the spotted owl. The FWS relies extensively on this data, replete with references to the *Thomas Report* and, in fact, relies on this data to make the claim that the owl is old-growth dependent, and this, in a "final rule" that is itself 80 pages long! *See, e.g.*, Final Rule, *supra* note 4, at 26,177–84.

[254] Salzman, *Evolution And Application of Critical Habitat Under the Endangered Species Act*, 14 HARV. ENVTL. L. REV. 311, 332 (1990).

[255] *Id.*

[256] *Id.* The percentage of habitat designation has declined steadily from 35% in 1985 to 5% in 1988. *Id.* at 338 n.111.

the provision requiring such a designation is far too discretionary.[257] The argument has been made that habitat designation is a rarity because of the tremendous influence of political, bureaucratic, and economic pressure.[258] Particularly with regard to the owl/old-growth controversy, "communities do *not* want to have the nation's wildlife jewels identified in their backyard. . . . [T]his opposition is rooted in the perception, accurate or not, that the Act's economic impact hurts localities with critical habitat areas."[259]

C. "Hard Looks"—But No Help: The Lack of Substantive Standards in Related Environmental and Resource Management Laws

Like the problems identified in the ESA, other federal statutes, including NEPA[260] and land and resource management or policy laws such as NFMA,[261] MUSY,[262] and FLPMA[263] offer little assistance in resolving the owl/old-growth preservation controversy. This failure is due either to a lack of substantive prohibitions within the legislation or to assigning too much discretion to agencies charged with implementing existing substantive directives.

Congress informed the public that its purposes for enacting the National Environmental Policy Act were: "To declare a national policy which will encourage productive and enjoyable harmony between [people] and [their] environment; [and] to promote efforts which will prevent or eliminate damage to the environment and biosphere."[264] In recognition of the "profound impact of man's activity"[265] on the environment, Congress recites that the national environmental policy is "to create and maintain conditions under which [people] and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."[266]

Had Congress backed these sentiments and goals with substance, directing the federal government as to how and when to proceed

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[257] *See id.* at 337.

[258] *Id.* at 312.

[259] *Id.* at 339; *see also* Kadera, *Workers Fear Act Will Cost Them Their Jobs*, Oregonian, June 17, 1990, at A18, col. 2 (emphasis in original).

[260] 42 U.S.C.A. §§ 4321–4370b (West 1977 & Supp. 1990).

[261] 16 U.S.C. §§ 1600–1687 (1988).

[262] 16 U.S.C. §§ 528–531 (1988).

[263] 43 U.S.C. §§ 1701–1784 (1988).

[264] 42 U.S.C. § 4321 (1988).

[265] *Id.* § 4331(a).

[266] *Id.*

with development projects and other actions having adverse impacts on the environment, NEPA truly might be characterized as setting forth the nation's environmental policy. Instead, NEPA imposes a complex reporting process that requires for every federal recommendation, report on proposed legislation, and other actions that significantly affect the quality of the environment a detailed statement assessing the environmental consequences of agency action—the environmental impact statement (EIS).[267]

It is clear, from the earliest to the most recent Supreme Court cases construing NEPA, that NEPA is essentially a procedural statute. For example, in *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*,[268] in which the issue was licensing of a nuclear power plant, the Court held that NEPA does not impose on agencies engaged in environmental rulemaking additional procedures beyond those required by the Administrative Procedures Act.[269] In a 1980 case brought to enjoin the Department of Housing and Urban Development from building a low-income housing project on a public site after the agency had rejected all alternative sites, the Court held that "once an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to insure that the agency has considered the environmental consequences; it cannot 'interject itself within the area of discretion of the executive as to the choice of the action to be taken.'"[270] And in its most recent decision, *Robertson v. Methow Valley Citizens Council*,[271] the Court held, in regard to a contested permit for operation of a ski resort on National Forest land, that, while NEPA requires discussion of adverse environmental effects in an EIS, it does not impose any substantive duty on agencies to mitigate a project's adverse environmental impacts or to include in every EIS a detailed mitigation plan.[272]

NEPA is an environmental impacts full-disclosure law, but this is a far cry from setting a substantive "national policy." Still, the disclosure of environmental risk would be beneficial if NEPA's requirements were coupled with other statutes that do contain standards for agency action. Thus, where the EIS exposed adverse

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[267] *Id.* § 4332(2)(C).

[268] 435 U.S. 519 (1978).

[269] *Id.* at 548.

[270] Stryckers Bay Neighborhood Council v. Karlen, 444 U.S. 223, 227–28 (1980) (quoting Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976)).

[271] 109 S. Ct. 1835 (1989).

[272] *Id.* at 1846–47.

consequences, other public resource laws could function to require agency mitigation, a response to adverse consequences, or, in some cases, rejection of proposed project alternatives based on substantive proscriptions contained in those laws.

In theory, land and resource management laws such as NFMA, MUSY, and FLPMA contain those substantive guidelines. In practice, they are nearly as ineffective as NEPA standing alone, because of judicial deference to "expert" agency decisions.[273]

National forest lands are managed under authority of NFMA,[274] which among other standards, includes provisions requiring multiple-use, sustained-yield management of forest resources to provide for timber, recreation, watersheds, wildlife, and fish.[275] Moreover, NFMA requires that forest management plans (1) insure that timber is harvested only when soil, slope, and watershed conditions will not be irreversibly changed; (2) protect fish habitat; and (3) use a harvesting system that is not selected primarily on economic grounds.[276] NFMA also constrains clear-cutting, limiting its use to those circumstances in which clear-cutting would optimize the objectives of the relevant land management plan.[277]

Despite these assurances, one court interpreting the provisions held that, because the NFMA planning process was still in progress, these standards were inapplicable.[278] Another court held that the standards were applicable and provided law for measuring USFS compliance with NFMA, but determined that the agency had not exceeded its discretion to manage lands for multiple uses.[279]

Similarly, in *National Wildlife Federation v. United States Forest Service*[280] the court also interpreted the Multiple-Use, Sustained-Yield Act,[281] a statute whose language another court described as "breath[ing] discretion at every pore."[282] In contrast to this description, the *National Wildlife* court held that MUSY is not entirely

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[273] *See generally* Note, *The Public Trust Doctrine–A Tool to Make Federal Administrative Agencies Increase Protection of Public Land and Its Resources*, 15 B.C. ENVTL. AFF. L. REV. 385, 416–18 (1988).

[274] 16 U.S.C. §§ 1600–1687 (1988).

[275] *Id.* § 1604(g)(3)(A).

[276] *Id.* § 1604(g)(3)(E).

[277] *Id.* § 1604(g)(3)(F)(i).

[278] Texas Comm. on Natural Resources v. Bergland, 573 F.2d 201, 210 (5th Cir.), *cert. denied* 439 U.S. 966 (1978).

[279] National Wildlife Fed'n v. United States Forest Serv., 592 F. Supp. 931, 936–38 (D. Or. 1984), *appeal dismissed* 801 F.2d 360 (9th Cir. 1986).

[280] *Id.* at 938.

[281] 16 U.S.C. §§ 528–531 (1988).

[282] Strictland v. Morton, 519 F.2d 467, 469 (9th Cir. 1975).

discretionary, that is, it contained law to apply.[283] That law, plaintiffs argued, required management of national forest resources "without impairment of the productivity of the land [including fish habitat]."[284] The court agreed, but held that, given MUSY's broad definition of "multiple-use, sustained-yield," sufficient discretion was given to the USFS to determine the mix of various uses of the forest.[285] The court reached this decision despite finding that USFS-approved harvesting practices had destroyed a significant portion of the anadromous fish spawning streams within the Mapleton Ranger District of the Siuslaw National Forest.[286] The court did require, however, preparation of an EIS because the USFS failed to comply with NEPA's procedural reporting requirements.[287]

As with national forest lands, BLM land management is governed by an "organic act," FLPMA,[288] that requires that these lands be administered under principles of multiple use and sustained yield.[289] And as with cases interpreting NFMA, the courts give the BLM extensive deference to exercise its discretion in determining the uses of BLM lands.[290]

IV. THE NEED TO ARTICULATE AND IMPLEMENT AN ENVIRONMENTAL ETHIC IN ENVIRONMENTAL, LAND MANAGEMENT, AND WILDLIFE PRESERVATION LAWS

A. Defects in the Current Legal Framework

The current statutory framework for protecting environmental values and for management and preservation of public lands and resources is unworkable not because it requires too much planning,

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[283] 592 F. Supp. at 938.

[284] 16 U.S.C. § 531(b).

[285] 592 F. Supp. at 938–39; *cf.* Sierra Club v. Hardin, 325 F. Supp. 99, 112–13 (D. Alaska 1971).

[286] 592 F. Supp. at 935.

[287] *Id.* at 944–45.

[288] 43 U.S.C. §§ 1701–1784 (1988).

[289] *Id.* § 1732(a).

[290] *See* Rocky Mountain Oil & Gas Ass'n v. Watt, 696 F.2d 734, 738 (10th Cir. 1982) (the BLM need not permit all resource uses on a given tract of land); Headwaters, Inc. v. Bureau of Land Management, 684 F. Supp. 1053, 1056 (D. Or. 1988) (once the BLM considers multiple-use alternatives, it may favor timber harvest objectives over other multiple-use values), *remanded*, 893 F.2d 1012, 1016 (9th Cir. 1990); Utah v. Andrus, 486 F. Supp. 995, 1004 (D. Utah 1979); Alaska v. Andrus, 429 F. Supp. 958, 961–62 (D. Alaska 1977), *aff'd* 591 F.2d 537 (9th Cir. 1979). *See also* Coggins & Evans, *Multiple Use, Sustained Yield Planning on the Public Lands*, 53 U. COLO. L. REV. 411, 424–29 (1982).

but because it either fails to articulate a substantive policy, as is the case with NEPA, or because existing substantive direction is too imprecise. As the Supreme Court noted in *Robertson v. Methow Valley Citizens Council*,[291] "[o]ther statutes may impose substantive environmental obligations on federal agencies, but NEPA merely prohibits uninformed—rather than unwise—agency actions."[292] Theoretically, Congress provides some discretion to land management agencies because those agencies possess the expertise to fashion resource and site-specific decisions. Courts defer to those decisions for the same reason.[293] But all too often, agencies' actions are not driven principally by scientific expertise. Rather, decisions are made to protect "vested" economic interests,[294] or because revenues generated by resource exploitation are often returned to the agency, rather than as general funds to the United States Treasury.[295]

The ESA is an example of this phenomenon. Although it provides for protection of species and for designation of habitat critical to species survival,[296] deference to agency discretion enables the Secretary to place too much emphasis on economic concerns and avoid designating habitat in nearly eighty percent of the cases where species are listed.[297]

Peter Raven, Director of the Missouri Botanical Garden, predicts that an average of one hundred species of wildlife and plants will be driven into extinction every day for the next three decades—a rate one thousand times the pace that has prevailed since prehistory.[298] Dr. Paul Erlich writes that the primary cause of this accelerating loss of biological diversity is not direct human exploitation or human malevolence, but rather is attributable to the loss of habitat from expansion of human population and activities.[299]

The scientific evidence is clear. If we intend to preserve biological diversity and halt the extinction of species, we must preserve the habitat these various species require for survival. The northern spotted owl depends on old-growth forest for survival, just as fifty

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[291] 109 S. Ct. 1835 (1989).

[292] *Id.* at 1846.

[293] Note, *Proprietary Duties of the Federal Government Under the Public Land Trust*, 75 MICH. L. REV. 586, 587–88 (1977).

[294] *See* R. O'TOOLE, REFORMING THE FOREST SERVICE 138–54 (1988).

[295] *See id.* at 13–14.

[296] 16 U.S.C. § 1536(a)(2) (1988).

[297] Salzman, *supra* note 254, at 332.

[298] Linden, *The Death of Birth*, TIME, Jan. 2, 1989, at 32.

[299] Ehrlich, *The Loss of Diversity: Causes and Consequences*, in BIODIVERSITY 21 (E.O. Wilson ed. 1988).

percent of the world's remaining species depend upon the seven percent of the earth that consists of tropical rain forests for their survival.[300] Saving the owl, as well as preserving biodiversity in tropical forests, imposes economic and social consequences.

B. An Environmental Ethic Defined

The political will to make difficult choices and provide for human needs, as well as those needs of wildlife and flora, requires articulation of an environmental ethic. That ethic must rest upon a foundation different from the traditional conservation ethic or Cartesian dualism that views humans as separate from the rest of nature, and views nature as serving human utilitarian needs.[301] As Professor Roderick Nash related in his history of environmental ethics, Aldo Leopold's prescription for this transformation was "not to allow economics to dictate ethics."[302] Nash describes how Leopold, in one of his essays, *The Ecological Conscience*, wrote that humans must "'cease being intimidated by the argument that a right action is impossible because it does not yield maximum profits, or that a wrong action is to be condoned because it pays.'"[303]

In his seminal work, *A Sand County Almanac*, Leopold wrote: "The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land."[304] As Leopold notes, the extension of ethics to the environment can be seen as an ecological evolutionary process that results in a limitation on the freedom of action as part of the human struggle for existence.[305] Professor J. Baird Callicott traces the roots of this principle, that human survival is linked with biotic survival, to the beginnings of modern biology and to Charles Darwin's theory that survival advantages gained through community membership, on the average, are greater than the increment of fitness lost through being subject to social and ethical limitations on individual freedom.[306]

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[300] Myers, *Tropical Forests and Their Species: Going, Going . . . ?*, in BIODIVERSITY 28 (E.O. Wilson ed. 1988).

[301] R.F. NASH, THE RIGHTS OF NATURE: A HISTORY OF ENVIRONMENTAL ETHICS 18 (1989).

[302] *Id.* at 72.

[303] *Id.* (quoting Leopold, *The Ecological Conscience*).

[304] A. LEOPOLD, A SAND COUNTY ALMANAC 202–03 (1949).

[305] *Id.* at 202.

[306] J.B. CALLICOTT, IN DEFENSE OF THE LAND ETHIC: ESSAYS IN ENVIRONMENTAL PHILOSOPHY 65, 71 (1989).

Today, Leopold's observation that "a land ethic changes the role of *homo sapiens* from conqueror of the land community to plain member and citizen of it. . . . [and] implies respect for his fellow members, and also for the community as such"[307] is increasingly attracting adherence in a wide range of disciplines—from sociobiology to ecology to theology, moral philosophy, and law.[308] Nevertheless, we still lack a consensual framework for the implementation of a land ethic in the practical context of resolving conflicts between, for example, the needs of humans, the needs of species like the owl, and those of ecosystems like old-growth forests.

An ecologically sound land ethic has been proposed as a basis for adaptation of a modern property law.[309] This new property law would emphasize the obligation of stewardship of the land, rather than the rights of ownership.[310] Although our land laws, for the most part, still reflect a "land-relation [that] is strictly economic, entailing privileges but not obligations,"[311] changes in social values mandate a shift toward a legal framework that reflects a heightened understanding of the laws of nature.[312] This obligation of stewardship of the land arises from our human dependence on a finite environment, not from any newfound altruism.[313] An environmental ethic that reflects care and concern for the ecosystemic integrity of the land should be part of both public and private land use decisions.

Some courts have begun moving away from total reliance on economics in land use decisions and now consider the inherent limitations of the environment on human activities.[314] The natural-use

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[307] A. LEOPOLD, *supra* note 304, at 204.

[308] *See, e.g.*, J.E. LOVELOCK, GAIA: A NEW LOOK AT LIFE ON EARTH (1979); H. ROLSTON, III, ENVIRONMENTAL ETHICS: DUTIES TO AND VALUES IN THE NATURAL WORLD (1988); C. STONE, EARTH AND OTHER ETHICS: THE CASE FOR MORAL PLURALISM (1987); Ehreenfeld, *The Conservation of Non-Resources*, 64 AM. SCIENTIST 648, 654–56 (1976); Favre, *Wildlife Rights: The Ever-Widening Circle*, 9 ENVTL. L. 243, 279 (1979); Greenawalt, *The Limits of Rationality and the Place of Religious Conviction: Protecting Animals and the Environment*, 27 WM. & MARY L. REV. 1011, 1036–39 (1986); Wilson, *The Current State of Biological Diversity*, in BIODIVERSITY 3–16 (E.O. Wilson ed. 1988).

[309] Hunter, *An Ecological Perspective on Property: A Call for Judicial Protection on the Public's Interest in Environmentally Critical Resources*, 12 HARV. ENVTL. L. REV. 311, 317–20 (1988).

[310] *Id.* at 319.

[311] A. LEOPOLD, *supra* note 304, at 238.

[312] Hunter, *supra* note 309, at 315–16. Ecologists would argue that the need for preserving resources does not reflect value choices, but is instead the result of objective observations of the laws of nature. *Id.* at 315 & n.17.

[313] *Id.* at 319.

[314] *Id.* at 349, 354; *see, e.g.*, Graham v. Estuary Properties, Inc., 399 So. 2d 1374, 1382 (Fla.), *cert. denied*, 454 U.S. 1083 (1981); Claridge v. New Hampshire Wetlands Bd., 125

theory developed by this case law can provide a foundation for contemporary land use and resource management statutes. The natural-use theory recognizes: that humans depend upon the entire ecosystem; that all human activities affect the ecosystem; and that therefore humankind should be denied the "right" to destroy the land's ecological capacity.[315]

An environmental ethic that informs the structure of our natural resources law also should embrace the dynamic that Charles Wilkinson refers to as an "ethic of place."[316] Starting with a regional focus, an ethic of place respects the people, the land, its animals, its vegetation, as well as the region's water and air resources equally.[317] Environmentally ethical resource management, in turn, also acknowledges the need for a stable, productive economy.[318] Wilkinson has described the ethic of place as a broad policy to provide "points of departure in our continuing struggle to define our society and what it stands for."[319]

Application of an ethic of place requires an inquiry into all aspects of contemporary society.[320] As such, it might be described as a dynamic socioecological approach to resource policymaking that requires a spirit of compromise among advocates of different resource uses and non-uses. To formulate an ethic of place, policymakers begin with a consideration of the region's geography, and then take into account the governments and societies of the region, looking carefully at the cultural elements of the communities and the stages of economic development of the region.[321] Implementation of this ethic thus borrows "from biocentric reasoning without adopting it wholesale."[322]

Professor Wilkinson suggests that the ESA fulfills the ethic of place because "[it] grants respect to the independent existence and integrity of other species, but also benefits the human race, and not

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N.H. 745, 752, 485 A.2d 287, 292 (1984); Sibson v. State, 115 N.H. 124, 129–30, 336 A.2d 239, 243 (1975) (overruled in Burrows v. City of Keene, 121 N.H. 590, 601, 432 A.2d 15, 21 (1981)); Just v. Marinette County, 56 Wis. 2d 7, 17, 201 N.W.2d 761, 768 (1972).

[315] Hunter, *supra* note 309, at 357.

[316] Wilkinson, *Law and the American West: The Search for an Ethic of Place*, 59 U. COLO. L. REV. 401, 405 (1988).

[317] *Id.* at 405.

[318] *Id.*

[319] *Id.* In his article, Professor Wilkinson fully defines this ethic of place and applies it to specific land use disputes in the West. *Id.* at 410–23.

[320] *Id.* at 406.

[321] *Id.* at 405–08.

[322] *Id.* at 408–09.

just by achieving pragmatic objectives such as preserving gene pools for scientific research."[323] As written, the Act reflects this ethic, but its flawed implementation,[324] and the administrative failure to designate critical habitat for the vast majority of listed species,[325] severely undercuts the ethical promise contained in the ESA's provisions.

Although some environmentalists offer more radical approaches[326] that build upon and extend Aldo Leopold's framework, his land ethic seems to offer a more practical application. This is because Leopold attempts to enlarge and fit within Western legal tradition, rather than to challenge the basic underpinnings of that tradition. Leopold's central theoretical maxim governing human relations with our environment is that "[a] thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."[327] Leopold's ecosystemic approach provides two important clues for approaching practical issues. First, we need to approach our resource use decisions and controversies holistically, using the discipline of "political ecology." Second, we need to set out enforceable non-discretionary standards that focus on preserving biological diversity, rather than on maximizing profits in the management of public resources.

C. Applying An Environmental Ethic to the Owl/Old-Growth Controversy

The owl/old-growth controversy will not be solved in the courts by enforcing the ESA. Just as the *TVA v. Hill*[328] decision did not

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[323] *Id.* at 409.

[324] *See supra* text accompanying notes 234–37.

[325] *See supra* text accompanying notes 254–59.

[326] The "Deep Ecology" philosophy embraced by some of the most dedicated environmentalists rests more heavily on the concept of species equality than do either the land ethic or the ethic of place. *See* B. DEBALL & G. SESSIONS, DEEP ECOLOGY: LIVING AS IF NATURE MATTERED 67–69 (1985). The two core values in the deep ecology movement are an enlarged and redefined self-realization and biocentrism. *Id.* at 66–69. Deep ecology thinking contrasts sharply with traditional Western philosophy, which places humankind in a superior position to other species. *Id.* It offers the potential to inform our understanding of humankind's relationship with our environment and the various species with whom we share our planet. While the deep ecology philosophy may not have gained sufficient popular acceptance to mandate adoption into our legal system, the lessons it teaches ought to be studied seriously by policymakers and elected officials as we move into the twenty-first century.

[327] A. LEOPOLD, *supra* note 304, at 224–25.

[328] 437 U.S. 153 (1978).

stop the Tellico Dam,[329] the Act will not protect the owls. Amending the ESA to reduce the discretion given the Secretary to designate critical habitat probably will save neither owls nor other species. Only public education that produces public acceptance of an ethic that places humans in nature rather than as her conquerors will lead to preservation of our common biological heritage.

Application of an environmental ethic requires greater reliance by decisionmakers on the ecological and biological sciences. We need to decide what level of biodiversity is "enough" and remove the discretion from federal land and resource management statutes to encroach on that "minimum" level needed for ecosystems to survive. In other words, multiple use and sustained yield must mean dedicating public resources to those uses that maintain the integrity and productivity of the land for all uses, not timber first or grazing first, and then water quality, fish, wildlife, or recreation. Moreover, this approach requires that, to the extent that current management schemes force agencies to emphasize a dominant use to fund additional land uses, agency financing needs to be reformed to make all uses of the land profitable for the agency.[330]

We need to restructure the federal framework for resource management by reevaluating and considering amendments to the ESA, NEPA, NFMA, FLPMA, MUSY, and other environmental laws. Presently, these statutes are reviewed in isolation when they come before Congress for reauthorization. Instead, these statutes need to be considered and harmonized collectively. This is what is meant by the term "political ecology." One means of accomplishing this goal is to create a new public land law review commission, made up of federal and state officials, scientists and resource economists from agencies and academia, industry representatives, and public interest environmental organization representatives. The charge to the review commission would be to propose a package of amendments to federal resource management laws that reflect an ecosystemic management approach and harmonize conflicting management and funding provisions.

Most importantly, we need, at a minimum, an amendment to NEPA that requires federal agencies to reject project alternatives whose benefits to a single segment of the biotic community (human

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[329] *See* Koberstein, *God Squad May Have Last Word if Owl Listed*, Oregonian, June 17, 1990, at A18, col. 4. After the Endangered Species Committee rejected the Tellico Dam Project, Congress acted to overrule the Committee, and the dam was built. *Id.*

[330] *See* R. O'TOOLE, *supra* note 294, at 196–211.

beings) are outweighed by the adverse impacts on the "whole community." That amendment would empower NEPA as an environmental bill of rights. As written, NEPA is a "Non-Environmental Policy Act." It merely requires disclosure of adverse environmental consequences, but not mitigation.[331] And as administered, NEPA currently requires public participation only in its narrowest sense, not "protection of the community" in its broadest sense, including human beings.[332]

Old-growth forests, as the ecological data show, are inherently valuable, as well as valuable for numerous wildlife and plant species, and for consumptive and non-consumptive human uses. Proposing listings of additional old-growth dependent endangered or threatened species,[333] or enlisting broader coalitions to support old-growth preservation by finding a plant species (such as the pacific yew) with medical value will not likely save old-growth. In fact, such a strategy, one that depends on equating preservation of a species with its value for human use, undermines the proposition that species and ecosystems have inherent value. And such a strategy, while it may provide incremental benefits in the short run, is more likely to undercut the real goal of environmentalists who want to preserve old-growth forests.[334] A different strategy, one that focuses on preserving ecosystems rather than maximizing the viability of any one component of those ecosystems, is necessary if owls, as well as other endangered species, are to be saved. In addition to preserving species and species habitat, such an approach will also preserve the long-term economic productivity of those same ecosystems.

V. CONCLUSION

The owl/old-growth controversy is not really about owls versus people, jobs versus old-growth, environmentalists versus the timber

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[331] *See supra* notes 264–72 and accompanying text.

[332] In line with Wilkinson's ethic of place such protection and mitigation should include, as some have proposed, assistance to timber workers who may lose jobs as a result of the owl's listing, and assistance for communities that need to diversify their local economies. *See* Ulrich, *supra* note 157, at D3, col. 2.

[333] Two other Northwest old-growth dependent species, the marbled murrelet and the fisher, also have been proposed for listing under the ESA. Durbin, *supra* note 151, at A19, col. 4.

[334] *See* Tribe, *Ways Not to Think About Plastic Trees: New Foundations for Environmental Law*, 83 YALE L.J. 1315, 1330–31 (1974). Professor Tribe argues that articulating environmental goals wholly in terms of individual and group preferences, i.e., from a homeocentric perspective, tends to legitimize this analytical approach, impeding efforts to seek alternative frameworks. *Id.*; *cf.* Meyers, *Variation on a Theme: Expanding the Public Trust Doctrine to Include Protection of Wildlife*, 19 ENVTL. L. 723, 727 (1989).

industry, or science versus politics. The issue is about values, what we value, what evidence we need to make decisions, and what methods we use to implement choices. The issue cannot be considered only in terms of human wants and human needs. To some extent, the forestry profession is changing, and beginning to respond.[335] But environmentalists, industry, and even the forestry profession itself is unclear where "new forestry" may lead.[336]

The federal government, however, continues to treat the owl/old-growth controversy as a conflict between science and politics and between species protection and economic factors. In February 1991, Secretary of the Interior Manuel Lujan named a sixteen-member team to devise a recovery plan for the owl.[337] That team contains no members of the *Thomas Report* committee[338] and only two members who are not federal employees or state officials.[339] Only one of the members, Dr. Ralph Gutierrez, a wildlife biologist at California's Humboldt State University, is a truly qualified expert on the owl,[340] and he suggested he might not serve because of the industry/government bias of the panel.[341] Because of the importance of timber to the Northwest's economy, Secretary Lujan "took the unprecedented step of removing [responsibility for] the recovery plan from the United States Fish and Wildlife Service and taking direct charge [of administering the study]."[342] While industry is generally pleased with the Secretary's action, the environmental organizations have accused the Bush administration of playing politics with science.[343] In addition to the reservations expressed by environmentalists, Senator Brock Adams of Washington expressed concern that the Secretary's decision may subject the government to lawsuits by suggesting that the team consider the economic and social impacts of listing the owl, thus violating the intent of the ESA.[344]

Secretary Lujan's decision to administer directly the recovery team process will not solve the continuing conflict between preser-

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[335] Shepard, *'New' vs. 'Old' Forestry: Ecology, Not Just Trees*, Oregonian, June 10, 1990, at K1, col. 1.

[336] Durbin & Koberstein, *Northwest Forests: Day of Reckoning — Foresters Take Measure of Light-Touch Logging*, Oregonian, Sept. 21, 1990, at A1, col. 3, A8, col. 3 (final part of six-part series).

[337] Ulrich, *Lujan Picks Team to Create Owl Plan*, Oregonian, Feb. 6, 1991, at C3, col. 5.

[338] *Id.*

[339] Sonner, *Expert Named to Owl Panel Fears Bias Toward Logging*, Oregonian, Feb. 7, 1991, at C1, col. 2.

[340] *Id.*

[341] *Id.*

[342] Ulrich, *supra* note 337, at C3, col. 5.

[343] *See id.*; Sonner, *supra* note 339, at C1, col. 2.

[344] Sonner, *supra* note 339, at C1, col. 4.

vation of species or species habitat and human demands on that same habitat. Nor will a lawsuit by environmentalists to force strict compliance with the ESA solve the conflict. If not the owl, what species will be next to find itself in conflict with competing human demands on its habitat? As noted earlier, it is unconstrained human activity that poses the greatest threat to wildlife and plant species survival.[345] Until we value ecosystems for all the services they perform and express that value in our resource management laws, the owl/old-growth controversy will continue to haunt us; only the names of the participants will have changed.

If greater recognition of our place in nature is one of the outcomes of revising our values, and if we can achieve greater understanding of our need for others in the natural community, then possibly we can avoid perpetuating what Garret Hardin calls the "Tragedy of the Commons" on our public lands.[346] If we fail, however, to take collective responsibility for the common good of the "community," then we will in fact, as Hardin demonstrates, destroy that community.[347]

We do not occupy the pinnacle of the evolutionary pyramid because we are a "higher" life form. Rather we depend upon, or in a sense prey upon, the species who make up the remainder of the pyramid.[348] If we destroy what sustains us, we destroy ourselves. As Stephen Jay Gould notes, "[t]his fallacious equation of organic evolution with progress continues to have unfortunate consequences . . . . Today, it remains a primary component of our global arrogance, our belief in dominion over, rather than fellowship with, more than a million other species that inhabit our planet."[349]

Finally, I suggest, we can, with time, move beyond fellowship—to communion with our fellow creatures. If we can imagine this possibility, we will not be so quick to rely upon our laws, and our economics, to deflect us from our long-term interest.

If the Owl Calls Again

at dusk
from the island in the river,
and it's not too cold,

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[345] *See supra* text accompanying notes 298–99.

[346] Hardin, *The Tragedy of The Commons*, 162 SCIENCE 1243, 1244–45 (1968).

[347] *Id.* at 1247–48.

[348] S.J. GOULD, EVER SINCE DARWIN: REFLECTIONS IN NATURAL HISTORY 34–38 (1977).

[349] *Id.* at 37–38.

I'll wait for the moon
to rise,
then take wing and glide
to meet him.
We will not speak,
but hooded against the frost
soar above
the alder flats, searching
with tawny eyes.
And then we'll sit
in the shadowy spruce and
pick the bones
of careless mice,
while the long moon drifts
toward Asia
and the river mutters
in its icy bed.
And when morning climbs
the limbs
we'll part without a sound,
fulfilled, floating
homeward as
the cold world awakens.[350]

POSTSCRIPT

On February 26, 1991, following the completion of this Article, the United States District Court for the Western District of Washington held that the failure of the FWS to designate critical habitat for the northern spotted owl at the time it was listed as a threatened species under the ESA was an abuse of discretion, and ordered that critical habitat be listed by May 1, 1991.[351] Judge Thomas Zilly stated that the ESA's charge to the Secretary of the Interior to designate critical habitat concurrently with species listings "to the maximum

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[350] Haines, *If the Owl Calls Again*, in WE ANIMALS: POEMS OF THE WORLD 148 (N. Aisenberg ed. 1989).

[351] Order Granting Plaintiffs' Motion for Summary Judgment and Motion to Compel Designation of Critical Habitat at 19, 20 Northern Spotted Owl v. Lujan, No. C88–573Z (W.D. Wash. Feb. 26, 1991) [hereinafter *Northern Spotted Owl* Order].

In another recent development, the pacific yew is also back in the news. In late February 1991, environmentalists filed appeals to 16 timber sales in southern Oregon, claiming that both the USFS and the BLM have failed to develop suitable plans to protect the yew tree. Of concern to environmentalists is the belief that these timber sales are a disguised means to increase timber sales rather than as proposed, a means for harvesting yews for cancer research. The Oregon Natural Resources Council pointed to the fact that thousands of pounds of yew bark is readily available, lying in slash piles prepared for burning in these same forests. Tims, *Pacific Yew at Center of Timber-Sale Appeal*, Oregonian, Feb. 27, 1991, at B5, col. 5.

extent prudent and determinable"[352] reflected the deliberate judgment of Congress that habitat destruction was the primary cause of species extinction.[353] The court held that "linkage of these issues was not the product of chance."[354] As noted earlier in this Article,[355] Congress intended for exceptions to habitat listing to be used sparingly. Relying on the legislative history, Judge Zilly determined that the Secretary's discretion to decline to designate habitat was intended to be circumspect, that is, specifically confined to those occasions when it would not be in the best interest of the species to list habitat.[356]

The court found that the FWS failed to justify its decision not to designate critical habitat for the owl.[357] Both the proposed listing rule and the final listing rule barely discussed critical habitat designation.[358] Moreover, the FWS admitted that it had not conducted the critical habitat analysis required under the ESA, despite its findings that the owl is "overwhelmingly associated"[359] with old-growth forests and its dire assessments that continuing present timber harvesting rates would destroy remaining owl habitat within twenty to thirty years.[360] The court stated that "[m]ore is required under the ESA and the Service's own regulations [for a finding that critical habitat is not determinable] than the mere conclusion that more work needs to be done."[361]

Perhaps the most important and far reaching conclusion reached by the court is Judge Zilly's determination that listing critical habitat for an endangered or threatened species is a mandatory duty within twelve months of publication of a final rule listing a species.[362] Under current regulations, the only exception to this mandatory duty is when listing habitat would not be "prudent."[363] The court found that FWS regulations limit the exception to only two instances: when identification of critical habitat would increase the threat of human taking of the species; and when habitat designation would not benefit

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[352] 16 U.S.C. § 1533(a)(3) (1988).
[353] *Northern Spotted Owl* Order, *supra* note 351, at 7.
[354] *Id.*
[355] *See supra* notes 206–12, 254–59 and accompanying text.
[356] *Northern Spotted Owl* Order, *supra* note 351, at 8–10.
[357] *Id.* at 12–16.
[358] *Id.* at 13–15.
[359] Final Rule, *supra* note 4, at 26,175.
[360] *Northern Spotted Owl* Order, *supra* note 351, at 15–16.
[361] *Id.* at 15.
[362] *Id.* at 10.
[363] 16 U.S.C. § 1533(a)(3) (1988).

the species.[364] Because one of the ESA's express concerns is that habitat loss is the greatest cause of extinctions, the second exception should be employed rarely. More importantly, a fair reading of the court's opinion imposes a significant responsibility, on the part of the FWS, to explain any decision not to list habitat.[365] As the court explains, the administrative record must establish that the FWS has considered all relevant factors and articulates a rational connection between the facts and the decision to list or not to list critical habitat.[366] No longer will the FWS be able to avoid listing habitat with the mere statement that listing is not prudent.[367] Moreover, while economic considerations may limit the amount of habitat designated, it is clear from the court's opinion that the habitat designation decision is intended to be based primarily on considerations of biological need.[368]

Unfortunately, Judge Zilly's decision does not assure that critical habitat in fact will be designated for the owl. As of March 5, 1991, the Department of the Interior had not yet decided whether to appeal the district court's decision to the Court of Appeals for the Ninth Circuit.[369] Of even greater concern, however, is the continuing failure of important congressional leaders to learn to address the inherent causes of the owl/old-growth controversy. Two days following Judge Zilly's decision, Senator Mark Hatfield said that the decision meant, as a practical matter, "[s]hut down the national forests."[370] Senator Hatfield commented that the ruling might require Congress to adopt yet another Interior appropriations bill rider in an effort to overturn the decision and allow continued logging in the Northwest's old-growth forests.[371]

Political posturing in Congress, foot dragging by the executive branch, scare tactics by industry, and intransigence by environmentalists will not resolve public resources conflicts. As suggested in the body of this Article, instead of avoiding responsibility for ethical public resources management, Congress should reform public resource management laws to maximize multiple-use objectives for

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[364] *Northern Spotted Owl* Order, *supra* note 351, at 8 n.3.

[365] *Id.* at 11–12.

[366] *Id.* at 14–16.

[367] *Id.* at 11–12.

[368] *Id.* at 3, 9–12.

[369] Durbin, *Panel Ready to Write Owl Recovery Plan*, Oregonian, Mar. 5, 1991, at B1, col. 1; Ulrich, *Hatfield Sees Ruling as Threat to Logging*, Oregonian, Mar. 1, 1991, at B4, col. 3.

[370] Ulrich, *supra* note 369, at B4, col. 3.

[371] *Id.*

these forest lands. This is a difficult task, requiring difficult decisions that will both incorporate respect for the land's capacity to produce consumptive economic benefits and maintain long-term biological integrity. This task requires reforming agency financing mechanisms to make all uses of public lands profitable for the USFS, the BLM, and other agencies. Most importantly, reform requires that all concerned parties shift their values away from the concept of land as an item solely for exploitation or preservation by special interests, toward a vision of land as both inherently valuable and valuable for a wide spectrum of public uses and benefits.