
From Despair to Hope

A Chronicle of Federal Old-Growth Forest Policy in the Pacific Northwest

by
James R. Furnish

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About the author

Jim Furnish retired recently from his position as Deputy Chief for National Forest Systems within the Forest Service (U.S. Department of Agriculture). He is in a unique position to discuss forest management issues in the Pacific Northwest and to chronicle Siuslaw National Forest events that occurred throughout the 1990s. He accepted the position of Deputy Forest Supervisor for the Siuslaw in Corvallis, Oregon, in 1991, became Forest Supervisor in 1994, and remained in that position until 1999, when he accepted the Deputy Chief position at Forest Service headquarters in Washington, DC.

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Cover photo: Old-growth understory, Siuslaw National Forest, Oregon.
Courtesy of Tom Iraci, USDA Forest Service

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In 1991, federal district judge William Dwyer enjoined the U.S. Forest Service from the continued sale and harvest of timber from forests inhabited by the northern spotted owl. The injunction clamped the jugular of federal timber in the Pacific Northwest and sent a deep shudder through the agencies and the part of the timber industry that depended on these forestlands for raw material. The end had finally come to decades-long liquidation of the remaining old-growth forests.

Monumental timber harvests and the road network that inexorably, incrementally sought to tame the vast and remarkably valuable forests of the Pacific Northwest were built on a foundation of public values that supported timber harvest for a growing nation. But public values can change. And so they did. Less and less were people willing to accept sweeping vistas dominated by clearcuts and new roads without asking: “Do I like where this is going?” More and more were people beginning to value naturalness, clean water, abundant fish and wildlife, and their deep sense of connection with the land. They anguished at what we seemed to be taking from the forest at the expense of future generations. You can plant all the trees you want, but you can’t make a forest.

Environmental groups had attacked the tradition of clearcutting, using the fact that owls relied on old-growth forests. By demonstrating that federal laws did not allow the agencies to threaten the owl’s viability, the environmental plaintiffs scored one of the most significant legal victories in the battle between commerce and the environment.

Siuslaw National Forest is a microcosm of the larger arena of federal lands in the Pacific Northwest and has several noteworthy attributes. Established in 1907 and comprising temperate rainforest in Oregon’s Coast Range, the Siuslaw is among the most productive and valuable timber areas in the world. It has a history of aggressive timber harvest, mostly in the post-World War II era.

Management of this national forest epitomized industrial forestry— clearcut the standing timber, burn the logging

How have federal forest managers and the timber industry responded in the more than ten years since then?

This paper takes a detailed look at how one national forest, the Siuslaw in western Oregon, successfully forged a new vision and strategy for managing federal forestlands. The Siuslaw model is based on management approaches that nurture, rather than eliminate, mature and old-growth forests and their associated fish and wildlife habitats. It also reflects the values and aspirations that most people in the region have for their national forests.

I believe it is a model that federal forestland managers can and should apply throughout the Pacific Northwest. It is possible and desirable for the region’s federal forests to move from the logging of old-growth forests to the thinning of second-growth plantations and restoration of watersheds. As Forest Supervisor of Siuslaw National Forest during most of the 1990s, I saw first hand the resentment and resistance of many professional foresters and mill workers whose traditional way of life was coming to an end. Yet, this wrenching experience—and the consequent changes in forest management—also produced real triumphs.

The end or the beginning?

It had the feeling of a door slamming shut . . . and then hearing the bolt slide into place. Judge Dwyer had spoken. The good old days were gone forever. Might the new days be even better?

slash to prepare sites for replanting in a dense monoculture of Douglas fir trees, spray herbicides to eliminate competition, and often use genetically superior seedlings and fertilizer. More money was spent per acre on Siuslaw National Forest than any other national forest, because it generated the most wood and revenue per acre.

With the precipitous decline in historic timber production caused primarily by

The context

wildlife and fisheries conflicts, how does one chart a future for this landscape and this agency when to continue traditional practices is no longer an option?

Before answering that question, I should describe the atmosphere that gave rise to this leadership challenge. An essential element of problem resolution is problem recognition. And one of the fundamental problems was institutional denial and resistance, which were evident at the highest levels of the Forest Service and permeated all levels of leadership. Judge Dwyer opined:

The problem here has not been any shortcoming in the laws, but simply a refusal of administrative agencies to comply with them. This invokes a public interest of the highest order, the interest in having government officials act in accordance with the law.

More is involved here than a simple failure by an agency to comply with its governing statute The most recent violations of the NFMA (National Forest Management Act) exemplifies [sic] a deliberate and systematic refusal by the Forest Service and the Fish and Wildlife Service to comply with the laws protecting wildlife. This is not the doing of the foresters, rangers, and others at the working levels of these agencies. It reflects decisions made by higher authorities in the Executive branch of government.

This was the context in which Jack Ward Thomas, on becoming the new Chief of the Forest Service in 1994, declared that the agency would “Tell the truth” and “Obey the law.” These mandates were widely applauded even within the Forest Service, which was at once both indicted and freed by Thomas’ declaration.

Former Chief Dale Robertson, among those referred to by Dwyer as having deliberately and systematically refused to comply with laws protecting wildlife, had been forest supervisor of both Siuslaw and Mt. Hood national forests early in his career. Robertson—and other leaders who were personally knowledgeable about the

forests that were the subject of these controversies—acted consistent with the view that the best interests of the public and the agency were served by maintaining timber harvest. But in doing so they laid bare the deep schism between the past and the future. The goal for decades had been to maintain the timber harvest. Thus, owl issues were managed to minimize disruption of timber production.

This policy was built on a premise that timber harvest was more important than protection of the owl (and other wildlife). The lawsuit successfully demonstrated that this policy was neither legitimate nor legal. A different approach was needed.

The same schism between past and future was abundantly evident within the Forest Service at the field level. Siuslaw managers had just issued their forest plan in 1990, having taken almost 10 years to complete the effort. The northern spotted owl was the subject of a thesis by Eric Forsman, an Oregon State University graduate student who had become interested in the owl in the late 1970s after observing it in the Corvallis watershed along the eastern fringe of Siuslaw National Forest. Forsman described the link between late-successional forests, or old growth, and the owl’s habitat needs.

The Siuslaw forest plan established an allowable timber sale quantity of about 315 million board feet (mmbf)* per year, a slight reduction from the 350 mmbf annual sale level throughout the 1980s. The Siuslaw plan was issued just prior to Dwyer’s injunction, in the midst of a white-hot controversy. Many thousands of jobs and billions of timber dollars were at stake. Although owl issues were at the forefront of timber policy, the Siuslaw plan made a very clear statement that timber was still king and minimal measures would be taken to protect the owl. Numerous other plans for national forests in owl habitat followed the same thinking.

Dwyer’s injunction dramatically changed all this.

As a new official in the Siuslaw organization in the immediate aftermath of the

* A board foot is equivalent to a piece of wood one foot long, one foot wide, and one inch thick.

injunction, I observed the anger and defiance of most employees. A smaller number were more philosophical, perhaps even slightly pleased that an obsession with timber harvest was being righted before their eyes.

Wendy Herrett was the Forest Supervisor (and a landscape architect). She had no strong convictions about maintaining a dominant timber harvest and was viewed with deep suspicion, even hostility, by employees with a strong allegiance to timber traditions. There were many. Herrett, during her tenure from 1990 to 1992, sought to carefully navigate through this unstable environment, recognizing that a very different

future lay in store. Funding for timber sale preparation began to tumble precipitously as funding for owl surveys increased.

And the owl controversy was a key environmental issue in the 1992 presidential election. President Clinton, after he was elected, made good on a campaign promise by convening a forest conference in Portland, Oregon, in the spring of 1993, followed by a sweeping new vision of forest management called the Northwest Forest Plan. This plan accomplished two aims: it ultimately satisfied Dwyer's legal standard for viability of vertebrate species, and also determined a balance between owl habitat protection

I vividly recall a meeting in Corvallis' Majestic Theatre of a large group of Forest Service and Bureau of Land Management employees to announce the Northwest Forest Plan decision. As Acting Forest Supervisor for the Siuslaw, I began my remarks with a simple question: "Do you believe this plan can work?" I thought this was the central issue as it focused on personal will. In spite of the drama associated with the release of the plan, skepticism was rampant. The plan was surely doomed from the start without a fundamental belief, both individually and collectively, in its merit. It was important that agency personnel be committed to implementing the plan if it was to have a chance. I daresay most employees answered the question "No." I answered "Yes."

Of immediate consequence was the 92 percent reduction in the annual timber sale level — from 315 mmbf to 23 million mmbf. The implication to our workforce, already in steep decline because of budget reductions, was apparent to all, and the Forest Service had developed a system for equitably imposing workforce reductions.

However, few of us had thought through the natural resource implications, in part because of the cloak of secrecy surrounding the plan before its release. In general terms, the Northwest Forest Plan created a "zoned" landscape dominated by late-successional reserves (LSR) and riparian reserves (RR), intended to pro-

tect important terrestrial and aquatic habitats, and matrix (remnant lands) from which timber production would occur.

Calculations indicated that Siuslaw National Forest landscapes were dominated by LSR and RR, leaving only about six percent in matrix. And projects in matrix would be subject to survey and manage protocols intended to detect the presence of the threatened northern spotted owl and marbled murrelet (a seabird that nests in trees) and to identify and further protect a wide variety of flora and fauna such as mollusks, lichens, fungi, and red tree voles (prey of the spotted owl) that are associated with mature forests. In addition, the density of salmon streams on the forest and the dramatic reduction of wild fisheries, including steelhead, cutthroat trout, and coho salmon, created an urgency to restore fish habitat.

Considering how profoundly fish and wildlife habitats are affected by clearcutting, it was easy to understand why forest management regimes were being so drastically altered. The convergence of owl, murrelet, and salmon crises in this coastal temperate rainforest would bring timber

The journey to a new future

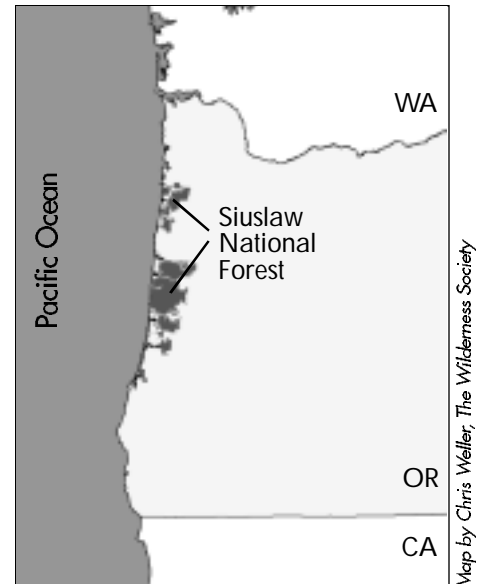
The Northwest Forest Plan was surely doomed from the start without a fundamental belief, both individually and collectively, in its merit.

production to a virtual standstill. The Northwest Forest Plan was an explicit admission that this incredibly productive landscape could not simultaneously maximize both wood products and wildlife. A choice was made. The forest was the womb that sustained this natural abundance, and the forest, what was left of it, was to remain standing.

In the months leading up to the release of the Northwest Forest Plan, I engaged the leaders of Siuslaw National Forest in a discussion of our purposes for this landscape, culminating in a vision statement called Siuslaw Stepping Stones. I have never been involved in a more rancorous and passionate clash over resource ideology, and it was clear that our leadership was fractured. Our statement was received with ambivalence, but when viewed through the lens of the Northwest Forest Plan, the Stepping Stones vision was in focus and emphatically consistent with the plan.

Patterns emerged through our survey for the presence of owls and murrelets in advance of timber harvest. There was a very strong correlation between timber stands with planned harvest activity and owl and murrelet activity. Some cynics argued that the Forest Service was targeting endangered species habitat for destruction. In truth, it was simply the case that mature forests were relatively scarce in the coast range, and owls and murrelets gravitated naturally to these areas because the habitat characteristics met the birds' needs. Our surveys merely illustrated what was intuitively obvious. If you want to find these species, look to the older forests. And these same forests held the greatest economic value, often \$40,000 in stumpage (standing trees on the stump) per acre in 1994 when the forest plan was issued. In contrast, thinning a young stand might yield only \$1000 per acres.

Our results typically showed a 90-percent occurrence of murrelet occupancy and



LOCATION OF SIUSLAW NATIONAL FOREST, OREGON

Map by Chris Weller, The Wilderness Society

somewhat less for owls. A determination of presence usually required either the cancellation of timber sales already under contract or the cessation of planning for future sales. Clearly, investment of effort and large sums of money in traditional clearcut harvests of mature timber was a losing proposition. Although the Northwest Forest Plan allowed for such harvesting in matrix areas, the plan did not require harvest. Given the high likelihood that owls and murrelets would preclude such harvest anyway, it was evident that common sense and economic efficiency were dictating a new direction.

We alerted the Regional Forester in Portland that, based on a miscalculation of riparian reserve width, the planned sale quantity of 23 mmbf per year specified for Siuslaw National Forest was inaccurate. The additional land base removed from matrix resulted in a planned sale quantity of only seven to nine mmbf. In addition, plan standards and our experience with habitat protection provisions demonstrated that to pursue the clearcutting of regenerated stands in matrix would prove fruitless.

We chose a different path.

Noting the history of harvesting dating back to the 1950s, we observed that there was an inventory of about 120,000 acres of young stands, most of which had been managed by clearcutting the forest, removing old snags and down logs, burning the site to prepare for the planting of dense stands of Douglas fir, and then spraying with herbicide a few years later to reduce competition from deciduous trees. Many of these young stands were, or soon would be, of sufficient size to support commercial thinning.

These plantations were not natural in the sense that coastal forests were considered natural following their establishment after the large fires that swept the Coast Range in the mid-1800s. There was a legitimate concern that the regenerated stands would not attain the desired mature forest character evident in natural stands without further management. Because so many acres were within LSR and RR (both intended to ultimately attain old-growth characteristics), we focused our available budget and resources on management of these young stands no longer for wood production, but rather to reorient them on a new trajectory destined for old-growth forest character.

It was a simple strategy to allow the mature forests in the Coast Range to age and become old growth in time, while managing the many young stands peppered throughout the LSR and RR to improve the likelihood that they too would provide higher quality old growth in time. I was resolute in my position that continued harvest of mature timber was no longer a priority, and that this wasteful practice should cease on Coast Range federal forests.

Many environmentalists familiar with Siuslaw National Forest management and history were skeptical. We worked rigorously with both Oregon State University and the agency's Pacific Northwest Research Station to establish a credible premise for our strategy. I also delivered a speech, euphemistically titled "Uncle, Thank You, and Please" at a 1994 conference in Oregon. The speech sent a message to the public and agency employees that the Northwest Forest Plan was a tacit public admission of a

Thinning young plantations

need for change (Uncle), we were indebted to environmentalists for their passionate insistence on principles of sustainable stewardship (Thank You), and that we needed time and patience to perform up to new expectations (Please).

The speech was well received by environmentalists who seemed willing to allow Siuslaw National Forest leadership some latitude to demonstrate our sincerity and commitment to change. It is equally true that the speech outraged those holding to tradition.

What followed was a rapid transition to identification of harvest priorities in young stands (products of previous clearcutting) that were largely in LSR. This process was aided significantly by a research project of Coastal Oregon Productivity Enhancement (COPE), a far-sighted partnership hosted by Oregon State University to conduct a 10-year research effort. COPE used mostly federal monies along with contributions from state and local governments and timber industry and interest groups to support fundamental and adaptive research.

As a COPE board member, I was aware of the unique opportunity for COPE to do thinning research. COPE designed a replicated study to evaluate three different levels of thinning—100, 60, and 30 "leave" trees per acre and a control site where no thinning occurred—applied randomly to three clearcut areas that were about 35 years



Seven years into the COPE study, the unthinned control stand (top) displayed a mostly closed canopy with no gaps and therefore little sunlight to nurture the rich understory typical of natural old-growth forests. The stand with 60 leave trees per acre (at left) exhibited a more open canopy and evidence of a healthy and diverse understory.

Photos courtesy of Sam Chan, USDA Forest Service

old. The treatments were carried out through a traditional commercial timber sale awarded to a high bidder.

The scientific rigor of COPE research and the field seminars that the partnership conducted were instrumental in establishing—with a variety of interest groups—the credibility of alternative management approaches for young stands. Federal regulatory agencies such as U.S. Fish and Wildlife Service and National Marine

Fisheries Service along with state and federal forest managers, industry foresters, and environmental organizations were willing to entertain opportunities to manage young stands in LSR and RR through thinning as a way to achieve mature forest conditions. Siuslaw National Forest timber sale programs were quickly adapted to rely almost entirely on the harvesting of young stands.

Roads and watershed restoration— an unforeseen opportunity

It was quickly becoming apparent that the road system on Siuslaw National Forest was turning into a liability as well as an asset. Road construction in the Coast Range is costly, but manageable given the high timber values. By 1990, total road mileage on the Siuslaw was about 2700 miles, or 2.7 miles of system road per square mile, much of it paved or high-standard roadway that required persistent and costly maintenance. Costs were met through appropriated funds and, more importantly, through cooperative deposits from timber purchasers. As timber harvest fell and appropriations were reduced, the capacity to adequately maintain roads dropped by about 75 percent. In our heavy rainfall area prone to road-associated landslides, this was a prescription for disaster.

A complete reassessment of road management was needed to accommodate both a reduced maintenance budget and the expectations for reduced road impacts that were inherent in the Northwest Forest Plan. Was there an approach to road management that would render roads somewhat invisible in the landscape, in relation to terrestrial and aquatic impacts?

Drastically reduced road maintenance funding meant that road closures were inevitable, and we ultimately closed about 70 percent of all roads to public travel. The resulting decrease in traffic and noise provided an unanticipated benefit for LSR and RR.

More vexing was the prospect that a major rainstorm and flood would confront

our neglected, aging road system. The ever-increasing risk of road-associated landslides bleeding ruin into rivers that we were counting on to support salmon recovery, not to mention the corresponding loss of many millions of dollars in road asset value, was like a ticking bomb.

We were to be tested.

In February 1994, a tremendous storm struck the Pacific Northwest. The warm rain-on-snow of this “pineapple express” (so named because of its origins in the warm mid-Pacific) brought widespread flooding, landslides, and road and bridge losses. Oregon’s Coast Range was in the crosshairs as the storm made landfall. I will never forget flying over those mountains when the storm abated and seeing the many rivers surging at flood stage into the Pacific Ocean, laden with soil and trees hundreds of years in the making. A thoroughly natural phenomenon, yes, but possessing a once-in-a-lifetime awesomeness.

Damage to the road system was great and seemingly everywhere. We now had the chance to gauge the effectiveness of measures we had taken over a couple of years just prior to the storm. We did not trust the ability of ditches and culverts to handle storm runoff because decades of experience had already proved their weaknesses. If neglected, they would only become greater liabilities.

Thus, prior to road closures, we installed thousands of small, inexpensive water bars diagonally across a road from the ditch side to the opposite edge of the road, about one foot deep. These low-tech bars are designed to remove all water from the road in small increments, no matter how hard it rains. Once treated, roads can

be left alone. In the Coast Range, this means rapid and dramatic changes as grass and brush grow quickly enough to make many roads impassible in as little as three years. Fallen trees are left in place.

After the flood, we meticulously assessed the nature and extent of damage through a study of 100 miles of road, 50 miles of which had been treated with water bars and 50 miles that had received no treatment. We noted significant reductions in both frequency and severity of landslides and road failures on treated

roads. Astonishingly, a detailed review of more than 950 water bars showed that only one gave way to any kind of road failure. This was a real triumph for the “small is beautiful” school of thought. Roads now posed less risk to the health of aquatic systems.**

** A 30-minute video, “Torrents of Change,” documents these results and is available from Forest Service Employees for Environmental Ethics, Eugene, Oregon.

The 1990s witnessed an unprecedented

reversal of forest management on Siuslaw National Forest because of both litigation and the Clinton administration’s resolve to create a bold, new direction for federal forest management in the Pacific Northwest. It was also made possible by our leadership group. We were committed to demonstrating that change was essential, reasonable, and possible.

A good barometer was the reaction of local and national environmental groups, who were deeply entrenched and even cynical in their opposition to traditional forest management. They generally applauded the changes, highlighting the Siuslaw as an example of a national forest once committed to the practice of “industrial-strength” forestry that had blazed a new trail for others to follow.

Would environmental groups become allies of this “reformed” Forest Service? Not really. There would be little peace in a region dominated by the “timber baron” Willamette, Umpqua, Siuslaw, Mt. Hood, and Gifford Pinchot national forests.

When the Northwest Forest Plan was released in 1994, reactions varied. The Clinton administration was euphoric, with good reason. They had convened an eminent group of scientists led by Jack Ward Thomas, who later became Chief of the Forest Service, to complete a massive, science-based, detailed, cutting-edge plan. Clinton had delivered on a campaign pledge to break the impasse in the Pacific Northwest and had done so with a vow to balance wildlife and environmental interests against timber and economic interests.

A sea change, but with a similar refrain

The timber industry, predictably, was feeling defeat at having lost about 75 percent of its traditional federal timber supply. Yet, the timber industry sector that did not rely on federal timber was sanguine at the prospect of tremendous windfall profits arising from a squeezed supply. Environmentalists were skeptical enough that a victory party did not seem appropriate. Federal employees, who would bear the responsibility to make the Northwest Forest Plan work, were just plain worried about implementing such a complex concept and were concerned about too lofty expectations.

The crux of the plan was to find the balance point where both owl habitat and timber supply were optimized. But it was made explicit that old-growth forests were still going to be harvested. Environmentalists were unwilling to cede any ground in their vehement opposition to harvest of old-growth forests. The case was made that the Northwest Forest Plan would accumulate old growth over time as mature stands aged in LSR and RR and would ultimately provide sufficient habitat for owl viability. But virtually every subsequent timber sale that included old-growth forest was contested, either through appeals, lawsuits, or the use of monkey-wrenching tactics such as site occupation and tree sitting.

There would be little peace in a region dominated by the “timber baron” Willamette, Umpqua, Siuslaw, Mt. Hood, and Gifford Pinchot national forests.

A new reality

The inescapable conclusion is that one technique assures adequate protection for owls and all other species that rely on old-growth forest habitats. Leave the trees standing.

There was a wild card in the deck. The innovative survey and manage provisions of the plan were of unknown consequence. They were intended to provide needed protection for more than 400 species of plants and animals believed to be intrinsic to mature forests. Federal agencies were allotted a few years to develop survey protocols that would help

determine whether specific species were present in a project area and to devise management standards in the event the species were present. Management standards often required restrictions on timber harvest to avoid elimination of or harm to habitat.

The red tree vole is a case in point. Research demonstrated that the vole, a tree dweller, is an important prey of northern spotted owls. The management standard for voles was to provide a buffer of uncut timber around any trees where voles were found. In practice, voles proved to be quite ubiquitous and were found in virtually all mature forest stands of Willamette National Forest. After providing buffers, it was simply not practical to proceed with timber harvest because there was almost nothing left. Imagine Swiss cheese, with mostly holes.

Surveys need to be reliable, and the scientific rigor necessary to produce a

reliable result can be very costly. The costs associated with surveys for hundreds of species were exorbitant—millions of dollars each year. At the same time, the amount of timber offered for sale—and thus revenue from timber sales—on the big-timber Willamette, Umpqua, Siuslaw, Mt. Hood, and Gifford Pinchot national forests dropped precipitously. When the Northwest Forest Plan was issued in 1994, the combined planned sale quantity on these five national forests was 382 mmbf, but the actual sale volume plummeted to less than 30 mmbf in Fiscal Year 2001 (Table 1).

To put this in perspective, the Forest Service offered more than 11 billion board feet of timber for sale per year in the late 1980s, and nearly five billion of that came from the Pacific Northwest Region. At one point, Willamette National Forest alone offered one billion board feet. Today, the actual sale total of less than 30 mmbf for Willamette, Umpqua, Siuslaw, Mt. Hood, and Gifford Pinchot national forests represents a reduction of 99 percent from the nearly three billion board feet offered for sale from these forests each year during the late 1980s.

The inescapable conclusion is that one technique assures adequate protection for owls and all other species that rely on old-growth forest habitats. Leave the trees standing.

Another important front dictating outcomes in the latter 1990s was litigation. Although many cases have been brought to trial on issues related to the Northwest

Table 1. Planned and actual timber sales for five Pacific Northwest national forests

Forest	Planned sale quantity	Actual sales volume FY 2001
	MMBF/YEAR	
Gifford Pinchot (WA)	73.0	1.6
Mt. Hood (OR)	67.0	1.5
Siuslaw (OR)	23.0	6.2
Umpqua (OR)	83.0	0.5
Willamette (OR)	136.0	18.3
Total	382.0	28.1

Sources: Northwest Forest Plan FEIS, 1994; USDA Forest Service Region 6, "Timber Cut and Sold Reports, FY 2001"

Forest Plan, one of the most intriguing and with the most impact was heard by federal district judge Barbara Rothstein. This was a challenge to the adequacy of the biological opinions rendered by the National Marine Fisheries Service in reference to federal projects, primarily timber sales.

The Fisheries Service relied for its biological opinions on the Aquatic Conservation Strategy (a provision of the Northwest Forest Plan to provide long-term, large-scale aquatic restoration) and concluded that federal projects could proceed. The agency argued that this aquatic strategy could be relied on to provide adequate long-term protection for endangered fish, even though local, short-term effects were known to be negative. Judge Rothstein rejected this premise and was upheld on appeal by the Ninth Circuit Court.

Rothstein's ruling, coupled with the results of survey and management efforts, is largely the reason that so little federal timber is currently being offered for sale on Pacific Northwest national forests west of the Cascades. National Marine Fisheries Service has yet to develop a new procedure to satisfy Rothstein's requirements to comply with the Endangered Species Act, so both the Forest Service and Bureau of Land Management have withdrawn timber sales affected by the ruling and are precluded from proceeding with others.

A consequence of this freefall is that most timber now planned for harvest is young. One would prefer to believe that this is the result of a deliberate recalibration

intended to focus energy where the need is greatest, rather than simple pragmatism necessitated by legal strictures. One test would be this: if sanctions were lifted, how would the agencies respond? Would the agencies simply revert to old habits and go after the big trees again? I hope not.

Years ago, Siuslaw National Forest confronted the simple truth that there was no biological need to harvest mature timber. It was assumed that mature and old-growth timber would only get "better" over time. On the other hand, there was a legacy of land management that did need attention. This was the road system we could no longer afford to maintain, the hundreds of thousands of acres of old clearcuts that were now dense thickets, and streams stripped of logs beneficial to salmon. There was an identified need here that we chose to meet. It was unquestionably the highest priority.

It takes time, but when a new vision is pursued, people and communities adjust and change; costs and benefits are counted differently. When an agency clings persistently to an agenda that does not enjoy broad support, opposition is guaranteed. And tremendous organizational energy is expended in rationalizing its agenda and combating the opposition.

However, when the old agenda is let go and replaced with one more consistent with public values — in this case, restoration of our natural resources — opposition largely vanishes. The organizational energy formerly devoted to defending itself is unleashed for constructive purposes. I know this. I lived it.

A different economic stability

By protecting most of the remaining ancient forests, the Northwest Forest Plan succeeded in bolstering the regional economy. During the past decade, the Pacific Northwest experienced impressive economic growth.

One would expect that the timber industry has been affected, and it has been. Sawmills have gone out of business, but industry is nothing if not resourceful. Many companies anticipated the reduction of federal timber and began retooling to use smaller logs that are now the primary product from private forestlands. Large logs

more than 100 years old used to comprise about 70 percent of the raw material used by sawmills in western Oregon and Washington, and federal timber used to provide most of the wood supply. Large logs now comprise less than five percent and federal timber only seven percent, and these numbers continue to drop.

Despite continued declines in federal timber harvest and additional endangered species listings since the Northwest Forest Plan was adopted in 1994, overall timber harvest levels in Oregon and Washington have been remarkably stable. Each state has produced about four billion board feet of timber every year, of which more than 80 percent comes from private forestlands (Figure 1). The plan has helped to provide greater stability for private timber owners in the region by assuming the bulk of responsibility for endangered species protection.

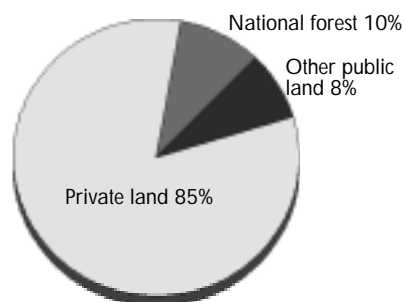
Federal timber in the Pacific Northwest is radically diminished in its economic effect, yet it is increasingly important for its environmental contributions. As economists Ernie Niemi and Ed Whitelaw explained in their aptly titled report *The Sky Did Not Fall*, unlogged forests have become mainstays of the Northwest economy because they contribute to the quality of life that attracts businesses and skilled workers to the region.

By protecting most of the remaining ancient forests, the Northwest Forest Plan succeeded in bolstering the regional economy. During the past decade, the Pacific Northwest experienced impressive economic growth, despite continued declines in the lumber and wood products industry. While several thousand timber industry jobs were lost, total employment in Oregon and Washington grew by more than one million jobs (26 percent) during the 1990s (Table 2). Defying expectations, growth occurred in almost all of the rural, traditionally timber-dependent counties affected by the Northwest Forest Plan.

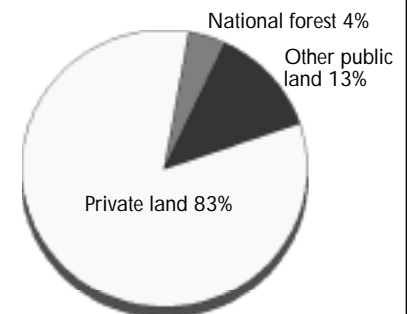
One cannot minimize the real hardships that impacted individual families and businesses, as well as communities that have faced lost jobs and closed mills. Stability is much sought after for its social and economic benefits, but cannot be equated to maintaining the status quo. Stability is best achieved by diversifying economies at all scales so that people and communities are resilient in the face of change.

Figure 2. Timber cut in Oregon and Washington, by ownership, 1994 and 2000

1994
8.3 billion board feet



2000
8.0 billion board feet



Congress has played an important role in easing the region's economic transition. For example, recent payments-to-states legislation sponsored by Senators Wyden (OR) and Craig (ID) has effectively de-coupled federal payments from

federal timber sales. The "jobs-in-the-woods" program and limitations on log exports have also helped minimize impacts on rural timber workers and the regional timber supply.

Table 2. Forest-related* and total employment in Oregon and Washington, selected years

	1986	1990	1994	2000
Oregon				
Forest-related jobs	72,900	72,800	63,600	56,900
Total jobs	1,414,000	1,639,200	1,795,600	2,117,900
Washington				
Forest-related jobs	54,300	57,400	52,900	47,700
Total jobs	1,728,900	2,144,000	2,305,500	2,703,200

* Includes jobs in Lumber and Wood Products and Paper and Allied Products. Sources: USDA Forest Service Resource Bulletins ("Production, Prices, Employment, and Trade in Northwest Forest Industries, Fourth Quarter"), 1987, 1993, 2002; Washington State Employment Security Department; U.S. Department of Commerce, Bureau of Economic Analysis.

Are the good old days gone forever? In all likelihood, yes. But it is not fair to conclude that anything is wrong with this dramatic and nearly total reversal. American politics can be painful and slow and lurching, but politics typically lurch toward outcomes that are acceptable to the public. This is a simple definition of a politician's job. Discern the public will and then deliver.

The Forest Service was, arguably, well within the mainstream of public sentiment through the 1970s. But a groundswell of opposition was mounting and clearly evident. A different set of societal values had emerged that beckoned the Forest Service to change. Failure to recognize such a value shift and adapt the mission of an agency can have profound consequences. How many polls that show 80 percent of people hate clearcuts does one have to read before concluding that changes are imperative?

There was no more poignant reminder of the consequences than Judge Dwyer's injunction that slammed the door on the past. But the injunction also illuminated a pathway to a brighter future.

Is it not fitting that federal forests might hold the key to restoring much of what has been lost? It is said that nature abhors a vacuum, and efforts are being made to restore health to the rivers and

forests in hopes that fish and wildlife will respond. As the natural forests that fostered such an amazing richness of salmon fisheries were systematically eliminated, was it any wonder that salmon stocks suffered, especially when compounded by other factors such as hatchery practices, fishing pressures, and hydropower dams? It is naive to think that salmon numbers will ever approach their former abundance, or that old-growth forests will ever occupy as large a portion of the landscape. But they can be restored to a significant degree.

Consider this. One hundred years ago the Oregon Coast Range, portions of which became Siuslaw National Forest, was a recently burned-over young forest and seemingly of little value. With time, this prodigiously productive 1000-square-mile landscape grew a phenomenal forest that is now worth \$15 billion in timber value alone. It is small wonder that the debate about which values will dominate the future is so heated. But land and resources do recover. Hope is often the real casualty and as much in need of restoration as are the lands and waters.

Opportunities abound. Many national forests are already well on their way toward a transition to restoration. These

Where to from here?

include the Mt. Baker-Snoqualmie and Olympic in Washington and the Siskiyou-Rogue River in addition to the Siuslaw in Oregon. These forests were the first to confront the dramatic, rapid reduction in timber harvest activity. Other national forests—notably the Willamette, Umpqua, Mt. Hood, and Gifford Pinchot—lag behind because they were traditionally the largest timber producers in the National Forest System, and the Northwest Forest Plan's strategy was to rely heavily on them to achieve the planned sale quantity. They contain relatively large amounts of matrix lands as well as the largest remnants of old-growth forest, and it is this old-growth timber that was to supply the hoped-for billion-board-foot sale level.

Is it any surprise that continued cutting of old growth has been the focus of so

much attention and controversy? Is it any surprise that a billion board feet of timber was an impossible goal to attain, and will remain so?

There are numerous obstacles in the way of a dogged allegiance to the cutting of old growth. The survey and management requirements are costly and often leave little remnant timber available for harvest. Legal challenges are a constant, the most recent being the Rothstein rulings. I have the feeling that when they are remedied (if possible), other legal skirmishes will ensue to block the cutting of old growth. The costs of confronting civil disobedience are great and include an erosion of public support. But perhaps the biggest obstacle is political, and it is often the last to be overcome. The Clinton administration was wary of the power of the timber industry; the Bush administration is beholden to it.



Photo courtesy The Wilderness Society

Old growth provides clean water for fish habitat and use by people downstream

Restoration—reasonable and achievable?

Are there also obstacles to restoration? Money is always an issue.

Traditional funding is targeted for timber sales, posing a threat to Pacific Northwest national forests if agency funding is redistributed to regions that are deemed “more efficient.” The Forest Service is seeking to fund acres managed as opposed to board feet sold, but this change in budgeting principles is not yet firmly established.

Money is not lacking. It just needs to be marshaled in a different way to accomplish different objectives. The recent payments-to-states legislation that secured a traditional level of revenue for county governments formerly reliant on a logging dividend went a long way by enabling counties to invest in federal land restoration projects. And it would help if there were authorizing legislation that addressed this need, to be followed by line-item appropriations. Congress routinely provides specific language to accompany a budget to ensure that an agency adheres to its direction.

Is labor readily available to perform new tasks? Yes, although some allowances for transition needs such as training have to be made. I found the labor market to be remarkably resilient. When Siuslaw National Forest roads needed restoration, many of the same contractors who had constructed and maintained roads readily adapted to meet our needs. Logging technology and loggers are both well adapted to the transition from old-growth to young-stand management. When we needed helicopters to place large logs in streams for fish, logging contractors did an outstanding job. Nationally, “forest practitioners” are becoming effective at accomplishing holistic work for a variety of forest resources—soil, water, fish, wildlife—in addition to traditional logging.

Perhaps the biggest obstacle is the agencies’ reluctance to let go of the timber sale contract in favor of simpler, more effective tools for restoration work. Simply put, for decades the agencies

have sold timber as stumpage rather than logs. This may have been appropriate under the old harvesting regime, but new concepts are needed and are available for selling logs, which will in turn foster accomplishment of restoration work more efficiently.

Ironically, authorities currently exist to make important changes, but there has been little progress.

All that’s needed, especially for the abundant young, homogenous stands, is a simple harvesting contract to cut and deliver logs to a selling point, while retaining federal ownership of the wood. This alone would dramatically reduce planning and preparation costs. Then logs could be sold as a straightforward business transaction to industry buyers, eliminating many of the complexities of traditional government stumpage sale contracts.

This is already common in the private sector. Congressman DeFazio (OR) has been suggesting this for many years. I have conferred with numerous people in the timber industry who would welcome this.

Forest Service officials feel squeezed, but they have an obligation to point out realities and illustrate new opportunities. The benefits of transitioning to a restoration focus would seem obvious—public support, less controversy, real work obviously benefiting the environment, more jobs, wood products that fit well with existing markets, and, importantly, the need to address consequences of past management. Now is the time to explicitly acknowledge the best course for the future—spare the old growth, attend to the young plantations. These federal forests generated many billions of dollars in profits. Aren’t they now worth an investment in restoration?

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Conclusion

The transition from despair to hope can be difficult, especially if leaders are not clear about what must be achieved and do not display the necessary determination. There is a palpable sense of resignation about the reality of circumstances that have altered federal forestland priorities in the Pacific Northwest. It has affected virtually all interests. The timber industry is bitter. Environmental groups remain deeply suspicious. Communities and labor lament lost jobs. Federal officials worry, endlessly. Approaching the future while looking backward does that.

Yet, citizens in the Pacific Northwest hold to the belief that they live in a great place, defined in large part by the mountains, forests, rivers, and ocean. If the good old days are over, move on. If restoration is needed, get busy.

It is simplistic but largely accurate to say that a divide has been crossed. For much of the 20th century, management of public and private forests was more similar than different. This is no longer true. Public forests—and federal forestland more so than state forestland—are now strongly focused on wildlife and fish, clean water, recreation, and naturalness by virtue of law and public preference. Timber harvesting is trending toward doing that which is necessary to sustain ecosystems, rather than produce revenue. There is a great deal of work to do to restore health and vibrancy and productivity to these lands, a different sort of productivity than formerly known. Private forestlands are still primarily driven by economic forces. The Pacific Northwest—indeed, all of the United

States—is blessed to have a balance of both public and private forests. This schism is healthy.

I liken the collapse of the big timber era to a train traveling at high speed right off the end of the track to a spectacular wreck. This occurred in spite of warning signs all along the way. *Yellow light*—growing public contempt for clearcutting of old-growth forests; more shrill opposition to the agency's core business. *Red light*—litigation tunes into the right frequency after many attempts and jams transmission; federal courts finally stop an agency incapable of stopping itself. I still think it surprising that the Forest Service sold more timber in 1989 than ever in its history. This was an interesting exclamation point on the contentious 1980s, a fine example of hubris.

There is another way, but will federal officials lead or be dragged? Restoration of forest health is needed, and there is abundant work to do. In LSR alone there are more than 1.2 million acres available in Oregon and Washington forests for pre-commercial and commercial thinning, yet current activity is only 1500 acres per year. There is also a huge backlog of road restoration that is essential to manage the unwieldy and unnecessarily large road system.

To change will require champions for a new vision, and passionate advocates for the values of natural forests. Perhaps new legislation with dedicated funding for restoration is needed to foster the right climate, thus enabling interest groups to unify around principles legitimized by Congress. Discern the public will and then deliver. This is a great time for leaders!