The Northwest Forest Plan

A Report to the President and Congress

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U.S. Department of Agriculture
Office of Forestry and Economic Assistance
December 1996

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United States Department of the Interior

United States Department of Commerce

United States Department of Housing and Urban Development

United States Department of Labor

United States Small Business Administration

United States Environmental Protection Agency

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ABSTRACT

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The Northwest Forest Plan is a comprehensive design for managing federal forests; providing economic assistance to hard-pressed workers, businesses, and communities; and coordinating the activities and responsibilities of federal agencies and state, local, and tribal governments in western Oregon, western Washington, and northern California. The Plan, announced in July of 1993, is a direct outgrowth of the Forest Conference held in Portland, Oregon, in April 1993; it was intended to break the impasse that had brought federal timber sales to a standstill in the region of the northern spotted owl. The interagency and intergovernmental component makes the Plan a model of government reinvention through streamlining, coordinating, developing partnerships, and collaborative decision making. The forest ecosystem management component includes regionwide federal land allocations and strategies for conserving aquatic resources, managing forests, planning timber sales, harvesting timber, using adaptive management, and protecting sensitive species on nonfederal forestlands. The economic assistance component is intended to give the workers and their families, businesses, counties, and communities affected by changes in federal forest policies the opportunity to adjust and prepare themselves for a prosperous, sustainable future. Much has been learned since the Plan was unveiled in July of 1993, and this report reviews accomplishments, develops observations on implementation, and identifies opportunities for further progress.

Keywords: Northwest Forest Plan, Option 9, ecosystem management, federal forestry, northern spotted owl, timber dependence, timber supply, endangered species, aquatic conservation, adaptive management, rural economic assistance.

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ABOUT THIS REPORT

This report was drafted at the request of Congress, as directed in the fiscal year 1995 Interior and Related Agencies Appropriations Conference Report. It summarizes the events that led to the development of the Northwest Forest Plan, the components of the Plan, accomplishments in meeting the Plan's commitments, and observations about what is working well and where improvements could be made.

The forest lands of the Pacific Northwest and northern California define the region's identity, woven into the lives and livelihoods of the people who call this region home. From the Pacific Ocean to the Cascade Range and from the Canadian border south to Mendocino County, California, these forests provide clean water, pure air, a home for plant and animal species, opportunities for recreation, and a place for solitude and contemplation. These same forests also provide a wide range of resources that people demand, including wood for forest products; fish for commercial and sport fishing; lakes, rivers, and mountains for tourism and recreation; and many other resources for a variety of smaller industries.

For the past few decades, policies that required both timber harvest at or near historical rates and increasing environmental protection proceeded along parallel tracks. Underlying these often conflicting mandates was an emotional debate over which track should have greater emphasis. The debate intensified in the late 1980s, when public attention and conflict over the issue gained national prominence.

A series of legislative and legal battles in the late 1980s led to an injunction in 1991 that prevented the Forest Service from preparing any new timber sales in northern spotted owl habitat; in 1992, the Bureau of Land Management was also enjoined from any new timber sales in owl habitat. These legal actions brought federal timber sales to a virtual halt.

The Clinton Administration inherited the Northwest timber issue in 1993, and a commitment to resolve it was high on the President's list. To end the legal impasse, remove the injunctions from the region's federal forest lands, and move the region forward, the President asked his Administration and federal professionals to create a science-based forest management plan built on these five goals:

Adhere to the nation's laws.
Protect and enhance the environment.
Provide a sustainable timber economy.
Support the region's people and communities during the economic transition.
Ensure that federal agencies work together.

These goals had widespread support from a diverse group of participants at President Clinton's Forest Conference in Portland, Oregon, April 2, 1993, though people clearly differed on which goal should receive the greatest emphasis. The challenge to the Administration was to develop a plan that achieved each of these goals while recognizing that difficult tradeoffs would have to be made to address people's often conflicting demands. Two months later, the President announced his forest plan with its proposed agency coordination, economic assistance, and forest management components.

Agency coordination was implemented immediately by the Administration. The Administration proposed and Congress secured federal appropriations to start the economic assistance program by December 1993. And, on April 13, 1994, the federal forest management plan was completed, incorporating nearly 110,000 public comments.

MEETING GOALS

How the five main goals that served as the Plan's foundation have been met during the first two years of implementation are outlined below.

Adhere to Our Nation's Laws: Providing Certainty for the Future

One of the underlying philosophies of the Plan was that making the difficult decisions required to Comply with environmental laws today would provide greater certainty for all forest habitat and its users tomorrow. The Plan attempts to increase certainty by using the best science available, and managing adaptively so that learning becomes a primary product of all management actions. The Plan was also designed to increase certainty by integrating the nation's environmental laws, which were independently drafted, making them sometimes difficult to interpret and susceptible to legal challenges.

Within two months after the Plan's release, the injunctions were lifted, clearing the way for agencies to plan new timber sales and other management actions, for the first time in three years. In December 1994, the Plan was the first regional land management plan to pass full legal muster, from the same court that had placed the injunctions on the federal government three years earlier. Since then, individual agency actions have continued to prevail on subsequent legal challenges, allowing the Plan to move forward.

Protect and Enhance the Environment: A New Era for Natural Resource Management

The concept of ecosystem management recognizes that forests are complex networks of biological systems connected and dependent on each other, and that people are an integral part of those ecosystems. Although ecosystem management has been widely studied, it is just beginning to be implemented on the ground. The Northwest Forest Plan is one of the first large-scale attempts to define and operate ecosystem management across an entire region.

The Plan covers the range of the northern spotted owl, which includes western Washington and Oregon plus northern California. The 24.4 million acres of federal forest lands in this region are allocated into seven categories created to maintain and restore nearly 80% of the remaining

late-successional and old-growth forests, water quality, fish and wildlife habitat, and to allow a sustainable timber harvest of 1.1 billion board feet per year.

An aquatic conservation strategy was implemented to restore and maintain the health of watersheds, providing direction for analysis, restoration, and monitoring. More than 1,100 watershed restoration projects are completed or initiated. Nearly 12 million acres of watersheds have been analyzed, with another 2.5 million acres projected to be analyzed by the end of fiscal year 1997.

The region is divided into 12 physiological provinces to focus on how land management activities will address the unique ecological attributes of each subregion. For example, the oldgrowth rain forests of the Olympic Peninsula Province in Washington have different management requirements than do the less dense and drier forests of the Klamath Province in northern California. The Provinces allow the Plan's standards and guidelines to be adapted to fit unique, local conditions.

Because of the conservation benefits on public lands, federal agencies are also working differently with nonfederal land owners. Nonfederal land owners are working voluntarily with the U.S. Fish and Wildlife Service and National Marine Fisheries Service to manage millions of acres of habitat for a variety of species by developing habitat conservation plans. These cooperative efforts give land owners the opportunity to comply with the Endangered Species Act by maintaining important habitat areas, and they can, in return, move forward with their economic goals; 24 plans and agreements are completed, covering more than 1,756,000 acres; another 56 are

underway, potentially protecting about 7.5 million acres.

Provide a Sustainable Timber Economy:
The Timber Supply Pipeline Is Flowing Again

From 1991 to 1994, the federal timber-sale program west of the Cascade Range was virtually shut down by court injunctions. The timber pipeline went down from about 5 billion board feet sold and available for harvest before the injunction to about 1 billion board feet three years later. In 1994, the injunctions were lifted and federal timber could again be offered for sale.

Filling the pipeline again posed a two-step challenge: first, to develop a science-based federal forest management plan that would allow the injunction s to be lifted, and then to physically reestablish a sustainable timber-sale program from scratch.

Volume offered in fiscal years 1994, 1995, and 1996 (mmbf)

Agency	FY 1994	FY 1995	FY 1996	Total
Forest Service				
Oregon and Washington	156	393	516	1,065
N. California	67	100	167	334
Subtotal	223	493	683	1,399
Bureau of Land Management	18	127	190	335
Total	**241**	**620**	**873**	**1,734**

The Forest Service estimates that, of this amount, 77% was saw timber; 14% was pulp and other non-saw-timber products; 5% was posts, poles, and pilings; 7% was fuelwood; and 1.5% was cull material. The Bureau of Land Management reports only saw timber when reporting volume offered. More than 1.7 billion board feet were offered for sale from federal forest lands in Washington, Oregon, and northern California from 1.994 to 1996--enough to build 142,000 average homes and employ about 11,700 people.

If the President's proposed budget is funded by Congress, the Plan is projected to meet the 1.1 billion board feet timber harvest target in western Washington, Oregon, and northern California in 1997.

Timber and other resource personnel in the region have had to spend considerable unplanned time on litigation related to the salvage provisions of section 2001 (k) of the Recissions Act (1995) and requirements of resulting court orders. The agencies believe that this unplanned workload may affect final accomplishments for 1997.

Support the Region's People and Communities During a Period of Economic Transition: The Economic Adjustment Initiative

Unemployment for the entire region is at its lowest in two decades. In Oregon alone, more than 58,000 jobs have been created between May 1995 and May 1996 (Oregon Employment Department 1996), and population growth in both metropolitan and nonmetropolitan areas throughout the region are above national averages. Nonetheless, changes in the timber industry resulting from federal sale reductions are creating hardships for people, businesses, and communities in rural parts of the region that have not benefited from regional economic growth, and are far from major transportation corridors. The Northwest Economic Adjustment Initiative is aimed at providing both immediate and long-term relief for those people, businesses, and communities. Partnerships with representatives from federal agencies, states, tribes, and local communities have created new opportunities to help people help themselves through this difficult transition in the forest products industry.

The initiative proposes to make $1.2 billion available over five years to develop much-needed infrastructure in timber-dependent communities, provide technical and financial assistance to rural businesses, create new jobs through restoring the region's forested watersheds, and provide job training and retraining for dislocated workers. In the Plan's first two years, nearly 14,800 job-related effects were created.

Job-related effects include worker placement for those completing training programs, short- and long-term jobs retained and created in 1995, and jobs expected to be created after 1995. The job estimates, by category of assistance and state are

Category	Oregon	Washington	California	Total
Workers and families	449	368	0	817
Business and industry	5,160	1,730	1,420	8,310
Communities and infrastructure	1,013	585	401	1,999
Ecosystem investment	2,361	701	611	3,673
Total	**8,983**	**3,384**	**2,432**	**14,799**
Percent	**61%**	**23%**	**16%**	**100%**

Not included in the totals are 1,743 jobs resulting from loan guarantees made by the Small Business Administration within timber-affected counties. Jobs from loan guarantees totaled 768 in California, 723 in Oregon, and 252 in Washington.

Additionally, the Initiative has distributed more than $555 million in grants and loans, and more than 100 communities have been assisted. The distribution of funds by category of assistance and state for the $555 million obligated from fiscal year 1994 through 1996 was

Category	**Oregon**		**Washington**		**California**		**Total**	
	Millions $	*%*	*Millions $*	*%*	*Millions $*	*%*	*Millions $*	*%*
Workers and families	20,320,000	4	16,250,000	3	4,000,000	1	40,570,000	8
Business and industry	77,087,435	14	28,086,892	7	36,601,400	7	151,775,727	28
Communications and infrastructure	114,188,782	21	81,859,452	14	74,838,719	13	270,886,953	48
Ecosystem investment	45,348,837	8	30,286,055	5	16,592,674	3	92,227,566	16
Totals	256,945,054	47	166,482,399	29	132,032,793	24	555,460,246	100

Here are some examples of projects funded in fiscal years 1994 and 1995:

Assistance to workers and families

More than $27 million has been awarded to retrain more than 4,900 workers in communities affected by changes in the timber industry; 81% of these workers have subsequently been placed in jobs.

Assistance to business and industry

Grants and loans of $88.6 million were awarded to stimulate business growth and economic development to more than 100 rural communities in Washington, Oregon, and California in fiscal years 1994 and 1995.

Assistance to communities

Grants and loans of $162.7 million were awarded to help rural communities in Oregon, Washington, and California plan and build water systems, retool mills, update and refurbish hospitals, build new waste treatment facilities, and support other community infrastructure improvements in fiscal years 1994 and 1995.

Ecosystem investment

An investment of $65.5 million funded several hundred watershed and ecosystem projects in Oregon, Washington, and California, to restore habitat and provide jobs.

Ideas for projects and programs are gathered and considered by one-stop centers for all types of financial assistance. Each state has one Community Economic Revitalization Team whose membership is individually tailored to deal with the needs of workers, families, businesses, and communities in their state. The Teams are working to streamline government processes and overcome bureaucratic barriers. Nearly 50 barriers have been identified and removed in 1994 and 1995.

An additional problem associated with federal harvest reductions is the economic threat to some county governments that traditionally depend on 25 to 50% of the federal timber receipts to provide a substantial portion of their budget. To help ensure these counties could continue to provide vital public services, the Administration proposed and Congress authorized a substitute fixed-payment schedule based on 85% of the average of federal timber receipts from 1986 to 1990. The payments, which began in 1994, will decline at the rate of 3% per year until 2003. Finally, the Plan incorporates a provision, proposed by the Administration and authorized by Congress, that ends tax exemptions given to foreign companies exporting unprocessed logs, to keep more logs here for domestic processing.

Ensure That Federal Agencies Work Together

The Plan directs government agencies to work cooperatively rather than as separate agencies. This cooperation is difficult because agencies have different mandates, responsibilities, and cultures that sometimes overlap or conflict. Agencies like the Forest Service and the Bureau of Land Management share similar missions to manage federal lands for resources, recreation, and environmental protection; regulatory agencies like the National Marine Fisheries Service and Fish and Wildlife Service are responsible for conserving species under their Endangered Species Act jurisdiction.

To coordinate and focus Plan implementation, the federal agencies are working together in new interagency groups that do not take decision authority away from individual agencies but require them to coordinate with other agencies and the public.

In this effort, agencies have developed regionwide means to coordinate activities, improve communication, share information, and eliminate duplication. As an example, the consultation process under the Endangered Species Act that used to take about 114 days is now taking an average of 30 days in Oregon, Washington, and northern California.

Advisory committees were established to ensure that federal decision makers receive input from local, state, and tribal governments and the public. The committees are focused on building coordination, communication, and trust among the 7 departments and 16 agency programs implementing the Plan.

The Interagency Steering Committee (ISC), based in Washington, DC, establishes policies for the Plan, and resolves regional issues that are brought before them.

The Regional Interagency Executive Committee (RIEC) serves as the senior regional body coordinating and implementing the Plan. Advising the RIEC is the Intergovernmental Advisory Committee (IAC), which ensures a forum for the states, local governments, and tribes.

Each of the 12 provinces has a Provincial Interagency Executive Committee (PIEC), of federal agency managers who oversee the public programs within their province. Advising the PIECs are the Provincial Advisory Committees (PAC), made up of community, business, and environmental representatives, along with tribal, state, and local officials.

The Regional Ecosystem Office (REO) provides independent recommendations and scientific, technical, and other staff support to the RIEC. Staff members of the REO are on loan from federal agencies participating in the Plan.

Assisting the Economic Adjustment Initiative are the Multi-Agency Command (MAC) and the Regional and State Community Economic Revitalization Teams (RCERT and SCERTs). The MAC members are based in Washington, DC, and the regional and state CERT members include state and local representatives from California, Oregon, Washington, tribal organizations, and the federal agencies responsible for awarding grants and loans.

THE PLAN IN PROGRESS

The body of this report contains hundreds of observations on Plan implementation and opportunities for improving what has already been completed. Although each observation is important in its own right, three broad conclusions were reached.

Government Agencies Are Working Together

Government agencies are working together--and working with interested citizens--to better serve the public and meet their diverse demands. Such coordination is saving staff and financial resources, creating trust among and between the agencies, leading to better and more unified positions, and helping manage the inevitable conflicts. Successful partnerships require people to look beyond their own missions and values to develop mutually agreed upon solutions. Working things out takes considerable patience and time, but in the end more people feel better about the decisions and the mix of resources being managed.

The Ecosystem Approach Is Changing How Forests Are Being Managed

An ecosystem management approach is more than just a general concept; it also provide s a set of management tools that can be applied on the ground and be made to work. But these tools are new, and improvements are being made to better meet economic and environmental policy commitments. The adaptive management concept--designing management actions to produce learning and making changes as we learn--will be used to refine the Northwest Forest Plan. It will take a decade or more to refine the tools that were developed in 1993 and 1994, but the agencies are off to a measurable start.

The Economy and the Environment Are Moving Toward a New Equilibrium

People want more of both environmental protection and products from their forests. The Plan seeks a new equilibrium by taking a comprehensive, multiownership look at integrating forestry and economic assistance. Difficult choices were made to assure that the region's late-successional and old-growth forests that were in decline would survive over time. The result was a new federal timber sale rate that is expected to grow slowly over time and a more flexible approach to regulating private lands in recognition of the rights of private land owners.

For those who depend on federal timber sales, the Plan's 75% reduction in sales is too large. For those who believe that all of the remaining late-successional and old-growth forests should be protected, the Plan's 80% protection of these forests is too small. Where people stand on the new equilibrium depends on their beliefs and values.

SUMMARY:

THE NORTHWEST FOREST PLAN IS A PLAN IN PROGRESS

After being shut down for three years, federal forest management is moving forward, though under somewhat difficult circumstances. Federal expenditures are being reduced to balance the budget. The reduced federal staff implementing the Plan is simultaneously doing field work, fighting fires, addressing mandates from the Congress and courts, and meeting a variety of other responsibilities. And both the federal agencies and the public are still learning how to work together in the context of some polarized perspectives about the role of public lands.

More important though, people from a wide variety of backgrounds, needs, and expectations are beginning to sit down with each other and federal resource managers--and finding common ground. These new partnerships often start when people work together and achieve a small success like a thinning timber sale or a watershed restoration project. The trust being established today may make decisions easier in the years to come.

The Plan is designed to be adaptable and flexible. It allows people to consider and incorporate new information, scientific results, and on-the-ground experience to meet Plan objectives. Over the next few decades, the Plan, if carefully implemented, will generate more old-growth habitat and provide environmentally sound, sustainable timber production for the entire region. Most important, the Plan can prevent a return to the gridlock and frustration of the past. It is a starting point for the people, communities, and forests of the Pacific Northwest and northern California, a blueprint for a new way of managing the region’s natural resources for the continued benefit of everyone.

CHAPTER 1

ABOUT THIS REPORT

The forests of northern California, Oregon, and Washington are an integral part of the lives and livelihoods of the people who call this region home. From the Pacific Ocean to the Cascade Range and from Mendocino County, California, to the Canadian border, these forests provide clean water, pure air, and a home for plant and animal species, along with a place for people to connect with their natural history. These same forests provide a wide range of resources that people demand, including wood for forests products; fish for commercial and sport fishing; rivers, lakes, and mountains for recreation and tourism; and a myriad of natural resources for many smaller industries.

How these federal forests are managed for the people of the region and the nation has been strongly debated since the late 1800s. The context for that debate changed dramatically in the early 1990s, when federal forest management was virtually halted by the courts for three years. The shutdown would remain in place until the federal land management agencies made their plans more effective in sustaining total forest environments, including dependent plant and animal species.

Over the last century, the United States has built strong forest management and protection programs founded on the principle of sustained yield, in which timber inventory characteristics are used to assure more timber is grown than harvested. By most measures, the nation has successfully met this challenge. Timber harvest in 1920, across all ownerships, was double the net annual growth; by 1992, net annual growth exceeded harvest by 34% (MacCleery 1992). Although the nation enjoys sustainable timber harvest, many have questioned whether sustaining timber growth reflects the sustainability of a forest's noncommercial timber, and other plant, fish, and wildlife species.

To help assure the sustainability of all forest-associated plant, fish, and wildlife species, Congress passed forest planning statutes in 1976 that expanded the responsibilities of federal land management agencies to negotiate resource allocations and practices among those with different perspectives about how those resources should be used (Fairfax and Yates 1987). After nearly two decades of forest planning under those statutes, many believe the time has come to re-think sustained yield and to consider whether timber harvest rates should be calculated after determining the kind and amount of habitat needed to assure the long-term health of fish, wildlife, and plant species.

Underlying the evolving definitions of sustainability and planning are many opinions that often cause deep divisions about how much, if any, timber should be cut on federal lands. Some believe federal forests should be transferred back to nonfederal land owners for more active management that characterizes historical timber sale rates. Others believe timber harvest should be banned from federal lands altogether. These strong differences of opinion about federal land management are reflected by the heartfelt and diverse feelings that people in the Pacific Northwest and northern California have about their forests. For the generations of people who have

made their livelihood harvesting timber and producing forest products, the forests represent the lifeblood of the region's economy and symbolize a proud tradition of hard, demanding work managing a renewable resource. For the many people who revere the beauty and solitude of an old-growth forest as well as its associated ecological and economic benefits, the forests personify the very soul and quality of life that make the region such a special place to live for both current and future generations.

In the Pacific Northwest and northern California, the debate over the future of the region's forests has pitted people, businesses, and communities against each other. Their disagreements reached a crescendo with the court order to shut down.

ABOUT THE PLAN

To help the region move forward, President Clinton proposed his Forest Plan for a Sustainable Economy and Sustainable Environment, now called the Northwest Forest Plan, on July 1, 1993. The Plan attempts to integrate science, management, restoration, and protection in a manner that reflects the innumerable demands now being placed on the region's forests and forest-dependent communities. The Plan also attempts to provide a new sense of certainty about how much of the region's forest will be available for management, how much will be restored, and how much will be protected. Finally, the Plan attempts to provide a framework for bringing people together, while realizing that in the end it is the people themselves who must be willing to work through their different perspectives about the region's forests.

PURPOSE AND METHODOLOGY OF THE REPORT

This report attempts to clarify the reality and the perceptions about the Northwest Forest Plan by summarizing:

- The events that led up to the Plan;
- The Plan's components, the President's commitments, and the agencies' accomplishments in meeting those commitments; and
- Observations about what is working well and opportunities for making improvements.

The report was drafted at the request of Congress, as directed in the fiscal year 1995 Interior and Related Agencies Appropriations Conference Report. The report was prepared by the USDA Office of Forestry and Economic Assistance, formerly known as the U.S. Office of Forestry and Economic Development, which was established in 1993 by the Clinton Administration to oversee the implementation of the Northwest Forest Plan. Research for this report began in the fall of 1995. Letters were sent requesting input to each land management and regulatory agency's regional office. Each agency sent letters to its field offices, also requesting information. Follow-up meetings were held with a cross section of line and staff personnel at 16 of 18 National Forests, the 7 Bureau of Land Management Districts, the 3 Fish and Wildlife Service Field Offices, the 3 National Marine Fisheries Service Offices, and the Environmental Protection Agency's Regional Office.

All data presented in the report were provided by the responsible agency at the authors' request. The report was reviewed by federal officials responsible for designing and implementing the Plan and other individuals knowledgeable about it.

THE REPORT'S BOUNDARIES

The report:

- Provides an analysis by the USDA Office of Forestry and Economic Assistance of implementation of the Northwest Forest Plan;
- Reflects agencies' accomplishments for the Plan's first two years, 1994 and 1995, with some preliminary information from 1996;
- Provides observations and opportunities that the Administration, Congress, and agencies may wish to consider in improving forest management and economic assistance throughout the region; and
- Focuses on the timber resource, but recognizes that the Plan affects all uses of the forest.

The report does not:

- Reflect the official views of the Clinton Administration or of individual agencies;
- Offer recommendations;
- Reflect the views of nonfederal personnel;[1]
- Analyze the adequacy of the Plan's underlying scientific basis or commitments; or
- Analyze the real or perceived effects of the salvage rider contained in the fiscal year 1995 Rescissions and Emergency Appropriations Act because doing such analysis is premature until its effects are reviewed in 1997.

HOW TO READ THIS REPORT

The report was written for an array of readers.

- Read the summary if you are interested in a brief overview of the events that led to the Forest Conference and of the most talked-about forestry and economic-assistance issues under the Northwest Forest Plan.
- Read chapters 2 and 3 if you are interested in the events that led to President Clinton's Forest Conference and the subsequent forest planning and implementation.
- Read chapters 4 through 6 if you are interested in a better understanding of the Plan's governmental coordination, forestry, and economic assistance components and accomplishments. These chapters also include a list of observations on implementing the Plan and opportunities for improving it.
- Read chapter 7 if you are interested in some general observations on what we have learned.
- Read appendix A if you are interested in reviewing President Clinton's original commitments.
- Read appendix B if you are interested in how the Administration and agencies met the President's commitments outlined in appendix A.

[1] This report should be reviewed by a wide array of citizens who are not working for federal agencies before any actions based on it are taken.

CHAPTER 2

THE SETTING

FOREST CONSERVATION IN THE UNITED STATES AND THE REGION

Efforts to conserve the nation's forests began in the 1860s and 1870s when writers like George Perkins Marsh and John Wesley Powell began publishing their work on human influences on the natural environment. These works, along with a philosophical foundation provided by Henry Thoreau, Ralph Waldo Emerson, John Muir, and Gifford Pinchot, gradually moved the nation to think about its current approach toward land use, which had focused on land disposition by the federal government and extracting natural resources.

By the turn of the century, National Parks and Forest Reserves had been established; a National Wildlife Refuge would be created early i,1 the first decade. In the century that has passed since that time, federal forest conservation has gone through distinct periods of emphasis: custodial care, commodity production, and environmental awareness. To differing degrees, debate about the appropriate role of government in managing or preserving federal lands was a central focus during each of these periods.

Custodial Care

Two federal agencies were established to manage federal forests, grasslands, and waterways under the concepts of sustained yield; the USDA Forest Service and the USDI Bureau of Land Management.

Today's Forest Service was established in 1905 to protect natural resources, secure favorable water flows, and provide a sustainable flow of commodities for current and future generations. Even so, contributing to the nation's industrial development was clearly the focus for the agency's efforts. In establishing the Forest Service, President Theodore Roosevelt's Secretary of Agriculture wrote:

> *You will see to it that the water wood, and forage of the reserves are conserved and wisely used for the benefit of the home builder first of all, upon whom depends the best permanent use of lands and resources alike (Samuel Trask Dana, as cited by Dana and Fairfax 1980).*

In 1937, the Oregon and California Act mandated that the "O&C" lands in western Oregon be managed by the General Land Office, later to become the Bureau of Land Management, to promote, among other things, community stability. Until World War II ended, federal land managers focused on fire protection, grazing, and an ongoing debate over forest preservation on public lands, in fact, the forest-products industry generally opposed federal timber sales during

this period, which was dominated by the Great Depression in the 1930s, to avoid flooding the timber market and competing with the private timber-supply sector.

Nonetheless, though sustainable use enjoyed broad support, many disagreed with this utilitarian perspective and argued for a federal agency whose primary responsibility was natural resource preservation. In 1916, the National Park Service was established to "preserve the [national] parks for posterity in essentially their natural state" (Dana and Fairfax 1980). Although the Park Service's holdings were a fraction of the federal lands, their existence institutionalized the management-versus-preservation debate in that federal agencies were now in charge of both managing and preserving federal lands.

Throughout the 1920s and 1930s, attempts were made to set aside Forest Service lands from commercial use, and these attempts were successful to a limited degree. In 1929, the Forest Service administratively established the first primitive areas, and the agency created wilderness and recreation areas in 1939. This custodial period ended in the mid to late 1940s, when federal timber harvests throughout the nation--especially in the Northwest region--rose in response to the postwar building boom.

Commodity Production

The postwar years were characterized by unprecedented population growth, economic expansion, and development. As a result, new demands for timber were enormous. And, as timber demand grew, so did calls for more intensive forest management.

The land management agencies promoted and the timber industry now strongly supported increased timber harvest from federal lands. For example, between 1945 and 1965, Forest Service timber harvest on the west side of Oregon and Washington climbed from about 149 million cubic feet to 807 million cubic feet (894 million board feet to 4.8 billion board feet). In other words, Forest Service timber could have built the equivalent of 119 thousand, average-sized, one story houses in 1945 and 640 thousand in 1965 (figure 1).

While demand for federal timber rose, so did demand for recreation on federal lands. Thus, more and more Americans visited federal lands and saw the nation's forests and how harvesting was rising, primarily through the silvicultural practice of clearcutting.

The disagreements between use and preservation of federal lands intensified through the 1950s, and an environmental movement that was increasingly diverse and embedded in different segments of society grew through the 1960s. To help clarify its mission during this period of increasing and conflicting demands on a limited land base, Congress passed the Multiple-Use Sustained Yield Act (1960), which recognized the agency's role in managing lands for fish, wildlife, and recreation in addition to wood, water, and forage in a manner that would best meet the needs of the American people.

Four years later, the environmental movement's new prominence helped pass the Wilderness Act (1964) after an eight-year debate. The Act authorized public lands managed by the Forest Service, Bureau of Land Management, and other federal agencies to be Congressionally set aside from large-scale commercial uses. in essence, it informally amended the Multiple-Use Act by requiring the management agencies to undertake preservation in addition to other uses, as only the National Park Service had in the past.

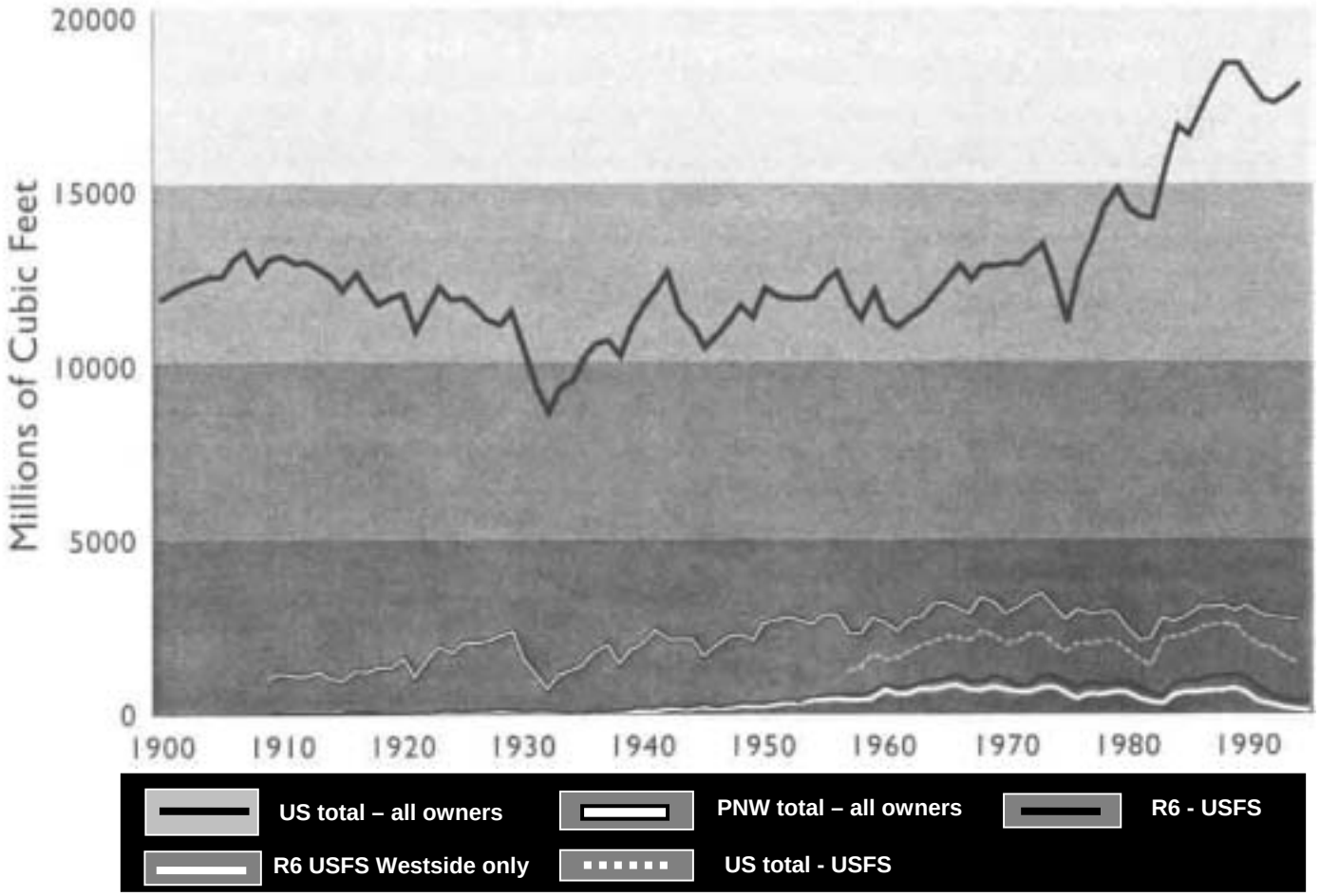

Figure 1 – Timber harvested between 1900 and 1990.

Environmental Awareness

Although some people had disagreed about tile central role of land management agencies since their inception, these differences took on a more pronounced tone after the mid 1960s. For the next 25 years, environmental interests successfully pushed for forest management reforms through legislation and judicial interpretations, and the timber industry successfully pushed for legislative and administrative timber sale rates that would keep them close to those in the mid 1960s (figure 1). With policies promoting both environmental protection and timber sales at the same time, the policies would inevitably collide.

Environmental protection

Efforts to enlarge the National Wilderness Preservation System served as the foundation for forest policy debates from the mid 1960s to the mid 1980s. Issues related to Alaska wilderness designations and the Forest Service's Roadless Area Review Evaluations (IL&RE I and II) were the most intensive and most controversial. The Alaskan National Interests Lands Conservation Act of 198o designated 56 million acres of wilderness in resolving issues related to Alaska wilderness; RARE I and RARE I1 (USDA FS 1978, 1979) identified 62 million acres of roadless Forest Service lands, of which nearly 35 million were eventually designated as wilderness, state by state. Wilderness designations were also made at smaller scales outside of Alaska for the Bureau of Land Management, National Park Service, and the Fish and Wildlife Service.

The National Wilderness Preservation System began with 9.1 million acres. Today, it includes about 103.6 million acres--57.4 million are in Maska and 46.1 million are in the lower 48 states. Together, the National Wilderness Preservation System is nearly equal to the areas of Oregon and Washington combined. In the Pacific Northwest and northern California, nearly 7 million of 24 million acres of federal lands have been designated as wilderness. Of this amount, 81% is forested.

Many people wanted more than just federal land set aside; they wanted to know that harvest and other practices on managed land would not degrade fish and wildlife habitat, and soil, water, and air quality. Controversies surrounding the practice of clearcutting on the Monongahela National Forest in West Virginia and the Bitterroot National Forest in Montana brought national attention to intensive forestry practices being used on federal lands across the nation. So, beginning in 1970, a series of legislative initiatives substantially strengthened existing environmental statutes and created new statutes to require the federal land management agencies to both plan for and analyze the environmental effects of their decisions. These statutes required the agencies to plan or to consider multiple uses in allocating public land resources, but like the Wilderness Act (1964), they would eventually result in reducing federal lands available for harvest. And northern California and the Pacific Northwest, these laws would eventually be used to force great changes in federal land management.

The National Forest Management Act (1976) and Federal Land Policy Management Act (1976) were two of the most important pieces of legislation affecting the Forest Service and Bureau of Land Management, respectively. These two acts incorporating the principles of multiple use required the agencies to broaden their timber-sale planning efforts to systematically incorporate multiple resource considerations, and the biological and economic rationale for those considerations. The agencies were required to use current scientific information and consult with the public as well.

Federal forest planning is widely viewed as one of the most complex and difficult planning efforts in the nation. As Cubbage et al. (1993) point out:

> *[Forest planning] required an uneasy marriage of science, economics, history, public administration, abstract values, and the rule of law.*

Although many of the nation’s most significant environmental laws were passed in the late 1960s and throughout the 1970s, they did not begin to have significant effects on commodity production until the mid to late 1980s. By then, most state wilderness bills had been passed and most of the Forest Service and Bureau of Land Management plans had been completed. The Forest Service plans administratively reserved around 40% of the region’s public multiple-use lands in various land-use allocations that limited or prohibited timber harvest. The Bureau of Land Management reserved about 20%.

Timber production

As concern for the environment grew, so did demand for timber. Not surprisingly, people started to look at where that timber would come from. The 1960s, 1970s, and 1980saw several regional timber-supply studies and administrative and legislative policies that responded to their conclusions.

The Region's Most Important Forestry Laws

Hundreds of laws guide the management of our nation's natural resources. The Forest Service alone has compiled a list of 197 laws that have since been passed since 1872 that affect how it practices forestry in the United States. Listed below are some of the most important laws that guide management of federal and nonfederal lands in northern California and the Pacific Northwest.

Clean Air Act Amendments (1990) – Establishes standards for the amount of point and nonpoint pollution that can be released into the atmosphere. Nonpoint pollution standards affect federal and nonfederal landowners' prescribed burning operations.

Endangered Species Act (1988) – Sets federal procedures for identifying and protecting threatened and endangered plant and animal species on federal and nonfederal lands.

Federal Lands Policy and Management Act (1976) – Authorizes the Bureau of Land Management to inventory and manage its public lands in accordance with the principle of multiple use and sustained yield. The Act requires the agency to complete management plans every 10 years.

Multiple-Use Sustained Yield Act (1960) – Clarifies the Forest Service's broad mission to manage the National Forests for recreation, range, timber, water, wildlife, and fish in a combination that will best meet the needs of the American people.

National Environmental Policy Act (1969) – Requires that environmental impact statements accompany all proposed major federal actions significantly affecting the quality of the human environment.

National Forest Management Act (1976) – Requires the Forest Service to prepare management plans for each National Forest. The plans are to meet the requirements of the Multiple-Use Act to address such matters as nondeclining even flow, biological diversity, the suitability of lands for timber production, and economic and social factors in agency decision making.

Oregon and California Act (1937) – Mandates that the Oregon and California railroad lands be managed by the General Lands Office (which became the Bureau of Land Management) for sustainable timber production, water quality, and recreation to promote community stability. The Federal Lands Policy and Management Act did not amend the intent of this statute.

Water Quality Act (1987) – Establishes standards for the amount of point and nonpoint pollution that are released into the nation's waters. Specifies procedures to control nonpoint pollution and identified forestry practices that could negatively affect water quality.

Text Box 1 Source: Society of American Foresters, 1993.

Timber Trends in Western Oregon and Western Washington (USDA FS 1963) looked at timber supply across all ownerships. The study reported that the high-volume, old-growth timber inventory on private lands was declining. The timber harvests from those lands were expected to decline throughout the next three decades until they start to recover after 2010, when their second growth would reach harvestable age.

In 1969, the Forest Service's *Douglas-fir Timber Supply Study* (USDA FS 1969) looked at whether intensive timber management techniques--such as planting genetically improved stock, fertilization, and other timber stand-improvement activities---could increase timber supplies. The study suggested supplies could be enhanced through intensive timber management, but supplies would decline over the length of a harvest rotation regardless of management intensity.

Oregon State University's *Timber for Oregon's Tomorrow* (Beuter et al. 1976) reaffirmed that private timber supplies would decline through the first decade of the 21st century; however, the

report also suggested that federal harvests could maintain their 1970s average indefinitely or that federal agencies could depart from current harvest rates to offset the private harvest reductions (Beuter 1995). Oregon State University updated their study in 1989 (Sessions et al. 1990) and, in so doing, recognized that supply on federal lands would indeed drop instead of increase because of changes in land-use emphasis (Beuter 1995).

Throughout the 1960s and 1970s, the timber industry and federal government, spurred by these studies, placed more attention on the kind of supply the federal government could provide. As discussed below, increasing timber demand, a projected reduction in private timber supply by the end of the century, and a stable supply source from federal land based on traditional sustained-yield calculations all contributed to policy determinations that were meant to support federal timber sale rates that met or exceeded those of the mid 1960s.

People who were supported by the federal timber harvests generally thought that the federal government should do everything it could to make up for the gap on private lands. As voices grew louder for environmental protection, other voices focused on the agencies' timber management plans which preceded the multiple-use forest plans required by the National Forest Management Act of 1976 and similar plans required by the Federal Land Policy Management Act of 1976--and what appropriations would be needed to fund their proposed timber sales (McCracken, personal communication).

Throughout the 1970s and 1980s, administrations and Congress continued to fund the Forest Service's and Bureau of Land Management's timber-sale programs, and therefore harvest, at or around historically high mid-1960s rates (figure 1). Although market-based recessions caused significant fluctuations in harvest rates, sales remained essentially flat.

Another important timber-supply issue in the late 1960s centered on whether the burgeoning log-export market was keeping logs from being processed at home. In 1968, the first raw-log export limitations, which would eventually turn into a permanent ban, were passed to assure that timber harvested on public lands was processed in the United States.

Past administrations were supportive of increasing timber sales as well. In 1970, the Public Land Law Review Commission and, in 1973, the President's Advisory Panel on Timber and the Environment both supported public policies that would maintain or increase current timber production rates.

In an attempt to reduce the inflationary effects on housing prices in the late 1970s, President Carter sent a letter to his Secretaries of Agriculture and Interior directing them to depart from nondeclining even flow to boost federal timber sales. In 1992, the USDA Assistant Secretary looked at opportunities for nearly doubling the federal timber-sale volume across the nation. Although these administrative actions were never implemented on the ground, they reflected the counter pressure applied to implementing the nation's environmental laws being passed at the same time.

The concern over public and private timber inventories intensified the region's forestry debate. With timber inventories on private lands decreasing, many who relied on these lands now planned to rely, at least partially, on federal forests until their second growth reaches harvestable

age during the 21st century. For some parts of the region, this period is still some I5 to 20 years away. Their reliance on shifting to public land timber increased competition with companies that had historically depended wholly or partially on federal lands. The hope--and many believe the commitment--was that increased harvest of old-growth forests would provide a supply of timber to fill in the gap. But this hope did not come to pass.

In summary, at the same time environmental legislation was being implemented and tested in the courts, through the 1960s, 1970s, and 1980s, the executive and legislative branches were proposing timber sales that met or exceeded historically high rates of the mid 1960s. After the early 1980s recession, federal land managers, at the urging of Congress and the Administration, actually maintained these mid-1960s sale rates on a timber base that was reduced as a result of forest planning. This scenario set land management agencies up for some inevitable challenges across the region.

IMPASSE: THE EXECUTIVE BRANCH, THE COURTS, AND CONGRESS

At the heart of regional forestry issues is how the region's federal land management agencies--the Bureau of Land Management and Forest Service--care for the public lands they have been entrusted, by law, to manage through the Federal Land Policy Management Act (1976), Multiple Use-Sustained Yield Act (1960), National Forest Management Act (1976), and the Oregon California Act (1937). Closely tied is how the management and regulatory agencies--the Fish and Wildlife Service, National Marine Fisheries Service, and the Environmental Protection Agency--undertake their responsibilities in the context of such mandates as the Endangered Species Act (1986) and the Clean Water Act (1977), which regulate federal actions that affect environment. Finally, how all federal agencies meet their mandates must take into consideration their tribal trust responsibilities.

Starting in the late 1960s, federal land management and regulatory agencies in the region struggled to define the future of federal forest management in the context of the nation's environmental laws. But the struggle was about much more than defining laws; it was a struggle between different, professional, natural-resource disciplines--their training, assumptions, and often values. Ultimately, the struggle was between people of the region and nation. Federal agency actions were challenged in the court of public opinion, courts of law, state and federal legislatures, and the highest levels of the executive branch. In 1991, the disagreements, which had attracted national attention by that time, resulted in court injunctions that virtually halted all federal forest management activities in the region for the next three years.

Three agencies--the Bureau of Land Management, the Forest Service, and the Fish and Wildlife Service--have primarily been involved with this issue. The activities of each agency are described below (table 1), along with some of the most important litigation that has affected their actions.

Table 1 – Key events leading to the Northwest Forest Plan

Year	Forest Service	Bureau of Land Management	Fish and Wildlife Service	Congress
1983		Assimilate new information on spotted owls into existing plans		
1984	Regional guide issued that included prescriptions for protecting spotted owl habitat Timber sales on Mapleton District enjoined			California, Oregon, and Washington wilderness bills passed Mapleton rider in the FY 1985 Interior Appropriations bill allows certain enjoined timber to be sold
1985				Mapleton rider continues
1986				Mapleton rider continues
1987		Assimilation of new information on spotted owls into forest plans	Two petitions are received to list northern spotted owl as a threatened or endangered species. FWS decided not to do so.	Mapleton rider and Silver Complex Fire riders prohibiting administrative appeal and judicial review under some environmental laws
1988	Spotted owl guidelines produced		Court finds that agency decision not to list was arbitrary and capricious	
1989	Injunction preventing timber sales in owl habitat Oregon and Washington forest plans released Enjoined sales released by Section 318	→ → Section 318 requires optional owl protection for BLM Section 318 challenged on constitutional grounds		Section 318 of FY 1990 Interior Appropriations Bill passed with sufficiency language to release enjoined sales
1990	Interagency Scientific Committee (ISC) Report on northern spotted owl released Notice that the Forest service would conduct timber management activities in a manner not inconsistent with the ISC recommendations	→ BLM consults with Fish and Wildlife Service who recommends adoption of ISC recommendations BLM chooses to adopt alternative “Jamison Strategy”	→ Northern spotted owl listed as a threatened species throughout its range Challenged for failure to designate critical habitat	Section 318 expires and its not reenacted

Year	Forest Service	Bureau of Land Management	Fish and Wildlife Service	Congress
1991	Notice challenged and injunction on auctioning or awarding timber sales until standards and guidelines are adopted	Challenged for failure to consult with Fish and Wildlife Service on Jamison Strategy Court ruled BLM could proceed with timber sales while they consulted Request for Endangered Species Committee to be convened to exempt 44 timber sales	Secretary Lujan forms recovery team	House Committees form "Gang of Four" to develop options for resolving regional timber issues
1992	New management plan for spotted owl habitat adopted that incorporates ISC report recommendations New plan challenged and timber sales are again enjoined Changes were made to address new information, viability of other old-growth species, and BLM actions	Designated 6.8 mm acres of critical habitat across the region Appeals court enjoined timber sales while consulting on Jamison Strategy Section 318 found to be constitutional by Supreme Court Timber sales enjoined until environmental impact statement analyzed logging affects in spotted owl habitat Endangered Species Committee proposes that 13 of 44 timber sales be exempted	Draft recovery plan released "Presentation Plan" released as an alternative to the Recovery Plan by Secretary Lujan for adoption by Congress	
1993	Scientific Assessment Team Report responds to issues in 1992 injunction President's Forest Planning effort begins	Exemptions withdrawn after court rules that Committee may have been tainted by improper communications →	Final Recovery Plan presented to Secretary Lujan, but not released before Administration left office →	

Actions of the Forest Service

The Forest Service manages about 19.4 million acres of federal land throughout the region. Forest plans guiding the management decisions are required to provide for a diversity of plant and animal communities based on the suitability and capacity of the specific land area to meet multiple-use objectives. Forest Service regulations further require that viable populations of certain vertebrate species be maintained across their historical ranges in the planning area. Ultimately, the viability rule would be interpreted by some courts to establish a biological imperative that the Forest Service would be required to address.

In addition their forest plans, the Forest Service recognized that both scientific and public opinion were evolving to support an ecosystems approach toward forest management. In 1990, the agency announced a "New Perspectives" program that would commit the agency to multiple uses with more sensitivity to ecological and social values (Robertson 1990). In 1991, then Chief F. Dale Robertson announced that the agency would reduce the silvicultural practice of clearcutting by at least 25%. Timber sales would remain at or near the current rates, however.

Yet it was the forest plans that most affected how the region's National Forests would be managed. The Forest Service's Oregon and Washington forest plans took an average of 11 years to complete. When the plans were adopted in 1989, events related to protecting the spotted owl overwhelmed their movement toward an ecosystem approach. But, to differing degrees the forest plans served as the basis for the old-growth management strategy that exists today. In northern California, the forest plans were not finished until 1995, and they actually served to refine the Northwest Forest Plan. Throughout these forest planning efforts, issues associated with protecting Spotted owl habitat were paramount.

In 1984 the Forest Service had sought to provide guidance to forest planners in region by issuing a regional guide that included a Strategy for protecting spotted owl habitat. This "Spotted Owl Habitat Area" protection strategy was challenged by the National Wildlife Federation, and, as a result, the Forest Service produced new spotted owl guidelines in December 1988. Many scientists and environmentalists considered this new approach inadequate to assure the long-term viability of owl populations. The timber industry also disliked the guidelines because of the associated reduction in timber harvest and a sense that the science was not strong enough to support the proposed reductions.

Both the timber industry and environmentalists brought lawsuits against the Forest Service's new owl plan in February 1989. In March 1989, U.S. District Court Judge William Dwyer issued a preliminary injunction against the Forest Service, preventing timber sales throughout the region' s spotted owl habitat on the grounds that the plan likely violated the National Forest Management Act (1976) and National Environmental Policy Act (1970).

In October 1989, the Congress intervened by enacting Section 318 of the fiscal year 1990 Interior Appropriations Act. Section 318 established a two-year timber sale program, retroactively for fiscal year 1989, of 7.8 billion board feet to be achieved by the end of fiscal year 1990. The Act stated that, with exception of the Endangered Species Act, compliance with the requirements of Section 318 for those sales would be sufficient to meet the nation's environmental laws. This "sufficiency" language has taken several forms, but the label is generally given to legislation in which Congress legislatively declares that an action meets environmental laws, thus effectively

precluding successful legal challenges for failure to meet those laws. As a result, Judge Dwyer's injunction was vacated.

In the meantime, the Forest Service joined with the Bureau of Land Management, the Fish and Wildlife Service, and the National Park Service in October 1988 to charter an Interagency Scientific Committee to prepare a conservation report on the spotted owl. The Committee's report, released in April 1990, was regarded as the best scientific information available on the spotted owl. The Forest Service initially planned to adopt committee's recommendations but was superseded by the Bush administration's decision to initiate another study to develop an alternative strategy. In October of 1990, the Forest Service said by Federal Register Notice that they would "conduct timber management activities in a manner not inconsistent with the Interagency Scientific Committee recommendations."

Sufficiency Language

Definitions – The term "sufficiency language" or "sufficiency provision" is a short-hand expression that – as applied to regional timber sales – is often used to describe legislation that declares a federal action sufficient to meet the law.

Effect – Sufficiency language essentially insulates a federal agency's decision from being successfully challenged, administratively or legally, on environmental grounds specified in the legislation. Sufficiency advocates have often assumed that environmental protections and processes would continue to be administratively applied so there would be more certainty in the timber sale program. Although the executive branch may choose and have chosen to comply with those laws, sufficiency language does not require them to do so. Opponents of sufficiency language argue that land management agencies can take short-cuts and their rights to question their federal government are taken away, increasing distrust between the government, segments of the public, and commodity purchasers.

For example – Section 318 of the fiscal year 1990 Interior and Related Agencies Appropriations Bill directed that existing plans for the region's National Forests and Bureau of Land Management lands known to contain spotted owls constitute adequate consideration for the purpose of meeting the statutory requirements that were the basis for the lawsuits that had led to an injunction on timber sales. Therefore, 7.8 billion board feet of enjoined timber was released for sale. Those sales could not be challenged based on compliance with the National Forest Management Act, National Environmental Policy Act, or other environmental statutes. Section 318 did, however, recognize that the timber sale program must still comply with the Endangered Species Act.

Precedents – In the past, 29 statutes related to federal land management alone have specifically deemed that Congressional specifications satisfy federal statutes. The Supreme Court reaffirmed that Congress could waive statutory provisions of previously enacted laws.

TEXT BOX 2

The Forest Service notice was again challenged because Section 318 expired at the end of fiscal year 1990, and Congress did not reenact similar provisions for the next year and beyond. In May 1991, Judge Dwyer enjoined the Forest Service from auctioning or awarding timber sales in spotted owl habitat until the agency adopted standards and guidelines for the conservation of the owl, and completed an environmental impact statement, which the court ordered be done by March 1992. In response, the Forest Service developed a new management plan for spotted owl habitat, in which they proposed to follow the Committee's recommendations.

Another suit challenged the adequacy of this new plan, and, in July 1992, Judge Dwyer issued yet another injunction until the Forest Service made changes that addressed new information

developed since, the Committee's report was published; the viability of other old-growth-related species, and the effects of the Bureau of Land Management's decision not to follow the Committee's strategy.

The Forest Service pulled together another team to respond to Judge Dwyer's concerns. The Scientific Analysis Team report was released in March 1993. No formal actions were taken based on the report, but the findings were used in developing the subsequent Northwest Forest Plan. In the meantime, the newly elected Clinton Administration had committed to holding a conference to resolve regional, forest management issues. The Forest Conference would take place within the month.

Actions of the Bureau of Land Management

The Bureau of Land Management manages 2.7 million acres in western Oregon and northern California. Unlike other Bureau of Land Management lands that are managed solely with a multiple-use mandate under the Federal Lands Policy and Management Act of 1976, most of these lands in western Oregon are also managed according to the Oregon and California Grants Lands Act of 1937 (O&C Act). Congress provided in the O&C Act that lands

> *shall be managed…for permanent forest production…in conformity with the principle of sustained yield for the purpose of providing a permanent source of timber supply protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities, and industries, and providing recreational facilities.*

The Bureau of Land Management's seven timber management plans, required by the Federal Lands Policy and Management Act, were in place by the early 1980s. These plans provided spotted owl habitat protection, which was strengthened in 1983 and 1987 in response to new information. Timber harvest in these areas was deferred, but timber management plans were not adjusted downward commensurate with this additional habitat protection.

Like the Forest Service, the Bureau of Land Management recognized that scientific and public opinion was evolving to support an ecosystems approach. Within the context of the O&C Act, the Bureau worked to re-draft its plans in the late 1980s and early 1990s to reflect such an approach. One of the cornerstones of their planning effort was a recognition that their forest should be managed for different successional stages, which would help assure that biological diversity would be maintained over time. These plans, which were released in draft form in 1992, served as another basis for the Northwest forest planning effort.

As it did the Forest Service, Section 318 directed the Bureau of Land Management to protect additional owl areas while mandating timber sales for 1989 and 1990. These sales were also deemed to be sufficient to meet the nation's environmental laws. Both the Forest Service and Bureau of Land Management were challenged over timber sales in owl habitat. Both agencies argued that Section 318 insulated it from lawsuits; although the Ninth Circuit Court of Appeals held that sufficiency language was unconstitutional, the Supreme Court reversed the Circuit's ruling in March 1992.

After the June 1990 ¯listing of the spotted owl as a threatened species, the Bureau of Land Management consulted with the Fish and Wildlife Service, as required by the Endangered Species Act, on 157 of 453 timber sales. The Fish and Wildlife Service response recommended that the

Bureau of Land Management adopt conservation measures, including the recommendations of the Interagency Committee's report. The Bureau of Land Management chose to develop an alternative strategy, commonly known as the "Jamison Strategy"--after the Bureau of Land Management's Director, Cyrus Jamison--that would provide for higher harvest rates than those that would result from the Committee's standards and guidelines, though below those currently being scheduled.

In April 1991, the Bureau of Land Management was challenged for failure to consult with the Fish and Wildlife Service on implementing the Jamison Strategy in September 1991, U.S. District Court Judge Robert E. Jones ruled that the Bureau of Land Management had violated the Endangered Species Act but could continue to sell timber while it consulted on the Jamison Strategy. In March 1992, after three Bureau of Land Management employees testified that they were still implementing the Jamison Strategy, the Ninth Circuit Court of Appeals affirmed that the Bureau of Land Management must consult with the Fish and Wildlife Service. The court also held that timber sales could not go forward until consultation was completed.

In February 1992, in a separate suit, Judge Helen Frye enjoined the Bureau of Land Management from selling timber in spotted owl habitat until it prepared an environmental impact statement that analyzed the effects of logging spotted owl habitat.

The Bureau of Land Management's decision not to fully implement the Interagency Committee Report's recommendations was an important factor in Judge Dwyer's decision in 1992 to impose an injunction on Forest Service timber sales. The success of the Committee's strategy was predicated on implementation by both the Bureau of Land Management and the Forest Service.

In another set of actions, the Bureau of Land Management requested, on the same day as Judge Jones' September 1991 ruling, that Interior Secretary Manuel Lujan convene the Endangered Species Committee to exempt 44 timber sales in western Oregon from the Endangered Species Act. The Endangered Species Act provides that a federal management action may be exempted from the Act by an Endangered Species Committee composed of senior Administration officials. The Committee may grant an exemption if it finds that benefits of an agency's actions clearly outweigh the costs and no other reasonable and prudent alternatives to the action exist.

The Endangered Species Act Committee met and, in May 1992, proposed that 13 of 44 sales be exempt, along with the provision that the Bureau of Land Management complete a series of planning requirements that would obviate the need for the Committee to meet again. On review, the Ninth Circuit Court of Appeals ruled that the Committee's decision may have been tainted by improper communications with people who were not party to the Committee. The matter was remanded back to the Committee, where the Bureau of Land Management withdrew its application for an exemption.

Actions of the Fish and Wildlife Service

The Secretaries of Commerce and Interior, through the National Marine Fisheries Service and the Fish and Wildlife Service, are authorized through the Endangered Species Act to identify and protect threatened and endangered plants and animals. The Fish and Wildlife Service's responsibility under the Endangered Species Act covers both federal and nonfederal lands.

In 1987, the Fish and Wildlife Service had before it two petitions to list the northern spotted owl as a threatened or endangered species but decided not to do so. In 1988, U.S. District Court Judge Thomas Zilly ruled that the Fish and Wildlife Service's decision not to list was arbitrary and capricious and not supported by expert opinion. The Fish and Wildlife Service reconsidered and, in July 1990, listed the spotted owl as threatened throughout its range.

Typically, the regional director of the Fish and Wildlife Service would prepare a recovery plan after listing a species that would ultimately be approved by the director of the agency. For the spotted owl, Secretary Lujan withdrew the delegation of authority to the field and formed a recovery team in March 1991. This team reported directly to Secretary Lujan, bypassing the agency's regional and national leadership. A recovery plan was released in draft form in April 1992. Secretary Lujan announced that expected job losses from implementing the draft plan were too great. He asked another team to draft an alternative plan, which resulted in his Preservation Plan, released in May 1992. This plan did not meet the immediate requirements of the Endangered Species Act, but it was intended to have provided for persistence of the owl over the next 100 years.

The Bush Administration released the Preservation Plan and testified in favor of its adoption by Congress. Legislation was never introduced to implement the Preservation Plan, however. The draft recovery plan was revised based on public comment and review and presented to Secretary Lujan in December 1992 for approval. Secretary Lujan did not authorize its release before he left office in January 1993. A limited number of copies were published as a "final draft recovery plan" soon thereafter and were available to the Forest Ecosystem Management Assessment Team. On a related matter, the Fish and Wildlife Service designated 6.8 million acres as critical habitat across the region after having been found to have failed to do so by Judge Zilly in another lawsuit in February 1991.

Summary of Agency and Court Actions

The preceding discussion touches on some of the most important challenges to federal forest management in the region. Since 1989, 11 U.S. District or Circuit Court judges have made rulings related to the actions of the Forest Service, Bureau of Land Management, and the Fish and Wildlife Service as they affect the northern spotted owl and managing federal forest lands in the Pacific Northwest and northern California. These agencies were sued and found by the 11 judges to be in violation of one or more federal laws or regulations affecting the management of federal forests, protection of endangered species, and compliance with procedures pursuant to the National Environmental Policy Act or other statutes.

As Judge Dwyer noted, the actions of the Executive Branch, in particular, often ran contrary to available science and the advice and recommendations of the agency's own scientific experts. In addition, the actions of individual agency administrators were often inconsistent and antagonistic to another agency's ability to take corrective actions to bring its management into compliance with court rulings or applicable statutes. This statement shows the difficulty, especially for land management agencies, of operating within the context of multiple-use mandates and the complex mix of political, economic, social, and ecological issues.

Congressional Efforts Toward a Resolution

An inability to resolve the old-growth debate should not be solely attributed to the federal agencies and previous Administrations. Each agency operates under its own legislation and serves constituencies that often disagree with one another. Again, the old-growth debate was, and continues to be, a debate among the citizens of the region and nation about how agencies should implement the nation's environmental laws. As such, it caused the nation's representatives in Congress to become increasingly involved through the 1980s and early 1990s.

In many aspects, Congressional involvement in the old-growth issue began after the state wilderness bills were passed in 1984. At that time, some members of Congress believed that they had resolved, at least for the time being, regional forest land-use allocation issues. But as wilderness issues cooled down, spotted owl and old-growth issues heated up. Citizens increasingly challenged, both through administrative appeals and in the courts, the Forest Service's and Bureau of Land Management's timber sales based on their compliance with their planning and regulatory statutes. To many managers, the appeals process was particularly frustrating because decisions could be indefinitely delayed. In 1988, one group threatened to bring a great deal of logging to a temporary halt by filing appeals against 220 U.S. Forest Service timber sales in a single month.

In response to the success of these administrative and legal challenges, efforts were successful to add sufficiency language to appropriations acts that would limit or prohibit administrative appeals or judicial review. One of the first sufficiency riders was included in the fiscal year 1985 Interior and Related Agencies Appropriations Act. The Act allowed certain timber sales on the Mapleton District of the Siuslaw National Forest to be resold despite an injunction. These efforts continued and riders were included in the Forest Service and Bureau of Land Management's appropriations bills for fiscal years 1986, 1987, 1988, and 1989. This legislation prohibited administrative appeals and judicial review on individual timber sales, then Districts and Forests, and finally--in the Silver Complex Fires--across multiple forests.

By 1989, Judge Dwyer had enjoined the Forest Service's regional timber-sale program. In response, Section 318 was added to the fiscal year 1990 Interior and Related Agencies Appropriations Act. This provision was accompanied by a colloquy between key Senators, in which they agreed that such riders would be suspended in future years and a long-term solution worked out in the authorizing committees.

During fiscal years 1991, 1992, and 1993 Interior Appropriations debates, attempts were made to attach amendments to allow components of the region's timber-sale program to proceed with sufficiency language. These efforts were defeated, however, clearing the way for the injunctions by Judges Dwyer, Frye, and Zilly from 1991 to 1994.

In May 1991, at the request of the House Agriculture and Merchant Marine and Fisheries committees, a scientific panel of four well-known forestry and wildlife scientists was asked to provide options for managing and protecting old-growth forests. The panel, which came to be known as the "Gang of Four," was assisted by hundreds of experts from both land management and regulatory agencies. Their report, which did not provide recommendations but produced 36 alternatives, broke new ground in linking old growth, owls, and fish habitat. The report was also the first large-scale interagency effort that focused on a comprehensive set of alternatives and the ecological and economic risks associated with each alternative.

Ultimately, Congress was unable to pass a long-term old-growth solution to this problem. Between 1988 and 1992, 26 bills were introduced and 6 congressional hearings were held that related to or sought to resolve the old-growth forest issue (Gorte 1995). Their contents ranged from comprehensive old-growth protection to mandated timber harvests, and from limits on judicial review to redistricting judicial districts. Only one bill encompassing comprehensive federal land management direction was ever reported out of a full authorizing committee. This Congressional interest in the old-growth debate, and inability to reach agreement, underscores the diverse and strongly held opinions of many citizens.

THE FOREST CONFERENCE

By the summer of 1992, with the region's timber-sale program stalled for more than a year, forestry was becoming an important issue for the region in the 1992 Presidential and general elections. President Bush made a campaign swing through the region, in late summer, advocating support for changes to the Endangered Species Act. Democratic front-runner, then Arkansas Governor, Bill Clinton also spoke out on the issue and committed to holding a multiparty timber summit, if elected.

The Presidential Transition

After the election, President-elect Clinton established a Timber Summit Transition Office to gather information and guide development of the promised meeting. The Summit was to focus on how interested parties could assist the Administration in developing a plan that would move forest management decisions out of the courts and back to the managers.

Staff contacted interested Congressional leaders, governors, and interest-group representatives. Fifteen-hundred letters were sent on behalf of the President-elect to gather input from federal, state, and local elected officials; tribal leaders; and private and nonprofit organization representatives on how best to organize a timber summit and what it should achieve.

The high interest in the transition team's work reaffirmed the need for the summit. People were united in their desire for the summit to use an inclusive process where the President himself would provide leadership to resolve the issues. People also agreed that any resolution should be "balanced" and include both forest management and economic assistance components. People whose livelihoods depended on the forest thought that a timely resolution that would allow sales to move forward was a top priority. But people disagreed on what form the timber summit should take, whether it should lead to an Administrative or Congressional resolution, and even whether the Administration should include the public in its deliberations.

The Forest Conference

On April 2, 1993, President Clinton traveled to Portland, Oregon, to convene what he called his Forest Conference, to reflect the broader array of issues that were included in the transition team's report.

The President was accompanied by Vice President Al Gore, Secretary of Agriculture Mike Espy, Secretary of the Interior Bruce Babbitt, Secretary of Commerce Ron Brown, Secretary of Labor Robert Reich, Environmental Protection Agency Administrator Carol Browner, Office of

Environmental Policy Director Kathleen McGinty, Office of Management and Budget Deputy Director Alice Rivlin, and Science Advisor Jack Gibbons.

The Forest Conference was a day-long session where the President heard from 52 local elected officials, tribal leaders, forest workers, industrialists, environmentalists, clergy, academics, and employment trainers.

The President at the Forest Conference

Their discussion ranged from how the forests affect their lives to how the old-growth issue could best be resolved. The many issues that had been debated during the previous five years were discussed: creating public-private partnerships, stability of rural communities, opportunities for displaced workers, the role of the regional and national economies, timber supply, old-growth protection, biological diversity, and--above all--ecosystem management. Appendix VII-A, p.VII- 130, of the Forest Ecosystem Management Assessment Team report (FEMAT 1993) contains a detailed content summary of the Forest Conference.

In closing the Forest Conference, President Clinton directed his Cabinet to report to him within 60 days with a plan to resolve the region's forestry stalemate. The President asked the Cabinet to determine which policies are at odds with each other, examine their approach toward interagency cooperation, and to follow five principles (above) in developing their forest planning effort.

The Forest Conference has been described as having Successfully brought all parties to the table. Many people believed that progress was made toward reaching agreements, but behind statements of accord, strong feelings about what should be done continued. As one regional environmentalist said about ecosystem management, the one concept that everyone seemed to agree on;

> *The only problem with ecosystem management is that I hear the word "ecosystem, "and they [the timber industry] hear the word "management" (emphasis added).*

In other words, ecosystem management means very different things to different people. Both environmentalists' and industries' perspectives are sincere and both are accurate. The challenge in the region, as it has in other parts of the nation, has been to develop forest management strategies that truly bring the two perspectives together instead of viewing them independently.

President Clinton's Five Guiding Principles

Economic Assistance – Where sound management policies can preserve the health of forest lands, sales should go forward. There this requirement cannot be met, we need to do our best to offer new economic opportunities for year round, high-wag, high-skill jobs.

Forest Management – We need to protect the long-term health of our forests, of out wildlife, and our waterways. They are a gift from God, and we hold them in trust for future generations.

Role of Science – Our efforts must be, insofar as we're wise enough to know it, scientifically sound, ecologically credible, and legally responsible.

Timber Certainty – The Plan should produce a predictable and sustainable rate of timber sales and nontimber resources that will not degrade or destroy our forest environment.

Interagency Cooperation – To achieve these goals, we will do our best to make the federal government work together for you. We may make mistakes, but we will try to end the gridlock within the federal government, and we will insist on collaboration, not confrontation.

TEXT BOX 3 Source: Forest Conference, 1993.

CHAPTER 3

DESIGNING AND IMPLEMENTING THE NORTHWEST FOREST PLAN

DESIGNING THE PLAN

President Clinton's *Forest Plan for a Sustainable Economy and Sustainable Environment*, now called the Northwest Forest Plan, was released on July 1, 1993 (see appendix A). The Plan has three main components: forest management, economic development, and agency coordination. See appendix B for a detailed summary of the Plan's commitments and the administration's accomplishments. This chapter describes how the Plan was developed, and how the government moved from announcing the Plan to implementing it.

Forest management, economic development, and agency coordination planning teams were formed immediately after the Forest Conference to follow through on the President's direction. Underlying each team was direction to the departments and a commitment by the individual agencies to develop consistent policies that would take advantage of and comply with each agency's mandate to the best of its ability, and to work together rather than as independent agencies.

Cooperation started at the top. A Forest Conference Executive Committee was formed with Administration representatives from the Departments of Agriculture, Commerce, Interior, Labor, and Housing and Urban Development, and the Environmental Protection Agency and the Small Business Administration. The Executive Committee was chaired by the Director of the White House Office on Environmental Policy--the President's environmental advisor. The Executive Committee gave policy direction to the planning teams, resolved internal departmental differences and disputes between departments, provided legal and policy guidance, and served as advisor to the President in developing the Plan.

Forest Management

A Forest Ecosystem Management Assessment Team (FEMAT) was established to

> *…identify [forest] management alternatives that attain the greatest economic and social contribution from the forests of the region and meet the requirements of the applicable laws and regulations (FEMAT 1993).*

The Team's charge as outlined by the Executive Committee was complex and difficult, especially in the legal context within which they were operating. The injunctions halting timber sales in the region had been in place for two years, and many legal precedents had been established over the previous five years. Complying with these laws in a manner that would allow the injunctions to be lifted and assure that the Plan could withstand future legal challenges would require the agencies to integrate the nation's environmental laws. For example, developing a methodology

for habitat protection whereby the "viability" standard under the National Forest Management Act and the "extinction" standard under the Endangered Species Act could be treated in a similar management context.

The Team was asked to develop, within 60 days, a range of options to apply ecosystem management on the ground, based on the best technical and scientific information available. These alternatives were to be developed in a way that maintained or restored habitat conditions for spotted owls, marbled murrelets, anadromous fish, and the late-successional and old-growth forest ecosystem itself. These management alternatives were designed to provide a medium to high probability of ensuring, both biologically and legally, the viability of an estimated 1,400 late-successional and old-growth-dependent species identified in the region.[2] Another goal was to include options that would allow for currently listed species, such as the owl and murrelet, to recover and would keep future listings, such as salmon and other anadromous fish, from affecting federal land management outputs. This goal was an attempt to manage the federal lands in such a way as to avoid the need for additional conservation measures under future Endangered Species Act listings. Given these biological requirements, the Team was asked to suggest patterns of protection, investment, and use that would provide the greatest possible economic and social contributions from the region's forests while providing for their long-term sustainability.

The Team was an interorganizational, interdisciplinary group comprising 104 federal natural resource, social, and economic experts from within the region. The chair was a USDA Forest Service researcher, and the team included local representatives from the Environmental Protection Agency, USDA Forest Service, USDC National Marine Fisheries Service, and USDI Bureau of Land Management and Fish and Wildlife Service. The Team worked in Portland, Oregon, and enlisted more than 500 people to assist them.

Input from nonfederal elected officials, tribes, and the public were provided to the team through writing and through meetings with an Administration official from the Department of the Interior. A special group was organized within the Team to process written and oral public comments and direct them to the appropriate technical expert for their use.

Holding public hearings or meeting with Team members was ruled out, given the short time frame. In retrospect, this omission--and some people's perspective that the Team was not scientifically balanced were important because many federal land managers who would be responsible for Plan implementation, nonfederal government officials, and citizens believed that their information, ideas, science, and concerns were not adequately addressed by the Team. Of the criticism leveled at the Plan today, much can be traced to people's lack of personal interaction with the Team's process and members.

The Team's report, released in July 1993, included a list of 10 options for managing the region's forests. It also included a scientific assessment of the region's terrestrial and aquatic ecosystems, evaluations of the economic and social effects of those options, and guidelines for implementation and adaptive management. A summary of statements made at the Forest Conference was included to help put the report into perspective. The President chose Option 9 to serve as the basis for the federal and nonfederal forest management components of his Plan.

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[2] Failure to meet the "viability" standard in the National Forest Management Act was one of the primary reasons for the 1992 injunction against Forest Service timber harvesting. The Endangered Species Act served as the basis for one of the Bureau of Land Management injunctions.

Economic Development

An equally important team was organized in Washington, DC, to develop a plan for meeting the President's economic objectives. The economic development team was chaired by a Director of the National Economic Council and included representatives from the Council of Economic Advisors; Office of Management and Budget; Domestic Policy Council; Departments of Agriculture, Commerce, Interior, and Labor; and the Environmental Protection Agency and Small Business Administration.

In July 1993, the economic team estimated the economic effects of federal harvest reductions both before and as a part of the President's forest planning effort and to develop an economic transition program for the region. Unlike the ecosystem team, which had to integrate a complex set of environmental laws as defined by the courts, the economic team had considerable flexibility in designing their programs. Moreover, although a formal public involvement program was not established, the team members did meet with nonfederal officials and citizens who requested time to share their perspectives. Additionally, the same Interior Department official who provided input from the region's nonfederal elected officials, tribes, and the public to the ecosystem team also provided input on economic assistance.

The Governor's offices of Washington, Oregon, and California were particularly active in working with the federal government to help inform them about the economic make-up of their states and forest-dependent communities' needs. The three states worked together early on, in providing information to the economic team on how best to develop assistance programs that would take advantage of state and local programs.

The economic team released an outline of an economic assistance program focused on providing financial and technical assistance to workers, businesses, and communities that had been affected by reductions in federal timber supply. The team also recommended that federal, state, and local partnerships be established to more effectively meet those financial and technical assistance commitments.

Agency Coordination

An Interagency Coordination Working Group was established that consisted of career natural resource professionals from both management and regulatory agencies from the region and from their national headquarters. The team was chaired by a special assistant to the Secretary of the Interior. The Working Group identified the institutional factors that may have contributed to the regional shutdown of federal forest management and proposed several ways of doing business differently to better fulfill their resource management responsibilities. The Working Group's efforts focused only on the forestry aspects of the Forest Plan; they make up appendix E of the Draft Supplemental Environmental Impact Statement discussed next. (A copy can be obtained from the USDA Forest Service's Regional Office in Portland, Oregon.) Economic assistance agencies also recognized the need to coordinate their efforts and recommended ways of doing so.

FROM DESIGN TO ACTION

Implementing the Forestry, Economic Development, and Agency Coordination Plans

Moving from designing to implementing the forestry component of the President's Plan has taken longer than many expected. President Clinton produced a plan (table 2) within 60 working days, and many people envisioned that it could be implemented immediately. Initial discussions with members of Congress while the conference was being organized and during the subsequent planning periods indicated that a Presidential Plan could or should be legislatively authorized. This possibility quickly vanished because some important interests and members of Congress opposed the Plan on the grounds that it either overprotected or underprotected the forests in the region. Without a legislative solution, the Administration moved to implement the Plan administratively, which meant using the FEMAT report as a basis for developing an Environmental impact Statement in compliance with the National Environmental Policy Act. In the meantime, the injunctions on timber harvesting would remain in place.

The Environmental Impact Statement Team was similar to FEMAT in that it was interagency and interdisciplinary, but it was considerably smaller and included natural resource managers and their staffs. The Team relied heavily on a Scientific Advisory Group of scientists who had participated in producing the FEMAT report to assist them in clarifying its science.

Table 2 – President Clinton's Forest Plan for a Sustainable Economy and a Sustainable Environment

Forestry	Economic Assistance	Agency Coordination
Record of Decision Guides management of 22.1 million acres of Forest Service and Bureau of Land Management lands **4(d) Rule** Relieves restrictions on nonfederal lands based on conservation benefits derived from federal forest management. **Habitat Conservation Plans** Establishes voluntary agreements between private land owners and regulatory agencies on land management activities that comply with Endangered Species Act.	**Northwest Economic Adjustment Initiative** Allocates $1.2 billion over 5 years. Funding made available to workers, businesses, and communities through 16 federal economic-assistance programs. **County Safety Net** Guarantees payments to counties for next I0 years. **Log Export Incentive** Repeals raw-log export tax credit. **Assisting Small Timber Businesses** Requests that ways be identified to assist small business and secondary manufacturers in the forest products industry.	Creates interagency groups nationally, regionally, locally to implement forestry and economic components of Plan.

In late July 1993, the SEIS team released the "Draft Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl." Releasing the draft started a 90-day public comment period in which nearly 110,000 comments were received. In addition, Clinton Administration officials held three public hearings in Olympia, Washington; Salem, Oregon; and, Redding, California.

Changes based on public comment and new information were incorporated into a "Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old Growth Forest Related Species Within the Range of the Northern Spotted Owl." The final document was released in February 1994; with that release, an additional 30-day public comment period began.

On April 13, 1994, Acting Secretary of Agriculture Richard Romminger and Secretary of Interior Bruce Babbitt signed the "Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl" (ROD 1994). With these signatures, the new forest allocations, watershed analysis, watershed restoration, and other nontimber guidelines could be immediately implemented and the federal forest management Plan could be submitted to Judges Dwyer, Jones, and Frye with a

request to lift their injunctions on timber sales.

The Record of Decision allowed the government to present a unified position on federal forest management to the public and the courts. Although challenges would result, the immediate effect was the dissolution of the three injunctions. Judge Jones lifted his injunction on Bureau of Land Management sales in April 1994. The government satisfied the terms of Judge Jones' injunction on Bureau of Land Management sales in May 1994, but litigation on whether the Bureau of Land Management could proceed on those sales was not completed until January 1995. In June 1994, Judge Dwyer lifted his injunction prohibiting timber sales on Forest Service lands across the region.

For the first time in three years, the land management agencies were permitted to propose new timber management activities in the region. Yet, for reasons discussed in chapter 5, an additional year passed before any significant timber-sale program was operating.

Implementing the economic plan was more straightforward. Little controversy existed about the proposed economic assistance program; in fact, this part of the Plan was supported by divergent interests. Implementing the economic assistance program progressed along two tracks. The Clinton Administration and the Congress worked together to Support $256 million in appropriations for fiscal year 1994 that would be spread among 16 federal agencies. In addition, the Congress terminated, at the request of the Administration, the tax-incentive program for raw log exports in the Omnibus Budget Reconciliation Act (1993). The savings from forgone tax incentives were used to fund payments that provided a safety net to the counties that receive 25 to 50% of gross federal timber receipts in lieu of the taxes they would receive if those lands were privately owned. Without such a safety net, these payments would drop substantially as a result of reductions in the federal timber harvest.

Finally, the three memoranda of understanding were signed to institutionalize the agency-coordination efforts called for in the Plan. On the forestry side, memorandum of understanding (MOU 1993a) outlined the processes to be: used in coordinating the region's forestry programs. On the economic development side, a memorandum provided funding commitments and outlined the process for implementing a Northwest Economic Adjustment Initiative (Interagency MOU 1993). Another memorandum (Federal-State MOU 1993) was signed by the Governors of Washington, Oregon, and California and the federal department heads; it outlined the state and federal relations that would help guide implementation of the Initiative. With these efforts, the Northwest Economic Adjustment Initiative began in December 1993.

Legal Challenges

For all practical purposes, the Administration, Congress, and federal and state agencies had developed and implemented a comprehensive forestry program in 14 months that complied with the nation's environmental laws and attempted to provide a transition for people affected by reduced federal timber harvest. The Initiative has moved forward without any legal challenges, but opposition to the federal Forest Plan still existed. Eight lawsuits were filed that challenged the Plan on its merits and the manner in which it was developed.

Challenges to the Design of the Forest Plan

Northwest Forest Resource Council v. Espy (D.D.C., Judge Jackson). Court ruled that participation of nonfederal scientists on the Forest Ecosystem Management Assessment Team violated the Federal Advisory Committee Act, and that the government had not complied.

Seattle Audubon Society v. Lyons (W.D. Wash., Judge Dwyer). Continuation of the litigation that led to the 1992 injunction, after it had been lifted. Amended complaint by 13 environmental groups challenged the 1994 Forest Plan. The court upheld the 1994 Forest Plan against all legal challenges, and its decision was reaffirmed by the Ninth Circuit Court of Appeals.

Save the West v. Lyons (W.D. Wash., Judge Dwyer). Complaint by environmental group challenging the 1994 Forest Plan. Consolidated with Seattle Audubon Society v. Lyons.

Native Forest Council v. Babbitt (W.D. Wash., Judge Dwyer). Complaint by environmental group challenging the 1994 Forest Plan. Consolidated with Seattle Audubon Society v. Lyons.

Sierra Club v. Espy (W.D. Wash., Judge Dwyer). Complaint by environmental group challenging the 1994 Forest Plan. Consolidated with Seattle Audubon Society v. Lyons.

Northwest Forest Resource Council v. Thomas (D.D.C., Judge Jackson). Complaint by timber industry association challenging the 1994 Forest Plan. Court granted government's request to transfer case to Judge Dwyer in Seattle, but case was withdrawn before transfer. Claims were decided in government's favor as were government's cross-claims in Seattle Audubon Society v. Lyons.

Northwest Forest Resource Council v. Dombeck (D.D.C., Judge Jackson). Complaint by timber industry association challenging the 1994 Forest Plan. In May 1996, the Court dismissed the case deferring to the Western Washington District Court and Ninth Circuit Court of Appeals' decision in Seattle Audubon Society v. Lyons.

Association of O & C Counties v Babbitt (D.D.C., Judge Jackson). Complaint by Oregon counties and others challenging the 1994 Forest Plan. Court stayed the case pending resolution of the Seattle litigation. In May 1996, the Court dismissed the case deferring to Western Washington District Court and Ninth Circuit Court of Appeals' decision in Seattle Audubon Society v. Lyons.

TEXT BOX 4

Challenges to Implementing the Plan

Seattle Audubon Society v. Lyons (W.D.Wash., Judge Dwyer). Environmental groups filed an amended complaint challenging the application of the Forest Plan to the Mather Memorial Highway Project, which removed 18 acres of old growth. Judge Dwyer upheld the plan's implementation.

Native Forest Council v. U.S. Forest Service (D.Oreg., Judge Ashmanskas). Environmental groups challenged the application of the Forest Plan to 11 timber sales in Oregon. The timber sales were found to comply with the Forest Plan and applicable laws.

National Wildlife Federation v. Agpaoa (D.Oreg.). Environmental groups challenged the application of the Forest Plan to suction-dredge mining on the Siskiyou National Forest. The issues were resolved and the case dismissed before a hearing.

Sierra Club v. U.S. Forest Service (D.Oreg., Judge Hogan, on appeal to Ninth Circuit). Environmental groups challenge the Warner Creek Fire Recovery Project's compliance with the Forest Plan. Outcome superseded by salvage provisions in the 1995 Rescissions Act.

TEXT BOX 5

The first lawsuit was filed before the Plan was finalized. U.S. District Court Judge Thomas Jackson held that the participation of five nonfederal university scientists in the Forest Ecosystem Management Assessment violated the Federal Advisory Committee Act, but he left the consequences of that judgment to other cases.

After the injunctions were lifted, 13 environmental groups amended their original complaint before Judge Dwyer to challenge the Plan on how it was put together and whether it provided adequate environmental protection to comply with the nation's environmental laws. Four additional lawsuits were filed in Judge Dwyer's court by environmental groups for similar reasons and were consolidated with the amended complaint. Two forest products industry complaints and one complaint from the O&C County Association were filed in Judge Jackson's court on both process and substantive grounds. Judge Jackson allowed the government to transfer one of the industry cases to Judge Dwyer and stayed the other two cases pending the resolution in Judge Dwyer's court, but the industry withdrew the complaint before it was transferred. Judge Dwyer then allowed the government to make a claim against the industry plaintiffs claims that were withdrawn so that all the issues could be decided at once.

In addition to satisfying the terms of the injunctions discussed earlier, Judge Dwyer upheld the Plan against all these new legal challenges on December 21, 1994. In upholding the Plan, Judge Dwyer rejected challenges both from environmental groups who contended that the Plan did not adequately protect old-growth forests and salmon stocks, and from timber industry groups who contended that the Plan unlawfully preferred environmental concerns over timber supply. The decision validated the use of an ecosystem management approach as the means to both meet the requirements of the environmental laws and make the timber resource available to the public. The Court also held that the public process used by the government for the environmental impact statement adequately remedied the failure to open up the Forest Ecosystem Management Assessment Team process found unlawful by Judge Jackson.

Separate appeals of this decision were taken by the industry and two environmental groups. On April 10, 1996, the Ninth Circuit Court of Appeals upheld Judge Dwyer's opinion. In upholding Judge Dwyer's decision, the Ninth Circuit Court of Appeals noted that the Plan was

designed to bring "much needed coherence to the management of federal forests in the region." Judge Jackson's subsequent dismissal of the challenges pending in his District Court underscores that fact. Environmental groups have challenged, four times, individual agency actions that implement the Plan. The government has prevailed on or resolved all four cases. Of all tile litigation affecting the Plan and its implementation, the federal government has prevailed on eight cases, negotiated one case, and lost one case.[3]

While these legal challenges were being resolved, the federal agencies were free to move forward in implementing all aspects of the Plan (table 3). These legal challenges certainly contributed to a sense of uncertainty that was felt by all parties in 1994, though die injunctions had been lifted. Would another injunction be put in place? Would the Plan have to be re-written? The previous three years had suggested that the agencies would have to start again. They have not had to do so.

Table 3 -- Key events in designing and implementing the Northwest Forest Plan

Date	Forest Management	Economic Assistance
1993		
April	▪ Forest Conference ▪ Forest Ecosystem Management Assessment Team organized	▪ Forest Conference ▪ Economic Assessment team organized
July	▪ President's Forest Plan released ▪ Draft Supplemental Environmental Impact Statement released to guide federal forest management ▪ Ninety-day public comment period begins	▪ President's Economic Assistance Plan released
August		▪ Budget Reconciliation Act of 1993 repeals log-export tax incentive and uses savings to guarantee payments to states
September	▪ Public hearings held in WA, CA, and OR	
October	▪ Draft Supplemental Environmental Impact Statement public comment period ends ▪ Federal cooperation memorandum of understanding signed	▪ Federal cooperation memorandum of understanding signed
November		▪ Federal and federal-state cooperation memoranda of understanding signed
December		▪ FY 1994 appropriation bills that contain economic-assistance funding commitments signed; Northwest Economic Adjustment Initiative is operational

[3] These numbers reflect challenges to the Plan and its implementation independent of those based on the salvage provisions included in the Rescissions Act (1995)

Date	Forest Management	Economic Assistance
1994		
February	▪ Final Supplemental Environmental Impact Statement released 30-day public comment period begins	
April	▪ Public comment period on final Supplemental Environmental Impact Statement ends ▪ Record of Decision released ▪ New forest management activities begin (except for timber sales) ▪ Judge Jones lifts injunction on Bureau of Land Management timber sales	
May	▪ Terms of Judge Frye's injunction on Bureau of Land Management timber sales are satisfied	
June	▪ Judge Dwyer lifts injunction on Forest Service's regional timber sales ▪ Forest Plan is completely operational ▪ New legal challenges filed on Forest Plan on its merits and in manner it was developed	
December	▪ Judge Dwyer upholds the Forest Plan on all accounts	

CHAPTER 4

INTERAGENCY COOPERATION AND PUBLIC PARTICIPATION

Because the Northwest Forest Plan addresses both federal forest management and economic programs of many federal agencies, the decision process was designed to be as broad, inclusive, and integrated as possible. It aims to bring people together across the borders that separate governments, jurisdictions, and sovereignty, and to create bridges within the federal government between departments, agencies, and responsibilities.

COORDINATION AMONG FEDERAL AGENCIES: A HISTORICAL PERSPECTIVE

Various federal laws and executive orders have historically encouraged or directed agencies to work together to implement environmental laws. In 1976, for example, the National Forest Management Act (1976) directed the Secretary of Agriculture to coordinate planning on National Forests "with the land and resource planning of other agencies" and the Federal Lands Policy and Management Act (1976) directed the Secretary of the Interior to coordinate "land use inventory, planning, and management activities...with the land use planning processes of other Federal departments and agencies...." In 1982, the Reagan Administration emphasized interagency coordination by calling for each agency responsible for implementing the National Environmental Policy Act to cooperate with a designated lead agency3 and to provide staff and funds as necessary (OMB 1982).

Even with these and other directives, achieving interagency coordination has been elusive and difficult for a variety of reasons; a major one is the way agencies were established and structured under law. Each department has different legislative mandates, with various laws, actions, and responsibilities delegated to only one or a few agencies. Each agency has its own budget, accounting, procurement, and management policies and procedures that may be incompatible with those of other agencies. These institutional factors alone can limit interagency coordination and collaboration.

Each agency’s mission may overlap with those of other agencies or have completely different objectives. For example, land management agencies such as the Forest Service and the Bureau of Land Management share similar missions to manage federal lands for resource uses and to protect the environment; regulatory agencies, such as the National Marine Fisheries Service and the Fish and Wildlife Service, share responsibility for enforcing the Endangered Species Act on federal land.

Because of the unique ways departments and agencies are established, structured, and funded by law, most have tended to concentrate on their own mandates and responsibilities, generally viewing their missions as independent and of little concern to other government agencies. Even in this context, the federal agencies sometimes sought public participation, coordination with other agencies, or communication with state, local, and tribal governments either because it was

required by laws such as the National Environmental Policy Act, as a short-term response to emergencies such as forest fires, as the result of personal relations between agency staffs, or simply as professional courtesy.

Evolving Conflicts

Although early consultation and coordination between federal agencies were rare on programs like timber-sale planning, interagency cooperation was by no means absent in the region. Agencies came together effectively during crises and emergencies, such as the eruption of Mount St. Helens and forest fires. Agency field offices have worked together and pooled resources, such as when the Forest Service and the Bureau of Land Management jointly managed and staffed local visitor centers and office buildings. Also, agencies have worked closely together on public education, recreation programs, and other projects.

As conflicting demands on natural resources increased and became more rooted in each agency's mission, their professional pride, cultures, and lack of trust in each other began to create conflict, inefficiency, and delays. The problems caused by lack of interagency coordination and trust were especially acute between agencies after the northern spotted owl was listed as a threatened species in 1990.

Before the owl was listed, the Forest Service and the Bureau of Land Management were not required to consult with the Fish and Wildlife Service about potential effects of management actions on owl habitat. After the listing, however, the agencies were required to consult, and the Fish and Wildlife Service often found that the Forest Service or the Bureau of Land Management had failed to adequately consider or address the habitat needs of listed species in their timber-sale plans. Depending on the complexity of the issues that needed to be addressed, the adjustments and revisions that the two land management agencies undertook could delay the offering of a timber sale for months or even years.

After the Interagency Scientific Committee developed and released a unified strategy to protect the habitat of the northern spotted owl--an example of agency cooperation--the Bureau of Land Management released its own proposal to protect the owl's habitat. The Bureau was challenged by environmental groups for not first consulting with the Fish and Wildlife Service while developing its strategy. In fact, opinions differed about whether the strategy actually was a plan that the Service could be consulted about. Nevertheless, the Bureau's strategy played a key role in a federal judge's decision to place an injunction on the Forest Service's timber-sale program. Even though the Forest Service's plan to protect owl habitat was based on the Committee's approach, the court ruled that the Forest Service failed to consider what effects the Bureau's strategy could have on spotted owl habitat. The lack of interagency coordination was one of the factors that led to the court injunctions that essentially shut down the region's federal timber sales.

How to break the impasse caused by the court injunctions became a highly emotional, polarizing issue. But virtually all parties agreed on two major issues: federal agencies should work toward better coordination, efficiency, and improved communication; and the states, tribes, local governments, and members of the public should have the opportunity to better share their concerns, issues, and ideas directly with federal decision makers on how the forests should be managed. Leaders in the federal agencies themselves agreed with these views, stating that the lack of

coordination among the various federal agencies was a major factor in creating the impasse in the region (DSEIS 1993). The need to coordinate activities of government agencies in the region thus became a goal of both the Clinton Administration and the federal professionals themselves.

The Forest Conference

The first step toward creating stronger interagency cooperation was taken on April 2, 1993, when nearly all of the relevant departmental Secretaries and administrators joined President Clinton and Vice President Gore in attending the Forest Conference in Portland, Oregon. The need for the federal government to find new ways of doing business, which was mentioned by many participants, was clearly articulated by Margaret Powell of the Hoopa Valley Indian Tribe of California (Forest Conference 1993):

> *... it will take a cooperative effort on the part of the management agencies, the timber industry, and environmental groups to achieve the balance that everyone is striving to achieve. It will not be acceptable for one group or agency to stop the work or efforts of the others. We have seen some very productive and constructive models developed between previously opposing groups when reasonable people sit down to develop reasonable solutions.*

As the Forest Conference ended, the President pledged a course of action for the departments and agencies to begin the process of government collaboration and streamlining:

> *I want each of our cabinets to look within the departments to determine which policies are at odds with each other. It is true, as I've said many times, that I was mortified when I began to review the legal documents surrounding this controversy to see how often the departments were at odds with each other, so there was no one voice for the United States. I want the cabinet members to talk with each other to try to bring these conflicts to an end which, at their extreme, we've had our own agencies suing one another in court, often over issues which are hard to characterize as monumental.*

The Administration was directed to craft a balanced, comprehensive, long-term policy that would require all levels of government to work together. Not since President Theodore Roosevelt established the Forest Service nearly 90 years ago had a President been so personally involved in a controversial forestry issue. Because of that special attention, expectations of what might result from the Forest Conference and the Administration differed widely.

Most people welcomed the opportunity for improved working relations and appreciated that their concerns were receiving attention from the highest levels of the federal government. Some people had high expectations that the new Administration would be more supportive of environmental laws than were previous Administrations, but others had equally high expectations for a return to previous forest management policies. American Indian tribes were encouraged by having a seat at the conference table so their concerns could be heard. Because of their status as sovereign nations, however, many tribes expected the Administration to deal with them as one government to another.

Although expectations were generally positive, the year s of frustration and the inability to find a solution created a general mood of skepticism about whether the federal government could indeed resolve the stalemate, protect forest resources, and create new economic opportunities.

THE NORTHWEST FOREST PLAN: A MODEL FOR INTERAGENCY COORDINATION

Implementing the Northwest Forest Plan would require the unprecedented coordination of 7 departments and 16 agency programs across 3 states. The Plan thus provides an ideal opportunity to serve as a model of how government agencies could work together to become more efficient, responsive, and effective.

Cooperation and Coordination for Forest Ecosystem Management

Federal agencies in the region recognized that existing organizational structures and institutional cultures did not foster interagency coordination (figure 2). In a joint working group agency coordination, regional and national career professionals from the federal agencies identified seven factors that contributed to the lack of interagency cooperation (DSEIS 1993):

- Lack of an agreed-upon mission;
- Land management incentives based on timber production;
- Inability to adapt rapidly to change;
- Inconsistent statutory mandates;
- Technological constraints;
- Structural problems with respect to agency budgets; and
- Lack of trust between federal agencies and within individual agencies.

To address these factors, the regionwide forest management strategy would require unprecedented long- and short-term changes. This task is complex, mostly because of the organizational structure of the federal government itself. Each individual department and agency is set up as a linear series of units with a traditional chain of command; although this vertical structure effectively maintains the internal operations and decision processes for large organizations, it can limit an agency's flexibility to work horizontally with other agencies.

In addition to the challenge of coordinating the actions of agencies, the government had to consider how to increase involvement with the public, the tribes, and state and local governments in federal forest management decisions.

Federal agencies included in the Plan were directed to come together in new interagency committees (figure 3). Because the list of the various committees and their acronyms resembled an alphabet soup of new bureaucratic organizations, it helped feed perceptions among some people that the Plan was creating a new bureaucracy and more jobs for staff and administration. In reality, it simply created a process that streamlined the existing 7 departments and 16 agency programs into focused, coordinated interagency committees. These committees allow each agency to retain their traditional decision authority, but require them to do so with a better understanding of other agencies' responsibilities and the effect of those responsibilities.

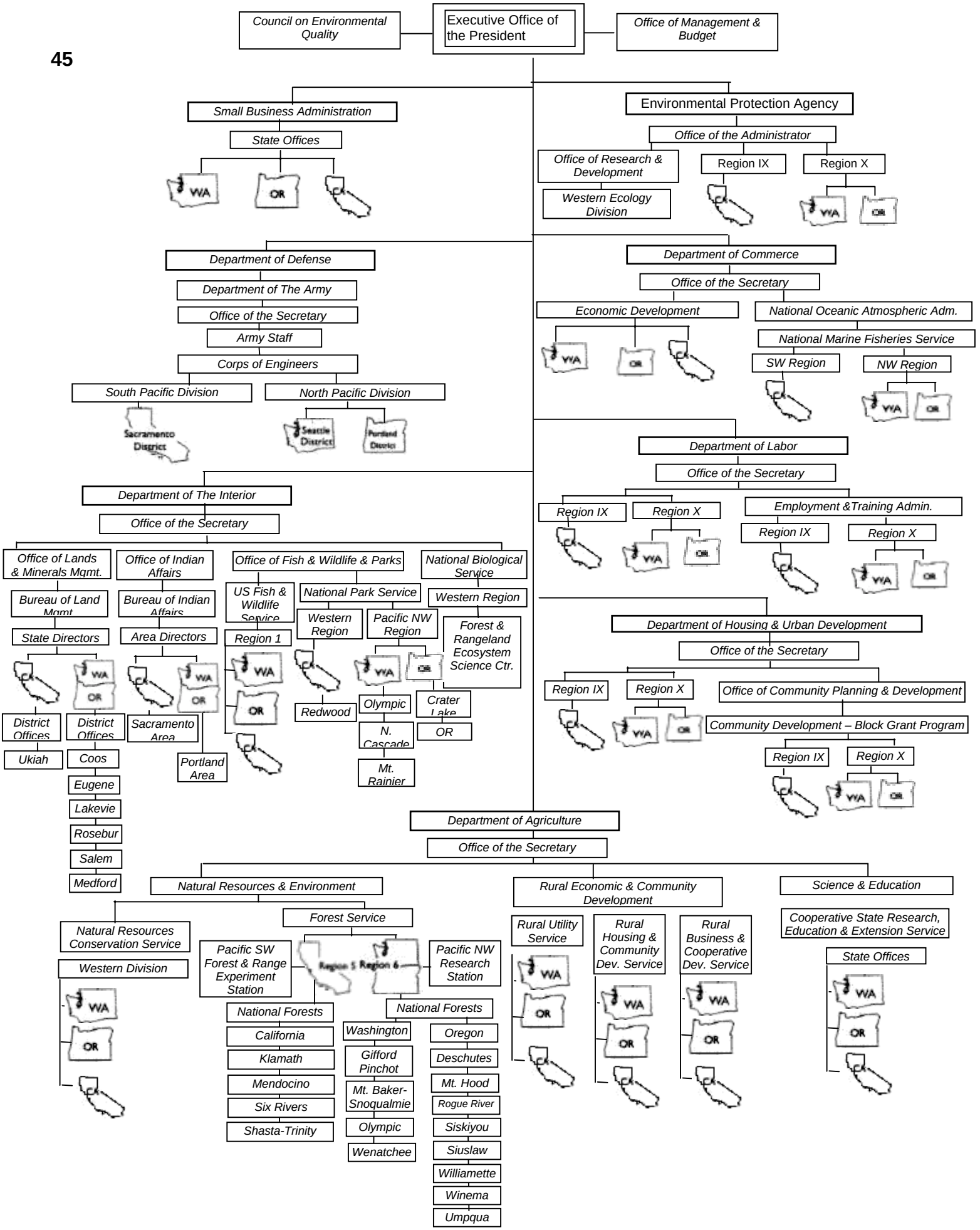

Figure 2 – Formal organizational chart of federal agencies involved with the Northwest Forest Plan

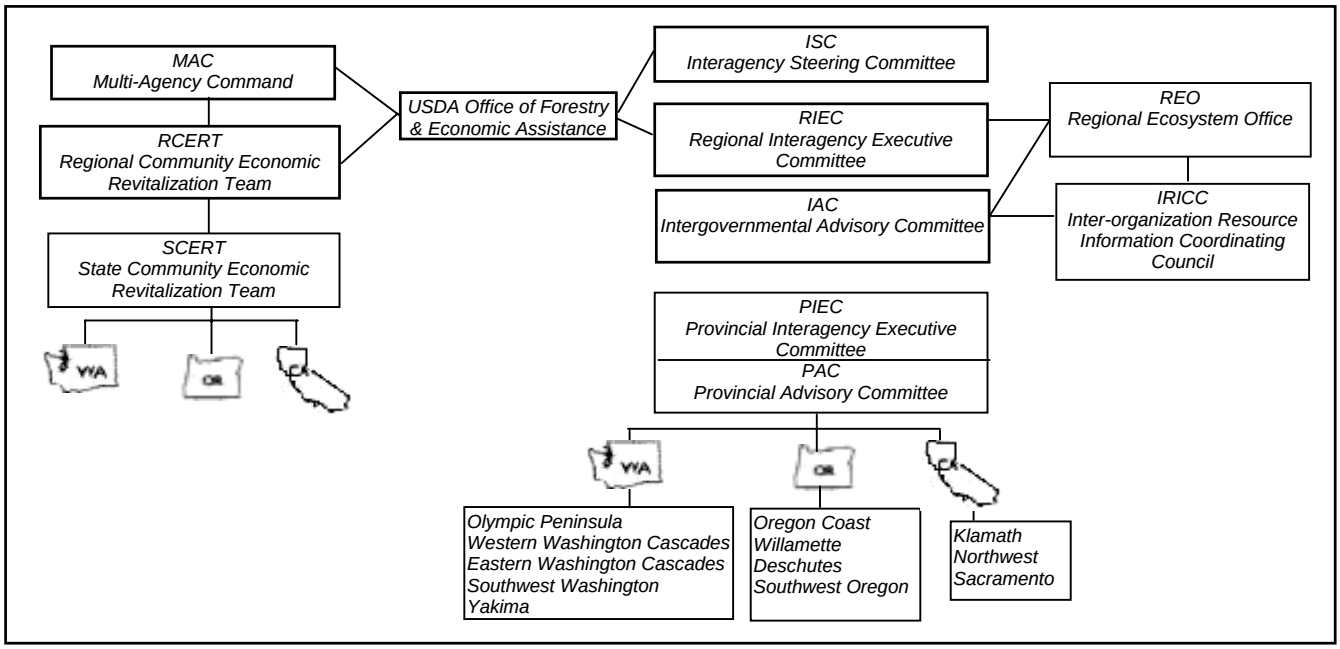

Figure 3 – Interagency cooperative structure under the Northwest Forest Plan.

Implementing the Agency Coordination Work Group's recommendations began in July 1993, when the regional executives of the Bureau of Land Management, Forest Service, National Marine Fisheries, Environmental Protection Agency, and the Fish and Wildlife Service, on their own initiative, took action and created their own Interagency Implementation Team. The team was established to enhance relations between the agencies, and it served as a jump-start for implementing the Plan.

Interagency coordination officially began on October 8, 1993, with the signing of the *Memorandum of Understanding for Forest Ecosystem Management* (MOU 1993a). Its purpose was "to establish a framework for cooperative planning, improved decision making, and coordinated implementation of the forest ecosystem management component of the President's Forest Plan...." The document created several interagency groups that would be responsible to "develop, monitor, and oversee the implementation of the comprehensive forest management strategy for federal forests within the range of the northern spotted owl." The memorandum was signed by the Director of the White House Office of Environmental Policy, the Secretaries of the Interior and Agriculture, the Administrator of the Environmental Protection Agency, and the Under Secretary of Commerce for Oceans and Atmosphere. The interagency groups established by the memorandum were the:

- Interagency Steering Committee,
- Regional Interagency Executive Committee, and their staff work-group, the Regional Ecosystem Office,
- Research and Monitoring Committee, and
- 12 Provincial Teams.

Northwest Forest Plan Committees

The Interagency Steering Committee (ISC) establishes policies for the Northwest Forest Plan; it is chaired by the White House Council on Environmental Quality. This committee, based in Washington D.C. includes subcabinet representatives from the Secretaries of the Interior, Agriculture, Commerce, and the Administrator of the Environmental Protection Agency.

The Regional Interagency Executive Committee (RIEC) serves as the senior body of line managers responsible for implementing the Northwest Forest Plan and coordinating and communicating policies with agencies in the Plan's region. The committee includes the regional executives of the Forest Service, Bureau of Land Management, Fish and Wildlife Service, National Park Service, the National Marine Fisheries Services, and the Environmental Protection Agency.

The Intergovernmental Advisory Committee (IAC) serves as the lead advisory body to the Regional Interagency Executive Committee. The 20 members include one official from local, state, and tribal governments in Washington, Oregon, and California, plus federal officials from each participating agency in the region.

The Provincial Interagency Executive Committees (PIECs) the region is divided up into 12 provinces with distinct land, ecosystem, and climatic qualities unique to their subregion. These committees are made up of federal agency directors who oversee the management of federal public land for each province.

The Provincial Advisory Committees (PACs) serve as the lead advisory bodies to the Provincial Interagency Executive Committees. They have up to 29 members, including representatives from federal, state, county and tribal governments, the timber industry, environmental groups, recreation and tourism organizations, and up to five other public at-large members.

Adaptive Management Areas (AMAs) are designed as community-based forums to work with federal land managers, encouraging development of innovative forest management techniques within their designated land area. Participation by any interested party is encouraged.

The Regional Ecosystem Office (REO) serves as the staff and advisory office to the Regional Interagency Executive Committee and the Intergovernmental Advisory Committee. It provides support for their efforts and provides independent scientific, technical, and other review and support to help resolve differences in implementing the Northwest Forest Plan. Staff of the office are detailed from each of the federal agencies responsible for forest management in the region.

The Interorganization Resource Information Coordinating Council (IRICC) coordinates and shares data and other information concerning natural resource issues from federal and state agencies. The council is chartered as a subcommittee of the Intergovernmental Advisory Committee.

The Research and Monitoring Committee (RMC) provides scientific and research information to the Regional Interagency Executive Committee. It consists of scientists and managers from different agencies representing a wide variety of research disciplines.

TEXT BOX 6

A federal interagency group that includes state government agencies is the Interorganization Resource and Information Coordinating Council. The memorandum of understanding that created the council was signed by the federal regional leaders of the Forest Service, Bureau of Land Management, Fish and Wildlife Service, National Marine Fisheries Service, Bureau of Indian Affairs, National Park Service, Soil Conservation Service, Environmental Protection Agency, and the Geological Survey, as well as representatives from the state governments of Oregon, Washington, and California (MOU 1994).

In addition to the national and regional bodies, Oregon, Washington, and northern California were divided into 12 provinces to focus on how land management activities would address the unique ecological characteristics for each subregion or physiographic province (ROD 1996). The boundaries were designed around common local ecosystem characteristics, such as climate, aquatic systems, and terrestrial qualities. Each province is being guided by a Provincial Interagency Executive Committee of federal agency representatives who oversee the implementation of the Plan in that province.

Cooperation and Coordination for Economic Assistance

The Northwest Economic Adjustment Initiative makes its available to provide both immediate and long-term relief for the people, communities, and businesses affected by changes in the timber industry and federal forest management. Formal commitments, including principles to guide the participating federal agencies, objectives of the assistance effort, responsibilities of the agencies, and a coordination structure are described in the *Interagency Memorandum of Understanding for Economic Adjustment and Community Assistance* (1993). The *Interagency Memorandum* was signed by the Secretaries of the Interior, Agriculture, Commerce, Labor, Housing and Urban Development; the Administrators of the Environmental Protection

Economic Adjustment Initiative Committees

The Multi-Agency Command (MAC) is responsible for policy and oversight of the Northwest Economic Adjustment Initiative. The committee, based in Washington, DC, includes representatives from the departments of the Interior, Agriculture, Commerce, Labor, and Housing and Urban Development, the Environmental Protection Agency, the Office of Management and Budget, the Small Business Administration, and the presidential advisors on economic, domestic, and environmental policy.

The Regional Community Economic Revitalization Team (RCERT) is composed of the executives of regional federal agencies responsible for awarding grants and loans. It includes representatives from the state, local, and tribal governments of Oregon, Washington, and northern California, American Indian Tribes, and regional representatives from the Forest Service, Bureau of Land Management, Small Business Administration, Farmers Home Administration, the Departments of Labor and Environmental Protection Agency, and Housing and Urban Development.

The State Community Economic Revitalization Teams (SCERTs): The Oregon, Washington, and California teams are chaired by a state official chosen by the respective Governor. The state teams bring together all of the federal agencies responsible for allocating federal grants and loans in each state. Although each team includes representatives from federal, state, and local governments plus American Indian tribes, the states were allowed to define what type of representation would best serve the needs of their workers, families, and communities, so the membership and representation differs with each team. The Washington and Oregon teams chose to include representatives from the general public, and the California team's membership consists only of governmental representatives.

TEXT BOX 7

Agency and Small Business Administration; the Deputy Director of the Office of Management and Budget; the Assistants to the President for Economic Policy and Domestic Policy; and the Director of the Office on Environmental Policy. The *Interagency Memorandum* covered fiscal years 1994+96; it was extended by consent of the signatories in August 1996 for two more years.

Coordinating bodies for the Initiative were established nationally, regionally, and by the states.

These groups include the:

- Multi-Agency Command,
- Regional Community Economic Revitalization Team, and
- Oregon, Washington, and California State Community Economic Revitalization Teams.

Community Economic Revitalization Team (CERT)

The Multi-Agency Command was charged with the responsibility of entering into an agreement with the Governors of Oregon, Washington, and California to carry out the provisions of the Initiative as a partnership of federal, state, tribal, local, and other parties. The *Federal-State Memorandum of Understanding for Economic Adjustment and Community Assistance* (1993) was executed between the chair of the Multi-Agency Command, the three Governors, and three county officials representing affected communities in each of the states. The existing authorities and statutory obligations of the participating federal and state agencies and officials are not affected by the agreements in either the *Interagency* or the *Federal-State Memorandum*.

Coordination and Oversight Through the
U.S. Office of Forestry and Economic Development

Once the framework for interagency cooperation was in place, the next step was to begin coordinating the 7 federal departments and 16 agency programs in the 3-state region in implementing the Plan. To help ensure a smooth transition, a United States Office of Forestry and Economic Development was created to oversee and coordinate the implementation of the Plan for two years. As the administration's representative in the region, the office served as a focal point for Plan activities, coordinating interagency and intergovernmental efforts, and serving as a communications link from the region to Washington, DC. The office was created at the request of the White House by the Secretaries of Agriculture, Interior, Labor, Commerce, and Housing and Urban Development; and the administrators of the Small Business Administration and the Environmental Protection Agency (MOU 1993b). The office closed in February 1996. With the interagency committees established, implementing the Northwest Forest Plan began to move forward. The various committees began meeting regularly, creating new channels of communication, coordination, and cooperation between the agencies and with state, local, and tribal governments and the public.

PUBLIC PARTICIPATION AND THE FEDERAL ADVISORY COMMITTEE ACT

Public participation has been a legislatively required part of federal agency efforts since 1970. Such participation includes formal and informal opportunities for interested individuals and organizations to work with and comment on federal plans and actions. The Plan retains these opportunities, but it also attempts to bring those who are most interested in forest management and economic assistance into partnership groups that will seek to help federal agencies reach consensus. Originally, these groups were envisioned to be part of the coordination groups described above, but issues related to the Federal Advisory Committee Act prevented this arrangement.

In late 1993 and early 1994, as the interagency coordination groups were established and the Northwest Forest Plan began to move forward, the process that created the Plan itself was challenged in court. On March 21, 1994, a federal district court determined that the Forest Ecosystem Management Assessment Team was in violation of the Federal Advisory Committee Act (Northwest Forest Resource Council v. Espy 1994). The Act, which was passed by Congress 1972, was created to reduce the influence of special interests, to open public access to government decision makers, and to control costs of advisory committees. It defines an "advisory committee" as any committee or group established or used by the President or any federal agency for advice or recommendations, and whose membership includes people who are not full-time federal employees (Federal Advisory Committee Act 1972).

The Forest Ecosystem Management Assessment Team was a group of more than 100 scientists and other experts brought together by the Administration to develop the ecosystem management options that eventually served as the basis for the Northwest Forest Plan. Although nearly all of the Team’s members were federal employees, five were professors from regional universities. The court determined that the Team was an advisory committee as defined by the Act because, even though the five professors were under contract to work for the federal government, they were still technically state employees.

The court also said that the Team should have been chartered as an advisory committee, which under the Act would have required a statement outlining the committee’s objectives; defining who the committee would report to; estimating costs associated with operating the committee; establishing a date for terminating or reviewing the committee; having a membership representing a balance of interests; publishing notices of meetings in the Federal Register; and keeping minutes of meetings and making documents available for public inspection. The Team did not meet all of these requirements.

Although the court determined that the Team’s membership violated the Federal Advisory Committee Act, it declined to enjoin the Administration. The ultimate penalty could have been prohibiting use of the Team’s considerable scientific findings while developing the Environmental Impact Statement for the Northwest Forest Plan. Had the court ordered such a prohibition, the Plan would have had to be redone, and the planning process would have had to start all over again.

Other Court Decisions Related to the Federal Advisory Committee Act

To provide a clearer understanding of the government's subsequent actions and responses to the lawsuits, the Forest Ecosystem Management Assessment Team's court case needs to be put in perspective with two other similar legal cases in 1993 that also addressed challenges to the federal committees' compliance with the Federal Advisory Committee Act.

A court case in Alabama focused on whether four scientists who were advising federal officials on the possibility of listing a sturgeon as an endangered species constituted an advisory committee under the Federal Advisory Committee Act (Alabama-Tombigbee Rivers Coalition v. Department of the Interior 1994). The four scientists worked independently, and they originally intended to independently submit their findings about the sturgeon to the Fish and Wildlife Service. Instead, they chose to give direct recommendations in a joint report. A federal court determined that the four scientists were technically an advisory committee under the Act. And, like the Forest Ecosystem Management Assessment Team, because they were not officially chartered, they were found in violation of the law. Unlike in that case, however, the government was barred from using the Alabama scientists' studies and recommendations, which meant their information and scientific data about the sturgeon could not be considered by government policy makers.

Another highly publicized advisory committee case focused on the President's Task Force on National Health Care reform headed by First Lady Hillary Rodham Clinton. As in the other cases, the issue centered on the membership of the task force. The dispute was whether the First Lady was a private citizen or a government employee. If she was a private citizen, her participation on the all-federal-employee task force would have been a violation of the Federal Advisory Committee Act. The government contended that the First Lady was a federal employee, and therefore the task force was not an advisory committee. A federal district court ruled that the First Lady was a private citizen, and thus her membership on the task force was a violation of the Act. Later, an appeals court overturned the lower court's decision, saying that the First Lady was a "functional equivalent of an officer or employee of the federal government," and thus, the task force was legal and not an advisory committee as defined under the law (Association of American Physicians and Surgeons, Inc., v. Clinton 1993).

Because of the high visibility of these cases, federal officials throughout the nation were under intense scrutiny by the public and interested parties on how they received advice and information from individuals and groups outside of the federal government. These legal opinions and implications were taken very seriously, and together they focused the agencies' efforts to assure that all future advisory processes would strictly comply with the law.

The Effects of the Federal Advisory Committee Act on Public Participation

Before the Forest Ecosystem Management Assessment Team case, many federal officials in the region were beginning to make progress working with state and local governments, tribal officials, and with various partnership and community groups. Just as federal officials were creating new lines of communication and building trust with numerous officials and groups, the court's decision on the Forest Ecosystem Management Assessment Team's compliance with the Federal Advisory Committee Act impaired these relations.

While legal experts analyzed the effects of the rulings and were deciding the best course to take to comply with the Act, questions arose about the involvement of federal agency officials in the many committees, partnerships, and other organizations that included nonfederal officials. Federal agencies and officials were advised to take a very conservative approach in their interactions and participation with groups outside the federal government. The concern was that the newly established legal precedents could allow nearly anyone to disrupt or derail agency actions, simply by claiming unfair representation because he or she was not part of a group and someone else was. Therefore, federal agency officials who were participating in nonchartered committees and organizations were advised to stop until a process was developed to comply with the Act.

The sudden removal of agency involvement with the public and representatives of other governments stalled the positive momentum many federal officials in the field had already established with local partnership groups, bioregional councils, and other community-based organizations throughout the region. This abrupt change led to uncertainty, frustration, and misunderstandings from the public and federal officials alike. For example, the Applegate Partnership, in southwestern Oregon and northern California, is a watershed-based community organization that was hailed by local and federal officials as a model for how partnerships could successfully bring together divergent interests and work together on local land management issues. Through the group's patience, hard work, and local leadership, a high degree of understanding and trust was formed between the community leaders, industry representatives, environmental groups, and federal officials participating with the partnership. The federal officials and the other members of the partnership were equally disappointed when federal participants were required to resign from the partnership's board of directors. The resulting frustration and tension led some people to lose trust and goodwill towards the federal government.

The decision to limit the participation of federal officials also significantly affected all of the interagency and intergovernmental committees that were just beginning operation. For example, the Regional Interagency Executive Committee, the lead body of federal officials implementing the Plan, was beginning to build working relations with state and tribal representatives through its regularly held meetings. After the ruling, the Committee reluctantly chose to continue with its meetings but not to include representatives from state governments and tribes. Again, this decision dampened the positive relations being established and replaced them with frustration and tension between the agencies and the tribes and state governments.

Advisory committee questions also stalled the full implementation of the 10 Adaptive Management Areas. These areas were designed to be prototypes of how forest communities might be sustained by providing opportunities for federal land management and regulatory agencies, other government entities, nongovernmental organizations, local groups, land owners, communities, and citizens to work together to develop innovative management approaches (FSEIS 1994).

Whether the public involvement method s used by the Adaptive Management Areas would fall under the Federal Advisory Committee Act's definition of being federal advisory committees was uncertain.

For the Adaptive Management Areas, partnerships, and other community and public groups, federal involvement was put on hold until solutions that would comply with the letter, spirit, and intent of the Federal Advisory Committee Act could be worked out.

Although the forest management efforts were slowed as federal legal experts worked on ways to comply with the Act, the Plan's economic assistance programs progressed along a different track. The Community Economic Revitalization Teams decided to limit their efforts to sharing information with federal officials, not directly advising them; the Federal Advisory Committee Act thus had little effect on their ability to meet, and they were able to proceed without interruption.

Chartering Advisory Committees Under the Federal Advisory Committee Act

Within four months of the decision on the Forest Ecosystem Management Assessment Team, the government created a new process to give nonfederal officials and the public interested in natural-resource issues the opportunity to have a say on how the region's federal forests will be managed. Several advisory committees were established, not only to comply with the Federal Advisory Committee Act but to help ensure that representatives from local, state, and tribal governments, as well as the general public, could share information and formally advise federal decision makers responsible for managing and regulating activities on the region's forests.

Because the advisory committees' charters placed a legal limitation on the number of people and groups that could participate on the committees, the government was challenged to find alternatives that would allow partnerships and other organizations to advise the government, while complying with the federal] Advisory Committee Act. Four possible options (right) were outlined.

Thirteen advisory committees were formally created on September 30, 1994, when the Intergovernmental Advisory Committee and the Provincial Advisory Committees were officially established by two separate charters (USDA 1994). The Intergovernmental Advisory Committee, whose 20 members include one official each from local, state, and tribal governments in Washington, Oregon, and

Opportunities for Complying With the Federal Advisory Committee Act

Public Involvement: "Use existing public participation methods and techniques," which are basically any public participation avenue available to the general public such as public meetings, hearings, seminars, workshops, letters, one-on-one meetings, and other communications.

Subcommittees: "Establish AMA groups and/or partnerships as subcommittees under a Federally-chartered provincial advisory committee." A chartered committee can establish working groups or subcommittees which could "be community-based groups that would provide advice and recommendation to the committee on federal land management issues."

Charter: "Charter separate advisory committees for AMA or partnership groups," which would clearly comply with the Act. The paper noted, however, "receiving approval for advisory committee charters may be questionable given the President's earlier mandate of reducing the number of federal advisory committees by one-third."

Contract: "Contract AMA or partnership groups," where the government could offer a competitive contract with various groups for advice on specific plans and options for forest management.

TEXT BOX 8 Source: Office of Forestry and Economic Development, 1994.

California, serves as the lead advisory body to the Regional interagency Executive Committee. The Committee has designated the Inter-Organization Resource information Coordinating Council as its subcommittee.

The Provincial Advisory Committees serve as key advisory bodies to the 12 Provincial Interagency Executive Committees, whose members are responsible for land management activities within each province (figure 4). The Provincial Advisory Committees have up to 29 members, including representatives from federal, state, county, and tribal governments, the timber industry, environmental groups, recreation and tourism organizations, and up to five other public-at-large members.

These advisory committees marked an important step forward for both interagency and intergovernmental coordination and are creating new ways to involve local governments, tribes, and the public in managing the region's forests. The committees allow a wide representation of interests to be heard by federal policy makers while still complying with the requirements of the Federal Advisory Committee Act. The law requires that the membership of the advisory committees represent a balance among various groups, communities, and people interested in natural resources, and that the number of seats on the committees should be limited to a workable size.

Notwithstanding the charter of these teams, several partnership and community-based groups, objected to the classifications of interests required by the Federal Advisory Committee Act's

California Coast Provincial Interagency Executive Committee

advisory committee structure, The Provincial Advisory Committees' charter outlined membership requirements for the committees that included representatives of the environmental community, the forest products industry, recreation and tourism, and others interested in natural resources issues. Some partnerships, community organizations, and timber industry associations, however, felt they represented their entire community and did not feel comfortable being classified into such specific categories. One group's concerns reflected the feelings of several in California when they said

> *The classification of representatives to the Advisory Committee as "representatives of environmental interests," "representatives of the forest products industry, "[and] "representatives of the recreation and tourism sectors" is a return to the days of confrontation. [We have] gone beyond labels to focus on better coordination of forest management activities among federal and nonfederal entities (Shasta-Tehama Bioregional Council 1994).*

California Coast Adaptive Management Area field trip

These groups were formed to focus on ecosystems across jurisdictional boundaries, and because their forums included more than just federal lands, they objected to the federal advisory committees' focus on federal lands only. Also, they thought that because they were already organized and functioning in their area, the new advisory committees were redundant and unnecessary.

Partnership groups in the region are not alone in their concern about the Federal Advisory Committee Act. The legal precedents of 1993 and 1994 have affected partnership groups throughout the nation.

Interagency Coordination and Public Participation: Observations and opportunities

Observations

The Forest Plan has been viewed by many as an opportunity for reinventing government. Within the broad context of reinvention, partnerships have developed, member's of the public have participated, and new ways of incorporating public input have been developed as a result of concerted efforts to comply with the Federal Advisory Committee Act.

Agencies working together

Interagency Cooperation

The goals of interagency cooperation and public participation were cited by participants at the Forest Conference as essential tools to help break the impasse that engulfed the region. Given the long-standing differences and polarization that persist, achieving these goals has been a genuine challenge.

Three years later, most of the Plan's goals of increasing interagency cooperation are moving forward. Interviews and discussions with agency professionals throughout the region have indicated widespread agreement with an observation made by the Forest Service's Ward Hoffman on the Olympic National Forest: "While developing effective coordination has sometimes been halting and difficult, there is no doubt that agencies are working more closely together and understanding each other more fully. This cannot but reap benefits that go far beyond the scope of the Northwest Forest Plan."

- All of the Plan's proposed coordinating committees were established and continue to operate.
- Most federal agency professionals believe that working together has greatly improved relations between agencies, believe the importance of working together cannot be overemphasized, and do not want to return to the old ways of doing business.

- Management and regulatory agencies have built cooperative relations and have a much better sense of and respect for each other's missions, cultures, and mandates.
- Interagency information-sharing leads to more unified and supportable decisions from management, legal, and public perspectives.
- Interagency decisions take more time up front, but they generally lead to better decisions that save time in the long run.
- Unified decisions allow the agencies to proceed along the same implementation path. For example, after a five-month process, all the regulatory and management agencies agreed on one watershed analysis process for the region that continues to be implemented two years later. The process was also supported by nonfederal governments and has withstood subsequent court challenges, allowing management decisions to move forward.
- Coordination allows agencies to educate each other on their missions and perspectives, thus creating buy-in on eventual decisions even if they are made unilaterally.
- The agencies have started to sign joint direction to the field where appropriate. Doing so helps assure consistent field interpretation and re-enforces positive relations between the agencies.

Benefits of interagency cooperation

Among the benefits of interagency cooperation cited most often by the agencies were

- Permitting agencies to leverage funds more effectively;
- Coordinating and applying research results;
- Creating common data bases and standards and guidelines;
- Coordinating resources, meetings, field trips, and discussions; and
- Maximizing limited agency resources.

Issues and concerns about Plan structure

Although most federal officials in the region support the Plan's coordination structure, some view the Plan as a burdensome shift in their traditional methods of operation. The issues and concerns they have raised differ widely, but in general they have viewed interagency cooperation as a new bureaucracy, citing a variety of reasons such as:

- Decisions being removed from local Districts and Forests;
- New committees and responsibilities adding to an already "full plate of work";
- Limited staff, funding, and resources being available for the new committee work;
- Decisions made at one level sometimes not being followed through at another;
- Cultures, funding, interests, and missions differing from one agency to another;
- Inability, unwillingness, or both of some staff professionals to adapt to change;
- Forest units being micromanaged by national and regional offices;
- Lack of standardized data and information collection; and
- The goal of consensus not always being attainable.

Internal management still an issue

Many agency professionals believe that internal management issues provide one of the most important components of Plan implementation that has not been adequately addressed in either the Plan or subsequent implementation.

- Although the timber sale rate has been reduced, the amount of staff and financial effort to re-establish the new program is comparable to what was needed to run the full timber program.
- The agencies' communication, organizational, and operational structures do not lend themselves to efficient coordination.
- A balanced skill mix is essential to meet the various commitments in the Plan and downsizing required for deficit reduction is impeding the agencies' operations.

- Retaining consistent management direction for the 10-year life of the Plan will allow the agencies to better meet their commitments and make improvements based on adaptive management. Changes that are intended to speed processes often end up taking more time to think through and implement.
- Many agency personnel that are not involved in implementing the Plan, especially in national headquarters, look at the Plan as a special regional project rather than a new way of doing business. This perception makes resolving issues nationally difficult for regional offices.
- Funding, budget development, budget direction, and accountability for how federal funds are used has not been overhauled to facilitate the Plan's ecosystem approach.

Opportunities

Opportunities for interagency cooperation could include

- Improving communication to and from all committee levels, both top down and bottom up. Direction and information could be communicated throughout the region by newsletter, electronic mail, and workshops.
- Requesting sufficient funding and staffing for committee responsibilities as a formal component of the agencies' budget requests.
- Restructuring the budget process by coordinating interagency budget requests, creating functional line items, building new performance measures into budget direction, and creating new measures of accountability that recognize the ecosystem approach.
- Identifying and promoting successful projects--such as watershed analysis, watershed restoration, and timber sales--will provide examples for others to learn from and reward those who are moving forward.
- Developing and building interagency coordination objectives into national, regional, and local performance measures.
- Continuing to create regionwide methods and standards for collecting, reporting, and recording data.

- Continuing to develop respect and trust in each agency for the roles and authority of other agencies.
- Increasing agency and staff willingness to share and yield some of their responsibilities to other agencies that are responsible for the same objectives.

Observations

Partnerships and Public Participation

Doing business differently

The Plan's goals for public participation focuses on the use of partnership groups and represents an unprecedented change in how federal agencies work with nonfederal representatives. These new partnerships require agencies to aggressively adopt new ways of doing business based on the input from their partners.

- Agency leaders generally stress that they highly value the input and advice that partnership groups have to offer, and they continue to strongly support and encourage everyone's participation in the various methods and vehicles available.
- Partnerships are not the only opportunities for public involvement on federal land management issues. For decades, agencies have been required to hold public meetings, open comment periods, and other methods to gather information on a variety of issues, including activities to assess effects of management activities on the environment. These opportunities continue.
- The opportunities for public and intergovernmental participation created by the Northwest Forest Plan have opened new channels of communication, understanding, and working relations between government officials and the people and communities throughout the region. Even some of the dissatisfaction is beginning to dissolve. Some in northern California were originally opposed to chartering committees. Two years later, two northern California Provincial Advisory Committees requested that their charters be renewed.
- Some nonfederal participants believe the partnerships do not lead to timely decision making.

Opportunities for the public and private sectors

Partnership groups provide new opportunities for the public and private sectors to actively participate and advise federal decision makers.

- Trust and understanding is increasing between people who are actively working within partnerships and the organizations they represent.
- Personal relations and mutual respect serve as the foundation for successful partnerships. Partnership groups within the Plan area generally have very good relations; however, relations remain polarized outside these groups.
- Partnerships with the best track record for having their agreements supported outside the partnership and on the ground include a mix of nonfederal and federal representatives and people who live in a local community and those who represent interests outside the immediate community who have an influence on the outcome. Conversely, partnership groups that do not include such representation are often viewed as special interests themselves and have a difficult time achieving results.
- Some partnerships make recommendations without understanding or considering if an agency can legally, financially, or professionally carry them out.
- The coordination structure of the Plan creates a positive climate for change and for future implementation.
- Partnerships have internal stresses that are related to many factors. They include the personality of individuals, the desire of agencies and representatives to control events within their missions, and the unwillingness of participants to think and act in nontraditional ways.
- Many of the interagency coordination observations also apply to partnerships and public participation. Notably, participants generally agree that the advisory committees have increased understanding, and information sharing between the agencies, departments, and the various public and nonfederal government committee members.

Role of staff

Partnership groups such as the Interagency Advisory Committee and certain state Community Economic Revitalization Teams that are formally staffed are more effective in delivering on partnership group proposals than are those partnerships without staff.

- Federal and nonfederal representatives at partnership tables often do not have the time to follow up on their agreements.
- Partnerships who have chosen not to or cannot staff their efforts can still play a valuable role. Implementing agencies find information sharing particularly helpful in better understanding and responding to public concerns.
- Some nonfederal partners believe staffing partnership groups increases the size of the federal government and would prefer that those funds be spent on economic assistance.
- The Regional Ecosystem Office, in particular, has served an invaluable role in assuring that agency decisions are delivered, interagency differences are resolved, and the Plan's standards and guidelines are complied with.

Conflict management

Although not as far along as agency cooperation, acceptance of partnership groups as a conflict-management tool is increasing.

- People who are not at the table may be unaware of or choose not to support partnership agreements.
- Although consensus is the ultimate goal, partnerships provide decision makers with a valuable conflict-management mechanism in the absence of consensus. More specifically, they require all perspectives to be laid out on the table and discussed. Where agreement can be reached, management actions can move forward. When agreement cannot be reached, the decision maker can make a decision based on the best information available.

Working with FACA

Early in the process, federal court decisions about the Federal Advisory Committee Act stalled the progress, energy, and goodwill that was being developed with the public and state, local, and tribal governments. In spite of this setback, federal officials developed means for partnerships to move forward that met the spirit and letter of the Act.

- Federal officials have worked to reassure partnerships that establishing an advisory committee neither precludes the establishment of, nor serves as a substitute for, the bioregional councils, watershed groups, or any previously established organization or structure.
- The ability of federal officials to meet with nonfederal government officials was clarified in the Unfunded Mandates Reform Act (1995). The provision exempted certain types of communications between federal officials and local government and tribal elected officials, or their designated employees, from the provisions of the Federal Advisory Committee Act. The act still applies for partnerships that include public representatives, however.
- Chartered advisory committees may actually create more opportunities for partnership groups by providing a central forum to offer advice, comments, and suggestions. In addition, expenses associated with participating in chartered groups is reimbursable.
- Even with the efforts by the government to meet the letter, spirit, and intent of the Federal Advisory Committee Act, and yet be as flexible as possible to meet a variety of individual concerns, some people are still not satisfied with the public involvement process that has been set up to comply with the law.

Effects of the salvage provisions

The salvage provisions of the Rescissions Act which prohibited administrative appeals and limited citizens' ability to successfully challenge timber sales based on their compliance with environmental laws in 1996, pressured the partnership process.

- Environmental representatives withdrew from several unchartered partnerships, but most groups continue to operate as originally established.
- Many credit the relations that had been built up before the law's passage as allowing groups to operate under the Rescissions Act's provisions in a manner that still complies with the Plan.

Opportunities

Partnership and public participation opportunities could include

- Implementing partnership agreements as a top funding and staffing priority of land-management and economic assistance agencies. Partnerships and the public need to know what progress and achievements were accomplished as a result of their efforts.
- Assuring that the national context within which local decisions are made is considered, to assure that agencies can implement partnership proposals.
- Focusing partnerships on general policy issues instead of bogging down on individual agency actions.
- Developing means to link the local and regional partnership groups in a manner that communicates the value that each bring to the forestry and economic-assistance programs.
- Developing means for successful partnerships to have more visible roles in the communities where they operate.
- Commissioning an independent analysis to assess how partnerships are working and how they could be improved.
- Combining committees where they appear to have the same functions.

CHAPTER 5

TOWARD A SUSTAINABLE ENVIRONMENT: MANAGING FOREST RESOURCES

THE REGION'S FORESTS[4]

The Pacific Northwest and northern California include a variety of distinctive forests from dense old-growth trees to open stands of young tree seedlings. The kinds of forests in the region are determined by weather, climate, geology, disturbance, and other qualities of each subregion. The most striking differences are between the forests near the Pacific Ocean and those east of the Cascade Range.

Forests close to the ocean receive an average of 115 inches of precipitation per year. These wet forests, in places such as Washington's Olympic Peninsula and Oregon's Coast Range, are dense and massive, dominated by a mixture of Sitka spruce, western hemlock, Douglas-fir, and western redcedar. When mature, these forests may have complex, multilayered canopies, with centuries-old trees that can tower to heights of more than 250 feet.

Inland forests in the rain shadow of the coastal mountains have less rainfall than their coastal counterparts. Generally in valleys, such as Oregon's Willamette and Umpqua, these forests are a mixture of trees, including Oregon white oak, Douglas-fir, and madrone.

The Cascade Range in Oregon and Washington rises from the valley floors, serving as the climatic center of the region. In the lower elevations of the Cascades' western slopes, the forests are similar to but less dense than those on the Pacific coast, with a combination of western hemlock, Douglas-fir, and western redcedar. Above 3,000 feet, the Douglas-fir and hemlock forests give way to forests dominated by true firs, such as silver fir and, as the elevation increases, eventually mountain hemlock and subalpine fir.

Across the ridge of the Cascades to the eastern edge of the Northwest Forest Plan's region, the mountains keep the rain on the west side. Forests farthest east in this subregion receive 15 inches or less precipitation per year. They are drier, sparser, and contain smaller trees than on the west side and are dominated by pines and firs. These conditions render the east side more prone than other subregions to frequent fires, which have played a major role in the structure, composition, and character of east-side forests.

Differences in the forests between the north and south extremes of the region are more gradual than between east and west. In the north, where the climate is cool and moist, forests are dominated by western hemlock, red alder, western redcedar and Douglas-fir. Farther south, the climate and forests eventually become drier and have more conifer species; the Klamath subregion in southern Oregon and northern California contains one of the most diverse native conifer forests on: Earth.

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[4] Much of the discussion in this section was provided by Tom Spies, research ecologist, Pacific Northwest Research Station, Corvallis, Oregon.

The Forests' Natural Process of Change

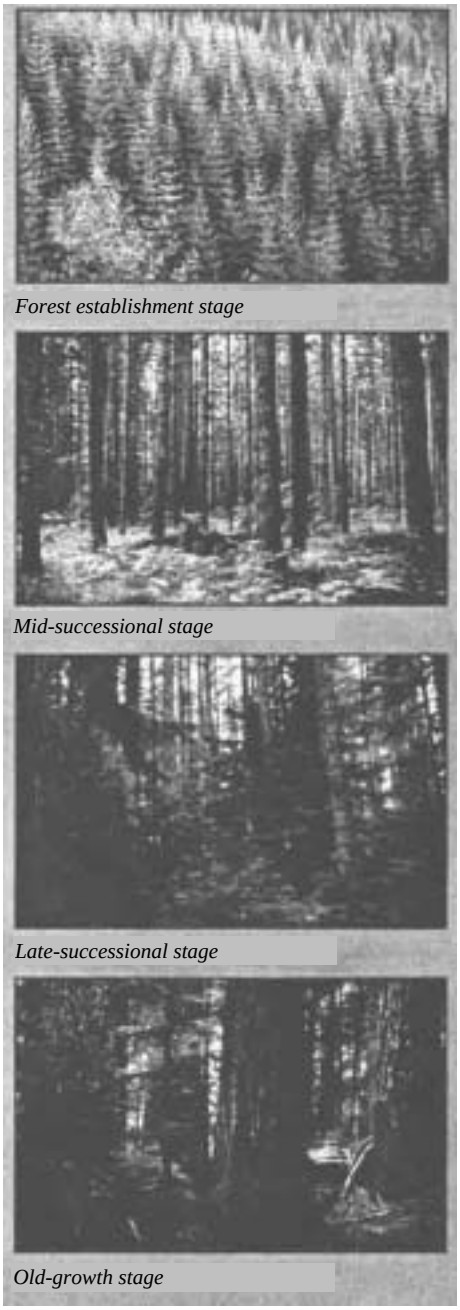
Scientific studies indicate that the composition of the region's forests in the mountains and the climate have changed little over the past 6,000 years. On a time line of geologic history, the forests are very young. Although the mix of tree species may be relatively unchanged, tile forests themselves are constantly changing in structure and composition, both at local sites and over the landscape. Each forest has been, and will continue to be, shaped and influenced by weather; diversity of soils, water, plants, wildlife, and other ecosystem qualities; catastrophic events such as fire, storms, and volcanic activity; and the effects of people's many demands on the forests.

Change can happen quickly in a forest from disturbances such as wildfires, floods and logging that cause immediate and dramatic changes to the forest landscape. Change can also take years or even centuries, such as when fallen trees decay or the number of shade-tolerant trees gradually increases over time. The gradual change of plants and animals on a site over time is called succession.

Most ecologists agree that succession proceeds somewhat predictably as forests increase in size and complexity; often, it is measured by changes in the structure of the forest. For the region's forests, the most obvious structural change is in tree size; others include the patchiness of vegetation, thickness of the forest floor, and increasing diversity of canopy layers---the umbrellas of shade created by the higher limbs of trees that overlap. Older forests are distinguished by the accumulation of very large dead wood and litter. The forests of this region are distinctive for the degree of structural change from young to old growth and for the length of time required for some of these structural changes.

Structural changes can profoundly affect both wildlife and ecosystem processes. Wildlife, wildlife habitat and biological functions such as forest regeneration microclimate, and carbon storage are particularly sensitive to changes in structure. Dramatic changes in the region's forests, such as the decline of late-successional and old-growth forests, reduce the biological diversity of the region's ecosystems.

West-side Douglas-fir forest successional stage



Forest establishment stage

Mid-successional stage

Late-successional stage

Old-growth stage

Wildlife species, their habitat, and the balance of ecosystem functions in older, more mature, and biologically complex (late-successional) forests face the greatest risk from deterioration of diversity in this region.

Roles of Natural and Presettlement Human Disturbances

Understanding the influence of disturbances such as fire, wind, insects, disease, and human activity is critical to achieving the goals of the Northwest Forest Plan. Without the effects of these disturbances, biological diversity created by young, mature, late-successional, and old-growth forests might cease to exist. The biological diversity of the forest--the array of plant and animal species that live there--is the product of two opposing forces: gradual growth and development; and the disturbances that destroy forest structure, restarting development.

Fire is the major force or source of disturbance in the region's forest history. Evidence of fire over the last 40,000 years is repeatedly found. Millions of acres in the region have been burned by wildfires, started by natural causes such as lightning o," set by American Indians.

American Indians influenced the region's forest dynamics, primarily through setting fires. These fires, which were often set annually in dry valleys, tended to clear out shrubs and tree regeneration, creating mosaics of forests and meadows. The early use of fire in drier areas, such as the oak woodlands of the Willamette Valley, is well documented. Although some of these fires probably burned out of the valleys and into the mountains, no evidence suggests that American Indians played a major role in the disturbance regimes of the cooler, moister mountainous areas. Early explorers have recorded widespread evidence of fire. In the last century, in part because modern efforts suppress fire, the absence of low-intensity fires in dry forests has created conditions very different from the forests viewed by European settlers.

Old-growth ponderosa pine

In the drier eastern and southern parts of the region, fire was frequent with light to moderate intensity. In the cooler, moister areas where droughts are infrequent but fuels such as dead trees and vegetation can build up, fires were less common, but more severe than those in drier areas. Also, average intervals between major fires in the region were anywhere from 50 to more than 500 years. All of these factors indicate that no single prescription for fire management can be applied to the entire region, and these differences were recognized by the Northwest Forest Plan.

Wind disturbances are primarily in coastal areas; however, individual trees and small groups of trees are broken or uprooted by winds every year throughout the region. In forests with thick, closed upper canopies, wind often creates gaps in the canopy that promote the seeding and growth of trees. From an ecological standpoint, these small patches of destruction are important to forests in all stages of development but especially in old growth. Small gaps in the canopy typically favor the growth of shade-intolerant trees, create dead wood, help move forests along toward late-successional conditions, and help maintain and enhance soil productivity through uprooting trees. 'When the trees uproot, they churn and aerate the soil. Uprooting also creates an opening, allowing light and precipitation to directly influence the plants and animals of the forest floor. These disturbances help maintain the productivity and diversity of the forest.

Insects and disease are also common and widespread causes of disturbance in forest ecosystems. Fungal diseases are particularly common and diverse in moist forests. Some species of root rot may infect large areas in the Coast Range. Although injurious insects are common in all parts of the region, they rarely reach outbreak populations in the moist western areas. Outbreaks are more common in the drier parts of the region, where the trees are under greater stress and the conditions favor buildup of insect populations. Wind often acts in concert with disease and insects to break and uproot weakened trees. In general, disturbances caused by insects and disease are a normal part of forest ecosystem dynamics and not necessarily an indicator of unhealthy forests.

In many steep, forested, mountain slopes and streams, landslides, floods, and debris flows are common and important parts of aquatic ecosystems. These disturbances add important structural diversity to aquatic systems in the form of sediments, boulders, large woody debris, and fine organic matter.

Defining Old Growth and Other Forest Classifications

Although forest succession is both continuous and diverse, forests can be classified generally into different stages of development. The Forest Ecosystem Management Assessment Team report defined "late-successional forests" as those in which the biggest, oldest, and most dominant trees create a maturing canopy with shade-tolerant trees occupying and flourishing on the forest floor. "Old-growth" forests were defined in the Team's report as the mature, diverse final stage of late-successional forests; old growth is distinguished by structural features such as a significant population of large, dominant tree species~ dead trees that are still standing or downed; and with multiple canopy layers abundant. Many tree species, Douglas-fir for example, can live more than 700 years; most old-growth forests in the region currently contain trees between 300 and 500 years old.

Specifying exact age ranges for late-successional and old-growth forests is impossible because of variations in climate, soil quality, disturbances, and numerous other factors. The general rule

that the Team used in its report to define these forest stages was trees at least 80 years old are the beginning of late-successional forests, and old-growth forests are a subset of late-successional forests with trees aged 200 years or older.

Amounts of Late-Successional and Old-Growth Forests

Considerable debate appears in the popular press over the historical amounts of late-successional and old-growth forests in the region. Differences in estimates frequently depend on definition, method, land base, and reference period. Early estimates of the extent of old-growth forests before European settlement of Oregon and Washington were 60 to 70% (excluding the interior valleys and woodlands). Several recent scientific studies, however, indicate that the pre-European settlement amounts probably ranged from 40 to 80%, depending on location in the region. More old-growth forest would be expected in the northern part of the region, where fires were infrequent, and less expected in drier areas where fire was more frequent.

Recent estimates show that the current extent of old-growth forests in Washington, Oregon, and California is less than half of what existed in the 1930s. Currently, about 10 million acres of old-growth forests are estimated on all ownerships in the region including the larger east-side forest types such as ponderosa pine. This amount represents about 18% of the total productive land (Bolsinger and Waddell 1993).

Of the 24.4 million acres of federal land in the region, late-successional forests are estimated to account for about 8.5 million acres. (This number cannot be strictly compared to the estimates for old growth on all lands in the three states because of different methods of estimating.) Of those 8.5 million acres, about 4.5 million could fit the definition of old-growth forests based on tree age and multiple canopy layers. Therefore, about 35% of the federal lands are currently covered by late-successional forests, and up to 19% of all federal lands meet the structural definition of old-growth forests. For comparison, the percentage of late-successional forests on all forest lands within the region, including all public, private, and tribal ownerships, is about 24% (excluding California), and about 13% falls under the definition of old growth. These numbers are only estimates based on satellite imagery, and actual amounts could vary depending on definitions, methods, and estimates of presettlement conditions (Bolsinger and Wadell 1993).

Past Forestry Practices

Forestry in the Pacific Northwest has been in a continuous state of evolution since it began in the 1800s. Forests were initially cleared for agriculture during the mid 1800s, when immigrants began to settle and farm the interior valleys. With time, logging for wood production increased and began moving up into the lower elevations of the mountains. Cutover lands were left to reforest naturally, and many did so.

Early logging typically cut only the largest and commercially valuable tree species, usually the conifers, leaving the smaller trees standing. Forests regenerated naturally on some sites, but on others the vegetation changed into hardwood forests or shrub lands that were resistant to invasion by conifers.

Streams were also affected by early logging activities. Most of the early removal of timber was at low elevations, along estuaries and large rivers. As logging moved into the mountains, streams and rivers became natural transportation routes for logs. Splash dams were constructed on many

streams to transport logs, and the resulting surges of water and wood scoured out channels and stream banks, clearing them of gravel and woody debris. Later, log transportation by railroad and by trucks over a network of roads reduced the need to use smaller rivers to transport logs, but log rafting on larger rivers continued and increased well into the 1970s.

In the late 1800s and early 1900s, fire control efforts and the first attempts at reforestation began. These early practices had limited success, and large wildfires and regeneration problems were extensive until after World War II. In the early 1950s, gas-powered chain saws came into use, transportation networks and logging engineering systems improved, and logging activities and timber production on federal lands increased. Between the 1950s and 1970s, improved forest management practices and new policies were developed for reforestation and protecting watersheds and wildlife. Although reforestation became even more successful, some of the new efforts to protect wildlife habitat had limited success, and others, though well-intentioned, are now known to have been misguided, such as the practice of removing all slash and large wood from streams.

Effects of Past Forestry Practices

During the 40 years after World War II, the forests of the Pacific Northwest have produced tremendous social benefits. More than 600 billion board feet of timber has been produced--enough to build almost 40 million average-sized homes. In the 1970s, the coastal Douglas-fir area produced more than 25% of the total softwood production of the United States. Millions of acres of forest land were successfully replanted to conifers.

Tax revenues from timber sales helped local governments build schools and roads, and also contributed to forestry education and research. Other nontimber benefits include establishing and building trails, ski areas, and campgrounds, which provide the public access to prime hunting and fishing areas, plus opportunities for many other kinds of recreational activities.

Scenic, recreational, and ecological resources were also protected, through designating and establishing wilderness, natural, scenic, and habitat-management areas. Watershed, riparian, and stream protection practices have also been implemented, and road construction and logging practices have greatly improved.

Under forest plans written during the 1970s and 1980s (before the Northwest Forest Plan), timber harvesting on federal lands was dominated by the even-aged management practice of clearcutting. Forest patches of 30 to 50 acres were clearcut in a pattern that dispersed the cuts across the forest on rotations of about 80 years. Much larger areas were clearcut on nonfederal lands. This practice provided for ease of regeneration, slash disposal, and road development. Forest regeneration techniques were refined and became generally successful during this period.

Clearcutting benefited early successional stages and edge habitats. Total species richness probably increased under these management plans because species favoring early-successional forest conditions (many of them non-native) could find habitats in the disturbed areas of the forest. The increase of edge habitats and open areas of the early stages of succession also favored some game species, such as deer and elk, that use edges and open areas for grazing and the nearby forests for cover. These changes were and still are generally viewed as desirable in moderation; however, these practices also had negative effects. Clearcutting increased soil erosion, destabilized

slopes, negatively affected late-successional wildlife habitat. As these effects became recognized, many people wanted new practices developed to maintain and restore aquatic systems and oldgrowth habitat types--and the species dependent on them.

Although the timber and nontimber benefits of Northwest forest harvests have been tremendous, they have not come without cost. The total volume of softwood available for harvest on federal and private industry timberlands declined in the late 1980s to 30% of the volume available in the early 1950s (Powell and others 1992). On private industry land, this decline is largely a result of converting high-volume old-growth stands to young plantations that produce smaller logs. On federal lands, the decline was a combination of stand conversion and the effects of designating wilderness and other reserves.

Effects on Species Associated With Late-Successional Forests

The drop in the region's late-successional habitat may be accompanied by declines in the important indicators of the forest's biological diversity and environmental quality. These indicators include the northern spotted owl, marbled murrelet, native salmon and trout stocks, and the quality of the remaining old-growth ecosystem.

Northern spotted owl

The northern spotted owl is strongly associated with late-successional, usually old-growth, forests. The owl nests in the cavities and platforms of trees and hunts in structurally diverse forests for a variety of forest-dwelling mammals, birds, and insects. These habitat attributes are predominantly in old-growth forests and rarely found in the uniform young forests managed for timber production by use of traditional, even-aged silvicultural systems. In some areas, such as northern California, the owl uses forests that are relatively young but have the structure of oldgrowth forests. The birds have a life span of 15 years, and pairs will often spend their entire adult lives in territories about one to two miles apart. The total population of the owl is 8,000 to 10,000, mostly found on federal lands. Based primarily on the continued loss of its preferred habitat, the northern spotted owl was federally listed in 1990 as a threatened species.

Marbled murrelet

Less is known about the life history of the marbled murrelet than about the spotted owl. The murrelet is an elusive seabird, about the size of a robin, that nests within 50 miles of the ocean in the tops of large-limbed trees. So far, most of their nests have been found in late-successional forests. Unlike most birds, the murrelet does not make its own nest by gathering twigs, mud, and other material; instead, it exclusively uses accumulations of moss found on large limbs and treetops. And, unlike the spotted owl, which meets all of its needs for habitat and feeding from the forest, murrelets only nest in forests; they gather their food from the ocean.

Although the murrelet population in the region is estimated to be about 15,000 birds, fewer than 40 nest sites have been found in Washington, Oregon, and California. In 1992, the marbled murrelet was listed as a threatened species because of the loss of its nesting habitat and, to a lesser extent, from deaths caused by gill-net entanglement.

Salmon

The life histories and factors affecting salmon are complex. Salmon begin life in the headwaters of rivers, streams, and tributaries throughout the region, hatching from eggs buried in gravel and heavy sand. As the fish mature to the smolt stage, they begin migration downstream that ends in the Pacific Ocean; depending on the species of salmon, the trip could cover more than a thousand miles. During the migration, the salmon transform from freshwater fish to saltwater fish. Scientists call fish with this unique characteristic "anadromous."

Depending on species, the salmon spend several years maturing and migrating thousands of miles in the ocean and then begin the long journey back to the waters of their birth to spawn and die. The salmon that do complete this cycle of life are the rare survivors.

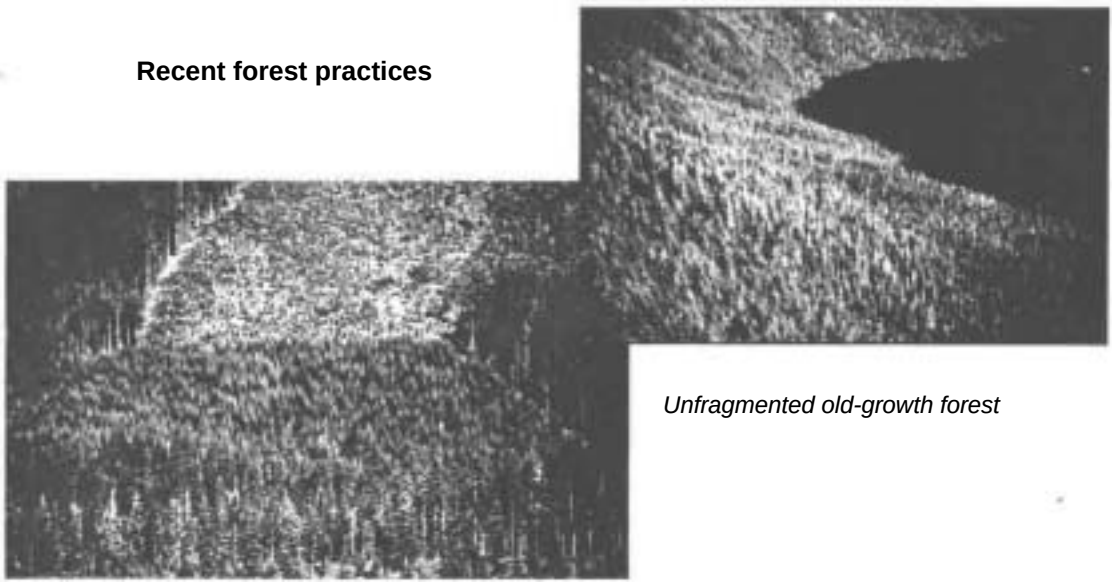
Many factors have contributed to the decline of the species, including agricultural activities, dams, drought, climatic changes, mining, water pollution, fish harvest, urbanization, and forest practices. Each one of these factors can substantially affect the salmon population, and knowledge of the relative importance of any single factor is limited, but forest practices are one of the important ones. Among the forest practices that have contributed to degradation of salmon habitat are environmentally insensitive timber harvesting, road building, and stream modifications, such as splash damming and removing large woody debris. Large pieces of dead wood left in streams are vital for salmon because they trap sediments and create pools and riffles that are characteristic of natural salmon habitat.

Stocks of anadromous salmon and trout in the region have been listed or are now under consideration for listing as threatened or endangered species under the Endangered Species Act. Pacific salmon have disappeared from about 40% of their historical breeding ranges in Washington, Oregon, Idaho, and California over the last century, and many remaining populations are severely reduced in areas where they were formerly abundant.

Late-successional forest ecosystems

The survival of spotted owls, marbled murrelets, and native stocks of anadromous fish are known to be threatened by the loss of late-successional and old-growth forests, but they may be only a few of the species that depend on this forest ecosystem. Hundreds of bird, mammal, amphibian, reptile, plant, and invertebrate species define the forests' biological diversity. Scientists have reported that some 30 vertebrate species (not including fish) and vascular plants might also be at risk if the forest management practices of the past are allowed to continue, and that an additional 135 to 155 species could be at risk---and no one knows how many invertebrates and nonvascular plants might also be at risk.

The late-successional and old-growth forests are more than just a home to hundreds of species; they are a vital, interacting ecosystem. The large canopy trees create a continuous supply of live and dead material that many organisms depend on for shelter or food, as well as provide shade, reduce erosion, and cause other microclimate effects. Streams that flow through the forest depend on the supply of organic material, shade, and other forest dynamics for their biological functions. The forests are also valued for their ability to convert nitrogen gas into forms useful for plant and soil productivity, to store carbon, and to provide a relatively stable environment for



Unfragmented old-growth forest

Fragmented forest showing old-growth, mature, and establisment stages

slow-growing organisms. The loss of these forests reduces the ability of the entire forest landscape to provide important ecological functions.

The amount of late-successional forest has declined greatly compared to the estimated presettlement amounts, with most of the remaining late-successional forests existing solely on federal lands. In addition to the decline in acreage, the remaining old-growth forest habitat is frequently fragmented into small patches or islands of forest isolated from other old forests, with edge effects that reduce habitat quality for deep-woods-dependent plants and animals. If the management activities in the region continue to comply with the Northwest Forest Plan, many functions of late-successional and old-growth forests are likely to be restored and maintained.

Even though many late-successional and old-growth forests on federal lands were protected through Congressional set asides and administrative designation, the eventual result of pre-Plan management practices would be loss of more late-successional and old-growth forest ecosystems. These declines would add to the cumulative effects of the past 100 years of forestry practices that, though providing good forest regeneration, have eliminated millions of acres of late-successional and old-growth forests, and created an abundance of early-successional forests.

Strategies for Maintaining Biological Diversity

To maintain and restore late-successional and old-growth ecosystems, three approaches are being widely studied and implemented: species-based, reserve-based, and active management. Although these strategies appear mutually exclusive, in reality many on-going conservation efforts, including the Northwest Forest Plan, contain elements of all three in differing degrees.

Species-based conservation

Species-based conservation and management efforts are designed to protect individual species that collectively make up an ecosystem. A species is targeted for protection because its population is declining, because it serves as an indicator of environmental or ecosystem degradation, because it has popular public appeal, or for a combination of these reasons. In the Pacific Northwest, the northern spotted owl is relatively unusual because it qualifies under all three reasons: it is at risk, it is an indicator species, and people are concerned about the owl's longevity.

The benefits of a species-based conservation approach are that it relates to the needs of a particular organism; it may be the most effective way to ensure the viability of a species; and people can relate better to conserving a single species than to the more abstract concepts of conserving biological diversity or ecosystems.

The disadvantages of a species-based conservation approach are that it requires detailed information about the life history of a species, which is lacking for most species; the information and resources needed to develop separate plans for all species of concern is not available; having one species serve as an indicator for other species or ecosystem degradation is, at best, only a crude indicator of the condition of an entire ecosystem; managing for a single species ignores needs of other species that share the same habitat; the cumulative effects of habitat protection for many species can often shut a forest down for all other uses; and it is usually not a cost-effective use of public resources.

Reserve-based conservation

The aim of a reserve-based system is to maintain a diversity of existing ecosystems in a planned landscape. This approach may be the best way of retaining ecosystem characteristics in the face of imperfect knowledge and in landscapes where intensive management has greatly reduced the amount of a successional stage. A basic assumption with this approach is that the major qualities that define an existing ecosystem are maintained in various allocations. The environment in these allocations will be managed to maintain different ecological characteristics across the landscape. These allocations recognize different management intensities based on the management objectives of a particular allocation.

The advantages of a reserve-based conservation approach are that it does not require detailed knowledge of all the species present, so it can be used where little is known about individual organisms; it allows ecosystem processes as well as species to be conserved; and it maintains a network of existing high-quality habitats without reliance on untested silvicultural methods.

The limitations of this approach are that some species may slip through the habitat screen, so a species-based focus may still be required; it assumes that a widely accepted habitat or ecosystem classification system exists; it requires that a particular classification be developed, though communities and ecosystems are always changing, so that countless ecosystem types could be identified; and it may not provide for management flexibility, particularly if forest conditions in reserves are changing in undesirable ways, for example, because of fire exclusion.

Active management

The third approach to ecosystem management does not assume that natural processes will create and maintain the desired stand and landscape structures; it encourages various intensities of active management across the entire landscape. Silviculture would be used to achieve various successional stages, and trees would grow on long rotations to allow development of late-successional and old-growth structures.

The advantages of this approach include the ability to restore desired conditions; an opportunity to achieve the desired conditions sooner than with other approaches; and the potential to produce greater commodity and ecological outputs. The disadvantages include the high cost of intensive management and long rotations; the uncertainty and inexperience in using silviculture to achieve biological diversity and ecosystem goals; and the risks associated with entry into or harvesting some of the remaining high-quality, old-growth stands.

Ecosystem management

The Northwest Forest Plan's ecosystem approach blends various aspects of the three management perspectives in an evolutionary process. By focusing on forest allocations with different management intensities, the Plan attempts to blend species, reserve, and active management conservation strategies into an integrated and comprehensive forest management system. To increase efficiency and flexibility in implementation, these allocations can be adjusted to differing degrees, watershed by watershed.

Although late-successional reserves are a major component of the Northwest Forest Plan, it does not rely solely on reserves to protect and enhance late-successional and old-growth forests. Of the estimated 8.5 million acres of late-successional and old-growth forests on all federal lands, about 2 million acres are in matrix or adaptive management areas outside of the reserves. The Plan also contains elements of the active management approach by allowing limited use of silvicultural techniques, such as thinning, to restore the developmental processes of old-growth forests in reserves, after scientific review.

Like an ecosystem itself, the Plan's ecosystem management approach is more complex than forest management strategies of the past. The sweeping changes it requires have just begun to be implemented, but measurable progress in meeting ecosystem goals is being made. The broad scope and multiple approaches of ecosystem management should increase the chances of maintaining a wider array of forest values in the future under a changing physical and social climate.

IMPLEMENTING THE NORTHWEST FOREST PLAN

The forest resource component of the Northwest Forest Plan provides new direction for managing more than 24.4 million acres[5] of public land administered by the Forest Service and Bureau of Land Management in western Washington, Oregon, and northern California in the range of the northern spotted owl. The Plan encompasses 18 National Forests and 7 Bureau of Land Management Districts.

The federal agencies prepared an Environmental Impact Statement and Record of Decision that reflect an ecosystem approach. Land allocations and management direction and requirements in the Record of Decision were incorporated into forest plans prepared by the Forest Service and Bureau of Land Management in Oregon, Washington, and northern California. This approach was designed to:

- Comply with requirements of federal law;
- Be based on the best available science and be ecologically sound;
- Protect the long-term health of the federal forests;
- Provide a steady supply of timber and other resources that can be sustained over the long term without degrading the health of the forest or other environmental resources; and
- Commit the federal agencies to work together.

New standards and guidelines describe in detail how the ecosystem management plan should be implemented. "Standards and guidelines" are the rules that guide federal land managers in making management decisions. They also specify the environmental conditions to be achieved and maintained. Some apply to all lands, others to a specific land allocation. More than one set of standards and guidelines may apply in some areas; if so, a hierarchy of standards and guidelines applies. For example, one area of land could be riparian reserve, within a late-successional reserve, and also contain parts of a key watershed.

The key principles of the Northwest Forest Plan's ecosystem management strategy are included in the Record of Decision in five elements. The Plan encourages a comprehensive approach for managing federal lands that maintains and restores late-successional forests and their dependent species and recognizes the importance of the forests to the economy and jobs in the region. Each of the key elements is summarized below:

- An aquatic conservation strategy was included in the Plan to restore and maintain the ecological health of watersheds and the aquatic ecosystems within them. It includes riparian reserves and key watersheds, requires watershed analysis in key watersheds before most management activity can take place, and emphasizes the restoration of degraded aquatic habitats. The strategy also serves as the basis for developing project-specific proposals and monitoring in watersheds.
- The region will provide a supply of timber, recreational opportunities, and other resources that will help maintain the stability of local and regional economies and contribute valuable resources to the

[5] Although the Plan considers all federal lands within the region, including those managed by the National Park Service, Fish, and Wildlife Service, and Department of Defense, the management allocations and directions only apply to the 22.1 million acres of Forest Service and Bureau of Land Management lands.

- national economy, predictably over the long term. Timber offered for sale is expected to reach about 1.1 billion board feet in fiscal year 1997.
- The Plan provides a well-distributed system of reserves to protect existing large blocks of late-successional and old-growth forests and to grow maturing stands into old growth. The reserves are intended to provide terrestrial and aquatic habitat for species that depend on these forests. Reserves were also located in key watersheds to serve the dual objectives of efficiency and resource protection. The reserves will help provide a healthy forest ecosystem with habitat that will support populations of native species and protect riparian areas and waters.
- The reserve strategy, in combination with the Aquatic Conservation Strategy, was also intended to restore and maintain enough habitat to protect species that may be listed in the future without additional protections being applied. For example, when the Umpqua cutthroat trout was proposed for listing in August of 1996, no additional conservation measures were required. The listing did require, however, that formal consultation take place when management and regulatory agencies differed on whether 24 of 155 ongoing actions adequately complied with the Plan's direction.
- An important element of the ecosystem management strategy is the requirement to adapt to new information. The Plan provides for adaptive, flexible management that can be applied, site specifically, to all land allocations. Adaptive management allows an array of strategies for achieving ecosystem goals to be applied in the context of the standards and guidelines. Learning is one of the principal goals of adaptive management. It relies heavily on monitoring and provides feedback on what works and what does not, as a basis for determining the need to change strategies.
- Monitoring provides information to determine if the standards and guidelines are being followed (implementation monitoring), verify if they are achieving the desired results (effectiveness monitoring), and determine if underlying assumptions are sound (validation monitoring). The process includes identifying new information, evaluating its importance and relevance, and--based on review and analysis of the new data--deciding whether land management plans should be altered. In addition, 10 adaptive management areas were established to test new, creative approaches to management, based on alternative scientific approaches and input from the surrounding communities.
- An ecosystem management strategy means looking across ownership boundaries while respecting individual ownership objectives. When an action takes place on federal forests, it may cause direct, indirect, or cumulative effects on nonfederal lands; the opposite is also true. Nonfederal forests in the region are generally in early- and mid-successional stages of development, with many at or approaching ages and sizes that are economically ready for harvest. Nonfederal forests are expected to continue to provide habitat primarily for species associated with these age classes. When nonfederal and federal lands are considered together, they are expected to provide a mix of successional stages and a diversity of habitat representing the region's ecosystems. The Plan recognizes that federal and nonfederal ownerships---state, tribal, corporate, and nonindustrial---provide different economic and environmental benefits based on land owner objectives. Nonfederal lands are not guided by the Plan's federal standard and guidelines, and no powers are added to federal agencies by the Plan. The agencies are encouraged to work with nonfederal land owners to seek voluntary cooperation for actions consistent with the Plan.

Land Allocations Under the Plan in the Range of the Northern Spotted Owl

Congressionally Reserved Areas: 7.3 million acres, 30% of the federal land. These lands have been reserved by acts of Congress for specific land uses such as Wilderness Areas, Wild and Scenic Rivers, National Parks, and other lands with Congressional designations.

Late-Successional Reserves: 7.4 million acres, 30% of the federal land. These reserves, in combination with the other allocations and standards and guidelines, are designed to restore a functional, interactive, late-successional and old-growth forest ecosystem over time. They also serve as habitat for terrestrial and aquatic species that depend on these old-growth characteristics. Not all of the reserves are currently old-growth condition; pending scientific oversight and approval, some silvicultural treatment is allowed to enhance their development in stands less than 80 years old and where fire played a dominant role in their development.

Managed Late-Successional Reserves: 100,000 acres, 1% of the federal land. These lands are either mapped to protect areas where spotted owls are known to exist, or they are unmapped protection buffers. Protection buffers are designed to protect certain rare and endemic species.

Adaptive Management Areas: 1.5 million acres, 6% of the federal land. Ten areas were identified to develop and test innovative management approaches to integrate and achieve ecological, economic, and other social and community objectives. Each area has a different emphasis, such as maximizing the amount of late-successional forests, improving riparian conditions through silvicultural treatments, or maintaining a predictable flow of harvestable timber and other forest products. Each area considers learning a principle product of their adaptive management activities.

Administratively Withdrawn Areas: 1.5 million acres, 6% of the federal land. These areas are identified in current Forest and District plans and include recreation and visual areas, back country, and other areas where management emphasis does not include scheduled timber harvest.

Riparian Reserves: initially 2.6 million acres, 11% of the federal land (acreage subject to change after watershed analysis). Riparian reserves are areas along all streams, wetlands, ponds, and lakes, and on unstable and potentially unstable lands vital to protecting and enhancing the resources that depend on the unique characteristics of riparian areas. These areas also play a vital role in protecting and enhancing terrestrial species. Riparian reserve acreage is calculated after all other areas have been designated. As a result, the acreage shown reflects only that portion of riparian reserves that is interspersed throughout the matrix.

Matrix: 4.0 million acres, 16% of the federal land. The matrix includes all federal lands not falling within one of the other categories. Most of the scheduled timber harvested will be from matrix lands. They include nonforested as well as forested areas that may be technically unsuited for timber production.

TEXT BOX 9

Managing federal lands for late-successional forests also provides more management flexibility for nonfederal land owners. Because of the conservation benefit on federal lands, a new rule to ease restrictions on timber harvest related to the northern spotted owl from certain nonfederal lands has been proposed under Section 4 of the Endangered Species Act. State and nonfederal timberland owners are also encouraged to voluntarily develop habitat conservation plans under Section 10 of the Endangered Species Act. Section 10 allows land owners to take individuals of a threatened or endangered species in exchange for a commitment to a long-term plan that helps conserve that species.

The following pages summarize how the region's ecosystem management strategy is being applied through the Record of Decision, accomplishments over the past two years, and observations and opportunities for the future. The specific standards and guidelines and their effectiveness are not discussed, though such an analysis, forest by forest, would be useful during the next agency planning cycles.

AQUATIC CONSERVATION STRATEGY

The Aquatic Conservation Strategy (the Strategy) has four components: riparian reserves, key watersheds, watershed analysis, and watershed restoration. These components work together to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems. The Strategy focuses on watersheds as the fundamental building block of federal forest management. It encourages agencies to work together, across administrative boundaries, to manage, resources on a watershed basis. By following this Strategy, the agencies will help maintain and restore water quality and availability, and runs of anadromous fish and other terrestrial and aquatic species dependent on water quality and quantity.

The Strategy provides a forum for regulatory and management agencies to work together. Because it provides a common reference, standardizing the information from which each agency makes decisions, it gives regulatory agencies greater confidence in evaluating management actions. Although support for the Strategy by management and regulatory agencies is almost universal, some managers are still uncertain about their ability to meet both habitat and production requirements.

A brief description of each component of the Strategy follows. For a complete description, see pages B-12 through B-34 of the Record of Decision.

Management effects in riparian areas

Heavily affected *Healthy area*

Riparian Reserves

Riparian reserves are portions of watersheds where riparian-dependent resources receive primary emphasis and where special standards and guidelines apply. A riparian area contains an aquatic ecosystem, such as a stream, take, river, pond, or wetland, plus adjacent upland areas that directly affect it. Riparian reserve standards and guidelines limit or prohibit activities that would retard or prevent meeting the goals of the Strategy.

The agencies have historically managed riparian areas as "streamside management units"; the stream and adjacent area of varying width where practices that might affect ware," quality, fish, and other aquatic resources were modified to meet water-quality goals for each class of stream. Management actions were prescribed case by case, considering the cumulative downstream effects from individual, tributary streams. The streamside management unit concept did not imply management restrictions from all activities near streams but stressed the need for applying special care in management and gave preferential consideration to riparian-dependent resources when conflicts among land-use activities arose. To meet streamside management goals, activity was severely restricted along some streams where the potential for unacceptable effects was high. Special treatment was given to land and vegetation for about 100 feet from the edges of all perennial streams, lakes, and other bodies of water. Special attention was also given to adjacent terrestrial areas to assure adequate protection for the riparian-dependent resources.

Under the Aquatic Conservation Strategy in the Plan, the riparian-reserve standards and guidelines are designed to maintain and restore riparian structures and functions of intermittent or nonpermanent streams, benefit riparian-dependent and forest-based species other than fish, enhance habitat conservation for organisms dependent on the transition zone between upslope and riparian areas, and improve travel corridors for many land-based animals and plants in the watershed. The riparian reserves may also serve as corridors that connect late-successional reserves.

Riparian Reserve Widths

Riparian reserve widths for each category of stream are as follows:

Fish-Bearing Streams – Riparian reserves consist of the stream and the area on each side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or to a distance equal to the height of two site-potential trees1, or 300 feet slope distance (600 feet total including both sides of the stream channel), whichever is greatest.

Permanently flowing nonfish-bearing streams – Riparian reserves consist of the stream and the area on each side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet total, including both sides of the stream channel), whichever is greatest.

Constructed ponds and reservoirs, and wetlands larger than 1 acre – Riparian reserves consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of seasonally saturated soil, or the extent of unstable or potentially unstable areas, or to distance of equal to the height of one-site potential tree, or 150 feet slope distance from the edge of the wetland greater than 1 acre or the maximum pool elevation of constructed ponds and reservoirs, whichever is greatest.

Lakes and natural ponds – Riparian reserves consist of the body of water and the area to the outer edges of the riparian vegetation, or to the extent of seasonally saturated soil, or to the extent of unstable or potentially unstable areas, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance, whichever is greatest.

Seasonally flowing or intermittent streams, wetlands less than 1 acre, and unstable and potentially unstable areas – This category applies to features with high variability in size and site-specific characteristics. At a minimum, the riparian reserves must include the extent of unstable or potentially unstable areas (including earthflows); from stream channel to the top of the inner gorge; the stream channel or wetland and the area from the edges of the stream channel or wetland to the outer edges of the riparian vegetation; and from the edges of the stream channel to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest.

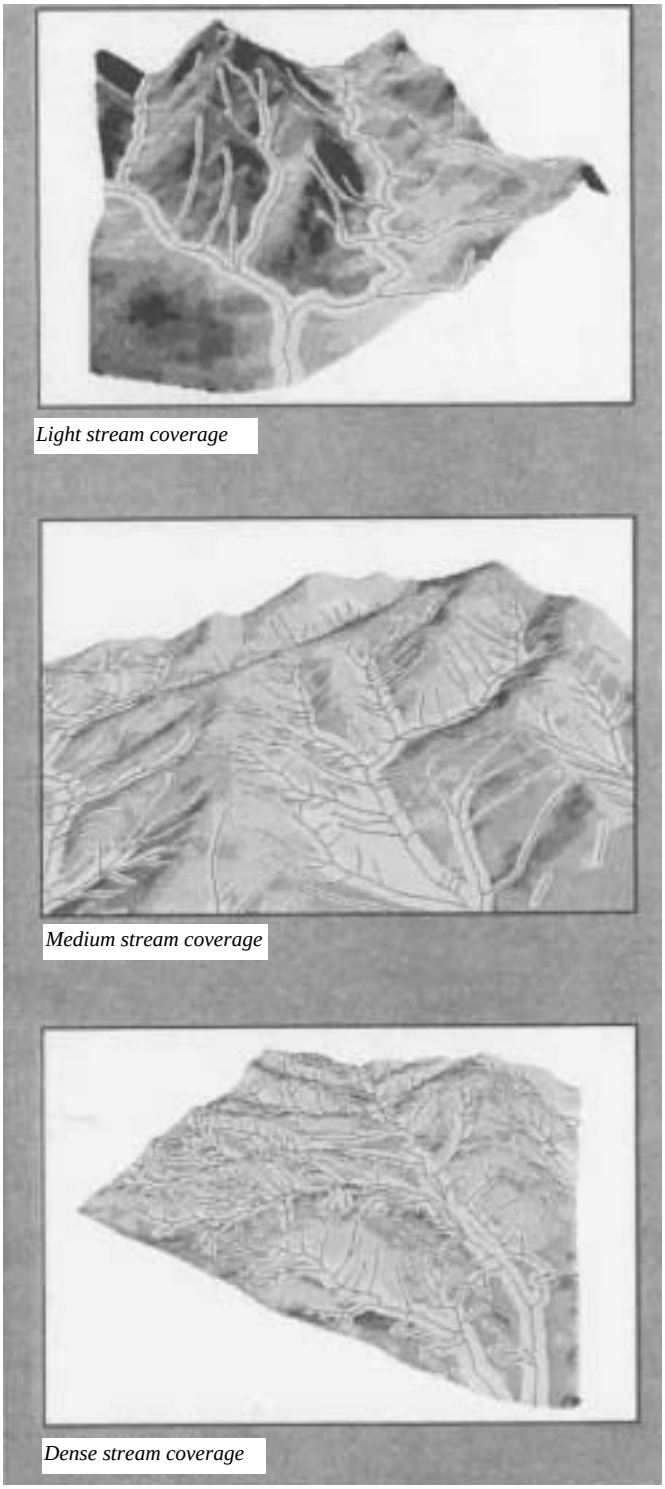
Intermittent streams are defined as any nonpermanent-flowing draining feature having a definable channel and evidence of annual scour or deposition. This definition includes what are sometimes referred to as ephemeral streams if they meet these two physical criteria.

[1]A site potential tree height is the average maximum height of the tallest dominant tree (200 years or older) for a given class.

TEXT BOX 10

The riparian-reserve strategy differs from those of many nonfederal land owners in the region, in that federal reserves are established for the needs of terrestrial as well as aquatic species. This difference has resulted in reserves that vary in width and are sometimes wider than those necessary to meet specific Aquatic Conservation Strategy objectives.

Implementation of this provision has been straightforward: riparian reserves are being universally applied across the region. Reserve modifications are being undertaken individually; however, very few reserves have been adjusted. The agencies, through the Regional Ecosystem Office, developed guidance in fiscal year 1996 to assist field personnel in revising riparian-reserve widths.



Light stream coverage

Medium stream coverage

Dense stream coverage

Key Watersheds

Key watersheds--those that are either providing or are expected to provide high-quality fish habitat and water quality--have been identified throughout the region; 164 key watersheds are identified for maintaining and recovering habitat for at risk stocks of anadromous salmonids (salmon and steelhead) and resident fish species. Key watersheds with existing high-quality aquatic and riparian habitat will serve as anchors for the potential recovery of depressed stocks. Watersheds with low-quality habitat and a high potential for restoration are expected to become future sources of high-quality habitat through a comprehensive restoration program.

The Strategy includes two designations of key watersheds. Tier 1 key watersheds were selected to directly contribute to the conservation of anadromous salmonids and bull trout and other resident fish species. Tier 2 key watersheds were selected as sources of high-quality water and may not contain at-risk fish stocks.

Although watershed analyses are generally required on federal lands in key watersheds before resource management activities can take place, minor activities may proceed before a watershed analysis is completed if they are consistent with the Strategy and consider standards and guidelines for key watersheds.

The Record of Decision states that the extent of existing roads in key watersheds should be reduced. For each mile of new road constructed, at least 1 mile of road should be decommissioned. Where Northwest Forest Plan prescriptions do not allow roads in inventoried roadless areas, no new roads should be built and existing roads reduced, with priority given to those that pose the greatest risks to riparian and aquatic ecosystems. If funding is insufficient to implement reductions, no net increase in the amount of roads is allowed.

The agencies have a legal obligation to provide access across federal lands to nonfederal land, however. In addition, ownership of many roads in the federal system is shared with nonfederal land owners. These integrated ownership objectives may limit the ability of federal land management agencies to decommission roads because the agencies may not make unilateral decisions.

Like riparian reserves, key watersheds have been designated throughout the region. The agencies issued joint direction on April 7, 1995, which clarified the policy for road construction in the region. The land management agencies will focus on reducing federal road mileage in key watersheds and working with nonfederal land owners who request access across federal lands. To minimize effects of such access, road managers will:

- Reduce federal road mileage within key watersheds;
- Provide monetary incentives for on-site mitigation; and
- Attempt to obtain an adequate interest in the agreement rights to attain the goals of the Plan.

If no alternatives exist to allowing third-party access through a roadless area in a key watershed, the effects will be mitigated to the fullest extent possible.

Watershed Analysis

Watershed analysis serves as the foundation for understanding the health of a watershed and an ecosystem itself. It considers everything that contributes to the health of a watershed, analyzes the current condition, and makes general recommendations for improving it. Watershed analysis is an information-gathering process that systematically characterizes the aquatic, riparian, terrestrial, and human features of a watershed. The information is used to, among other things, guide timber management activities, plan and monitor programs, refine riparian-reserve boundaries, and identify potential restoration projects. Watershed analysis is required in key watersheds and roadless areas before management actions can proceed and before riparian reserve widths can be changed; it is recommended in all other watersheds. It is intended for non-key watersheds as a basis for ecosystem planning and management.

Watershed analysis is a new process. Because the agencies had not prepared watershed analyses on a large scale in the past, they developed direction for their field offices to assure consistency across the region. In December 1993, the Regional Interagency Executive Committee approved a program for watershed analysis. The program was spearheaded by an interagency Watershed Analysis Coordination Team that drafted and refined *A Federal Agency Guide for Pilot Watershed Analysis* (Regional Ecosystem Office 1994). The program was designed to:

- Provide a systematic, rigorous approach that would test and further develop the watershed analysis process;
- Explore ways to increase interagency and intergovernmental cooperation; and
- Demonstrate that ecosystem-based management can produce commodities while minimizing environmental risks.

In March 1994, the Regional Interagency Executive Committee established the Pilot Program for Watershed Analysis. it identified 15 key watersheds around the region to serve as pilot projects. A primary goal was to develop new models of participation by regulatory agencies. By concentrating resources in a few watersheds, these agencies, some of which had limited technical staff, were able to participate in developing watershed analysis techniques for use on federal lands. The field offices of the land management agencies also prepared analyses in other watersheds, following the Federal Guide.

While the analysis process was being developed, Watershed Restoration Assessments were allowed for fiscal year 1994 restoration projects in key watersheds and riparian reserves. These assessments allowed management projects to move forward in 1994 and 1995 while pilot analyses were prepared. Assessments differed from analyses in that existing data could be used to assure that the projects would not preclude management options in the future, were consistent with direction in the Record of Decision, and posed minimal risk to the health of the watershed. The Record of Decision stated that during the transition period, watershed analyses could be less detailed arid project-focused than those prepared after fiscal year 1996.

As pilot and interim analyses were completed and reviewed, the agencies amended the initial Federal Guide. A revised document, *Ecosystem Analysis at the Watershed Scale: Federal Guide for Watershed Analysis, version 2.2,* was approved in July 1995 (Regional Ecosystem Office 1995).

The *Revised Federal Guide* is based on direction from the Regional Interagency Executive Committee, recommendations from the Intergovernmental Advisory Committee, and comments from a broad group of agencies, governments, organizations, and other interested parties, as well as the experience of field personnel who prepared analyses in 1994. As a result of the breadth of involvement, the *Revised Federal Guide* has been improved over its predecessor in many ways. For example, the analysis now includes seven core topics to ensure that all analyses demonstrate a basic understanding and knowledge of the watershed. The process has been simplified; it now includes six concise and understandable steps that follow a more direct logic path. The *Revised Federal Guide* is general enough that it is not limited to the geographic area considered in the Plan; it can be applied anywhere that a landscape approach to watershed analysis is desired.

Section II of the Guide, "Analysis Methods and Techniques," is a technical supplement to Section I. It provides a tool box of optional analytical methods and techniques to address core topics and questions, as well as other pertinent issues identified by watershed analysis teams. Section II is intended to meet Northwest Forest Plan goals, ensure scientific credibility; provide "methods and techniques," and provide for cooperation and coordination with other watershed analysis processes. It is not a comprehensive set of methods and techniques, and teams are encouraged to continue to use standard analysis methods that are widely accepted by local resource specialists and that are appropriate to analyze issues it1 their watersheds.

Analysis Steps and Core Topics for Watershed Analysis

Analysis Steps

1. Characterization of the watershed – Identify the dominant physical, biological, and human processes or features of the watershed that affect ecosystem functions or conditions. Establish the relations between these functions. Identify the most important land allocations, plan objectives, and regulatory constraints that influence resource management.

2. Identification of issues and key questions – Focus the analysis on the key elements of the ecosystem that are most relevant to the management questions and objectives, human values, or resource conditions within the watershed.

3. Description of current conditions – Develop information relevant to the issues and key questions identified in step 2. Document current range, distribution, and condition of the relevant ecosystem elements.

4. Description of reference conditions – Explain how ecological conditions have changed over time as a result of human influence and natural disturbances.

5. Synthesis and interpretation of information – Compare existing and reference conditions of specific ecosystem elements and explain significant differences, similarities, or trends and their causes. Evaluate the capacity of the system to achieve key management-plan objectives.

6. Recommendations – Bring the results of steps 1 to 5 to conclusion; focus on management recommendations that are responsive to watershed processes identified in the analysis. Link issues and key questions with synthesis and interpretation of ecosystem understanding. Identify monitoring activities.

Core Topics

The core topics are intended to provide the framework for focusing the basic analysis. They represent the major and common ecological elements, and their interrelations, in all watersheds. They are purposely broad and general, encouraging a watershed-scale perspective of the system as opposed to site- or project-scale perspectives. They will help ensure that analyses are sufficiently comprehensive to develop a basic understanding of the watershed. An understanding of the basic ecological conditions, processes, and interactions should be demonstrated by addressing the following core topics through the 6-step process: erosion processes, hydrology, vegetation, stream channel, water quality, species and habitats, and human uses.

TEXT BOX 11

In fiscal year 1994, the Forest Service and Bureau of Land Management's target was to complete 15 pilot watershed analyses and to analyze other watersheds necessary to complete critical projects. In 1995, the Forest Service planned to analyze more than 4 million acres, and the Bureau of Land Management more than 500,000 acres. In 1994 and 1995, the agencies completed the 15 pilot watershed analyses and additional watershed analyses on more than 8 million acres, which represents more than 51% of the land in matrix, adaptive management areas, and late-successional reserves (including riparian reserves). Federal agencies completed analyses on another 3.2 million acres in 1996 and plan to complete 2.5 million acres in 1997. The Revised Federal Guide will continue to be adjusted as necessary, with knowledge gained as more analyses are completed.

Watershed Restoration

The watershed restoration program has dual goals: economic health and watershed health. The economic goal is to provide meaningful, family-wage jobs for local displaced timber workers. The watershed health or resource management goal is to work to restore the region's aquatic, riparian, and terrestrial habitats. Chapter 6 describes the economic component of watershed restoration in more detail.

The Record of Decision states that restoration activities should focus on protecting anadromous fish habitat, restoring riparian vegetation, and restoring in-stream habitat complexity. Forest management treatments may be used as a restoration tool if they are intended to restore large conifers in riparian reserves. In-stream structures may be used to help restore stream channel complexity in the short term.

Restoration Strategy

An *Interagency Watershed Restoration Strategy for Fiscal Year 1994* (Regional Ecosystem Office 1993) was developed in December 1993 to guide design and selection of watershed restoration projects in fiscal year 1994. Key features of the *Restoration Strategy* included a preliminary watershed restoration assessment process for coordinating restoration efforts with other agencies, the state Community Economic Revitalization Teams, and other public stakeholders. The *Restoration Strategy* emphasized that managers should respond to obvious, urgently needed restoration while providing needed employment for local communities. The *Restoration Strategy* also features local interagency teams of resource specialists to identify potential projects, criteria for identifying priority watersheds, and an assessment process. In addition, Congress directed the Forest Service to spend restoration funds primarily on projects that had benefits for anadromous fish and projects with long-term benefits. The Bureau of Land Management did not receive the same direction; therefore, it was able to use its funds on a broader range of projects, not limited to projects in anadromous fish habitat.

Based on restoration and analysis experiences in fiscal year 1994, an interagency working group revised the Restoration Strategy in October 1994. It was distributed to the agencies for implementation in 1995 and beyond. Improvements were made to:

- Link watershed analysis and restoration projects;
- Emphasize monitoring and reporting;
- Clarify roles of Provincial Interagency Executive Committees, state Community Economic Revitalization Teams, and technical teams;

- Encourage early interagency coordination and involvement; and
- Improve coordination with state, tribal, and other governmental restoration efforts.

Endangered Species Act consultation

The management agencies also worked together to improve the process of consulting with the regulatory agencies under the Endangered Species Act and to reduce seasonal restrictions on restoration activities because of disturbance.

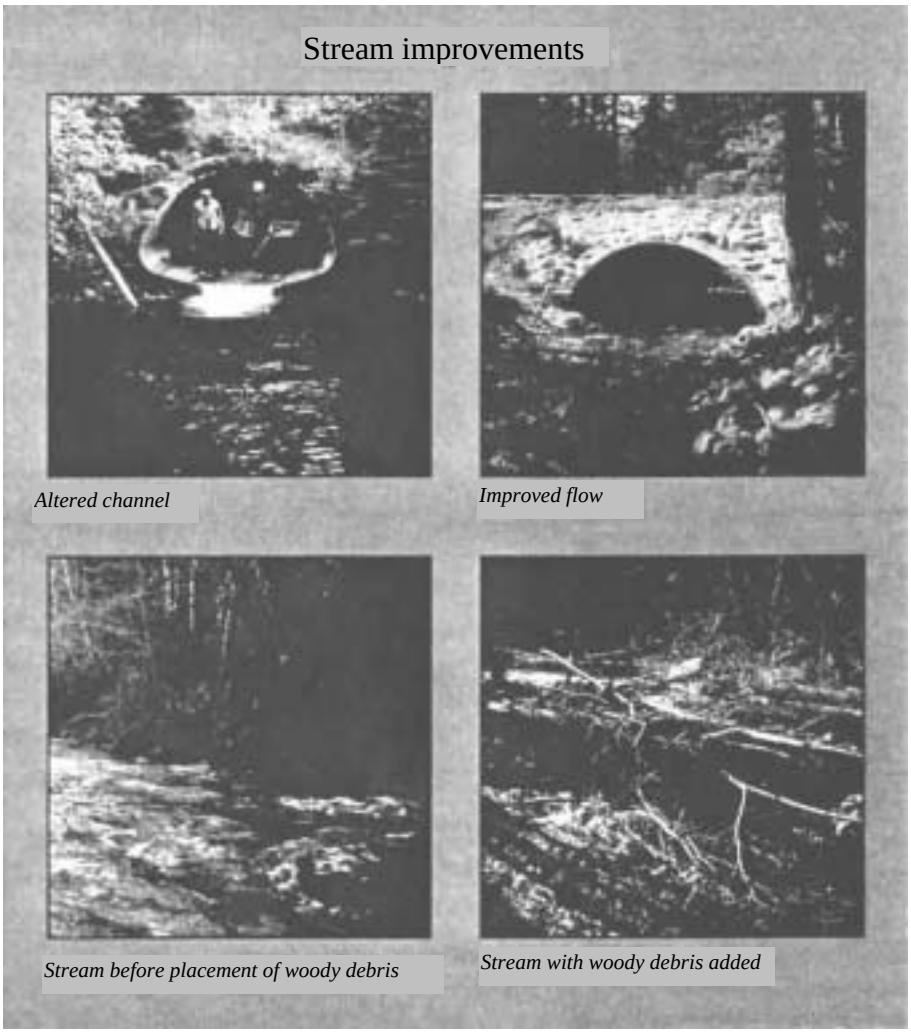
In fiscal year 1994, many projects were not scheduled until after early August to minimize effects on listed species, water quality, anadromous fish, and other resources. This timing did not meet the goal of providing year-round employment for displaced timber workers. In response, the Forest Service, Bureau of Land Management, and Fish and Wildlife Service worked together to plan projects to meet both the resource restoration and economic goals of the program in 1995. Efforts were focused at reducing time for regulatory reviews and planning needs. The land management agencies shared staff and prepared interagency biological assessments, where possible. The Fish and Wildlife Service committed to expediting section 7 consultation under the Endangered Species Act and working with the land management agencies as projects were planned, so that the projects would affect listed species as little as possible.

Job creation

To shorten the time between planning and starting a project, contracting was reduced to less than one-third of historical spans by developing and publicizing one advanced notice to potential contractors in only the economically affected area. This process was facilitated by the use of a "public interest" waiver authorized in the Federal Acquisition Regulations by the Secretaries of Agriculture and Interior. In addition, advance joint briefings were held for local contractors by the Small Business Administration, Forest Service, Bureau of Land Management, National Park Service, and Natural Resource Conservation Service, working as a team. As a result, the agencies reviewed more than 1,000 restoration projects, facilitating creation of jobs that were available from June through December, partially meeting the goal of providing year-round employment opportunities.

Federal, state, local, and nonfederal sectors came together in two places in 1994 to provide classroom training in designing and constructing watershed restoration projects and on-the-job experience at family-wage rates for displaced timber workers through the Jobs in the Woods program. The graduates of these training programs will become part of the ecosystem management workforce of the future.

An example of the successful ecosystem management and Jobs in the Woods training program took place in Sweet Home, Oregon, where 10 displaced timber workers were enrolled through an effort by a team of people from Oregon’s Economic Development Department, Willamette National Forest, Oregon Department of Forestry, the University of Oregon, and Oregon State University Extension Service. Projects designed by Forest Service and Bureau of Land Management resource professionals were intended m give the enrollees exposure to the wide variety of technical tasks required for watershed restoration. At the same time, university and extension specialists provided valuable classroom training in a range of subjects that will enable the program’s participants to become contractors, subcontractors, or technicians qualified to perform similar work in the future.



A comparable approach was taken on the Olympic Peninsula, where the local private industry council, Forest Service, and Department of Labor job-retraining resources were combined to give 10 displaced timber workers the necessary training and experience at family-wage rates to perform the complex technical work needed to restore the region's watersheds. Most of the funds obtained to perform the restoration work were used to pay the wages and benefits of the enrolled workers; the balance was spent on vehicle rentals for the crews, equipment, supplies, and fuel, with a small amount going to accounting expenses to track the project.

In 1995 and 1996, the region expanded on what was learned in Sweet Home and Olympia an additional seven sites in Oregon, one large project in Washington containing five demonstration sites, and four northern California sites.

For fiscal year 1996, the agencies sought to maintain existing job-training sites and continue to monitor the consultation process to keep it as efficient as possible. For example, they combined projects so workers can be employed for longer periods with each contract. The research branches of the agencies will support the restoration program by helping managers develop methods

and protocols to assess restoration needs, provide technical support for restoration activities, and design methods to evaluate the effects of restoration strategies.

Projects completed by the agencies include installing culverts, stabilizing cut banks, and constructing a limited number of in-stream structures. These projects were chosen for the ecological benefits they could provide. Although the long-term ecological benefits of these restoration projects cannot be assessed with any accuracy after only two years, biologists report that the actions are clearly beginning to improve the health of the watersheds. The true success will be measured over time through effectiveness and validation monitoring.

In 1994, 593 watershed restoration projects were contracted, 602 in 1995, and 480 in 1996 (table 4). A contract could include one or a group of smaller projects. In 1996, a concerted effort was made by the agencies to aggregate projects into contracts to better provide long-term employment. Although the number of contracts was reduced, ecological benefits were maintained and employment benefits enhanced.

Table 4 – Watershed restoration projects (projected 1996)

Activity	Measure	Number
Culverts	Fish passage	104
Roads	Miles treated	2,533
Instream	Miles improved	643
Vegetation	Acres treated	8,740

Source: USDA Forest Service

Aquatic Conservation Strategy: Observations and Opportunities

Riparian Reserves

Observations

The reserve system is being universally applied and appears to be working as intended, protecting the habitat of aquatic and terrestrial species. The 100- to 300-fbot buffers were established with the intent that they could be adjusted as needed to meet conditions in tile field. Adjustments can be made if information gained through watershed analyses suggest that the agencies do so.

Limited adjustments to reserves

- The first round of analyses did not lead to many changes in riparian-reserve widths because they lack information on effects to terrestrial species.
- The analyses have provided information to support certain management actions within reserve areas that are consistent with Strategy objectives.
- Some specialists in the agencies consider the initial widths as a required minimum, rather than viewing them as open to change after appropriate analyses at the watershed and site scales.

Adjusting reserves

Opinions differ between managers and specialists as to the amount of scientific rationale needed to adjust riparian reserves.

- Many managers believe watershed analyses that address ecosystem conditions at the habitat scale provide an adequate basis for change.
- Many specialists believe more scientific certainty is needed on individual species before changes are made.

More protection than envisioned

The reserves cover more area than was originally modeled on most units. As the Forest Service and Bureau of Land Management began to identify riparian reserves on the ground, all but two units found more land that qualified as reserve areas than was modeled in the Final Supplemental Environmental Impact Statement. This increase is reducing the percentage of land available for resource use in matrix.

- Riparian reserves are intended to connect late-successional reserves, but in some checkerboard ownerships they are not effectively doing so.
- In blocked ownership, especially along the Coast Range, riparian reserves can be so extensive that the islands of matrix surrounded by reserves become difficult or uneconomical to access for timber harvest.

Opportunities

Riparian reserve opportunities could include

- Developing a riparian-reserve module in the watershed analysis guide to provide information and a simplified process to address aquatic and terrestrial species to clarify how and when reserve boundaries can be modified in the future.
- Conducting an analysis to determine whether and how riparian reserves might be modified to maintain species viability as established by the Plan and meet management commitments for matrix areas affected by current reserves.
- Recognizing that more riparian protections exist than were originally modeled.
- Expanding the type of research being conducted by the Olympia Forestry Sciences Laboratory, where reference sites are being established for riparian ecosystem research in western Washington. The sites, including federal, state, and nonfederal lands, will be monitored for a minimum of five years to determine the effects of various management practices on riparian ecosystems.
- Clarifying that riparian reserves are special management zones for aquatic and terrestrial species dependent on riparian habitat, but they are not always "no touch" zones if watershed analyses shows otherwise

Key Watersheds

Observations

The concept of key watersheds is being used throughout the region. No requests for modification have been made. Although strong support for decreasing road densities continues, awareness is increasing that some roads may be needed to provide access for watershed restoration and forest protection activities.

Opportunities

Key watershed opportunities could include

- Analyzing when, where, and how roads are needed to maintain or restore the health of a watershed.

Watershed Analysis

Observations

The examination of a watershed's aquatic and terrestrial components serves as the basis for the Plan's ecosystem approach by providing a fuller understanding of how the ecosystem functions in the surrounding area. It also helps identify the limitations that exist and potential enhancements that could be undertaken within a watershed. Among the benefits from this approach are

Watershed analysis benefits

- Greater ability to set priorities for work and projects;
- Development of a comprehensive, shared, standardized information base for use by all agencies and the public; and
- Development of criteria for decisions on land management activities such as timber sales and watershed restoration projects; for instance, many decision makers believe that watershed analysis helps them focus on methods and options for laying out projects to meet long-term ecosystem objectives.

Watershed analysis as a tool

The new *Watershed Analysis Guide* is an effective, useful tool. Other comments about the Guide include

- Early in the process, agency staff professionals faced tight deadlines and were on a steep learning curve to develop an expedited method to analyze watersheds, which led to some concerns in 1994 and to a lesser extent in 1995.

- A streamlined process served as the foundation for the new *Watershed Analysis Guide*, which was used to identify which watersheds required priority attention for restoration work and further analysis.
- The new *Watershed Analysis Guide* is an easily understood and concise document that has gained acceptance by the agencies throughout the region. It is now being used as a model for similar guides in Alaska and on the Columbia River basin assessment project. With each completed analysis, the agencies are becoming more efficient and producing better documents.

Cooperation on analyses

Watershed analysis teams provide opportunities for cooperation and understanding between agencies and the public. Where staffing and funding allowed, the agencies gained several benefits from working together on the analyses. For example, the agencies have found that by sharing information, they increase their understanding of the issues; improve relations as they continue to work together and make better decisions as a result. Other benefits from the interaction include

- The analysis process works best when research staff and regulatory agencies participate at the beginning of the process.
- The nonfederal land-owner sector is beginning to recognize the value of conducting watershed analyses and incorporating them into their own management regimes.
- Involving research scientists during the analysis resulted in more comfort with and opportunities for active management.

Start-up difficulties

Although the process is being effectively implemented throughout the region, implementing watershed analysis--as with any new process--posed some new challenges. Among some of the issues were

- Requiring a full watershed analysis for actions that have only minor effects on the watershed were inefficient and bureaucratic; therefore, the agencies developed criteria for the types of activities for which a watershed analysis was not necessary.

- Applying watershed analysis across so many administrative units and acres was new, and developing the process was time consuming. The nature of the process contributed to the frustration at the beginning. As it was developed, new information required clarifying direction that the agencies' leadership has provided in a timely manner.
- The agencies disagreed on which watersheds were to be analyzed first and whether analyses should be driven by proposed projects or by the need to restore the resource.
- Some agency staff and members of the public had trouble distinguishing watershed analysis from an environmental analysis prepared under NEPA. The difference was clarified in that a watershed analysis is not a NEPA document but contains information helpful in preparing the NEPA document.
- Data standards are not the same among the agencies, so some inefficiencies existed as watershed analyses were prepared.

Workforce overload

The workload and desire of the agencies to complete analyses didn't always fit the workforce available. The most frequently cited problems were

- Regulatory agencies didn't have enough staff to participate.
- Management agencies were under pressure to produce both timber and restoration projects with very little lead time.
- Some field offices are concerned about whether staffing and resources will be adequate to prepare analyses in future years and for doing additional iterations of the initial analyses.

Unresolved questions

Although the process is well accepted and the information is being used in making decisions, a few questions remain that are yet to be resolved.

- Cultural, social, economic, and terrestrial components are included in analyses at different scales across the region. Consensus is lacking on amount of detail and information that should be considered. The Guide states that the responsible official should balance the number and scope of issues addressed and decide what core topics should be

addressed for each watershed, based on recommendations by the local watershed analysis team. This potential for lack of consistency makes some agencies uncomfortable.

- Only a few units have included public input to the process. Initially, most watershed analysis teams were faced with the simultaneous responsibilities of learning what they had to do and also working with the public; most chose to first figure out what watershed analysis was and then involve the public in later analyses.
- Some field units question whether watershed analysis is needed in areas where federal ownership is less than 10%.
- Watershed analysis is providing information that supports various management actions, but direction from policy makers is needed on the amount of detail and kind of information they require to make management decisions in a watershed.

Raised expectations

Expectations were unreasonably high on what watershed analysis could achieve. Some expected an increased ability to extract resources, and others expected all environmental questions to be answered before management decisions were made. The reality is somewhere in between, depending on the amount of data available in the initial analyses, and the complexity and condition of each watershed.

- The 15 pilot watershed analyses were helpful in developing a new watershed analysis process and provided valuable information for completing the Guide and for project planning, but most of them took too long to complete and were too expensive.
- Even though pilot analyses were supposed to experiment with different approaches and methods being encouraged, their results were criticized for lacking consistency. Agencies have differences of opinion on whether consistency is necessary, realistic, or even desirable.
- Watershed analysis is raising questions but not providing answers to all of them, especially in the initial analysis. Some people anticipated that detailed information on a site-specific scale would be collected, such as maps of the riparian-reserve network, maps of intermittent streams,

and data on fish distribution throughout a watershed. But collecting such specific data for a whole watershed proved financially and technically infeasible.

- The information gathered in a watershed analysis may be used to modify practices under the standards and guidelines, but no process has been developed to do so.

Opportunities

Watershed analysis opportunities could include

- Allowing adequate time for watershed analysis teams to refine their work process. The learning curve is beginning to level off, and the teams are feeling more confident with each completed analysis.
- Requiring early participation by all agencies and interested nonfederal partners, at least in analysis design. Recognizing and accepting that the general public may not want to participate in the analysis but may be more interested in participating during the NEPA process.
- Continuing peer review of watershed analysis by professionals in other agencies to improve the product and build trust. Giving direction to reviewers on elements to look for.
- Conducting training seminars for watershed analysis teams to share information and good examples.
- Addressing the challenge of conducting a watershed analysis where federal ownership is 10% or less, and evaluating the amount of derail and data necessary, based on conditions of a specific watershed.
- Encouraging local project and line managers, in an interagency context, to provide better direction to project teams so that objectives and issues are clear from the start.
- Tying watershed analysis with implementation and effectiveness monitoring. Analyses provide opportunities to develop baseline information to measure the effectiveness of management actions.
- Being realistic about funds, staffing, and skills. Watershed analysis will have to be done with fewer resources in the future, and agencies must find ways to reduce the costs. In addition, expectations and the degree of detail that was included in the pilot analyses need to be reduced.

- Recognizing that, based on the availability of funds, multiple iterations of analysis in a watershed may provide the best opportunity for understanding ecosystem conditions over time.
- Clarifying the role of the regulatory agencies and the ability of management and regulatory agencies to share staff in light of their staff limitations.

Watershed Restoration

Observations

The watershed restoration program was aggressively applied throughout the region.

Restoration program applications

- Some forests reported that restoration projects had immediate positive results, with fish, for example, spawning where pools had been created only a year before.
- Regionally, however, it will take a decade to understand the long-term ecological effectiveness of the program's current work.

Flood effects from 1996

Watershed restoration projects were affected to varying degrees by the 1996 floods in Oregon and southern Washington.

- All projects that withstood the floods in early 1996 are functioning as planned.
- The road and upslope projects withstood the 1996 floods most effectively, and the survival of instream structures varied with location, severity of flooding, and whether the structure spanned the entire or only part of the channel.
- The agencies are continuing to assess what worked and what did not, adjusting the program as necessary.

Integrating jobs and the environment

The workforce demonstration projects provided the best example of integrating jobs with environmental protection.

- The pilots demonstrated a critically important model for future restoration that could be significantly expanded.
- Some concerns were expressed that the work could be done less expensively with agency employees, but that strategy would not have met the goal of assisting and retraining displaced timber workers.

- The extra time and expense to use job-training crews were acknowledged as necessary for the first few years.

Restoration as a priority

Watershed restoration became a priority management objective for all agencies. Among the benefits of this increased focus were

- Restoration projects were accomplished that would not have been possible without targeted funding.
- In some communities, restoration contracts helped ease the economic effects of reduced timber sales in the region.
- The contract waiver provisions helped the agencies to expedite restoration contracts to local businesses and workers familiar with the region's forests.
- Restoration projects provided a laboratory for testing interagency cooperation and an opportunity to demonstrate success quickly.

Funding availability and flexibility

Funding in the future and the lack of flexibility in funding distribution are still concerns.

- Only 20% of the funds could be used to prepare and administer contracts. Nearly all of the Forest Service and Bureau of Land Management offices found this amount inadequate to actually lay out the projects.
- Funding is inadequate for out-year project planning. Projects are planned a year or two before a contract can be let, but planning funds are very limited. Agencies worry that, as other budgets go down, the program cannot be maintained unless planning funds are available.
- More opportunities for restoration have been identified than available funds and skills can cover, especially on nonfederal lands.

Nonfederal lands

Fish and Wildlife and Forest Service Stewardship funds that could have assisted restoration on nonfederal lands were limited. In areas of mixed ownership, restoring nonfederal and public lands at the same time is most effective, and restoring federal land in some areas could be futile unless nonfederal land is also restored.

Congressional direction

Restoration was originally intended to benefit both aquatic and terrestrial habitat. Congressional budget direction for the Forest Service, however, shifted the emphasis away from terrestrial habitat and directed the Forest Service to focus on anadromous fish habitat in 1994, which left less flexibility for choosing projects to meet social and ecological goals.

Opportunities

Watershed restoration opportunities could include

- Clarifying the social and economic goals for the region and how watershed restoration can be used to address those goals. From an ecological standpoint, the need for restoration to continue throughout the region is strong. Consistent and reliable public and private investment will be needed to achieve the Plan's restoration goals.
- Designing a 10-year restoration program and evaluating the agencies' ability to fulfill that program with existing and out-year funding.
- Returning to the original intent of the restoration program to restore both aquatic and terrestrial habitat.
- Gaining approval for contract waiver authority permanently to increase flexibility and benefit communities. Devising methods to ensure that local workers can compete for employment opportunities will build ownership and support for the program.
- Developing innovative collaboration opportunities for example, through watershed councils--to complement federal restoration with nonfederal land owner restoration on a watershed basis.

- Funding the Fish and Wildlife Service, Forest Service Stewardship, and the Natural Resource Conservation Service to encourage nonfederal land owner participation.
- Eliminating the 20% and establishing a realistic limitation on expenses for planning and administering contracts and separate training costs.
- Increasing support so an aggressive restoration program could be an important part of the agencies' efforts for many years.
- Creating a watershed restoration project pipeline similar to that of the timber-sale program.
- Authorizing use of "stewardship" or "end-result" contracting to encourage private-sector investment in restoration.

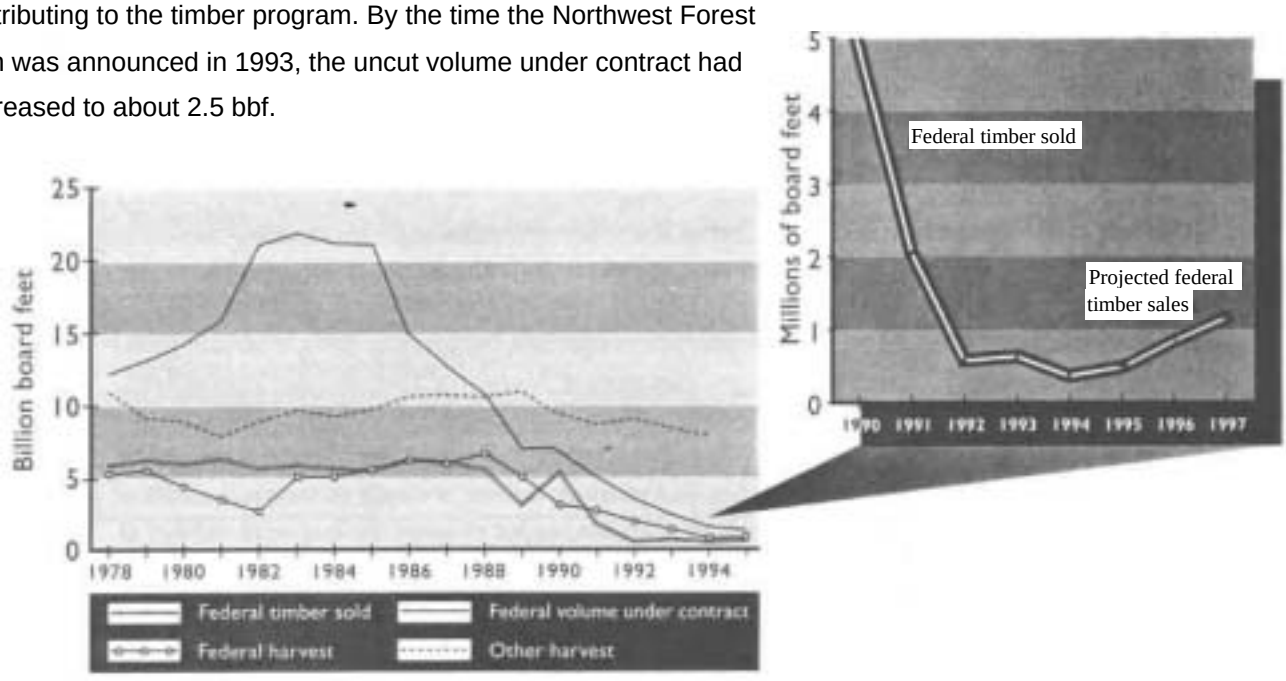
TIMBER RESOURCE

The American Forest Council (1991) reported that about 80 billion board feet (bbf) of timber harvested annually across all ownerships throughout the nation in the 1980s. Nonindustrial, nonfederal forest lands provided about half this volume, and nonfederal industrial forest lands provided 30%. The remaining 20% originated from various local, state, and federal lands, with 13% coming from federal forests.

Timber harvest across all ownerships in the Northwest Forest Plan area averaged 12.95 bbf per year between 1980 and 1989. Federal lands contributed an average of 4.5 bbf; northern California contributed 0.5 bbf, Oregon 3.0 bbf, and Washington 1.0 bbf. Between 1990 and 1992, federal harvests declined to 2.39 bbf, partly because of the recession but also because of court-ordered injunctions resulting from several environmental lawsuits filed in three separate federal district courts.

Historically, regional timber operators could be fairly certain about the federal timber supply: the program was prepared in advance with a 3- to 5-year supply of timber being prepared in a pipeline to be sold. Purchasers then had 3 to 5 years to cut the volume under contract at their discretion. So, though the harvest fluctuated based on market conditions, the federal sales for the region did not vary much from year to year (figure 1, page 15).

Starting in the early 1980s, however, sales and harvest rates took some unusual turns as a result of markets, legislation, and litigation. The recession during the early 1980s resulted in a large accumulation of uncut volume under contract because lumber prices were depressed and purchasers held sales with high stumpage prices. The accumulation peaked at more than 20 bbf in 1983. Between 1985 and 1989, a significant drop in uncut volume under contract was largely the result of the timber buyback legislation, where the government bought back uncut sales from timber purchasers who had paid prices that could not be recovered at then current market conditions. The drop also resulted from contract rule modifications that required a larger down payment and limited the contract to three years. In 1989, the first of Judge Dwyer's regional injunctions on timber sales was issued; it continued the steady decline in volume under contract because of the limited number of new sales contributing to the timber program. By the time the Northwest Forest Plan was announced in 1993, the uncut volume under contract had decreased to about 2.5 bbf.



Over the three-year life of the injunctions, the number of new timber sales offered rapidly decreased and then virtually stopped (figure 5). As a result, federal timber sales, harvest, and uncut volume under contract are now nearly the same, which results in a system that is much more sensitive to fluctuations in federal sale rates.

The Plan attempts to once again provide a stable timber-sale program, albeit at lower rates. An average annual regional supply of 9.5 bbf is expected across all ownerships in the next decade, representing a 26% drop from 1980s rates. Over the 10-year life of the Plan, federal lands should contribute about 1.1 bbf per year--a 76% reduction from 1980s rates. Because of the time required to prepare timber sales, the agencies committed in the spring of 1994 to completing 60% in 1995, 80% in 1996, and 100% in 1997, assuming adequate funding and staff. The change in availability of federal timber was anticipated to affect regional forest-product prices and spur increases in harvest from nonfederal and other public lands, with variations by state. A more detailed description of the federal and nonfederal timber supply situation and economic effects can be found in the FSEIS (1994, chapters 3 and 4, p. 263-274) and chapter 6 of this report.

Sustainable Harvests

Under the National Forest Management Act (1976) and the Federal Land Policy and Management Act (1976), the first-decade sustainable harvest was referred to as the "allowable sale quantity" ASQ. The allowable sale quantity is based on all land suitable and designated for timber production and reflects the standards and guidelines established in individual forest plans. The allowable sale quantity is the estimated upper-limit of volume that can be harvested in the decade from a given National Forest or Bureau of Land Management District, sustained in perpetuity in accordance with the management plans of each agency. This limit is based on timber inventory attributes to assure that harvest cannot exceed growth. Nontimber attributes are deemed as constraints on allowable sale-quantity calculations.

In the 1980s, research indicated that the needs of the northern spotted owl were greater than previously thought and, therefore, that then-planned harvest rates could compromise the owl’s existence. Scientific knowledge about the owl rapidly increased, resulting in recommendations to increase the size and number of locations of habitat areas necessary to preserve the species. As the assumptions on which the forest plans were based changed, the amount of land available for harvest changed, and the allowable sale quantity began to decrease. For example, the Forest Services Region 6 plans proposed reducing harvest by about 30%, but, by the time the plan’s were finalized the program had already been enjoined because they had not gone far enough. By the early 1990s, new information about the owl and other old-growth species such as the marbled murrelet was being generated so quickly that by the time it was incorporated into the plans, it was affected by still newer information.

To attempt to get a handle on this situation, and to provide some certainty for both habitat protection and timber harvest, the Forest Ecosystem Management Assessment Team and the Supplemental Environmental Impact Statement Team reevaluated the land base and recalculated the amount of habitat necessary for all species’ viability while maintaining the more restrictive allocations defined in existing forest plans. In this way, sustainability evolved from focusing primarily on timber growth and harvest to an emphasis on the kind and amount of habitat needed to assure the long-term viability of aquatic and terrestrial species.

The Northwest Forest Plan acknowledged the uncertainties in determining what would actually be available for harvest. The agencies would need to apply the land allocations, conduct necessary analyses, and evaluate effects of riparian reserves before an accurate land base could be used to calculate the available harvest. To reflect the uncertainties in the amount of harvest that could be sustained, the Record of Decision refers to "probable sale quantity" as an alternative to allowable sale quantity.

Probable sale quantity depends on acres available for harvest and expected acre yields and standards and guidelines. As implementation continues, probable sale-quantity volume may be adjusted from that listed in the Record of Decision, based on new information from applying, on the ground, the requirements in the Record of Decision, which could change acres, yields, or other pertinent factors. The Bureau of Land Management and the Forest Service in northern California have already made such adjustments to their management plans, resulting in a decrease of about 90 mmbf. The Forest Service in Oregon and Washington is making these adjustments in fiscal year 1997 (table 5). Nonetheless, the agencies expect to meet the average annual probable sale-quantity goals over the 10-year life of the Plan because the volume that wasn't offered during the first three years of the Plan, as the agencies were reestablishing the program, can be offered over the remaining seven years.

The probable sale quantity is based only on kinds considered suitable for producing programmed, sustainable timber yields. Timber-suitable lands do not include kinds designated for forest uses considered incompatible with programmed timber harvests. Timber-suitable lands under the Plan are only in the matrix o," in adaptive management areas. Lands designated as administratively withdrawn, late-successional reserves, and riparian reserves are all considered unsuitable for programmed timber yields, although they can provide for limited harvesting. Timber removed from reserves was not included in calculating the probable sale quantity (FSEIS 1993, p. 263).

Table 5 – Probable sale quantity (PSQ) for the Northwest Forest Plan[1] in millions of board feet

Source	Total PSQ	+10% other wood	Adjusted in final forest plans	+10% other wood
National Forest – Washington	120	132	*	*
National Forest – Oregon	413	454	*	*
National Forest – Region 6 (Wash. and Ore.)	533	586	*	*
National Forest – Region 5 (N. California)	224	246	161	177
National Forest – Region 5 & 6	757	832	*	*
Bureau of Land Management	201	221	174	191
National Forest – Region 5 & 6 and BLM	958	1,053	*	*

[1] The probable sale quantity in forest plans in Oregon and Washington have not yet been adjusted to account for the changes in the Northwest Forest Plan.

Table 6 – Steps in timber-sale planning[1]

Timber-sale planning	Time frame and range	Average
Watershed analysis (Forest plan standards and guidelines, PacFish)[2]	0-6 months	3 months
Project scoping (NEPA) Alternative development (NEPA) Selection of preferred alternatives (NEPA)	2-12 months	3 months
FS biological evaluation (ESA) FWS/NMFS biological opinion (ESA)	30-60 days	1 month
Decision notice (NEPA)	3 months	3 months
Sale layout and contract preparation	4-12 months	6 months
Advertisement	10-60 days	1 month
Award	0-60 days	1 month
Total	**10-49 months**	**18 months**
Monitor (post-sale activity)	0-2+ years	2 years

[1] Regional Ecosystem Office reviews, such as for silvicultural activities or salvage in late-successional reserves, Regional Ecosystem Office arbitration, and Endangered Species Act or other surveys and protocols (survey and manage species, for example).

[2] Once a watershed analysis has been completed, the manager has the option to use the original watershed analysis or modify it based on new information.

Timber Sales

Timber-sale planning under the Plan differs in several ways from sale planning of the past: it requires watershed analyses in key watersheds before any activity can take place; revised standards and guidelines for laying out timber sales, such as marking additional riparian reserves and meeting guidelines for green-tree and snag retention; and increased involvement, at early stages of planning, by the regulatory agencies and other interested parties (table 6).

In resuming the timber-sale program, the Bureau of Land Management and Forest Service have been working to meet the 1.1 bbf goal, but the task has been difficult. When the injunctions on timber sales were imposed, sale planning and preparation in federal forests essentially stopped for three years. Because of prior years' sales, the industry initially had a couple of years of volume under contract to sustain higher harvest, but after three years of few sales being offered, the amount of federal timber trader contract gradually decreased and hovered around 1 bbf.

The shortage of sales is a direct result of the injunctions because the pipeline of sales prepared l-or the years ahead has essentially run dry. In other words, the agencies had been preparing sales based on locations and prescriptions in their old forest plans. When the Northwest Forest Plan was adopted, it redefined both where and how trees could be harvested.

No sales could be legally prepared based on these new criteria before the Plan was completed. Thus, a transition time was needed to redesign sales already being planned and prepare new sales

based on the new criteria. The time and effort spent learning how to incorporate the new criteria used planning and preparation dollars and staff previously devoted to filling the pipeline with sales for the future. In addition, the agencies faced annual reductions in staff (for example the Mount Baker-Snoqualmie National Forest staff has been reduced from 440 to 185 people between 1992 and 1996), decreased budgets, and severe fire seasons in 1994 and 1996, which further diverted skills and resources from preparing sales.

Land Allocations and Timber Harvest

Congressionally Reserved Area – Timber harvest is normally precluded.

Late-Successional Reserves – Harvest is precluded unless it enhances the late-successional characteristics of timber stands, salvage is allowed if it is neutral or beneficial to late-successional reserve characteristics. Thinning or other silvicultural treatments are subject to review by the Regional Ecosystem Office. No harvest is allowed in stands more than 80 years old west of the Cascade Range. Stands up to 80 years old may be thinned. More flexibility is included for harvest in stands affected by past fire suppression efforts. East of the Cascades and in northern California, thinnings can mimic historical fire frequency and intensity and will reduce the risks of catastrophic fire or insect outbreaks.

Managed Late-successional Reserves – Harvest is subject to review by the Regional Ecosystem Office. Some silvicultural treatments and fire-hazard reduction is allowed to help prevent complete stand destruction from large catastrophic events, such as fire or insect outbreaks.

Adaptive Management Areas – Timber harvest is consistent with the specific direction for each Area. Rates and method of harvest will be determined Area by Area. Innovation is encouraged.

Administratively Withdrawn Areas – Scheduled timber harvest is normally precluded, unless otherwise indicated in forest land management plans.

Riparian Reserves – Timber harvest and vegetation management are prohibited except where catastrophic events result in degraded riparian conditions or if necessary to meet riparian objectives. Salvage and fuel-wood cutting are allowed if necessary to attain Aquatic Conservation Strategy objectives. Trees are salvaged where watershed analysis determines that coarse woody debris requirements are met. Silvicultural practices are applied to control stocking, reestablish and manage stands, and acquire vegetation characteristics needed to attain Aquatic Conservation Strategy objectives.

Matrix – Harvest is allowed after watershed analysis in key watersheds. Most of the scheduled timber harvest will be from matrix lands.

TEXT BOX 12

Table 7- Volume offered in fiscal years 1994, 1995, and 1996

Forest Service	1994	1995	Total 1996	to date
Oregon and Washington	156	393	516	1,065
Northern California	67	100	165	332
Forest Service total	223	493[a]	681	1,397
Bureau of Land Management	18	127	180	325
Total	**241**	**620**	**861**	**1,722**

[a] The Forest Service estimates this figure includes about 428 mmbf of chargeable volume and 65mmbf of nonchargeable volume. Preliminary estimates of the percentage of various products on the Forest Service's cut and sold reports are: 77% saw timber; 14% pulp and other non-saw timber products; 0.5% posts, poles, and pilings; 7% fuelwood, and 1.5% cull material. The Bureau of Land Management reports only saw timber.

Source: USDA Forest Service Region 5 and Region 6, USDI Bureau of Land Management, Oregon State Office.

The agencies offered 241 mmbf in fiscal year 1994 and 620 mmbf in fiscal year 1995 and 861 mmb fiscal year 1996. Doing so met their commitment to meet 60% of the probable sale quantity in 1995 and 80% in 996 (table 7).

Other Effects on Timber Supply

Endangered Species Act consultation

Before any timber sale moves forward in habitat occupied by a listed, threatened, or endangered species, the management agency is required by section 7 of the Endangered Species Act to consult with a regulatory agency. In the past, consultation with the Fish and Wildlife Service and National Marine Fisheries Service was a source of frustration for both the regulatory and land management agencies. Consultation could be lengthy and, on occasion, antagonistic, taking anywhere from 30 to 135 days. The Fish and Wildlife Service and National Marine Fisheries Service were scheduled to come into the process at the end of project planning, which would often result in their request that a project be reworked. Some sales were reworked several times to address various issues and changing protocols. Some differences were substantive, but most were a result of ineffective communication early in the planning process, between the management and regulatory agencies, about what was needed to meet the requirements of the Endangered Species Act.

The agencies jointly developed a new process to streamline consultation under the Endangered Species .Act that will be part of all future timber sales and other projects, according to direction dated May 3 I, 1995, from the regional executives. The new process will use existing information and prior consultations on major regional planning documents. The approach requires significant up-front input by agencies' staffs, but it ultimately results in less paperwork arid allows a better analysis of cumulative effects. The agencies will monitor the process arid adjust it as necessary over the next several years. Three training sessions were held in the region to explain the new process to field employees.

Early results of the streamlined process are viewed as positive. Interagency teams have been established in the field, and the agencies are working together regularly. The agencies consulted on hundreds of timber sales, and watershed restoration, recreation, and silvicultural treatments. The time necessary for formal consultation was reduced by 70%, averaging 34 days, as opposed to averaging 114 days for formal consultation in the past. On the Olympic National Forest, the Fish and Wildlife Service created one programmatic biological assessment that allows all the Forest's timber, watershed restoration, and other programs to be cleared through consultation for two years.

FY 1995 Rescissions Act

Another effect on timber supply is the timber salvage provisions of the Rescissions Act, which became law on July 27, 1995. The law prohibited administrative appeals and included sufficiency language (see text box on page 23) for the land management agencies' national salvage sale program and green sale program under the Plan. The law also intended to release, as originally configured, the last of the sales that had been suspended for spotted owl or marbled murrelet concerns within the geographic area of National Forest units and Bureau of Land Management districts that were subject to Section 318 of the fiscal year 1990 Interior Appropriations Bill (see page 27).

The President directed the agencies to implement the timber provisions of the Rescissions Act in an expeditious and environmentally sound manner, in accordance with the Plan, other existing forest and land management policies and plans, and existing environmental laws, except as prohibited by the Rescissions Act. Doing so assured that green sales that were prepared under the Plan would continue to comply with it.

Issues related to the Section 318 provisions were more complex. A total of 122 sales containing 552 million board feet were originally identified as potentially meeting the provisions definitions. At issue was whether moving forward with these sales as originally sold would require a supplemental analysis to determine their effects on the environmental baseline of the Plan. Several lawsuits were filed, challenging the Administration's reading of this provision, to limit the number of old, environmentally problematic sales from moving forward. As a result of these lawsuits and working with individual purchasers to mitigate the sales' effects, about 48 sales needed further evaluation for their effects on the Plan's environmental baseline. These sales contain about 219 million board feet and affected 0.02% of the late-successional reserve acres, 0.03% of riparian reserve acres, and 0.04% of key watershed acres.

Timber Resource: Observations and Opportunities

Timber Resources

Observations

The agencies' timber-sale programs are being planned on 22% of the federal land base that is available for regeneration harvest. An additional 47% of the federal land base is available to limited thinning of stands, pending scientific oversight to assure such thinnings will enhance late-successional and old-growth forest habitat.

Timber sales on track

The agencies are on track in offering the timber volumes estimated in the Record of Decision adjusted for reconciliation with the District and Forest plans. The Bureau of Land Management and Forest Service met their fiscal year 1995 and 1996 targets and plan to offer 100% of the probable sale quantity in 1997.

- Timber arid other resource personnel in the region have spent considerable time working on litigation related to the Rescissions Act and requirements of the resulting court orders. This unplanned workload affected the final accomplishments for fiscal year 1996, and their ability to prepare sales for 1997.
- The timber industry is concerned that these sales do not provide historical amounts of saw timber.

Timber-sale planning changes

The agencies have changed the way, sales are prepared. Although much of fiscal years 1994 and 1995 were spent modifying old sales to comply with the new standards and guidelines, the agencies worked effectively to get timber sales out and started preparing new sales under the requirements of the Plan. Some of the new requirements were challenging at first, but most field offices are incorporating the changes with more ease now. Some of the benefits include

- A more balanced approach to timber--sale planning, focusing on outcomes, rather than species-by-species effects. The result is a better job on the ground.
- Timber sales are better protecting aquatic and terrestrial habitat and are put in context by watershed analyses.

- Some units are using innovative techniques, such as service contracts for marking, cutting, decking, and sorting timber before selling it.
- Some Bureau of Land Management offices thought that the performance agreement on timber sales between the state Director and the national Director helped them focus on getting the job done.

Endangered Species Act consultation

Much of the improvement in the Endangered Species Act consultation process is due to the consistency and predictability provided by the Plan.

- The agencies have worked closely to expand the streamlined approach so that it is the regular way of doing business for the entire region and other regions, as well.
- The new section 7 consultation process is working and has resulted in a better product, faster.
- Individual consultations have decreased as programmatic consultations have been developed. This change reduces the time Fish and Wildlife Service and National Marine Fisheries Service staff spend on reviewing biological assessments and the time Forest Service and Bureau of Land Management staff spend re-doing biological assessments.
- The consultation process has increased coordination and provided a consistent approach for the Fish and Wildlife Service and the National Marine Fisheries Service.
- Input from the public and other agencies has been favorable and helpful. Trust between agencies has improved and outputs are less controversial.

Timber-sale planning more complex

Existing and additional project-planning steps assure environmental protection but make timber-sale planning more complex, time consuming, and expensive. Although the field units are becoming more efficient with each sale, sales are taking longer to prepare and unit costs are rising. Among the challenges are

- More matrix was affected by riparian reserves than was originally estimated on most Districts and Forests.

- On timber-suitable lands, active management is often made difficult and expensive because the sites can be isolated fragments between riparian reserves.
- Irregular riparian reserve lines conflict with logging system requirements from both an engineering and safety standpoint.
- The percentage of thinning sales to total sales is much higher than in the past. These sales require more time and resources to lay out.
- Even though the consultation process has been significantly improved, some managers still believe that the new habitat protections are not adequately recognized by biologists during consultation on regeneration harvest in the matrix. Conversely, some biologists believe that managers only look at standards and guidelines for sale layout and not at the broader requirements of the Plan, including the aquatic conservation strategy, road requirements, and cumulative affects.
- The green-tree retention requirements make timber harvest more complex than in the past.
- Initial watershed analyses, late-successional reserve assessments, and Adaptive Management Area plans are added process steps; however, on completion, the analyses can greatly expedite project planning, Endangered Species Act consultation, and the NEPA process.

Staff and funding concerns

Concerns about the adequacy of agency resources in the future have been expressed.

- After four years of downsizing, with more to come, the field offices have fewer staff working on a more complex timber-sale program.
- Although the timber-sale program has been reduced, the need for staff foresters, engineers, and hydrologists is still strong.
- Funding is still distributed in narrow line items and doesn't easily allow design of sales to treat all resource concerns or needs across the landscape.

- As long as line items exist, funding the Endangered Species Act consultation, planning, analysis, and monitoring programs will be as important as will funding the timber-sale programs because they are integral to each other's success.
- Thinning sales in late-successional reserves cost more because of layout, method of harvest, and access, but the budget does not reflect the increased unit costs.
- Staff and funding requirements to release sales under the Rescissions Act diminished opportunities to put new green sales in the pipeline for future years.

Complications in meeting timber commitments

Meeting timber commitments is more complicated than anticipated. Among the concerns are

- Critical habitat designated under the Endangered Species Act is in the matrix and constraining timber operations there. Even though the Plan's land allocations are thought to obviate the need for such interpretations, some biologists are firm in maintaining critical habitat designations until late-successional reserve designations are determined to be adequate for spotted owl needs.
- Some late-successional reserves may benefit from thinning or salvage sales; however, the requirements in the Record of Decision and lack of targeted funding limit the ability to plan silvicultural treatments in these areas.
- The tension between those who favor a landscape approach and those who favor a species approach continues. On forests with east-side characteristics, some people believe cutting less in existing matrix areas and more as small-diameter thinnings from late-successional reserves may be more appropriate to promote healthy stands. This tradeoff is difficult to make now because the Record of Decision directs certain harvest intensities to different land allocations. Other people believe that this approach to promote healthy forests may not be beneficial to some individual species. Some biologists believe they are being pressured into accepting management proposals in late-successional reserves, even if they affect a listed species.

- On many forests, reaching agreement between agencies and the public on thinnings in riparian reserves and late-successional reserves has been easier than on regeneration harvests in matrix lands.
- Some forests are staying away from sensitive zones (that is, roadless areas) even if they are in the matrix timber base. This approach may be appropriate in the short term to garner trust, but it will limit the ability to meet the probable sale quantity if not changed in the long run.

Miscellaneous concerns

A variety of miscellaneous concerns have also been expressed.

- The new sales program requires the industry to adjust how it estimates bids. Many of the sales require different equipment or practices than were usually used in the past.
- The Plan does not currently recognize management opportunities in primarily coastal forests that contain many even-age second-growth stands that are 80 to 150 years old.
- Batching sales for consultation was efficient for the agencies but sometimes it slowed the process for the sale operators because they had to wait until sales were batched and sent to the Fish and Wildlife Service for consultation, rather than each sale being sent when it was ready.
- The economic viability of salvage sales under the Plan's standards and guidelines is more tenuous than normal. The Plan's process requirements, however, have not substantially slowed the salvage sale program.
- The ability to sell salvage and forest health-treatment sales is very sensitive to market price fluctuations. The cost per acre is high and the trees carry less value. Therefore, several sales have gone without bids.

Opportunities

Timber resource opportunities could include

- Clarifying relations between reserves and matrix.
- Further exploring ways to resolve the tension between habitat and species approaches exhibited by those who think some kind of management is needed across an entire landscape and those who believe in management by allocation. Perhaps experimentation could be more aggressively pursued in Adaptive Management Areas.
- Resolving the issue of spotted owl critical habitat in matrix in the context of the reserves that have already been established.
- Streamlining process requirements for sales in matrix areas by acknowledging these areas were designated for timber harvest and assumed so in the Record of Decision.
- Clarifying expectations between protection and timber activities in each land allocation. This process should be coordinated between the regulatory and management agencies and then reflected in agreed-upon management decisions.

Realigning management operations to facilitate an ecosystem approach.

- Committing to an ecosystem management funding approach at the Congressional and Departmental levels to fund work required in the Record of Decision and Forest plans.
- Allowing the Forest Service's 1994 ecosystem approach budget, which was partially adopted, to serve as a foundation for reassessing opportunities to adequately fund the timber-sale program.
- Creating incentives for regulatory agencies to share responsibility with management agencies to meet targets, as management agencies are now required to share responsibility for meeting environmental goals. Including Plan goals in annual performance standards for all upper managers in all agencies.

- Looking at creative ways to prepare and offer sales, such as stewardship or end-result service contracts to mark, cut, deck, and then offer timber for sale (within limits of the Davis-Bacon Act). This process could optimize return to the treasury because the agencies can charge a premium for high-quality logs, as opposed to selling high- and low-quality logs and getting an average price.
- Reviewing timber-sale planning steps and associated performance measures that continue from before the Record of Decision to determine if any of the steps are no longer needed.
- Clarifying how accomplishing the probable sale quantity should be reported. The Forest Service reports all chargeable volume (saw timber and other wood) offered from lands identified as suitable for harvest in the Plan, but the Bureau of Land Management reports all saw timber offered for sale, whether it is from suitable lands or not. Both methods have merit for different reasons, but the two figures are not comparable and may cause continuing confusion.

Enhancing the ability to offer safe and economical timber sales:

- Continuing to develop new ways to lay out and sell timber and mitigate their effects. For instance, allowing cable corridors to cross riparian reserves if soil effects can be eliminated or mitigated.
- Continuing to work closely with Research to find ways to make engineering and mitigation systems economically viable under current standards and guidelines.
- Analyzing opportunities to improve operability of timber sales in riparian reserves, with a focus on intermittent streams, since reserves cover more land areas than originally modeled.

Building on successes in streamlining consultation by, for instance:

- Continuing to use one document rather than a separate biological evaluation, biological analysis, biological opinion, NEPA analysis, and watershed analysis,
- Sharing biologists across agencies by using an "incidental take account" from which management agencies can proceed with actions and are allowed a certain number of incidental takes of species under certain conditions. No consultation would be required if the action met the standards and guidelines.
- Requiring the management and regulatory agencies to build on the model programmatic consultation whereby forest projects are cleared for a two-year period.

Other opportunities include

- Developing a regional Coast Range strategy to determine the availability of the opportunities in mature forests for limited thinning in stands 80 to 150 years old. This approach could promote old-growth habitat in the context of acres treated and assure such stands were not treated as matrix.
- Implementing adjustments to east-side forest plans that integrate the results of the Columbia River basin planning efforts when finalized.
- Establishing an extra sale-quantity program. The probable sale quantity does not include volume offered in reserve areas. Volume harvested from reserves was intentionally left out of the probable sale quantity calculation by the FEMAT scientists because they did not want an incentive for harvest in reserves to be part of an annual, scheduled, targeted harvest; therefore, the agencies could recognize and fund treatments in reserves and achieve the goals established for those areas. The extra sale quantity could consider using "acres treated" as the measure of accomplishment for riparian and late-successional reserves, to assure that volume cut does not drive treatments in these areas.

Adaptive Management Areas

The region has 10 Adaptive Management Areas (Areas). They were selected to provide a mix of ecological conditions, land-ownership patterns, and natural resource and social characteristics. The Areas were established to allow innovative and creative resource management approaches that may be different from those outlined in the Plan. By being creative, land managers will learn new approaches to managing ecosystems in the context of the technical, social, and legal challenges before them. In addition, local public participation is emphasized in selecting and designing projects. The Areas were originally intended to allow experimental management approaches that would not affect the viability of species even if those approaches failed. Between the draft and trial version of the Plan, this flexibility was tightened to shore tip biological standards that were deemed not adequate to meet viability and extirpation standards. A derailed description of" the Areas can be found in the Record of Decision (1993, p. D-1--D-17).

Management goals for fiscal year 1994 included appointing a Forest Service or Bureau of Land Management leader and a research coordinator for each Area; confirming professional relations across the agencies; and interacting with the community about managing the Area. The goals for 1995 were to draft plans or strategies, implement the projects already planned in the Areas that meet other priorities, and do projects in such a way that they become adaptive or learning exercises.

In 1994, the Areas generally concentrated on screening projects to assure they were within adaptive management area objectives, completing watershed restoration projects, and increasing public participation. In addition to the Hayfork and Applegate Areas, which had active participating groups before the Record of Decision, the eight other Areas created public and governmental participation opportunities through field trips, information exchanges, and other activities, issues relating to litigation over compliance with the Federal Advisory Committee Act significantly slowed the pace at which the Areas were able to move forward. More specifically, many

Adaptive Management Areas

Applegate Adaptive Management Area, Oregon
Size: 277,500 acres
Emphasis: Developing and testing forest management practices that provide for a broad range of forest values.

Central Cascades Adaptive Management Area, Oregon
Size: 155,700 acres
Emphasis: Intensive research on ecosystem and landscape processes and its application to forest management in experiments and demonstrations at the stand and watershed scales; approaches for integrating forest and stream management objectives and managing young and mature stands to accelerate development of !ate-successional conditions.

Cispus Adaptive Management Area, Washington
Size: 143,900 acres
Emphasis: Developing and testing innovative approaches at stand, landscape, and watershed scales to integrate timber production while maintaining late-successional forests healthy riparian zones, and high-quality recreational values.

Finney Adaptive Management Area, Washington
Size: 98,400 acres
Emphasis: Restoring late-successional and riparian habitat components.

Goosenest Adaptive Management Area, California
Size: 172,900 acres
Emphasis: Developing ecosystem management approaches including use of prescribed burning for managing pine forests.

Hayfork Adaptive Management Area, California
Size: 488 S00 acres
Emphasis: Developing, testing, and applying forest management practices, including partial cutting, prescribed burning, and low-impact approaches to forest harvest, which provide for a broad range of forest Values.

Little River Adaptive Management Area, Oregon
Size: 91,800 acres
Emphasis: Developing and testing approaches to integration of intensive timber production with restoration and maintenance of high-quality riparian habitat.

Northern Coast Range Adaptive Management Area, Oregon
Size: 250,000
Emphasis: Managing for restoring and maintaining late-successional forest habitat consistent with marbled murrelet guidelines noted on page D-15 of the Record of Decision.

Olympic Adaptive Management Area, Washington
Size: 150,400 acres
Emphasis: Creating a partnership with the Olympic State Experimental Forest and testing innovative approaches at the stand and landscape scales for integrating ecological and economic objectives, including restoration of structural complexity to simplified forests and streams and developing more diverse managed forests through appropriate silvicultural approaches, such as long rotations and partial retention.

Snoqualmie Pass Adaptive Management Area, Washington
Size: 212,700
Emphasis: Developing and implementing a scientifically credible, comprehensive plan for providing late-successional forest on the “checkerboard” lands.

TEXT BOX 13

of the Areas started preparing plans, but the agencies’ need to pull out of the Area groups until compliance with new legal standards could be sorted out slowed down initial planning efforts.

Accomplishments in 1995 included a range of actions, such as timber sales, assessing special forest products opportunities, restoration projects, ongoing research projects, and planning. Some Areas have accomplished a great deal; others less, in response to the different emphasis and needs for each Area, and different amounts of interest in the communities. Strategic plans and socioeconomic assessments of the communities were initiated or completed in seven Areas. All of the Areas have had field trips for community members so that stakeholders could look at current management activities and discuss the types of activities that should be planned in the future. Several new partnerships with school districts, counties, and local colleges have been formed. For example, in the Hayfork Area, the Hayfork Watershed Research and Training Center developed a college-accredited retraining program in conjunction with the Forest Service, Shasta College, and the Department of Labor. The Cispus Area formed a partnership with the local school district to add monitoring to the junior high and high school curriculum. The Goosenest Area entered into an agreement with Humboldt State University and the National Aeronautic and Space Administration to provide the Area with vegetation data collected by satellite.

One of the major accomplishments was the amount of coordination and communication among all parries. Excellent communication tools were developed, from community educational newsletters to improved decision documents between agencies. The tools have allowed greater sharing of information within and among communities and agencies.

Each Area took a different approach to community assessment. For example, in the Cispus Area, people in the community wanted to do their own assessment rather than have someone tell them what to assess or how to evaluate their needs. The Forest Service facilitated tile process, but the members of tile community worked together to identify needs and opportunities. This innovative approach to problem solving greatly improved communication and provided the Forest Service a social context within which to manage the federal forests in the Area.

Three Areas--one each from Washington, Oregon, and California--- were nominated to represent the United States in the Model Forest Network. The Model Forest Network, initiated by the Canadian government, is an international network of forest areas that emphasize sustainable development. Some model forests had been identified in Canada and in third world countries, but the first model forests selected in the United States were the Cispus, Applegate, and Hayfork Areas. The objectives or the Model Forest Network are to accelerate sustainable development in forestry and emphasize integrated resource management; develop and apply innovative concepts to forest management; and test and demonstrate the best sustainable forestry practices available.

In fiscal year 1996, adaptive management plans were developed in draft form for all but one area. Relations with surrounding communities were enhanced, and projects continued to be implemented and monitored. The research branches of the agencies focused on efforts to integrate planning, management, and research in Areas; assessed and evaluated results of management and research, development, and applications activities; and facilitated public participation in adaptive management activities. More than 270 separate projects are ongoing or were completed by the end of 1996.

Adaptive Management Areas 1995 Highlights

Applegate

- Began developing a management strategy for the Area;
- Prepared 10 timber sales;
- Made progress on 55 research and monitoring projects;
- Initiated a fire management plan for the Area;
- Conducted five watershed analyses;
- Completed an ecosystem health assessment for the Area;
- Completed an aquatic, wildlife, and special-habitat assessment;
- Completed an economic assessment for the Area; and
- Contracted for an Area assessment by an outside party.

Central Cascades

- Conducted several interagency communication efforts and field trips about the Area;
- Completed a research and learning assessment;
- Made progress on more than 100 Projects ranging from timber sales to long-term research and monitoring;
- Completed two watershed analyses;
- Participated in developing a community strategic plans;
- Participated in watershed council collaboration; and
- Completed projects worth more than $250,000 by using an ecosystem workforce demonstration crew tied to Jobs in the Woods objectives

Cispus

- Completed public participation in monitoring, community assessment, and community self assessment;
- Completed Upper Cispus Rivers watershed analysis;
- Worked on I 0 current and proposed research studies;
- Prepared four timber sales;
- Completed four watershed restoration projects; and
- Completed an arrangement with a local school to add monitoring to the 7th- to 12th-grade curriculum.

Finney

- Developed watershed analysis and restoration policies for the Adaptive Management Area in cooperation with Province Advisory Committee;
- Developed data and involvement processes for all ownerships and interests.

Goosenest

- Began landscape analysis with interagency team;
- Worked with Humboldt: State University and NASA Mission to Planet Earth to provide Landset MSS images classifying existing vegetative communities;
- Worked on Studies with Pacific Southwest Research Station scientists after completing the Adaptive Management Area plan; and
- Working on low level, georeferenced aerial videography to supplement current remote-sensing data.

Hayfork

- Developed a college-accredited retraining program in conjunction with Shasta College and the Department of Labor;
- Developed a computer network established within Trinity County to facilitate education about the Area and information sharing
- Developed a method for community access to detailed maps of the Area;
- Released Draft EIS for the Pilot Creek Ecosystem Management Plan (Six Rivers NF, Mad River District);
- Prepared timber sales totaling 19 million board feet.

Little River

- Completed Area assessment (watershed analysis and social assessment);
- Used retrained timber workers watershed and wildlife inventories;
- Cooperated on an anadromous fish out-migration monitoring program; and
- Developed an effective public involvement strategy for the Area.

Northern Coast Range

- Offered three timber sales totaling about 5 mmbf;
- Conducted a public involvement effort to develop the Adaptive Management Area guide; and
- Participated in an ecosystem workforce demonstration crew.

Olympic

- Made Adaptive
- Made substantial progress on Habitat Development Study;
- Completed the Adaptive Management Area overview; and
- Established a Close working relation with the Province Advisory Committee.

Snoqualmie Pass

- Completed a draft EIS/Adaptive Management Area plan providing late-successional forest and connectivity in an area with checkerboard ownership; and
- Initiated a two-year research project to determine historical ranges of old-growth stands and large woody material in the different environments.

TEXT BOX 14

Adaptive Management Areas: Observations and Opportunities

Observations

Each adaptive management area is progressing at a pace that reflects local priorities and needs.

Progress reflecting local interest

- The Little River Area began meeting with several smaller groups when the big group was polarized and not able to progress.
- The Hayfork Area treated the entire area as a research project, which improves flexibility for experimental projects and other management actions.
- Some areas have very close association with research scientists from the Forest Service and Bureau of Land Management. This association has proved to be a useful alliance in developing scientifically based decisions that can be realistically implemented on the ground. Concerns have been raised about the agency's ability to finance these positions in the future, however.

Benefits of public participation

Public participation and the opportunity to share information between the agencies and communities has generally been beneficial.

- Consensus building was generally applauded by the agencies and communities, even with the extra time required to get results.
- Working with communities that are close together has been easier than with those that arc spread out over a wide area.
- In some Areas, the public did not participate in early discussions about objectives and proposals. Some members of the public prefer to let the agencies develop proposals and comment on the environmental analyses developed later in the project approval process.

Lack of flexibility

The flexibility allowed in the Record of Decision affected management actions within the Areas.

- In Areas where the Record of Decision provided flexibility and allowed some management discretion, the Forests' ability to experiment outside the standards and guidelines was greatly improved. The North Coast Area is an example where this flexibility worked well.
- In Areas where flexibility and discretion were not allowed in the Record of Decision, the principles of adaptivity and creativity were lost. The standards and guidelines limit experimentation for most of the Areas.
- Where allocations overlapped, operating in an Area is as restrictive as in a matrix area. The original intent of the Areas was clouded by lack of flexibility.

Other observations

The regulatory and management agencies differ in their opinions about the extent of management and experimentation allowed within the Areas.

Budget priorities have not emphasized the Areas. In the first two years, other functions such as preparing timber sales, watershed analysis, and watershed restoration have taken priority.

Requirements and interpretation of the Federal Advisory Committee Act slowed progress and damaged relations between communities and the agencies. This negative outcome affected personal relations as well as the agencies' ability to develop projects.

The relation between federal and nonfederal land owners is unclear in the context of managing the Areas. Federal policy focuses on federal land, yet to get the most benefit from management actions, nonfederal land owners should also participate.

Opportunities

Adaptive Management Areas opportunities could include

- Restoring the original intent of Areas as experimental, with the flexibility to look beyond the boundaries established by the Plan's standards and guidelines.
- Conducting an analysis of the effects that increased flexibility in managing these Areas would have on viability ratings for listed species and clarifying policy accordingly.
- Conducting an analysis of the effects that increased flexibility would have on the extirpation and other standards of the Endangered Species Act and clarifying policy accordingly
- Encouraging the greatest amount of experimentation possible in the Areas to identify innovative management techniques.
- Determining if the type of information and approaches of independent scientific analyses developed since the Plan's adoption can be integrated into Area management proposals.
- Clarifying the relation and involvement of nonfederal land in the Areas. Ask nonfederal land owners and other nonfederal stakeholders to voluntarily work together to participate in the process.
- Developing a public involvement process that distinguishes between public input on Area projects and priorities and public input for NEPA analyses.
- Reestablishing the Areas as a high budget priority, with management emphasis, staffing, and funds.
- Considering a pilot program that gives management agencies authority for stewardship contracting where many elements of the ecosystem can be treated under a single contract and some or all of the revenues returned to benefit the site of origin.

ADAPTIVE MANAGEMENT AND MONITORING

Adaptive Management

Adaptive management is the process and philosophy governing how managers learn from implementing Plan goals and adjust future actions according to what has been learned (figure 6). As a part of the larger effort to implement the Plan, an adaptive management process working group was commissioned by the Regional Interagency Executive Committee to describe a framework for using the philosophy on all federal lands covered in the Plan, not just to the Adaptive Management Areas. Adaptive management is relatively new as a means for evaluating and adjusting management practices; the process is based on monitoring and evaluation, which have been applied in varying degrees with varying success in the past (Bormann et al. 1994). Adaptive management applies scientific principles and methods to improve resource management activities incrementally as the managers, scientists, and citizens learn from experience, new scientific findings, and social changes and demands. The Plan will be implemented, monitored, and then changed as necessary to better achieve the Plan's goals. New forest management practices and variations from the standards and guidelines will be tested in the Adaptive Management Areas, but management on other lands will provide vital information as well.

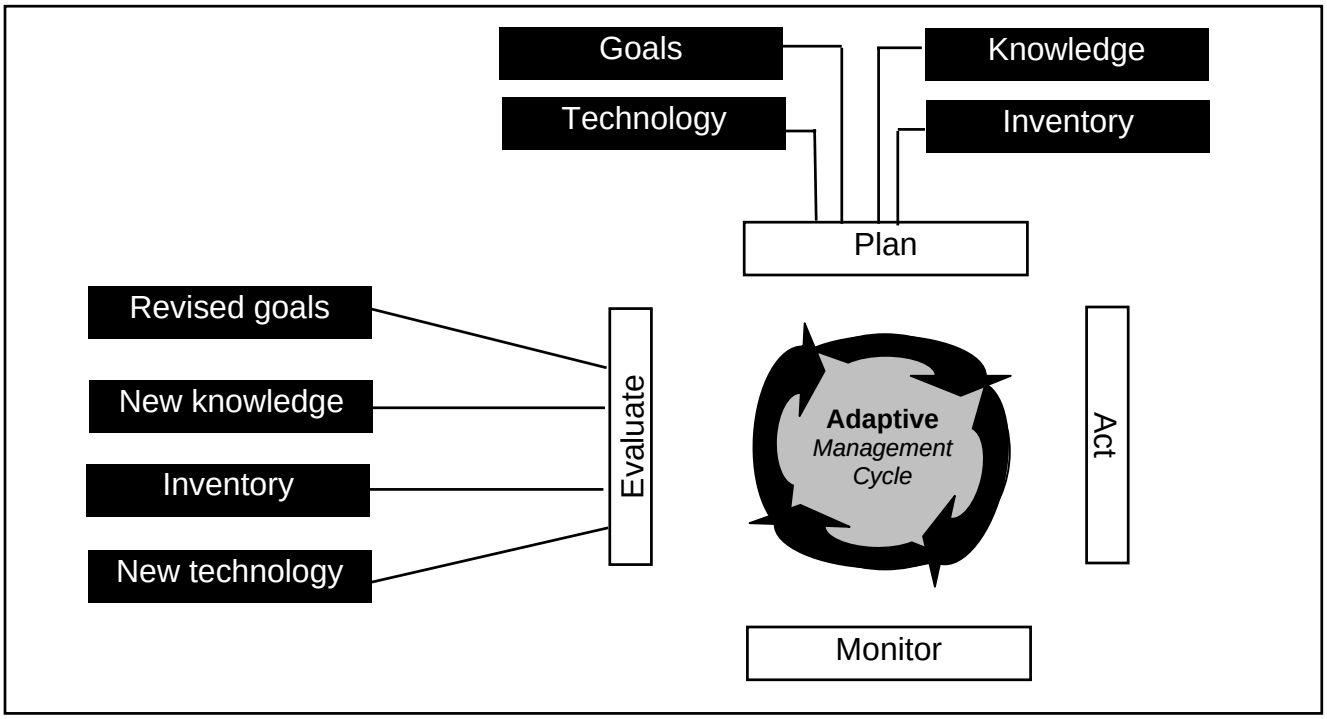


Figure 6 – An adaptive management cycle, modified from Femat (1993).

Adaptive management begins with implementing management actions. No explicit direction was given to the field on how to apply the adaptive management concept. Over the last two field seasons, however, many of the concepts of adaptive management have been broadly applied in the region, and they have already resulted in improvements to management protocols and strategies. For example, the watershed analysis and watershed restoration guides were revised based on lessons learned during their first year. People working on the Central Cascades Adaptive Management Area have produced a research and learning assessment. In another example, the Siuslaw National Forest has begun to institutionalize adaptive management by requiring that learning objectives be added to all but a few purpose and needs statements in future NEPA documents (Bormann et al. in press). As learning becomes a central focus of NEPA activities, the importance of monitoring integrated with adaptive management becomes apparent. Learning—the cornerstone of adaptive management--provides the motivation needed to change standards and guidelines and adjust policies and management activities as needed to better manage complex ecosystems.

As the agencies implement the Plan, gather the results of initial monitoring, and "groundtruth" the standards and guidelines, they will keep track of areas where adaptation is needed at the site, forest, or regional scale.

Monitoring

Monitoring is critical to successfully implementing the Plan and was recognized by the courts as essential to keeping management actions legal over time. It plays a pivotal role, primarily to detect desirable and undesirable changes early enough that management activities can be modified to achieve the desired objectives. Monitoring is designed to:

Support management goals and needs;
Be sensitive to significant changes in ecological and social systems;
Assess trends and conditions to see if positive cumulative effects are occurring or anticipated;
Provide early warning so appropriate actions can be taken;
Provide a basis for policy decisions through analysis at various scales;
Provide for storage and manipulation of data; and
Be accessible across organizational and administrative boundaries.

Three types of monitoring are used in the Plan: implementation, effectiveness, and validation.

Implementation monitoring--Implementation monitoring determines if the standards and guidelines are being followed. It considers three components: aquatic, terrestrial, and socioeconomic. The details of these components include:

Land allocations with Specific boundaries;
Standards and guidelines for managing the land allocations, including key watersheds;
Watershed analysis;
Social and economic effects; and
An adaptive management process or learning framework.

Implementation monitoring is the first monitoring plan to be fully developed and implemented. To determine if the standards and guidelines are being followed, implementation monitoring is organized around management

activities and land allocations, including types of activities allowed and projected conditions within each allocation.

Effectiveness monitoring--Effectiveness monitoring takes implementation monitoring a step further by evaluating whether a management action achieved its desired goals. This type of monitoring will be done at various reference sites in geographically and ecologically similar areas based on a statistically valid, random-sampling design. Departures from expected conditions are not to be treated as failures but rather as new information to improve the quality of management and future decisions. Effectiveness monitoring could result in mitigation, changes in future actions, revised goals, changes in standards and guidelines, or even a Plan amendment. Changes that can be measured via effectiveness monitoring may take several years, or even decades.

Determining the specific effectiveness-monitoring approach for any issue depends on the type of information needed. For example, assessing trends requires periodically gathering baseline information. Where continuous coverage for structure and pattern is important, monitoring techniques include geographic information systems and remote sensing. When more detail and ground measurement are required, ground-based surveys are used. Successfully implementing broad-scale monitoring requires integration of all these approaches. Simultaneously, research is needed to evaluate alternative measures to improve future monitoring efforts.

Validation monitoring--Validation monitoring determines if a cause-and-effect relation exists between management activities and the indicators or resource being managed. It questions whether the underlying management assumptions are correct. Among the key set of assumptions that need to be validated is the relation between habitat conditions and populations. This validation requires a strong mix of inventory, monitoring, and research. One primary evaluation question is whether the populations of northern spotted owl, marbled murrelet, and at-risk fish stocks are stable or increasing because of the implementation of the Plan.

The monitoring program will require a long-term commitment to gather and evaluate data on environmental conditions and management actions. Each of the agencies has made this commitment, but staff and funding capacity will dictate the rate at which monitoring can progress.

The role of the Forest Service, Environmental Protection Agency, and National Biological Service research branches is to design and develop new planning tools and management processes that support an adaptive approach to ecosystem management. Researchers will also help managers define monitoring needs and design and evaluate regional monitoring strategies. Some effectiveness and most validation monitoring will be through formal research. Researchers may help develop standardized measurement and reporting protocols to assure consistency among the agencies. The agencies will also incorporate nonfederal research results as they consider changes to the Plan. Finally, the research branches will provide input to developing new standards and guidelines based on research results.

The Regional Executives directed their field offices to begin intensive implementation monitoring under the Plan in 1995, the first full year of Plan implementation. Effectiveness monitoring and validation monitoring plans were to be drafted in 1995 and 1997. The focus of the Research and Monitoring Committee’s Implementation Monitoring efforts have been directed at developing information at the regional and provincial scales to evaluate the degree to which the

land management agencies are complying with the standards and guidelines established in the Record of Decision. The major principles of the approach are

- Determining the degree of compliance with all standards and guidelines for selected projects and activities;
- Evaluating stages of project and activity completion (for example, for timber sales, this stage could include design, layout, and harvest);
- Integrating existing agency tracking systems to identify projects and activities for monitoring;
- Categorizing and prioritizing projects and activities to facilitate variable amounts of sampling and review efforts; and
- Assessing and reporting results based on a statistical approach that provides provincial and regional summaries.

In addition to monitoring individual agency actions as they have in the past, the agencies have been actively progressing on developing a regional monitoring program to support the Plan. The agencies have initiated a pilot implementation-monitoring effort to conduct reviews of a statistical sample of 45 timber sales in fiscal year 1995. The review was completed in 1996. Interagency teams will do the review, and provincial advisory committees and other members of the public have had opportunities to participate. These reviews will determine compliance with relevant standards and guidelines by examining project documentation and field visits. An implementation monitoring report has aggregated the sample data base to provide summaries and assessments at the provincial and regional scales. The report also includes recommendations for the further development and expansion of the 1997 implementation monitoring efforts into the other relevant projects and activities.

In August 1995, the Interagency Research and Monitoring Committee distributed a draft effectiveness-monitoring plan to the Interagency Advisory Committee. The draft plan focused on five emphasis areas: late-successional and old-growth, northern spotted owl, marbled murrelet, survey-and-manage species, and riparian and aquatic habitat. These emphasis areas represent species, habitat associations, or both that are currently a priority for the agencies and the major focus of the Plan. The agencies consider these areas to be the first step of effectiveness monitoring, with more issues included as the process is refined. The agencies are revising the draft plan and intend to complete it for use in the 1997 field season. Pilot effectiveness-monitoring projects will be tested in 1997 for spotted owls, late-successional forests, and riparian and aquatic resources.

Monitoring:
Observations and Opportunities

Observations

Implementation monitoring is being undertaken throughout the region.

- The three part monitoring program is expected m take several years to design, rich test, and fully implement.
- The agencies' ability to do effectiveness and validation monitoring depends on budget allocations in the future.
- A major focus will be on maximizing the use of-existing or ongoing monitoring programs instead of relying solely on new efforts.

Opportunities

Monitoring opportunities for agencies could include

- Looking for creative ways to get monitoring done, in the context of current funding, such as partnerships with each other or with state and nonfederal organizations.
- Although analyzing the effectiveness of the monitoring program would be premature, a comprehensive review could be undertaken after all three components are operational.

FORESTRY ON NONFEDERAL LAND

Although the Record of Decision only applies to federal lands, assisting nonfederal land owners in complying with the environmental laws---especially the Endangered Species Act--is an equally important part of the Plan. The government's ability to assist nonfederal land owners is based on conservation protections that have been placed on federal lands and the recognition that different land owners have different management objectives. The federal agencies manage for multiple uses, states often manage lands in trust for their citizens, and nongovernmental land owners often manage for maximum economic returns, although many manage for environmental benefits as well. Although some people thought the Plan should have analyzed ecosystems across ownership boundaries, the Administration chose not to do so because of its effects on local law and the concerns of stare, private, tribal, and other nonfederal land owners.

Instead of dictating a plan across all ownerships, the Administration chose to place the primary conservation benefits on federal public lands. Doing so allowed the government to use provisions of the Endangered Species Act to provide nonfederal land owners with more flexibility to manage their resources while providing for the conservation of listed species.

Habitat Conservation Plans

In working to develop an appropriate balance in forestry practices in the region, the Fish and Wildlife Service and National Marine Fisheries Service are strongly encouraging state and nonfederal timberland owners to develop habitat conservation plans for their lands under section 10(a)(1)(B) the Endangered Species Act. Their efforts focus on the issuance of incidental take permits. These permits are required by the Fish and Wildlife Service and National Marine Fisheries Service when nonfederal activities will result in individuals of a threatened or endangered species being harmed or otherwise taken. According to the Endangered Species Act, the term "take" means to "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (P.L. 93-205, section 3 (19)). "Harm" may include significant habitat modification where actually kills or injures a listed species through impairment of essential behavior.

The agency allows incidental take of a species only if the land owner has committed to a long-term plan--called a habitat conservation plan, take avoidance plan, or conservation agreement--that helps conserve the species as a whole. Habitat conservation plans determine and minimize the take and mitigate its effects to the maximum extent practicable. Such plans may also cover unlisted species, as long as the habitat conservation plan provides sufficient conservation for both listed and unlisted species. The agencies are emphasizing multispecies plans that use an ecosystem management approach. Take-avoidance plans can sometimes be developed that obviate the need for habitat conservation plans. Take-avoidance plans describe an activity that has little or no effect on listed species. These activities are typically small-scale, low-impact actions such as small-acreage timber harvests. Land owners work with the regulatory agency to develop the plan to avoid the risk of take. The agency sends a letter of concurrence to the land owner but does not issue a permit for any incidental take. A third variation on habitat conservation planning is the conservation agreement. Conservation agreements are formally written agreements between federal and nonfederal parties to achieve the conservation of a candidate species through voluntary cooperation. It documents the specific actions and responsibilities for which each party agrees to be accountable.

Conservation planning in Northwest forests is being closely coordinated with the affected state and local governments, as well as the interested members of the nonprofit and private sectors. Where appropriate, the National Marine Fisheries Service endorses habitat conservation plans that have listed, proposed, or sensitive anadromous fish species in the planning area.

The process for obtaining a take permit and preparing a habitat conservation plan is driven by the applicant; in other words, habitat conservation plans are voluntary. Personnel from the Fish and Wildlife Service or National Marine Fisheries Service assist with technical and procedural guidance. The plan is negotiated between the land owner and the agency m gain the best results for both the land owner and the listed species. The process can require anywhere from 2 to 12 months, depending on the complexity of the issues and the land owner's preferences. The steps are:

- Develop a plan;
- Prepare an environmental analysis;
- Send the plan to the Fish and Wildlife Service and National Marine Fisheries Service for joint review and publication in the Federal Register;
- Collect public comment on the analysis;
- Review public comment and revise, if necessary; and
- Send the final plan to the Fish and Wildlife Service and National Marine Fisheries Service for final review and approval.

Although the management direction in the Northwest Forest Plan addresses conservation and recovery of threatened and endangered species only on federal lands, nonfederal lands will play a significant role. Recovering threatened and endangered species or preventing the listing of additional species may often be impossible without the contribution of nonfederal lands. Habitat conservation plans are a means by which nonfederal land owners may help provide for the conservation of listed species. Many of these nonfederal lands will be important in the recovery of species, particularly such species as salmon and riparian associates that are found throughout the rivers and streams that cross nonfederal lands.

Twenty-four habitat conservation plans, conservation agreements, or take-avoidance plans related to timber harvest have been completed as of August 1996, covering more than 1,756,000 nonfederal acres. Another 56 habitat conservation plans and conservation agreements are being prepared, under negotiation, or being considered, covering nearly 7.5 million nonfederal acres (table 8).

Following are examples of different types of habitat conservation plans that address various species and ownership sizes:

- Weyerhaeuser Company owns the 209,000-acre Millicoma tree farm in the Oregon Coast Range Province, east of Coos Bay, Oregon. This single-species plan for the northern spotted owl was signed in February 1995. Weyerhaeuser was authorized to harvest the remaining owl habitat on the ownership (up to 16,700 acres) over the course of a 50-year incidental-take permit. As mitigation, Weyerhaeuser has agreed to produce a landscape conducive to dispersing owls across its ownership within 20 years, and to maintain that landscape condition until the end of the permit period. The tree farm is strategically located among several parcels of federal land being managed as late-successional reserves under the Northwest Forest Plan, and maintaining

Table 8 – Habitat conservation plans under section 10 of the Endangered Species Act.[1]

Plan or agreement	Washington		Oregon		California	
Habitat conservation plans	number	(acres)	number	(acres)	number	(acres)
Completed	5	(233,040)	3	(302,109)	2	(380,500)
Underway	11	(3,255,485)	4	(1,001,200)	12	(2,350,600)
Potential	5	(511,200)	1	(12,000+)	2	(27,000+)
Inactive	6	(260,000)	1	(unknown)	--	--
Total	**27**	**(4,259,725)**	**9**	**(1,315,309)**	**16**	**(2,758,100+)**
Conservation agreements						
Completed	1	(23)	1	(5)	--	--
Underway	3	(10,201)	1	(200)	--	--
Potential	1	(1,200)	--	--	--	--
Inactive	5	(643+)	1	(unknown)	--	--
Total	**10**	**(12,067+)**	**3**	**(205)**	**--**	**--**
Take-avoidance plans						
Completed	6	(27,577)	2	(298 acres)	4	(813,000)
Underway	1	(40)	2	(141 acres)	--	--
Potential	--	--	--	--	--	--
Inactive	--	--	--	--	--	--
Total	**7**	**(27,617)**	**4**	**(439)**	**4**	**(813,000)**

[1]Undertaken by the U.S. Fish and Wildlife Service and local land owners in the Plan region.

Source: USDI Fish and Wildlife Service, North Pacific Coast Ecoregion, and Klamath and California Ecoregions.

connectivity among the reproducing populations of owls within those reserves is crucial to long-term viability. The dispersal condition on the Millicoma should facilitate this connectivity during the latter part of the permit period.

- The 55,000-acrc Murray Pacific multispecies habitat conservation plan specifically provides for leaving at least 10% of its tree farm in nonharvest reserves for the next 100 years. The reserves, providing 100-foot buffers on most streams, will be established as a result of a watershed analysis that Murray Pacific will complete by the year 2004. All habitats on the tree farm, including rock slopes, caves, nest trees, and den sites, would be retained, and protected, and many will be enhanced. The company will leave more snags and double the green trees per acre required by Washington forest-practice rules.
- Coast Range Conifers is a small timber company in western Oregon. The habitat conservation plan provides the company with an incidental-take permit for spotted owls and marbled murrelets. The ownership contains 109 acres of suitable habitat for these species. Coast Range Conifers proposed to harvest 60 acres and place 49 acres in permanent reserve status by selling it to the Forest Service. The permit runs for 5 years.

Habitat conservation planning

Harvesting methods have left "leave trees" in clumps scattered throughout the harvested unit as a way to provide habitat. Flexibility in deciding which trees to leave, and where to leave them, is encouraged in habitat conservation planning.

Precommercial thinning and pruning to provide dispersal habitat for juvenile and "floater" adult spotted owls. Dispersal habitat consists of canopy lift and closed canopy, enabling owls to fly through the stand while protected from predators such as great horned owls.

No-harvest riparian reserve along an intermittent stream. Reserves average 50 feet wide along these streams

The 4(d) Rule

Once the northern spotted owl was listed as a threatened species, taking the owl was prohibited on both nonfederal and federal timber lands during timber harvest, unless an incidental-take permit was secured. In light of the federal conservation benefits in the Record of Decision, the Fish and Wildlife Service reviewed the prohibitions against incidental take of the northern spotted owl on nonfederal lands. The purpose of the proposed 4(d) rule is to relieve incidental take prohibitions for owls related to timber harvest activities on nonfederal lands where such prohibitions are no longer deemed necessary or advisable for conserving the owl. The 4(d) rule identifies areas in California and Washington where prohibitions on incidental take of owls will be relieved and areas where they will be retained. The Fish and Wildlife Service is working with both states to determine how to apply this rule relative to existing state requirements and processes.

To provide for continuing conservation of the owl, the alternatives analyzed in the Draft Environmental Alternatives Analyses for the proposed 4(d) rule included special areas where restrictions

incidental take would be retained: Special Emphasis Areas in Washington and potential California Conservation Planning Areas.

Special Emphasis Areas and California Conservation Planning Areas cover those nonfederal lands where land management activities can affect the conservation of the spotted owl by enhancing connectivity between federal late-successional reserves and, where necessary, supporting the population centers in those reserves, or by protecting important owl population centers in large areas of nonfederal ownership. Cluster Areas, where five or more owl home-range circles overlap, are designed to support larger concentrations of owls currently existing on nonfederal lands in California.

Generally, the proposed action would ease federal incidental-take prohibitions on nonfederal lands outside Special Emphasis Areas, and California Conservation Planning Areas. In all instances, however, incidental-take prohibitions would be retained within the closest 70 acres of nesting, roosting, and foraging owl habitat surrounding any owl activity center during the nesting Season, unless the site is subsequently determined to be abandoned.

At the state's request, relief from takings prohibitions are not being proposed by the Fish and Wildlife Service for Oregon at this time. The agency has agreed to consider a 4(d) alternative submitted by Oregon's Governor. Work on such an alternative is on-going.

The proposed 4(d) rule for Washington and California currently includes several provisions:

- An exemption for land owners who own fewer than 80 acres in California, or 500 acres in Washington, provided such acreage is outside a 0.7-mile radius from a nest site;
- Conservation planning options to protect owl sites for land owners with more than 80 acres inside Special Emphasis Areas and California Conservation Planning Areas;
- Tribal relief from incidental-take prohibitions, except for 70 acres around nest sites;
- A safe management provision for compliance with the rule land owners will not be prosecuted for any incidental-take violations, as long as they meet this safe management standard; and
- A sunset feature for certain designated areas. The sunset feature is for areas where prohibitions against incidental take are retained now, but take would be allowed in the future if the Fish and Wildlife Service determines that the conservation needs of the owl have been met.

A Draft Environmental Alternatives Analysis of the various 4(d) alternatives was distributed February 1995 for public comment, along with an extended concurrent comment period on the proposed 4(d) rule for the owl, published in the *Federal Register* on February 17, 1996. The comment period, extended numerous times, closed on June 27, 1996.

Forestry on Nonfederal Land: Observations and Opportunities

Habitat Conservation Plans

Observations

The habitat conservation plan process is working. The good start is being improved as more land owners apply and work through the process. Among the observations being made are

- Section 10 of the Endangered Species Act, which authorizes habitat conservation plans, is fundamentally sound legislation.
- Although the habitat conservation plans arc authorized to focus on single species, land owners are voluntarily incorporating multispecies needs through them.
- The plans are providing some sense of certainty to nonfederal land owners about how they can manage their forests in compliance with the Endangered Species Act;
- The plans are achieving more habitat protection than has been achieved under federal and state law in the past.
- The application process for section 10 incidental-take permits needs to be streamlined.
- Potential applicants are wary of the habitat conservation planning process because of NEPA concerns (public comment and disclosure) and the cost associated with preparing a plan.
- A comprehensive monitoring program is essential for understanding the long-term success of the plans.
- Developing a habitat conservation plan is an expensive undertaking that requires the financial and staff resources that only large and some midsized land owners can bear.

Opportunities

Habitat conservation plan opportunities could include

- Developing land-owner-friendly conservation planning tools such as a generic habitat conservation plan and cooperative agreements that would assist midsized and small land owners to participate in the habitat conservation planning process.

- Streamlining the public review process, while still allowing the public adequate opportunity to review habitat conservation plans. Nonfederal land owners think the current amount of redundancy in preparing the NEPA and habitat conservation plan documents is too high.
- Resolving land-owner concerns locally to build trust with local managers and to reduce the tendency to want to access higher levels in the Administration.
- Offering land owners--especially small and midsized--financial and technical incentive packages to participate in habitat conservation. Many land owners would be willing to do more if they received a small amount of compensation.
- Working with states to develop the equivalent of a habitat conservation plan. The goal would be to have the states develop and manage the plans, and the role of the Federal government would be to approve the standards and guidelines.

The 4(d) Rule

Observations

The initial advanced notice of rulemaking was developed independent of land owner input. The easing of restrictions was viewed as placing new restrictions on many land owners within the region. Subsequent to the advanced notice of rulemaking, the Fish and Wildlife Service worked closely with land owners, agencies, and states in the early scoping effort to develop the proposed 4(d) rule.

- Extensions to the comment period were part of the Fish and Wildlife Service's continuing effort to obtain public input and gather new information pertinent to this rulemaking process.
- High interest continues among participating parties in the Fish and Wildlife Service's rulemaking to ensure a balance of conservation benefits to the northern spotted owl, relief from prohibitions for nonfederal timber managers, and continuity in further implementing the Plan.

Opportunities

The 4(d) rule opportunities could include

- Continuing to find ways to mesh state and federal regulatory processes and changes to achieve public resource conservation goals and increase government effectiveness.
- Coordinating among several state and federal agencies and their sets of laws, regulations, and processes related to resource conservation and economic issues for which the 4(d) rulemaking process provides an additional case history.
- Establishing common intergovernmental and public goals, objectives, and time frames for completing regulatory change before beginning to develop proposed rule changes and related analysis documents for public and agency review and comment.

OTHER COMMITMENTS

East-Side Ecosystem Management Project

The Plan included direction to conduct an East-Side Ecosystem Management Assessment to promote the long-term health of ecosystems on the east side of the Cascade Range in Oregon, Washington, and Idaho. Substantial public input and interagency coordination have contributed to identifying issues and developing alternatives. The effort includes two Environmental Impact Statements, one for the Upper Columbia River basin, and one for the East-Side Ecosystem Management Project, and a Science Integration Team Report. The geographic area included in the areas of evaluation consists of Bureau of Land Management and National Forest lands in the continental United States tributary to the Columbia River east of the crest of the Cascade Range in Oregon, Washington, and parts of Idaho, Montana, Utah, Nevada, and Wyoming, and portions of the Great Basin and Klamath Basin in Oregon.

The Environmental impact Statement Team for the Eastside Ecosystem Management Project and the Upper Columbia River Basin identified three broad categories of issues associated with resource management on the east side (figure 7). The first is ecosystem health, which encompasses issues such as forest health, watershed health, sustainable communities (plant, animal, and human), clean air, scenic landscapes, and production of goods and services. These issues are being used to develop the environmental impact statement alternatives. The second category includes

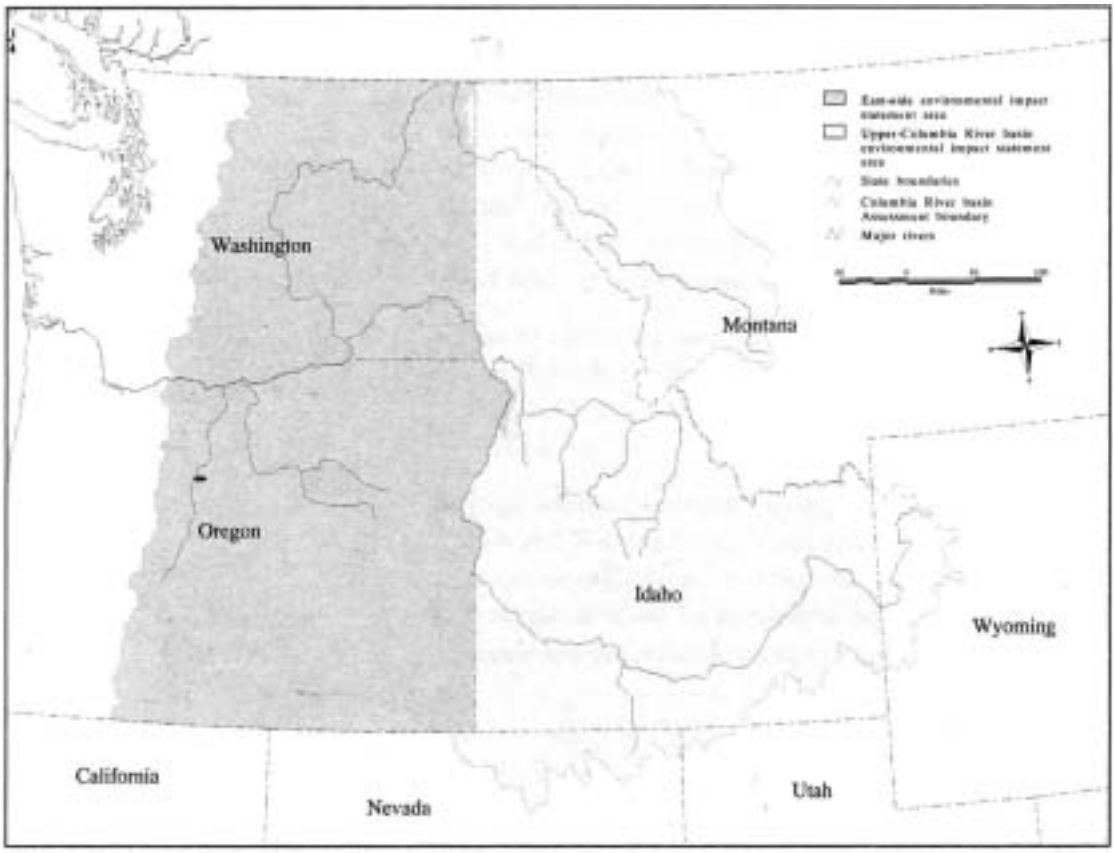


Figure 7 – Boundaries of the Interior Columbia Basin Ecosystem Management Project.

issues such as public participation, consultation, and coordination. The third category includes issues that are beyond the charter for the environmental impact statement, including desired changes to existing laws, who the decision makers should be, and issues that would require analysis at scales not being addressed by the environmental impact statement.

As the west-side Plan is implemented, the agencies are learning what works and what needs improvement. The east-side assessment teams built on some of these lessons in drafting their plans. For instance, without the pressure of an injunction driving the process, tribal, local, and county governments are participating from the start. The agencies also established official advisory committees early in the process, to involve them in preparation, rather than waiting until the final document. The advisory committees and nonfederal government parties are reviewing draft material as it is completed. The final environmental impact statements are due to be released in 1997.

The Science Integration Team is developing a scientifically sound and ecosystem-based strategy for managing east-side forests. The three major products are

- A scientific framework for ecosystem management in the Interior Columbia River basin. This framework includes the principles and processes that may be used in future NEPA documents to develop management direction.
- A scientific assessment that will characterize and assess the ecosystem, social, and economic processes and functions and describe probable outcomes of continued management practices and trends.
- A scientific evaluation of the alternatives developed by the two environmental impact statement teams. Staff reports were completed and sent out for peer review in August 1995. Their review, compilation of feedback, and integration of policy questions and issues across staff areas will be incorporated into the environmental impact statements, which will be used to draft records of decision for each Forest plan in the east-side analysis area.

Expediting Timber Sales on Tribal Lands

The Plan included direction to move the backlogged volume of timber from tribal and individual trust lands to add to the timber supply in the Northwest. The rate of timber harvest on these lands was expected to play a role in assisting local timber-dependent economies affected by decreases in timber harvest on federal lands. Additional jobs could be created in primary harvesting and, with additional wood reaching mills, secondary employment could be supplemented.

In the past, inadequate staffing and funding of the Bureau of Indian Affairs forestry program resulted in many tribes being unable to harvest all the areas approved for treatment in their current forest management plans. The Northwest Forest Plan recognized the problem and called for additional funding to allow this backlogged timber to be harvested.

In fiscal year 1995, the President’s budget included $1.5 million to sell backlogged tribal timber. The goal was to harvest 40 to 60 mmbf of timber in fiscal year 1995. The tribes had concerns about meeting this goal because of the late distribution of funds, the need to prepare environmental documents, and staffing problems. Eight Of the twelve Bureau of Indian Affairs field offices produced 34.5 mmbf of harvested timber volume in 1995. The remaining four areas did not produce any volume in 1995.

in fiscal year 1996, $1.5 million was made available to prepare and administer backlogged tribal timber sales. The goal was to harvest 50 mmbf of timber volume in 1996. The 11 reservations participating in the Timber Harvest Initiative program in fiscal year 1996 produced more than 50 mmbf of additional harvest volume during the year. Additional volume is ready for sale but has been withheld because of locally depressed markets for some products that have been offered. Bureau of Indian Affairs projections for fiscal year 1997 volume in this program range from 45 to 60 million board feet.

OTHER FOREST RESOURCE USES

The Plan focused primarily on direction for evaluating the effects of large-scale modifications to the landscape,

such as timber harvesting, but federal lands throughout the region have many other uses, either existing or proposed, ranging from ski areas to municipal water systems. The agencies are being asked to clarify direction in the Plan as it applies to these uses. Some of the issues being addressed are summarized below.

Ski Areas

The Record of Decision (page 15) states, "For many ongoing activities, we expect that current permit terms will be sufficient to meet the overall goals. We presume that current existing and permitted Ski Areas will be allowed to continue under current permit terms." Clarification was sought on what this means for existing ski area operations, changes to existing operations within the ski area boundary, and changes or expansions outside the existing ski area boundary (figure 8).

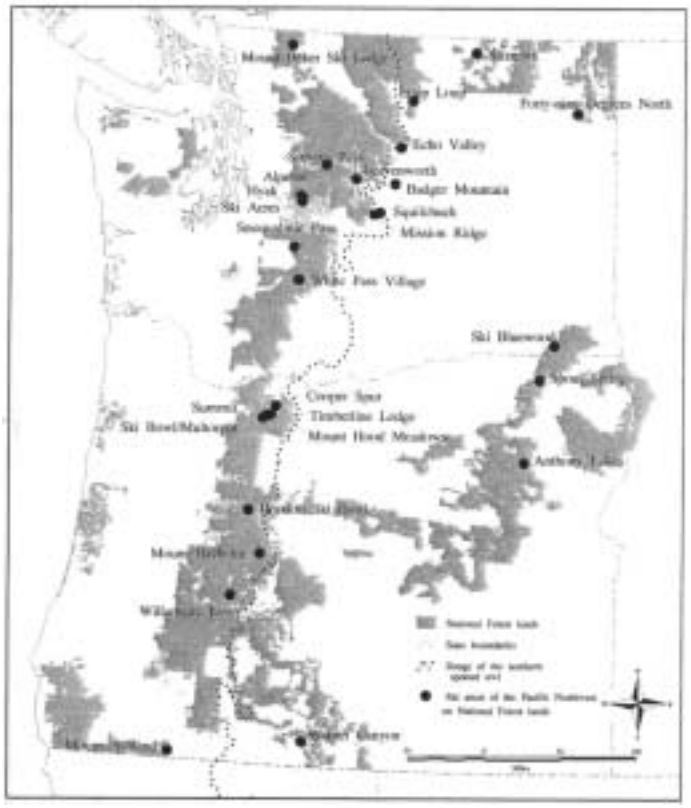


Figure 8 – Ski areas of the Pacific Northwest

The agency executives used the interagency format of the Regional Ecosystem Office to discuss the issues and prepare a policy paper. The Forest Service clarified how the Plan's standards and guidelines affected ski areas and how they should be applied. In summary, the agencies agreed that the Record 0f Decision allows ski areas to continue to exist and operate in their current locations and that the land allocations and standards and guidelines do apply to ski area operations. The guidance also recognized, however, that the industry only occupied 0.15% of the region's forest lands; therefore, development opportunities may differ depending on the proposed site and whether the proposal is within an existing ski area or master plan boundary or outside existing boundaries.

Small-Scale Hydroelectric Power Proposals

About 50 hydropower projects are proposed on National Forest land within the region. Because they are along streams, the projects are particularly affected by the Aquatic Conservation Strategy and late-successional reserve standards and guidelines. The Forest Service is required to evaluate whether a project is consistent with existing plans and regulations before the Federal Energy Regulatory Commission can issue a license. All of these hydropower projects were proposed before the Record of Decision.

As with the ski areas, the Forest Service has analyzed whether hydropower development can proceed under the conditions of the Record of Decision. The agency issued an interpretation after coordination with other agencies. In summary, hydroelectric power projects can exist as long as they are consistent with the standards and guidelines, or if the Forest Plan is amended to allow them. Other details of the questions considered by the agency can be found in the May 10, 1996, memo to the Forest Supervisor, Mount Baker-Snoqualmie National Forest, from the Acting Regional Forester and the accompanying discussion paper on file at the Forest Service’s Region 6 office in Portland, Oregon.

The effects of a hydroelectric power project are long term because licenses are issued for 30 to 50 years. Any decisions about allowing hydropower development to proceed must be in the context of total effects on the watershed and must consider the amount of mitigation over the 30- to 50-year life of the project. In the past several years, the Forest Service has negotiated millions of dollars worth of mitigation on hydropower projects, including recreation facilities, watershed restoration work, and road obliteration and maintenance. If the mitigated projects are compatible with the standards and guidelines, benefits can be accrued for the resource through mitigation and for the public through the production of power.

Mining

Under the 1872 Mining Law, a valid mining claim is a property right owned by the claimant. The law and regulations provide for prospecting, exploring, developing, mining, or processing of mineral resources and all uses of the claim reasonably connected with these activities. A claimant does not need to receive a patent to perform these activities.

The Forest Service regulations require, where feasible, that operations be conducted to minimize environmental effects. Reclamation, where practicable, is required. The Forest Service has no authority to deny reasonable mining activities or to so condition them as to result in taking the claimant’s property rights. Only where "the disturbance can be minimized using reasonable means" can the Forest Service influence the operation (36 CFR 228.4 E (3)).

Forest Service regulations allow the District Ranger to decide if mining operations will "likely cause significant disturbance of surface resources" and therefore require a plan of operations. "If the District Ranger determines that such operations will likely cause significant disturbance of surface resources, the operator shall submit a proposed plan of operations to the District Ranger"(36 CFR 228.4 (a)).

The National Wildlife Federation filed a lawsuit against the Forest Service, alleging that the management of suction dredging operations on the Siskiyou National Forest violated the Clean Water Act and Siskiyou Forest Plan riparian-reserve standard and guideline "Minerals Management-1" (part of the amendments from the Record of Decision). The standard and guideline

states that a reclamation plan, an approved plan of operation, and a reclamation bond are required for all minerals operations that include riparian reserves.

Bureau of Land Management regulations do not conflict because they are specific as to when a plan of operations is required--only if the operation will affect more than 5 acres. The Forest Service regulations give the District Ranger discretion to determine if a plan of operations is necessary. The Record of Decision states that none of the standards and guidelines are to supersede existing regulations; therefore, where the regulations are clear--as for the Bureau of Land Management--then the regulations take precedence. The lawsuit claims that in discretionary cases, the Record of Decision standards and guidelines apply and a plan of operations must be done.

A tentative settlement was reached between the government and plaintiffs in which the plaintiffs agreed to dismiss the lawsuit without prejudice (that is, the lawsuit can be refiled) and the government agreed to amend the Siskiyou National Forest Plan to clarify that not all mining operations will require a plan of operations.

Other Activities

How the standards and guidelines affect the multiple uses of federal land will also need clarification or interpretation by the agencies. These uses include recreation residences within riparian reserves, municipal or nonfederal water systems, grazing, special forest products, and developed and dispersed recreation facilities, such as campgrounds and trails.

Most of the issues arise around riparian or late-successional reserves where any construction is required. For instance, in areas where population is growing, a municipal water supply system may need upgrading. In many areas, the only alternative source of water is on federal land. A conflict may arise between the municipality’s state water rights and the standards and guidelines; these issues must be resolved case by case, with community input to the interagency process.

CHAPTER 6

EASING THE TRANSITION FOR WORKERS, BUSINESSES, AND COMMUNITIES: PROVIDING ECONOMIC ASSISTANCE

The economic assistance components of the Northwest Forest Plan are aimed at helping the region[6] adjust to changes in federal forest management by increasing the capacity of those affected by reduced federal timber supply to improve their economic and social well-being. The components are intended to ease a complex set of economic and social stresses that have been affecting parts of the region for several years. The most apparent dislocations are job losses, business closures, and distressed timber-dependent communities. But the effects are even further reaching because the capacity of communities to maintain and upgrade their infrastructure is adversely affected, the endurance and spirit of workers to acquire new skills is sorely tested, and the sense of optimism that underlies investment in both human and business capital is overcome by the stresses that arise as traditions and economic security are threatened.

The major components of economic assistance--the means to improve economic and social well-being—are

- The Northwest Economic Adjustment Initiative (the Initiative) to bring assistance to workers and their families, businesses, and communities;
- Payments to counties to compensate for reductions in payments that traditionally have been tied to federal timber receipts;
- Removal of tax incentives for the export of raw logs; and
- Assistance to encourage growth and investment of small businesses and secondary manufacturers in the wood-products industry.

The Initiative is the most visible part of the economic assistance effort. It brings together federal, state, local, tribal, and private representatives to match available technical and financial assistance with locally determined needs and opportunities. The Initiative provides assistance in the short-run so that workers, families, businesses, and communities can adjust to a prosperous, longer-run, diversified future-,--a future compatible with ecosystem management on federal forests.

The region's people, communities, customs, and expectations are varied, and these variations affect forestry and how forest management problems will be resolved. The Forest Ecosystem Management Assessment Team makes clear that the problems associated with forest management

[6] In this chapter, the region is defined in two similar ways. For analyzing economic trends, the region is the set of counties in the range of the northern spotted owl, the definition used in chapters VI and VII (the economic and social analysis chapters) in the FEMAT report (1993). For evaluating the economic assistance delivered as part of the Plan, the region follows boundary lines established by the states for implementing the Northwest Economic Adjustment Initiative (see text); the state boundaries exclude several major urban counties and include several counties with significant wood-products sectors that are associated with the range of the northern spotted owl.

are only partly technical and scientific; more important, those problems are influenced by a multitude of values and beliefs about how the many benefits of forests are to be provided. The transitions of the region's communities and residents are complex because the communities, institutions, groups, and individuals that make up the region are themselves complex. The effects of the Plan, particularly its economic assistance component, will have implications broader than the measures of demographic and economic performance summarized here. For a Complementary discussion of the historical and social factors relevant to federal forestry in the region, see FEMAT (1993) and the references cited there.

UNDERSTANDING THE REGION AND ITS RELATION TO FOREST-BASED INDUSTRIES

Parts of the region's economy, many communities, and a way of life for many of the region's people are linked to public and private forests, their uses, and the industries they support. The economic assistance provided by the Plan is only one of the economic forces affecting the region and its forest-based communities and industries. Global and domestic competition and trade, technology development and use, and aggressive global and domestic marketing all combine with a well-recognized quality of life, a tradition of business innovation, and a rich endowment of natural resources to give the region its vitality.

Several industries, based on both commodity and noncommodity products, uses, or services, are derived from or associated with the region's forests. Wood-products manufacturing and logging, dispersed and developed recreation, tourism, commercial and sport fishing, hunting, and special forest products are all important to the region's economic health, its culture, and the unique character of each state. They are all affected by changes in federal forest management. The region also depends on its important water resources for domestic and industrial use, recreation, and transportation. Forests contribute to the amenity and scenic quality of the region, its air and water quality, and the quality and character of both urban and rural life. Cultural, spiritual, subsistence, and wildlife uses are locally important throughout the region for indigenous and other peoples. Finally, locally important industries, such as grazing and mining, are linked to forests.

Regional Growth and Urbanization

The people, and thus the economic activity of the region, are unevenly distributed across the landscape, with most of the region's population in metropolitan counties. 7 For the analysis that follows, the following counties have been included in the metropolitan category:

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[7] The distinct/on between metropolitan and nonmetropolitan is based on size. Metropolitan counties are included in a Metropolitan Statistical Area, which is defined by the Bureau of the Census as a county or a group of contiguous counties that contains at least one city with a population of 50,000 or more or includes an urbanized area of at least 50,000 with a total metro population of at least 100,000, and may include other counties with strong ties to the central city. None of the northern California counties are considered metropolitan for purposes of this analysis.

Washington	**Oregon**
Clark	Clackamas
Island	Columbia
King	Jackson
Kitsap	Lane
Pierce	Marion
Snohomish	Multnomah
Thurston	Polk
Whatcom	Washington
Yakima	Yamhill

Benton County in Oregon and Shasta County in California, which are formally classified metropolitan counties based on the 1990 census, are not treated as such in this analysis because of their important rural characteristics. The distinction between metropolitan and nonmetropolitan is useful, but does not perfectly distinguish between urban and rural. For example, Lane County, Oregon, is classified as metropolitan, with 72% of its population residing in urban areas (places with populations exceeding 2 500), but it also has a decidedly rural pattern of land use, with 87% of its land area in forest and another 10% in agriculture. Because of their size many of the region's metropolitan counties include public and private forest land, provide homes and work for many rural residents, and support various forest-based enterprises.

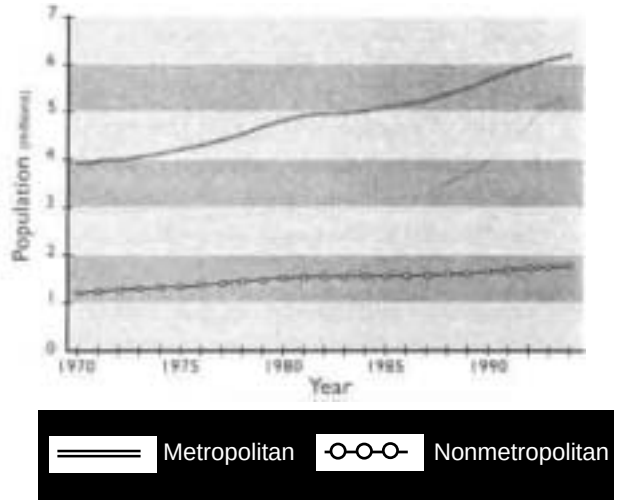

Figure 9 – Metropolitan and nonmetropolitan population in the region, 1970-94.
Source: U.S. Census Bureau and State Census Data Centers.

The region's population has grown briskly for more than two decades, though the rate has varied through time with some important slowdowns, such as the first few years of the 1980s. Since 1970 population has grown at a rate of 1.8% annually, twice the national rate of 0.9%. Population in the region's metropolitan areas has been growing much faster than the nonmetropolitan population (figure 9).

Since 1970, regional employment has grown at a 2.8% annual rate, which exceeds the national rate of 1.8%. Today, regional employment stands at almost 4.4 million workers, almost twice what it was in 1970. The region as a whole is experiencing a historically low unemployment rate. Industries in and around major urban centers have led the region's

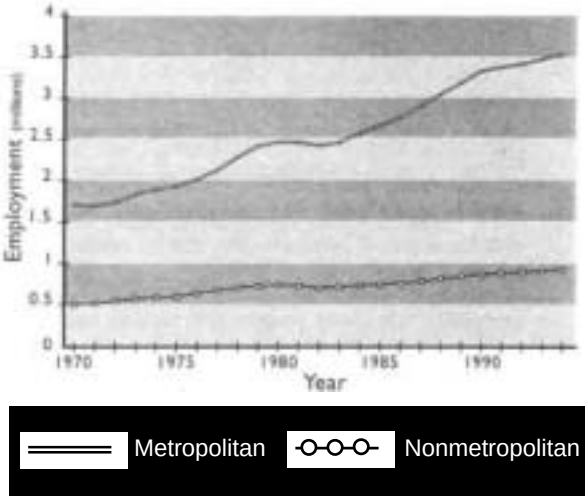

Figure 10 – Metropolitan and nonmetropolitan employment in the region, 1970-94.
Source: Regional Economic Information System, U.S. Bureau of Economic Analysis

expansion with an employment growth rate of 2.9% per year, but employment in nonmetropolitan counties, which has been increasing at 2.3% per year, has also exceeded the nation's rate (figure 10). Some timber-dependent counties are exceptions, such as Coos County in Oregon and Humboldt County in California, where employment growth has been well below national and regional trends. Personal income (adjusted for inflation) also grew at rates that exceeded the nation's over the same period, with metropolitan income more than doubling and nonmetropolitan income doubling, while the nation's total personal income grew 83%.

The region's industrial, service-oriented, and trade-related sectors have substantially diversified, and above-average, continued growth in some sectors is expected in coming decades. Employment projections for Oregon illustrate the expected changes: the high technology industries, which currently employ slightly more workers than the lumber and wood-products industries, will grow by more than 20,000 jobs by the year 2005; lumber and wood-products employment is expected to trend slightly lower during that time because an additional 2,000 jobs are expected to be lost (Oregon Employment Department 1996). The region's economic performance, however, will likely continue to be affected by the health of the broader national economy, though the region's response may not follow the patterns of the recessions of 1975 and 1982.

Other measures of economic prosperity and social development describe the region, particularly its nonmetropolitan counties, less favorably. Though per capita personal income (adjusted for the effects of inflation) for the region was equivalent to per capita income in the nation in both 1970 and 1993, per capita income for nonmetropolitan areas, which were at 90% of national per capita income in 1970, had fallen to 83% by 1993. Much of the divergence happened in the early 1980s recession, and the affected areas never caught up with metropolitan areas and the nation as the domestic economy improved. As is true across much of the nation, educational attainment in nonmetropolitan counties in the region is substantially below that of metropolitan counties: nonmetropolitan counties had 54% of their adult population with a high school or less education, and the corresponding figure for metropolitan counties was 42%. Metropolitan counties had a correspondingly higher proportion of their adult populations with college or graduate education.

Unemployment is higher in some rural communities, particularly those with wood-products mills heavily depending on federal forests for timber, and economic circumstances are more desperate than countywide, statewide, and regional figures show. In 1991, 28 Washington communities were at "high risk" in the state because of their dependence on the timber industry, and Oregon identified 90 communities severely affected by federal timber supply reductions. The FEMAT (1993) report states that community capacity--the community's physical and financial infrastructure, its human Capital, and its human responsiveness--is inversely related to the risk of adverse consequences from changing federal harvests, and concluded that communities most at risk have small populations, are in counties with low populations, and are judged to be relatively isolated; further, both positive and negative effects of changes in federal forest policies will be unevenly felt, even within affected communities.

Table 9 – Major land uses for metropolitan and nonmetropolitan counties in the region[1]

Land use	Metropolitan counties		Nonmetropolitan counties	
	Acres	Percentage of total metro acreage	Acres	Percentage of total metro acreage
Farmland	3,652,281	20.4	12,424,600	21.1
Nonfederal forest				
Industrial	2,525,000	14.1	9,460,000	16.0
Nonindustrial	2,227,000	12.5	3,079,000	5.2
Other public	865,000	4.8	2,464,000	4.2
Federal land				
National forest	4,789,009	26.8	18,943,954	32.1
BLM	935,948	5.2	5,535,695	9.4
Urban				
Residential and other	2,882,812	16.1	7,060,892	12.0
Total	**17,877,050**	**100.0**	**59,968,141**	**100.0**

[1] Includes all acres within metropolitan and nonmetropolitan counties, not just those acres that are within the range of the northern spotted owl.

Sources: Census Bureau (STFIA and USA Counties, CD-ROMs), Pacific Northwest Research Station, Bureau of Indian Affairs, Bureau of Land Management, USDA Forest Service.

Land Use and Location of Forest Industries

For many industries, including the forest-based ones, the decision on where to locate is influenced by conventional economic factors. Those factors include proximity to markets, availability of financial capital, access to raw material and intermediate product suppliers, transportation, taxes, land and labor costs, and a pool of skilled labor.

Most of the region's people (78% of the population) and economic activity (80% of employment) are found in metropolitan counties--counties that account for less than one-fourth of the region's land area. Land-use patterns in metropolitan and nonmetropolitan counties are similar (table 9). A slightly greater proportion of the nonmetropolitan land base is in farms, and much more of the metropolitan land base is in urban, residential, and other (nonforest or nonfarmland) uses. A larger share of the nonmetropolitan land base is in federal land or industrial forest ownership, but nonindustrially owned forest land is a much larger share of the metropolitan than nonmetropolitan land base.

About two-thirds of tile land base in the counties covered by the Plan arc in privately owned forest or federal land. Forests near large urban centers get heavy recreational use from local residents during all seasons. National Parks, National Recreation Areas, and Wilderness Areas, with their exceptional natural resource characteristics, can draw visitors from across the nation and world.

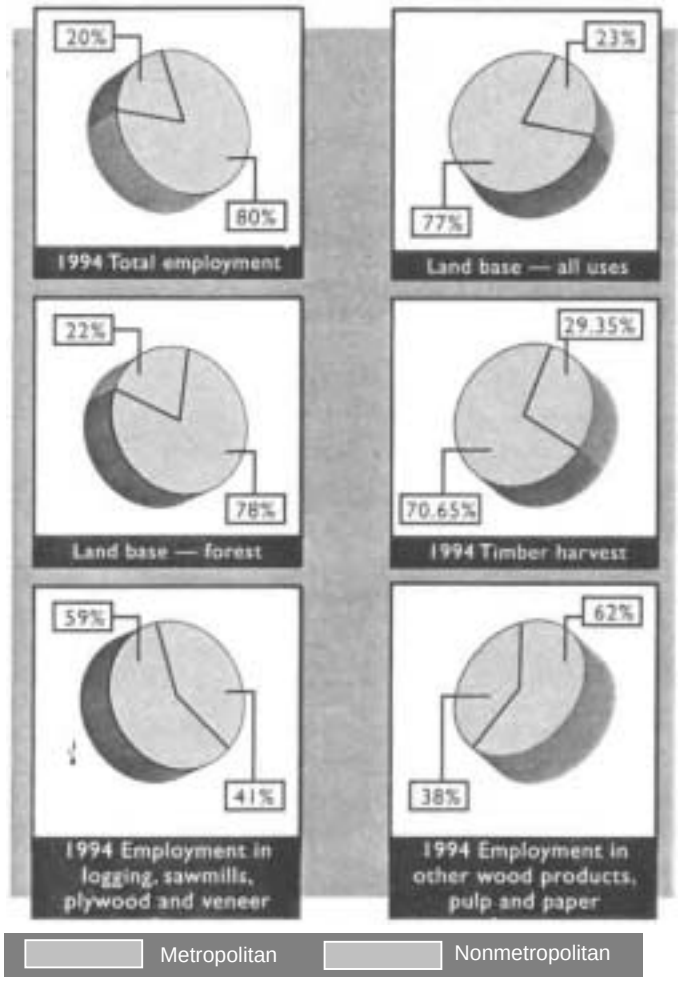

Figure 11 – Differences between metropolitan and nonmetropolitan counties in total employment, timber harvest, land base, forest land, and employment in major parts of the timber industry.

The primary wood-products manufacturing industries typically locate close to their sources for raw materials to minimize the expense of transporting unprocessed logs. Businesses close to their source of raw materials are heavily influenced by the use of nearby forest land and availability of timber for harvest. In contrast, parts of the secondary wood-products manufacturing industry are market oriented and locate near urban areas to minimize the costs of transporting manufactured products in their finished or nearly finished forms. Recent research shows that the proportion of the secondary industry outside major metropolitan areas is much higher for Oregon than for Washington (McGinnis and Raettig 1996). Market-oriented firms may draw from a variety of raw material sources and would therefore be much less affected by forest land use and the availability of timber than is true for their counterparts in the primary wood-products manufacturing industries that locate mills close to timber resources. The differences between metropolitan and nonmetropolitan counties are summarized in figure 11.

Slightly more than one-fourth of all federal land included in the Plan region is in metropolitan counties, and the proportional distribution of federal land allocations is similar for both metropolitan and nonmetropolitan counties (table 10). The types of industries, uses, and services that can be supported by federal forestry depend roughly, though not perfectly, on the proximity of users to the different allocations of federal forest land and the different land uses in private ownership. The importance of federal land allocations for local as well as nonlocal support of industries and people is illustrated by contrasting the intended uses of reserved and matrix lands. Reserved land favors protecting natural conditions and permits recreational visits and an associated recreational industry; the matrix lands are subject to a wider set of management possibilities and can therefore support uses based on gathering or harvesting by the region's forest-based manufacturing industries.

Table 10 – Distribution of federal land allocations for metropolitan and nonmetropolitan counties in the region[1]

Land use	Metropolitan counties		Nonmetropolitan counties	
	Acres	Percentage of total metro acreage	Acres	Percentage of total metro acreage
Adaptive management areas	328,372	5.1	1,193,465	6.6
Administratively withdrawn	296,914	4.6	1,180,265	6.6
Congressional reserved	2,113,056	32.8	5,207,552	28.9
Late-successional reserve	1,856,848	28.8	5,573,982	30.9
Managed late-successional reserve	57,383	0.9	44,816	0.2
Matrix	1,079,132	16.7	2,896,077	16.1
Riparian reserve	713,259	11.1	1,914,181	10.6
Total	**6,444,964**	**100.0**	**18,010,338**	**100.0**

[1] Includes only those acres within the range of the northern spotted owl in metropolitan and nonmetropolitan counties, some counties include substantial federal acres outside the range of the northern spotted owl (see table 1).

Sources: Information Resources staff, Pacific Northwest Region, USDA Forest Service.

Diversity of Forest-Based Industries

Forest-based industries provide substantial employment in the region, with many of those jobs in rural areas. Data measuring economic importance, including employment, are obtainable from published sources for the wood-products industry but are more difficult to obtain and interpret for the many other forest-based industries.

The region's wood-products industry has a worldwide reputation, and its historical importance to the region's development is well recognized. In 1991, the wood-products manufacturing industries employed some 120,000 workers, including 17,000 in logging, 27,000 in pulp and paper, and the rest in solid wood products or secondary manufacturing. On average, slightly more than nine direct jobs exist per million board feet of timber processed in the region (FEMAT 19913); those jobs are generally considered to be high-paying, family-wage positions. In March of 1996, workers in lumber and wood products in Oregon were earning an average of $12.65 an hour; the average hourly wage in the wholesale and retail industries was $9.83 an hour.

Forest-based recreation and tourism in the region's federal forests are represented by an estimated 132,810,000 visits in 1990 (Swanson and Loomis 1993). These visits include activities such as off-road vehicle use, sightseeing, hiking, camping, hunting, fishing, boating, rafting, bicycling, and winter sports. The number of people employed in these activities is not easily measured, though Radtke and Davis (I 993) estimate 17,000 to 23,000 full-time jobs in the coastal tourism industry and between 50,000 and 80,000 full-time equivalents associated with recreation on federal forest lands in the region (of which 4,000 to 5,000 are estimated to be

associated with fishing). Because of the land-allocation strategies in the Plan, employment gains are expected in some of these industries, though not enough is known to reliably estimate the effects.

Several other forest-based industries have regional employment Significance. The Commercial fishing industry is estimated to employ about 5,000 workers in the region; more than 18,000 workers were employed in mining and minerals processing statewide in Oregon and Washington; and floral greens, Christmas ornamentals, and mushroom harvesting activities provide at least seasonal employment for some 28,000 to 30,000 workers (FEMAT 1993). Wages, benefits, and employment conditions vary greatly between and within industries. Finally, the forestry services sector, which carries out forest management activities such as tree planting, supports about 6,000 jobs in the region. According to the FEMAT report (1993), substantial job opportunities could be created in pruning and other timber stand-improvement activities, reforestation, wildlife inventory and monitoring, watershed restoration, and technical surveys and assessments on the region's federal forest lands.

The Timber Industry's Contribution to the Regional Economy

The timber industry, composed of logging, lumber, veneer and plywood, pulp and paper, and an array of secondary (value-added) wood-manufacturing industries, is an important component of the region's economic base, especially in rural areas. The contribution of the timber industry to regional employment, however, has been gradually declining. More than 10% of the region's workforce, representing 150,000 to 160,000 workers, was employed in the industry at the beginning of the 1970s; by the beginning of the 1990s, about 3% of the region's workforce, representing between 120,000 and 130,000 workers, were employed in the industry (figure 12). The change is due reductions in the number of workers in the timber industry and increases in the nontimber economy in both metropolitan and nonmetropolitan counties.

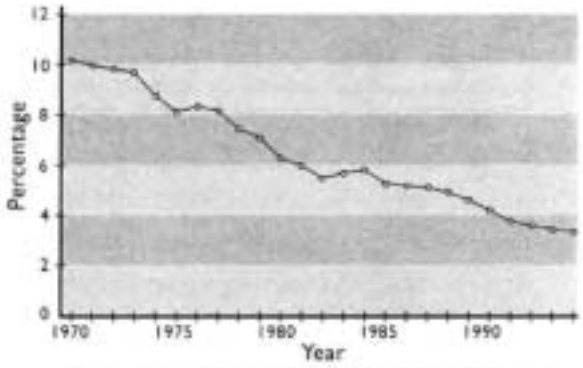

Figure 12—The percentage of total employment in the region associated with the timber industry, 1970-94.

The size of the timber industry varies by state, with slightly fewer than 60,000 workers in western Oregon, about 42,000 in western Washington, and some 15,000 in northern California. The reasons for changes in timber employment numbers have been similar in all three states: sharp reductions associated with changes in aggregate demand during domestic recessions; sharp increases during robust domestic economic expansion; a general downward trend related to investments in labor-saving,

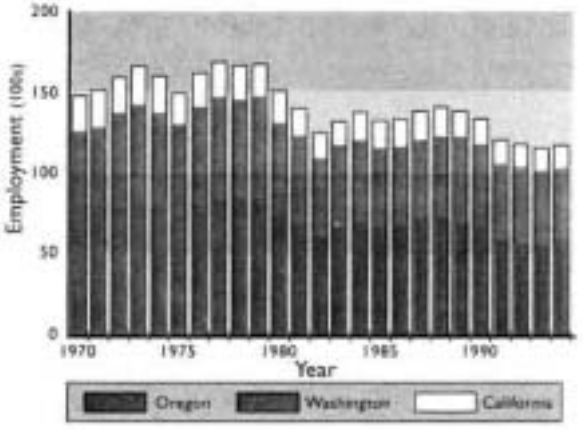

Figure 13 – Timber industry employment in the region, 1970-94.
Source: State Employment Security or Employment Development Departments.

technological improvements; reductions from changes in a mix of products that require less labor; reductions from changes in timber quality as the percentage of old growth available has declined; and, most recently, changes in timber supply (figure 13).

The downward trend was further intensified by the recession in the national economy that reached full force during the early 1990s. Timber industry employment has been largely unchanged from 1992 to the present, and it increased modestly between the announcement of the Plan in July 1993 and the end of 1994. Modest losses occurred in the region in 1995, though final figures were not available when this analysis was prepared.

Employment data for the region as a whole do not capture the local importance of the timber industry to rural, resource-based economies. Regional totals and trends reveal relatively small changes, but adverse effects are much more significant in localized areas where mills have closed and workers have lost their jobs. The extent to which the local timber industry depends on raw material from federal forests and is therefore vulnerable to employment losses associated with federal harvest reductions varies widely (figure 14). Oregon, particularly the counties in the southwestern part of the state and along the crest of the Cascades, has historically been highly dependent on federal timber. The interior northern California counties, the counties east of the Cascades in Washington, and Skamania County in Washington in the Columbia Gorge have also been highly dependent on federal timber.

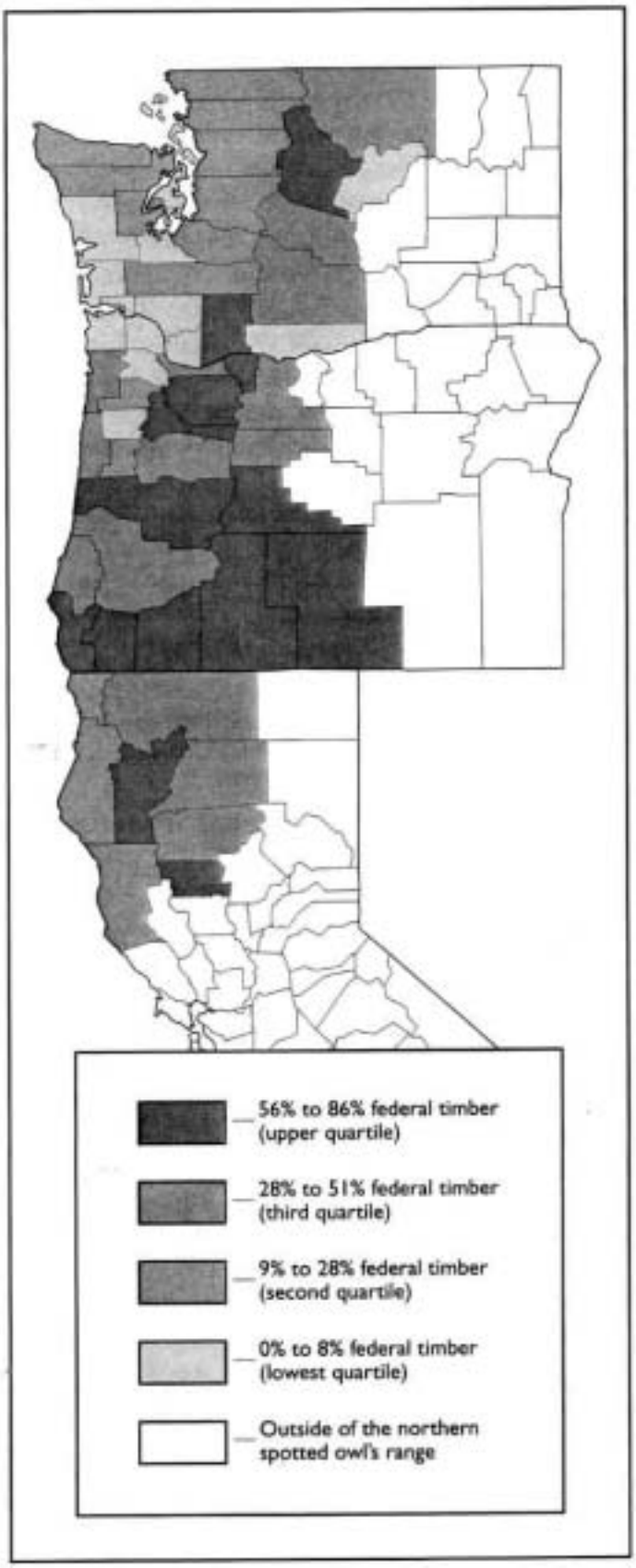

Figure 14 – Distribution of counties by proportion of timber harvested on federal forests. 1982-91.

The adverse effects of mill closures can be significant in rural areas' which typically do not have the size, diversified economic base, or locational advantages of industries in urban areas. Instead, the comparative advantage of rural economies is their proximity to abundant natural resources, and a resident labor force with the knowledge to work with installed industrial capacity to efficiently manufacture products for domestic and international markets.

For these reasons, the wood-products industry is the largest manufacturing industry in the region's rural areas and, for many rural areas, the most important part of the local economic base.

Improved transportation and communications, proximity to urban centers, and an enviable quality of life have helped some areas grow and further diversify. As a result of this growth and diversification, the proportional share of the timber industry as a source of employment in nonmetropolitan counties in the region was declining even before federal harvest reductions began (figure 15).

Employment totals for the region, however, do not show the variation in the industry's importance from community to community and their resultant vulnerability to changes in federal forest policy. For example, the Oregon Economic Development Department ranks the south Lane County community group of Cottage Grove, Saginaw, Creswell, Culp Creek, and Lorane as relatively more timber dependent than the Lane County metropolitan community group of Eugene, Springfield, and surrounding towns; both groups of communities are timber dependent and both are included in one of the region's most highly federal-timber-dependent counties, For policy and economic assistance purposes, therefore, the ranking by the Oregon Economic Development Department of 59 groups of timber-dependent communities in Oregon is more revealing than broad county, state, or regional averages.

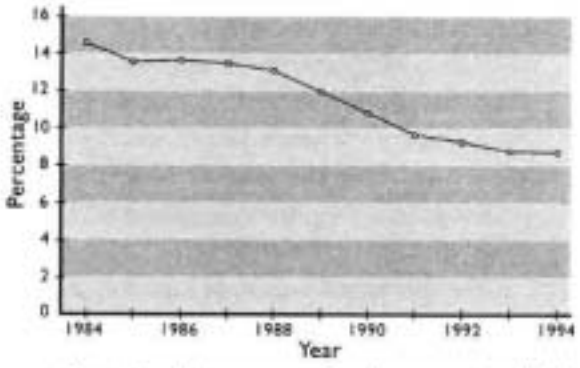

Figure 15—The percentage of employment associated with the timber industry in nonmetropolitan counties in the region, 1983-94.

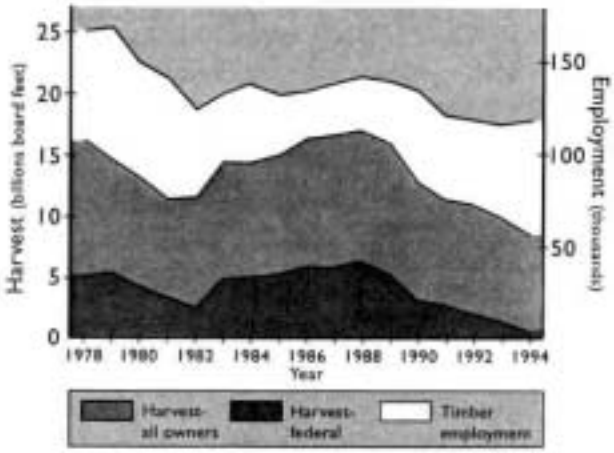

Figure 16—The relation between harvest from all owners, federal harvest, and timber employment in the region, 1978-94.

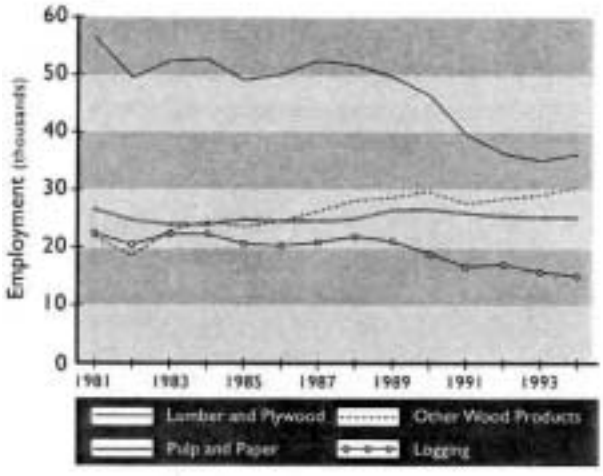

Figure 17- Trends in timber industry employment in the spotted owl region in Oregon and Washington. 1981-94.
Sources: Oregon Employment Development Department, Washington Employment Security Department.

Table 11 – Distribution of employment in the region's timber industry, 1990

Sector	Percentage
Secondary Manufacturing	19.9
Logging	15.5
Sawmills	27.3
Plywood and veneer mills	12.7
Other solid wood	3.6
Pulp and paper	21.0

Source: Richard Phillips, USDA Forest Service, 1990 IMPLAN data for the spotted owl region.

Timber Harvest
Timber Employment

The last decade has seen a close relation between timber harvest and employment in the timber industry (figure 16). Much of the region's harvest, averaging between 60 and 70% of the region's total over the last decade, comes from nonfederal ownerships; this volume has been and continues to be the main source of supply for the region's timber industries. Changes in federal timber harvest, therefore, are not proportionately translated into changes in either total harvest or employment. For example, in western Oregon and western Washington, harvest from federal forests fell 61% between 1988 and 1992, total harvest fell 31%, and timber industry employment fell 13%.

An important reason that employment changes have not proportionately reflected changes in timber harvest is that not all components of the timber industry depend entirely on the region's forests for their raw material. The distribution of employment by major sectors in the timber industry is shown in table 11. The logging, sawmill, and plywood and veneer sectors depend very heavily on the region's forests for their raw material. The secondary manufacturing industry, however, depends on a wide array of raw materials, including the output from the region's sawmills and plywood mills, but also on nonwood raw materials and wood products from outside the region. The hardwood industry has been relatively unaffected by reductions in federal harvest rates because much of the region's hardwood volume is on private forest land (Raettig et al. 1995). The pulp and paper industries also do not depend heavily on the region's forests for pulpwood, relying instead on mill residues (which have been affected by changes in sawmill and plywood plant production), the world chip market, and recycled wood fiber materials. Finally, the industry has shifted somewhat from log export to processing by domestic mills.

The historical record of employment differs from one sector of the timber industry to another. In western Oregon and western Washington (figure 17), employment losses have been apparent in the primary manufacturing sectors---sawmills producing softwood lumber and softwood plywood and veneer mills. Employment in logging has changed during recent years in response to changes in the total volume harvested from all ownerships. The pulp and paper sector has been relatively unchanged, and the other wood-products sector, which is comprised mainly of secondary or value-added manufacturers, has grown.

Because of the growth of the secondary wood-products manufacturing sector relative to other components of the timber industry, a common economic development theme is to encourage even further growth in the sector. Comprehensive approaches have been designed to take advantage of the opportunities that secondary manufacturing offers (Mater Engineering, Ltd. 1989, Fridley 1990, Sommers and Birss 1990, Dubal Beck and Associates 1991, Jensen International 1991). Sommers and Birss (1990) noted that focus-group participants in Oregon estimated 50 to 90% of the state's primary output, which could have been used by the state's secondary manufacturing industries, was sold in primary form to purchasers outside the state. The possi-

bilities for investing in secondary manufacturing are especially attractive to rural communities with localumber and plywood mills--the output of existing mills could become the raw material for a secondary manufacturing plant that chooses to locate close to raw material sources rather than potential markets.

Retraining and Assistance to Dislocated Timber Workers

Both state and federal governments have taken action to provide retraining and other services as a result of job losses in the timber industry. Since the end of 1990, the Department of Labor has awarded supplemental grants to the states to address the needs of dislocated timber workers; the grants are from the Secretary of Labor's National Reserve Account under Title III of the Job Training Partnership Act as amended by the Economic Dislocation and Worker Adjustment Assistance Act. Grants are intended to supplement the formula funds for Title III that are already administered by the states for timber and other dislocations, and they are made in recognition of mass layoffs, plant closures, disasters, and federal government actions. Workers who have lost and are unlikely to return to their previous jobs are eligible, as are the long-term unemployed with limited job prospects. A variety of retraining services are available to fit local circumstances, as are readjustment services such as outreach, testing, and counseling; payments to provide living expenses to those who have exhausted their unemployment insurance may also be included in the grants. The following tabulation summarizes the awards from the Secretary's Reserve Account for dislocated timber workers and the number of planned participants between late 1990 and the announcement of the Plan in 1993:

State	Amount awarded	Planned number of participants
California	$ 2,500,000	722
Oregon	$10,035,549	1,953
Washington	$ 8,572,310	3,094

Further awards, discussed elsewhere, have been made in the region since the Plan was announced.

Future Prospects for the Timber Industry[8]

The nation's timber industry is well positioned to respond to the growing domestic and international needs for solid wood products, structural panel products, engineered wood products, secondary or value-added products, and pulp and paper products. Nationwide, harvests are expected to increase substantially on forest industry and other types of private lands in response to investments in intensive forest management and stewardship strongly influenced by favorable economic opportunities in the wood-using industries. The region's timber industries will participate in this bright future and therefore remain as a key part of the region's economic base, but they will be affected by worldwide competitive pressures that will change product mixes and availability of raw materials. Raw-material needs are especially visible because harvest is constrained by the young ages of private forests and substantially reduced federal timber harvests.

[8] Much of the discussion in this section and its Subsections was provided by Richard Haynes, Program Manager, Social and Economic Values Research, Pacific Northwest Research Station, Portland, Oregon.

The region's timber industries have historically had higher costs for wood delivered to the mill than their principal competitors in the south-central part of the United States, interior British Columbia, and Alberta. The disparity in costs in the different regions is expected to continue into the future. Delivered wood costs include the costs of stumpage, logging, and log haul from woods to mill. During the 1970s, the disparity between the region's delivered wood costs and the costs of competing regions grew; during the 1980s, the difference diminished but never achieved parity. Beginning in 1988, delivered wood costs in the region again began to increase over costs in competing regions. Currently, average regional costs for wood delivered at the mill are about one-third greater than they are in the south-central states and almost 60% greater than they are in interior British Columbia and Alberta. Stumpage costs make up 70% of the delivered wood costs in the region compared with 67% of the delivered wood costs in the south-central states. Logging costs in the south-central states are about half what they are in this region.

As with other views of the future, this one depends on key assumptions about supply and demand. For example, these projections assume continuation of the trends in domestic and international economic growth of the last several decades. A key assumption for the region's timber industry concerns National Forest harvest rates in the rest of the nation. National Forest harvests are assumed to fall by 76% across the nation during the period of the late 1980s through the year 2000 because of several policy changes, including the Northwest Forest Plan. The background

and details of the projections that follow are described in Haynes et al. (1995).

In 1990, total U.S. consumption of softwood timber products, expressed as roundwood volume from growing stock, was 12.9 billion cubic feet. This amount was roughly 60% above the average consumption in the early 1950s but down from the highs experienced in the late 1980s. According to Haynes et al. (1995), softwood consumption is expected to increase to 14.3 billion cubic feet by 2040, with the largest increase in solid wood products. Increases in recycling keep pulpwood consumption constant for the next two decades in spite of expected increases in paper and board consumption over the same period.

The United States is expected to continue to be a net importer of softwood forest products, especially imports of softwood lumber from Canada. Exports of lumber and plywood from the United States will grow very little over the projection period. Log exports have already fallen from the 1984-to-1988 average rate of 3.1 billion board feet per year (1988 peak rate of 3.6 billion board feet) to 1.6 billion board feet in 1994 (Warren 1995). Log export volumes expected to remain at these rates because of increased competition from Canadian, Southern Hemisphere, and Russian sources, particularly at the low end of the quality spectrum, and the continued decline in the average size and quality of exportable logs, especially in the Douglas-fir region.

The change in federal timber availability in western Oregon, western Washington, and northern California affects private and other public timber producers through price increases for stumpage and intensified competition for available supply. Despite increases related to price, nonfederal suppliers are expected to provide more timber in western Oregon, and less in western Washington and northern California, than in the recent past. In total, regional (Pacific Northwest) nonfederal supply is expected over the next several years to approximate the 8.2 billion board feet that were annually harvested during 1990 to 1993.

The total amount of timber processed in the region is also expected to decline. Analysis reported in the Final Supplemental Environmental Impact Statement shows that 10.443 billion board feet will be processed annually during the next decade. This projected processing volume compares with the 14.84-billion-board-foot annual average from 1980 to 1989, and the 12.18-billion-board-foot annual average for 1990 to 1992.

Prospects for the Pacific Northwest (but not for California) start to improve after 2000, as consequence of private timber-land management activities undertaken in the region starting in the 1960s. Harvests are expected to regain their early 1960 volumes by 2030. In California, this recovery is both slower and not expected to return to the early 1960 harvest rates.

Prospects for western Oregon and western Washington

Lumber and plywood production are expected to fall (from 1991 rates) by 41% in Oregon and 36% in Washington by 2010. The drop in plywood production continues a trend that started in the mid 1980s; it is the consequence more of competition from oriented strand board and other composites than of timber supply problems. The drop in projections of lumber and, to a lesser extent, plywood production is influenced by changes in costs and in product recovery. As timber harvest from public lands decreased, stumpage price grew from roughly 1.6% per year in the 1980s to 10.4% per year between 1990 and 1994. Stumpage prices remained roughly constant in 1993, 1994, and for the first 6 months of 1995. With rising wood costs (and relatively stable product prices), the competitive position of the wood-products industry in the region deteriorated, profits fell, and solid wood-products output and capacity dropped, in spite of some increases in harvest on private timberlands. During the decades between 2000 and 2020, lumber is projected to consistently remain about 4.5 billion board feet below projections made in the late 1980s and based on assumptions of higher rates of federal-timber harvest. Plywood projection may be more variable, averaging about 0.5 billion square feet lower. Stumpage prices are expected to stabilize after 2020 at about the same rates projected in the late 1980s.

Total timber harvest in this region is expected to fall 37% by 2010 as a consequence of declines of harvest rates on private timberlands and public forest. After 2010, harvests start to increase as the effects of current and predicted private forest management practices lead to expanded private timber inventories.

Prospects for California

Lumber and plywood production in California have fallen since the 1970s. Changes in timber harvests from public lands compound adverse effects from several other changes. For example, the plywood production dropped after the rapid liquidation of privately owned Douglas-fir stands along California’s coast in the late 1950s and early 1960s.

Harvests from industrial timberlands are expected to decline in the late 1990s, reflecting the legacy of poorly stocked and mixed-species stands, increasing forest regulations, and liquidation of mature stands. As with western Washington and western Oregon, downward adjustments of harvests from public lands during the early 1990s accelerated stumpage price growth from roughly 1.1% in the 1980s to 14% per year between 1990 and 1994. With rising wood costs, the competitive position of the wood-products industry in the region deteriorates and solid wood

products output and capacity drop. Unlike western Oregon and Washington, California has almost no opportunity to offset some of these declines with increased harvests from private timberlands. Total harvests in this region are expected to fall 41% by the year 2000 and remain at that rate for the next several decades (Haynes 1990, Haynes et al. 1995).

THE NORTHWEST ECONOMIC ADJUSTMENT INITIATIVE

The Northwest Economic Adjustment Initiative was designed to recognize the plight of and directly help those workers, businesses, tribes, and communities in Washington, Oregon, and northern California affected by reductions in federal timber harvests. The Initiative is a new way of doing business: the federal government works in partnership with state, tribal, and local officials, and representatives of the nonprofit and private sectors to identify priority needs and then streamline assistance to help retrain dislocated workers, encourage and support investment and business retention and expansion, and develop infrastructure and much-needed professional capacity for economic development in hard-pressed communities.

The Initiative provides a means to assist the most affected parts of the region to work toward a sustainable, prosperous future. It complements the program of federal forest ecosystem management, the other three components of economic assistance (assurances for payments to counties, removal of log-export tax incentives, and aid to small businesses and secondary manufacturers) under the Plan, base federal funding already committed to the region, and state and local programs for economic assistance and development. The Initiative is more than a program to employ people; and--through its investments in the region's workers, businesses, and communities-its effects will be felt well into the future. The federal financial commitment, announced as part of the Plan, is to make $1.2 billion available to the region over 5 years, beginning in fiscal year 1994. Seven federal departments with 16 different programs are participating financially; three other agencies participate in the Initiative by providing technical assistance and leadership.

Principles and Objectives of the initiative

The Initiative, which was designed after the Forest Conference by a team of federal officials in consultation with state and local officials knowledgeable about economic development possibilities and needs, reflects the following principles. The assistance delivered in the Initiative:

- Should have long-term favorable effects and be implemented in a far-sighted, strategic manner.
  The Initiative is intended to ease the transitions necessary to allow dislocated workers to compete for permanent jobs; business and industry to survive and adapt to the new federal forest policy; and affected communities to develop the capacity to decide on and pursue a future appropriate to their opportunities and resources.
- Be implemented quickly and in a manner consistent with national policy.
  The need is immediate, so efforts to design new approaches to meet the region's needs would require painful delay. Broader domestic policy would also have to be reflected in the mix and degree of programs to be included in the Initiative.

- Be region-specific and tailor assistance to the many different kinds of effects associated with forest policy changes.
  The federal government serves both as a partner and leader as programmatic and policy issues are pursued; assistance is intended to reflect the relative needs associated with the geographic distribution of forest land, the timber industry, and dependence on federal timber.
- Deliver assistance based on geographic rather than conventional programmatic criteria.
  Assistance will favor those beneficiaries in the most affected communities in the region rather than be broadly directed to all potential beneficiaries.
- Incorporate a high degree of state and local participation and leadership in providing assistance.
  Local people know best what their needs and opportunities are---assistance cannot be decided upon and delivered exclusively by the federal government using a one-size-fits-all approach to the region's problems;

The objectives of the Initiative follow from its principles and the region's needs. The Initiative is intended to:

- Provide immediate relief for distressed timber communities and emphasize the need for immediate response.
- Create an environment for long-term economic development consistent with and respectful of the character of the communities and their natural resources.
- Develop new mechanisms for delivering assistance.
- Emphasize the equal partnership of the states and the critical role of local governments.
- Emphasize the use of performance-based funding (outcomes based on creating new opportunities and sustainable jobs) over traditional funding based on programmatic eligibility.

The Federal Commitment

The Initiative was designed to provide assistance needed to cope with 11,000 to 16,000 displaced workers--6,000 projected to be displaced as a result of Plan adoption and implementation, and between 5,000 and 10,000 remaining from the economic slowdown and timber-sale injunctions of 1990 to 1992--and associated effects on communities and businesses. The job-loss effects were expected to be unevenly distributed among the states, 55 to 65% of the total in Oregon, 30 to 35% in Washington, and 10 to 15% in California. The effects were also expected to be unevenly distributed within the states, mostly falling on small rural communities with a narrow economic base, a high degree of dependence on timber, and a heavy reliance on federal forests to meet the raw material needs of local mills.

The coordinating structure and responsibilities of the federal and nonfederal partners in the Initiative are discussed in detail in chapter 4. Briefly, the Multi-Agency Command has policy oversight responsibilities in Washington, DC, and works to resolve barriers and remove red tape that cannot be overcome in the region. The regional Community Economic Revitalization Team (regional CERT) is composed of federal representatives from the participating agencies and nonfederal representatives of the three state CERTs. The regional CERT is responsible for ensuring an equitable distribution of funds within the region, for identifying and addressing barriers

and red tape, and for sharing information and innovative approaches across the region. The three state CERTs are responsible for overseeing the day-to-day operations of the Initiative.

The counties eligible for assistance under the Plan have been selected by the three state CERTs (figure 18). The group of eligible counties includes several that are physically outside the range of the northern spotted owl: Ferry, Pend Oreille, and Stevens (Washington); Crook (Oregon); and Lake (California). Several counties have been excluded from assistance because they are largely urban and suburban and thus minimally within the range of the northern spotted owl: King, Kitsap, Thurston, and Yakima (Washington); and Lake, Multnomah, and Washington (Oregon).

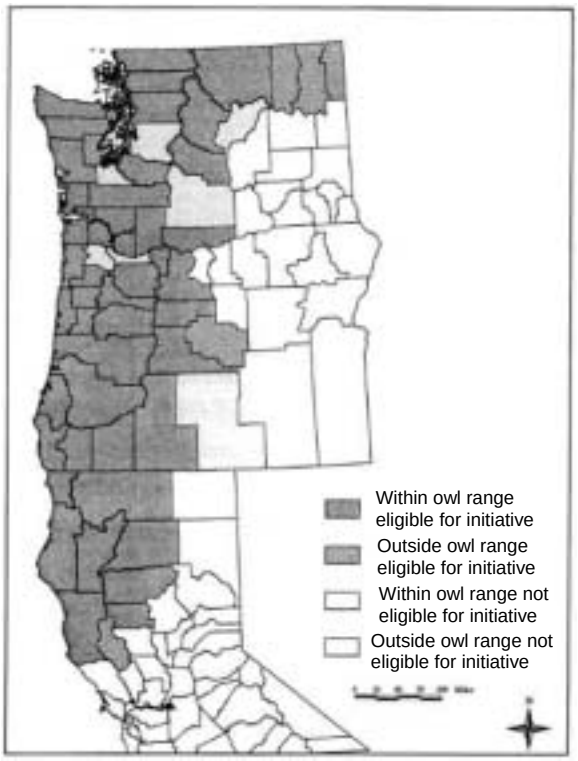

Figure 18- Counties in the region eligible for assistance under the Plan.

Additional agreements on federal participation and assistance affect the Initiative, but do not appear in the Interagency Memorandum of Understanding for Economic Adjustment and Community Assistance (1993). The original announcement of the Plan identified a new program, the Northwest Economic Adjustment Fund, as one of the elements of the Initiative, with the intent of providing state and local governments a flexible source of money to fund emergency social and municipal services. Finally, the additional $268 million originally targeted for the Initiative in fiscal year 1994 was intended to augment about $900 million already coming to the region in the base program funding of the participating agencies and federal revenue-sharing payments to counties.

Programmatic commitments

The Initiative brings four broad types of assistance to the region:

- Assistance to workers and families aimed at the intermediate-term effects of retraining dislocated workers and supporting their families, and bringing similar opportunities to bear on the secondary and tertiary displacements resulting from timber-related dislocations. A related short- to intermediate-term effort in the Plan is the resumption of federal timber sales.
- Assistance to business and industry aimed at retaining existing businesses and, in the intermediate term, diversifying the business base throughout the region by improving access to capital, expanding technical assistance and support, and improving access to domestic and international markets. Related short-term efforts in the Plan are the increased supply associated with federal timber sales, and an improved business climate as the federal-state-local partnership works to ease the transitions in the economy.

- Assistance in developing the community infrastructure and technical capacity needed for communities to effect the transition to an economically sustainable future, including a strengthened ability for communities to retain and encourage the growth of existing businesses, recruit new businesses, and stabilize the necessary public services that workers, their families, and local businesses depend on. Related short-term efforts in the Plan are the assured payments to local governments, and the diversification in business activity expected as the Initiative is implemented.
- Ecosystem investment aimed at providing short-term jobs, through a Jobs in the Woods program to workers in communities affected by federal forest policy changes, by undertaking much-needed work to restore the region's watersheds to environmentally sustainable conditions. Also aimed at watershed restoration and research through the Environmental Protection Agency, and investing in small, nonindustrial, private forest land stewardship.

A fifth category of assistance, the Northwest Economic Adjustment Fund of $13 million, was mentioned in the original announcement of the Plan and was included in the Administration's proposed nationwide economic stimulus legislation. The Fund was never implemented because the legislation was never passed by Congress.

Each of the four categories of assistance, the agencies and programs participating, and the financial commitments for fiscal year 1994 specified in the Interagency Memorandum (1993) are listed in table 12.

Funding the Initiative

The Initiative has been funded largely without additional appropriations for the participating agencies, though Congress has played a significant role in ensuring the availability and use of monies for certain programs within the region. Significant increases in USDA Rural Development (formerly Rural Development Administration, Farmers Home Administration) appropriations and accompanying base allocations to state operations were made between fiscal years 1993 and 1994. More than $248 million were available in the Initiative's programs in fiscal year 1994; the amount available increased to more than $268 million in 1995, and $209 million in 1996.

Participating agencies

The participating agencies and Departments used the following approaches to make funds available tO the Initiative:

Department of Labor--All of the funds available to the Initiative are from the national Secretary of Labor's Reserve. Though $12 million was designated as available for each year of the Initiative, the amount awarded depends on the merits of the grant proposals and may be either more or less than the $12 million designated.

Economic Development Administration---all of the funds for the Initiative, $11 million in fiscal year 1994, $3.5 million in 1995, and $9 million in fiscal year 1996, originally represented commitments over and above base allocations to the region. In practice, however, commitments from base funding declined to reach the funding rate in the Initiative.

Table 12 – Categories of assistance and participating federal agencies and programs, 1994			
Category of assistance	**Federal agency**	**Program**	**Type of involvement/ 1994 funding specified in *Interagency Memorandum***
Workers and families	Department of Labor	Secretaries Reserve, Title III, Job Training Partnership Act	Grant/$12 million
Business and industry	Rural Development	Rural business enterprise business and industry	Grant/$4.1 million, loan guarantee/$35.3 million
	Forest Service	Old-growth diversification	Grant to states/$3 million additional
	Forest Service	Rural community assistance	Grant to communities/$13 million
	Economic Development Administration	Technical assistance	Grant/$15 million additional
	Small Business Administration	*Loan guarantees*	Coordination and technical assistance; special target for loan guarantees not in *Interagency Memorandum*
Community And infrastructure	Rural Development	Community Facilities Water and Waste Water	Loan and loan guarantee/ $41.6 million grants and loans/$87 million
	Dept. of Housing and Urban Development	Community Development block grants	Grant to states; special target not in *Interagency Memorandum*
	Economic Development Administration	Planning assistance	Grant/included in $15 million, above
	Cooperative Extension Service	Technical assistance	Technical assistance available
	Forest Service	Jobs in the Woods	Contract, agreements/ $16 million additional
Ecosystems investments	Forest Service	Stewardship and stewardship incentives	Grants to states/ $4 million additional
	Bureau of Land Management	Jobs in the Woods	Contract, agreement/part of $30 million for Interior agencies
	Bureau of Indian Affairs	Jobs in the Woods	Contract/part of $30 million for Interior agencies
	Fish and Wildlife Service	Jobs in the Woods	Contract, agreement/part of $30 million for Interior agencies
	Environmental Protection Agency	Section 319, Clean Water Act	Grant to state/$5 million
	Corps of Engineers	Jobs in the Woods	No financial part in the Initiative, technical assistance available

Rural Development, Rural Business Enterprise Grant – Funds for the Initiative come from both base allocations to the region and national reserves. In fiscal year 1994, $4.1 million was initially available ($2.0445 million from base allocations, and $2.06 million from national reserves); in 1995, more than $4.4 million was available ($1.114 million from base allocations and $3.33 million from national reserves); in 1996, more than $4.1 million was made available. The total available for 1994 was increased by an additional $3 million by reprogramming funds from the Community Facilities Direct and Guaranteed Loan program and the Intermediary Relending program.

Rural Development, Water and Waste Water Loan – Funds for the Initiative come from both base allocations to the region and national reserves, in fiscal year 1994, more than $56.5 million was available ($45.744 million from base allocations and $10.8 million from national reserves); 1995, more than $74.7 million was available ($43.15 million from base allocations and $31.607 million from national reserves); and, in 1996, more than $34.08 million was available.

Rural Development, Water and Waste Water Grant – Funds for the Initiative come from both base allocations to the region and national reserves. In fiscal year 1994, more than $30.4 million was available ($24.703 million from base allocations and $5.753 million from national reserves); fiscal year 19951 more than $41.1 million was available ($23.753 million from base allocations and $17.396 from national reserves); in fiscal year 1996, more than $13.4 million was available.

Rural Development, Direct and Guaranteed Community Facilities Loan – Funds for the Initiative come from both base allocations to the region and national reserves. In fiscal year 1994, $11.598 million was available from base allocations and $30 million from national reserves was available for both the Direct and Guaranteed Community Facilities loans; in fiscal year 1995, more than $31 million was available ($7.792 million from base allocations, and $23.401 million from national reserves); in fiscal year 1996, more than $24.7 million was available. In fiscal year 1994,the total was reduced through reprogramming to slightly more than $32 million to fund an increase in the Rural Business Enterprise Grant program.

Rural Development, Business and Industry Guaranteed Loan – Funds for the Initiative come from both base allocations to the region and national reserves. In fiscal year 1994, $35.3 million was available ($11.775 million from base allocations and $23.525 million from national reserves); fiscal year 1995, almost $46 million was available ($24.389 million from base allocations and $21.6 million from national reserves); in fiscal year 1996, more than $50 million was available.

Rural Development, Intermediary Relending – All funds available to the Initiative are from national sources. In fiscal year 1994, $13.4 million was available; in 1995, $16 million; and in fiscal year 1996, $8 million was available. In fiscal year 1994, the total was reduced through reprogramming to $13.4 million to fund an increase in the Rural Business Enterprise Grant program.

Forest Service, OM-Growth Diversification – All of the funds in the program are dedicated to the Initiative and passed through to state agencies to administer. In fiscal year 1994, $6.5 million was available--representing an increase of $4 million over the fiscal year 1993 program of $1.5 million and an increase of $3.5 million over the approximate program average of $2 million for fiscal years 1991 and 1992. In fiscal year 1995, $4.9 million was available, and in fiscal year 1996 $3 million was made available.

Forest Service, Rural Community Assistance – All of the funds available to the Initiative, $10 million in fiscal year 1994, $11 million in 1995, and $12.76 million in 1996, are increases authorized by Congressional appropriation over and above base allocations to the region. The funds for the Initiative were substituted for the smaller base programs in the area covered by the Plan.

Forest Service, Watershed Restoration and Jobs in the Woods – The funds allocated to the Initiative were $20 million in fiscal year 1994, $14.6 million in 1995, and $13.5 million in 1996. Some Forest Service officials view the funds as dedicated for specific purposes and, therefore, earmarks within budgets that have not increased to accommodate watershed restoration. For field officials, therefore, the program represents no increase in forest management on the National Forests but is shift in program implementation.

Forest Service, Forest Stewardship and Stewardship Incentive programs – No funds have been appropriated for the Initiative, though the commitment to the Initiative is $4 million annually. Competing national needs and priorities for the program precluded reprogramming.

Department of the Interior agencies (Bureau of Land Management, Fish and Wildlife Service, and Bureau of Indian Affairs), Watershed Restoration and Jobs in the Woods – All of the funds available to the Initiative, $7 million in fiscal year 1994, $18.09 million in 1995, and $13.14 million in 1996 are increases over and above base program funds.

Environmental Protection Agency Ecosystem Investment – The funds available to the Initiative, $5 million in fiscal years 1994, $5.5 million in 1995, and $5 million in 1996 represent no increase over base funding in the region but are earmarks within existing program areas.

Department of Housing and Urban Development, Community Development Block Grants – All funds are passed through to state agencies to administer. The funds available to the Initiative, $1.9 million in fiscal years 1994, 1995, and 1996 represent no increase over base funding. In fiscal years 1994, 1995, and 1996, base funding available to the region was increased over the prior fiscal year through regular appropriations increases. The Department measures its contribution to the Initiative by the actual awards within the area covered by the Plan and substantially exceeded the $1.9 million target by awarding more than $20 million within the region in 1995 and $17.75 million in 1996.

The region's programmatic advantages

The region enjoys several programmatic advantages as a result of the Initiative. The clearest advantage is that federal agencies reprioritize the use of funds to favor projects in communities and areas that are affected by changes in federal forest policy; without the initiative, available funds, base or appropriated, would not likely have been targeted to provide assistance in timber affected communities. A second advantage comes from the programs that are funded partly or wholly from national sources because, without the Initiative, such funds would likely not have reached the region. Finally, funds that are passed through to state agencies, such as the Community Development Block Grant and Old-Growth Diversification programs, allow the states the flexibility to develop their unique priority systems and uses, and to adjust those priorities and uses through experience.

Table 13 – Comparisons between 1993 and 1995 in allocations and obligations for selected Rural Development programs in Oregon

Program	1993				1995			
	Base allocation (dollars)	Total obligations	Obligations in Plan area	Obligations in Plan area	Base allocation	Total obligations	Obligations in Plan area	Obligations in Plan area
Water and waste-disposal loan	6,445,000	6,940,600	6,640,600	300,000	9,986,000	25,596,650	24,932,650	664,000
Water and waste-disposal grant	3,851,000	4,532,400	3,732,400	800,000	5,497,000	14,295,080	12,295,080	2,000,000
Community facilities guaranteed loans	25,000	25,000	25,000	0	870,000	1,000,000	0	1,000,000
Direct community facilities loans	1,056,000	570,000	410,000	160,000	1,803,000	14,810,140	6,060,540	8,749,600
Intermediary relending	1,000,000	1,000,000	1,000,000	0	0	8,000,000	6,000,000	2,000,000
Rural business enterprise grant	140,000	210,000	210,000	0	500,000	2,210,290	1,710,290	500,000
Business and industry loan guarantee	--	--	0	0	5,644,000	4,800,000	4,800,000	0
Total	**12,517,000**	**13,278,000**	**12,018,000**	**1,260,000**	**24,300,000**	**70,712,160**	**55,798,560**	**19,413,600**
Total from national reserves	--	1,247,000	--	--	--	46,411,870	--	--

The programmatic advantages of the Initiative can be difficult to interpret for programs that are funded partly from base allocations and partly from national sources. Rural Development programs in Oregon are illustrative. The source and use of funds for the seven Rural Development programs, including the Initiative in Oregon for fiscal years 1993 and 1995, are shown in table 13. In fiscal year 1993, the year before the Plan was adopted, more than $12 million was available in the base allocation to the state and more than $13 million was spent--some $12 million was spent inside the area covered by the Plan, and $1.2 million in funds from national reserves augmented the state's base allocations in three of the programs. For reasons not directly related to forestry in the Northwest, Congress increased funding for rural programs in the nation in fiscal year 1994. In fiscal year 1995, the latest year for which complete data are available, base allocations were more than $24 million--almost twice the total available in 1993. Total obligations in Oregon increased more than five-fold between 1993 and 1995--rising to $70.7 million--and obligations within the area affected by the Plan rose to almost $56 million. The increase in base funding allowed large increases in funding both inside and outside the area covered by the Plan. Very clearly, however, the spending of national reserves, which was more than $47 million, was a direct result of the national priority identified by the Plan.

State Community Economic Revitalization Teams

The state Community Economic Revitalization Teams (state CERTs) are the heart of the combined federal, state, tribal, and local effort to identify economic adjustment problems and opportunities, and then to devise appropriate methods for solving those problems. The responsibility of the Governors and state CERTs to coordinate and communicate with local governments and communities is one of the key provisions of the Federal-State Memorandum of Understanding for Economic Adjustment and Community Assistance (1993), which complements the Interagency Memorandum. By approving the Federal State Memorandum, the Governors agreed to join with the federal government to commit the resources necessary to carry out the Implementation Plan.

Actions to Date

Fiscal year 1994 was the first full year of the Initiative. State Community Economic Revitalization Teams were organized in each state. Formation and operation of the Oregon CERT capitalized on the already existing Oregon Rural Development Council, a strong Portland Federal Executive Board, and the local and multicounty strategic planning and scoping previously conducted or underway with the Oregon Economic Development Department's Regional Strategies program. The Washington CERT was built on the previously successful experience of the Governor's Timber Team and allied state programs in dealing with the economic and social dislocations accompanying layoffs in the state's timber industry. For both states, therefore, programs had been underway to assist timber-affected areas for several years before the Plan was announced. The California CERT was created from scratch and undertook the economic assistance tasks of the Initiative without the benefit of state institutions exclusively charged with the responsibility of dealing with issues of rural development and rural industrial dislocation.

The state CERTs are similar in that they and their supporting network of economic and community-development specialists act as a clearinghouse for local proposals in the business and industry, and community and infrastructure categories of assistance. Although the exact steps differ by state, proposals in these categories may be developed by governmental or nonprofit groups at the local or state scale. Priorities among locally developed projects for infrastructure, capacity building, capital access through nonprofit organizations, and community development are typically set at the county scale before they are forwarded to the state CERT. Financial assistance to businesses through loans and loan guarantees is delivered either through nonprofit economic development intermediaries or commercial banks working in conjunction with funding agencies.

A major innovation made possible by the state CERT structure is the "lead agency" approach to working with project funding. Projects meeting or potentially meeting the eligibility criteria of the programs administered by one or more of the Initiative's participating federal or state agencies are passed to a lead federal or state agency. Technical specialists from the lead agency then work with both the applicant and other potential funding agencies to prepare the proposal for final approval; the decision to approve a project is made by the funding agency or agencies, and approval is subject to the availability of funds. Assistance can be flexibly tailored to the circumstances of the proposal--funding may come from more than one federal program, may be combined with state funds or funds from other sources, and may be in the form of grants, loans, loan guarantees, or a combination thereof.

Projects in the worker and family category, which are funded by the Secretary of Labor's Reserve under Title Iii of the Job Training Partnership Act, are forwarded to the Department of Labor by state agencies responsible for worker retraining programs. The responsible state agency may work with local governments, private, nonprofit parties, or a combination of groups to prepare the proposals. Some of the funds in this category are being used to provide in-classroom training in business, ecosystem science, and personal skills for displaced timber workers. These workers also receive on-the-job experience in ecosystem restoration by working on projects from the watershed restoration/Jobs in the Woods program.

The watershed restoration/Jobs in the Woods category has both economic development and environmental restoration objectives; it is intended to provide employment opportunities that produce ecological benefits. Projects for the program are developed either by the federal land management agencies (Forest Service, Fish and Wildlife Service, Bureau of Land Management, and Bureau of Indian Affairs), in collaboration with state and tribal representatives, or by the state agencies responsible for watersheds for some funds going to the state of Washington.

Funding in fiscal year 1994

In fiscal year 1994, more than $126 million in federal assistance of $248.2 million of federal funding formally available in the Initiative was delivered to more than 100 communities in grants (46% of assistance), government contracts (21% of assistance), and loans and loan guarantees (33% of assistance)(table 14). The state-by-state distribution of the assistance was 46% spent Oregon, 29% in Washington, and 21% in California. Additionally, $164 million in loans were guaranteed by the Small Business Administration in the region. By category of assistance, the distribution was assistance to workers and families, 7%; assistance to business and industry, 31%; assistance for communities and infrastructure, 37%; and watershed restoration, 25%. The distribution of funds by category of assistance, program, and state is shown in table 15.

Some federal and nonfederal participants in the Initiative were concerned and frustrated by the difficulties inherent in establishing new working relations, reaching out to potential bene6ciaties of the many different programs, and working to complete applications for the many different kinds of assistance in a timely manner. For example, the Department of Labor's Reserve funds were incompletely used in the region because filing deadlines were not met (deadlines were announced in October 1993), an already existing set of training programs funded through Job Training Partnership Act Title III formula funds, and a lack of capacity in some areas to take advantage of the program or to increase a commitment to the program.

The complete set of commitments specified in the Interagency Memorandum (1993) was proposed to Congress for funding. Congress appropriated most, but not all of the amount requested so that funding available in each program was less than proposed. Agency actions further modified the amounts appropriated. The main reasons for the differences between proposed and obligated amounts were

- To provide more grants, the amount available to the Rural Business Enterprise Grant program was increased to $7.1 million from $4.1 million by reprogramming (reducing) the amount available in the Community Facilities Grant and Loan program to $32 million from $41.6 million and by reprogramming the Intermediary Relending Program to $13.4 million from $16 million. The reprogramming request was initiated jointly by the states and regional representatives of Rural Development.

Table 14 – Distribution of funds spent for the Initiative in fiscal year 1994, by department, agency and program

Departmental program	Funds available	Funds spent in the region	Percentage of available dollars spent in the region
Department of Agriculture			
Forest Service—Community Assistance	10,000,000	9,598,000	96
Forest Service—Old-Growth Diversification	6,500,000	6,348,000	98
Forest Service—Watershed Restoration/ Jobs in the Woods	20,000,000	20,000,000	100
Rural Development Administration (Rural Development)			
Rural Business Enterprise grants	7,095,500	6,580,900	93
Business and Industry loan guarantees	35,300,000	0	0
Intermediary relending	13,401,000	5,500,000	41
Water and Waste Water loans	56,544,000	28,496,200	50
Water and Waste Water grants	30,456,000	11,400,500	37
Community Facilities loans	32,028,000	5,606,600	18
Department of Housing and Urban Development			
Community Development block grants	1,900,000	1,900,000	100
Department of Labor			
Job Training Partnership Act—Secretary's Reserve	12,000,000	8,400,000	70
Department of Commerce			
Economic Development Administration	11,000,000	10,775,000	98
Department of the Interior			
Bureau of Land Management Watershed Restoration/Jobs in the Woods	5,000,000	5,000,000	100
Fish and Wildlife Service Watershed Restoration/Jobs in the Woods	1,000,000	1,000,000	100
Bureau of Indian Affairs Watershed Restoration/Jobs in the Woods	1,000,000	1,000,000	100
Environmental Protection Agency			
Clean Water Act Section 319, research grants	5,000,000	4,999,000	100
Total for the Initiative	**248,224,500**	**126,604,900**	**51**
Other Federal:			
Small Business Administration loan guarantees	154,000,000	164,308,960	107

Table 15 – Expenditure for the Initiative fiscal year 1994, by category of assistance, program, and state

Program by category of assistance	Initiative funds available (dollars)	State						Percentage	
		Oregon		Washington		California		*Total dollars*	*of available funds*
		Dollars spent	%	Dollars spent	%	Dollars spent	%		
Assistance through the Initiative for workers and families									
Department of Labor—Secretary's Reserve	12,000,000	6,600,000	55	1,800,000	15	0	0	8,400,000	70
Category total	**12,000,000**	**6,600,000**	**55**	**1,800,000**	**15**	**0**	**0**	**8,400,000**	**70**
Assistance through the Initiative for business and industry									
Rural Development									
Rural Business Enterprise grants	7,095,500	2,961,750	42	2,169,950	31	1,449,200	20	6,580,900	93
Business and Industry loan guarantees	35,300,000	0	0	0	0	0	0	0	0
Intermediary relending	13,401,000	5,500,000	41	0	0	0	0	5,500,000	41
USFS									
Old-Growth Diversification grants	6,500,000	2,541,000	39	2,525,000	39	1,282,000	20	6,348,000	98
Rural Community Assistance grants	10,000,000	4,465,000	45	2,781,000	28	2,352,000	24	9,598,000	96
Economic Development Administration									
Technical assistance	11,000,000	6,350,000	58	2,796,000	25	1,629,000	15	10,775,000	98
Category total	**83,296,500**	**21,817,750**	**56**	**10,271,950**	**26**	**6,712,200**	**17**	**38,801,900**	**47**
Assistance through the Initiative for communities and infrastructure									
Rural Development									
Water and Waste Water grants	30,456,000	4,933,500	16	3,640,000	12	2,827,000	9	11,400,500	37
Community Facilities direct and guaranteed loans	32,028,000	3,177,200	10	2,429,400	8	0	0	5,606,600	18
Water and Waste Water loans	56,544,000	8,737,200	15	8,653,900	15	11,105,100	20	28,496,200	50
Housing & Urban Development									
Community Development block grants	1,900,000	450,000	24	450,000	24	1,000,000	53	1,900,000	100
Category total	**120,928,000**	**17,297,900**	**36**	**15,173,300**	**32**	**14,932,100**	**32**	**47,404,000**	**39.2**
Assistance through the Initiative for ecosystem investment									
USFS									
Jobs in the Woods	20,000,000	7,700,000	39	7,600,000	38	4,000,000	20	20,000,000	100
Stewardship and Stewardship Incentives	0	0	0	0	0	0	0	0	0
BLM—Jobs in the Woods	5,000,000	4,800,000	96	0	0	200,000	4	5,000,000	100
BIA—Jobs in the Woods	1,000,000	0	0	600,000	60	300,000	30	1,000,000	100
Fish and Wildlife Service									
Jobs in the Woods	1,000,000	0	0	806,902	81	0	0	1,000,000	100
EPA—Ecosystem research	5,000,000	480,000	10	394,000	8	300,000	6	4,999,000	100
Category total	**32,000,000**	**12,980,000**	**41**	**9,400,902**	**29**	**4,800,000**	**15**	**31,999,000**	**100**
Total for all programs in the Plan	**248,224,500**	**58,695,650**	**46**	**36,646,152**	**29**	**26,444,300**	**21**	**126,604,500**	**51**

Ecosystem Investment regional and administrative percentages for implementing Jobs in the Woods for FS, BLM, BIA, and F&Ws are 3.5%, 0%, 10%, and 19% respectively; EPA regional use of research funds is 77% with the remainder passed through to the states.

- The amount available in Economic Development Administration Title IX technical assistance grants was reduced to $11 million from $15 million because of disaster relief needs elsewhere in the nation, and economic adjustment needs associated with the fishing and coal mining industries.
- Only $7 million of the originally proposed $30 million was appropriated to fund the Interior Department's watershed restoration program.
- Commitments to the Initiative for the Forest Service's Forest Stewardship and Stewardship Incentive programs were proposed but unfunded.
- The Forest Service had $20 million appropriated for watershed restoration rather than the proposed $16 million.
- The Forest Service's Old-Growth Diversification program had $6.5 million available, in contrast to the $1.5 million that was available in 1993, and California was included in the program for the first time.
- The partial use of funds in the Farmers' Home Administration and Rural Development Administration's (Rural Development) programs reflects programmatic difficulties in making use of the Business and Industry Loan Guarantee program, expenditures made for priority needs within the three-state area but outside the region covered by the Plan, a lack of demand for the services provided by some programs, and lag times necessary to prepare and complete complex construction-related program proposals for infrastructure and facilities. Funds from the Community Facilities and Intermediary Relending programs, which were only partly used, were reprogrammed to increase the dollars available in the Rural Business Enterprise Grant program.

Funding in fiscal year 1995

In fiscal year 1995, federal spending increased dramatically over 1994, and more than $217 million of an available $268 million was delivered to the region; 42% of the total was awarded as grants, 43% was awarded as loans or loan guarantees, and 14% was awarded in contracts or agreements (table 16). Additionally, the Small Business Administration, by targeting loan-guarantee activity to the affected counties in the Region, guaranteed almost $163 million in loans. The state-by-state distribution of the assistance was 44% spent in Oregon, 32% in Washington, and 25% in California. By category of assistance, the distribution was assistance to workers and families, 9%; assistance to business and industry, 23%; assistance for communities and infrastructure, 53%; and watershed restoration, 15% (table 17).

As in fiscal year 1994, the amounts available differed from what was originally proposed because of changes in both the amounts appropriated by Congress and the agencies' decisions to adjust their funding. The principal reasons for the differences between the amounts proposed and spent were

- The Department of Labor's Job Training Partnership Act funds exceeded the target originally intended; more opportunities were available for retraining than anticipated, so the amount awarded in the region was increased above the $12 million target.
- Significant progress was made in implementing the Rural Development Business and Industry Loan Guarantee program, though some of the funds in the program remained unused by the agency.

Table 16 – Distribution of funds spent for the Initiative in fiscal year 1995, by department, agency and program

Departmental program	Funds available	Funds spent in the region	Percentage of available dollars spent in the region
Department of Agriculture			
Forest Service—Community Assistance	1,012,000	9,306,977	85
Forest Service—Old-Growth Diversification	4,900,000	4,800,000	93
Forest Service—Watershed Restoration/Jobs in the Woods	14,600,000	12,145,100	83
Rural Development Administration (Rural Development)			
Rural Business Enterprise grants	4,149,250	3,563,350	86
Business and Industry loan guarantees	36,994,250	14,425,000	39
Intermediary relending	16,000,000	14,200,000	89
Water and Waste Water loans	58,843,274	48,819,550	84
Water and Waste Water grants	32,388,975	29,672,280	92
Community Facilities loans	28,319,000	16,479,840	58
Community Facilities guaranteed loans	13,949,624	6,000	0
Department of Housing and Urban Development			
Community Development block grants	1,900,000	20,305,983	1,053
Department of Labor			
Job Training Partnership Act—Secretary's Reserve	12,000,000	19,200,000	160
Department of Commerce			
Economic Development Administration	10,000,000	3,528,500	35
Department of the Interior			
Bureau of Land Management	11,977,000	10,869,305	91
Watershed Restoration/Jobs in the Woods			
Fish and Wildlife Service	3,518,000	3,264,978	93
Watershed Restoration/Jobs in the Woods			
Bureau of Indian Affairs	2,595,000	2,988,281	115
Watershed Restoration/Jobs in the Woods			
Environmental Protection Agency			
Clean Water Act Section 319, research grants	5,000,000	4,269,000	101
Total for the Initiative	**268,146,373**	**217,844,144**	**82**
Other Federal:			
Small Business Administration loan guarantees	152,000,000	162,955,926	107

Table 17 – Expenditure for the Initiative fiscal year 1995, by category of assistance, program, and state

Program by category of assistance	Initiative funds available (dollars)	State						*Percentage*	
		Oregon		Washington		California		*Total dollars*	*of available funds*
		Dollars spent	%	Dollars spent	%	Dollars spent	%		
Assistance through the Initiative for workers and families									
Department of Labor—Secretary's Reserve	12,000,000	7,000	36	8,200,000	43	4,000,000	21	19,200,000	160
Category total	**12,000,000**	7,000	36	8,200,000	43	4,000,000	21	19,200,000	160
Assistance through the Initiative for business and industry									
Rural Development									
Rural Business Enterprise grants	4,149,250	1,710,290	48	1,137,860	32	715,200	20	3,563,350	86
Business and Industry loan guarantees	36,994,250	4,800,000	33	5,300,000	37	4,325,000	30	14,425,000	39
Intermediary relending	16,000,000	6,000,000	42	5,000,000	35	3,200,000	23	14,200,000	89
USFS									
Old-Growth Diversification grants	4,900,000	1,190,000	40	1,910,000	40	980,000	20	4,800,000	98
Rural Community Assistance grants	11,012,000	4,485,395	48	2,790,582	30	2,031,000	22	9,306,977	85
Economic Development Administration									
Technical assistance	10,000,000	2,374,000	67	516,500	15	638,000	18	3,528,500	35
Category total	**83,055,500**	**21,279,685**	**43**	**16,654,942**	**33**	**11,889,200**	**24**	**49,823,827**	**60**
Assistance through the Initiative for communities and infrastructure									
Rural Development									
Water and Waste Water grants	32,388,975	12,295,080	41	10,278,700	35	7,098,500	24	29,672,280	92
Community Facilities direct and guaranteed loans	28,319,000	6,060,540	37	1,335,800	8	9,083,500	55	16,479,840	58
Community Facilities guaranteed loans	13,949,624	0	0	6,000	100	0	0	6,000	0
Water and Waste Water loans	58,843,274	24,932,650	51	15,559,900	32	8,327,000	17	48,819,550	83
Housing & Urban Development									
Community Development block grants	1,900,000	5,082,612	25	6,715,752	33	8,507,619	42	20,305,983	1,069
Category total	**135,400,873**	**48,370,882**	**42**	**33,896,152**	**29**	**33,016,619**	**21**	**115,283,653**	**85**
Assistance through the Initiative for ecosystem investment									
USFS—Jobs in the Woods	14,600,000	4,968,400	41	3,994,700	33	3,182,000	26	12,145,100	83
BLM—Jobs in the Woods	11,977,000	9,975,305	92	0	0	894,000	8	10,869,281	91
BIA—Jobs in the Woods	2,595,000	65,154	2	2,332,453	78	590,674	20	2,988,281	115
Fish and Wildlife Service									
Jobs in the Woods	3,518,000	1,028,978	32	1,350,000	41	886,000	27	3,264,978	93
EPA									
Ecosystem research, nonpoint sources	5,000,000	1,811,000	42	2,458,000	58	0	0	4,269,000	85
Category total	**37,690,000**	**17,848,837**	**53**	**10,135,153**	**30**	**5,552,674**	**17**	**33,536,664**	**94**
Total for all programs in the Plan	**268,146,373**	**94,499,404**	**43**	**68,886,247**	**32**	**54,458,493**	**25**	**217,884,144**	**81**

- The Economic Development Administration chose not to go ahead with many of the projects that would have been funded with its original $10 million target.
- The Rural Development Community Facility Guaranteed Loan program wasn't fully used and remained an economically unattractive program relative to alternative sources of community financing.
- The Department of Housing and Urban Development classified the awards made in affected counties in the region as part of the total to be compared against their target, so many more dollars than originally anticipated appeared in the Department's total.
- The Department of the Interior agencies had an aggregate total of $18.1 million appropriated for the watershed restoration/Jobs in the Woods program rather than the proposed $30 million.
- The Forest Service's Forest Stewardship and Stewardship Incentive programs remained un-funded as a part of the Initiative.
- Forest Service, Bureau of Land Management, and Fish and Wildlife Service totals for the watershed restoration/Jobs in the Woods program for funds spent differ from funds available because the total for funds spent represents only the amount awarded for work to be done by private and nonprofit workers and does not include the funds retained within each agency to prepare projects for award; the Bureau of Indian Affairs total spent for watershed restoration/Jobs in the Woods exceeds the total available because of an earmark special award.

Funding in fiscal year 1996

Federal spending in fiscal year 1996 came in at 103 percent, $215.8 million, of the $209.45 million that was originally available to the region; 43% of the total was awarded as grants, 44% was awarded as loans or loan guarantees, and 13% was awarded in contracts or agreements (table 18). In additional, the Small Business Administration, by targeting loan-guarantee activity to the affected counties in the region, guaranteed more than $169 million in loans.

The state-by-state distribution of the assistance was 48% spent in Oregon, 28% in Washington, and 24% in California. By category of assistance, the distribution was assistance to workers and families, 6%; assistance to business and industry, 29%; assistance for communities and infrastructure, 50%; and watershed restoration, 14% (table 19).

The amount awarded or obligated in the region was higher than the amount that was originally proposed because of changes in Congressional appropriations and individual agency decisions to adjust funding during the fiscal year, and to obligate or award additional new program dollars in the affected timber area. The principal reasons for the differences between the amounts are

- The Department of Labor's Job Training Partnership Act funds ($12.97 million) exceeded the target. The Department of Labor's position has always been that the $12 million target is a minimum and not a maximum, and that more is available subject to the submission of proposals. In fiscal year 1996, no proposals for timber-affected counties in California were received.
- The Rural Development Business and Industry Loan Guarantee program made significant progress and obligated more than $25 million or about 50% of what was available.

Table 18 – Distribution of funds spent for the Initiative in fiscal year 1996, by department, agency and program

Departmental program	Funds available	Funds spent in the region	Percentage of available dollars spent in the region
Department of Agriculture			
Forest Service—Community Assistance	12,760,000	10,900,000	85
Forest Service—Old-Growth Diversification	3,000,000	2,890,000	96
Forest Service—Watershed Restoration/Jobs in the Woods	13,510,000	13,510,000	100
Rural Development Administration (Rural Development)			
Rural Business Enterprise grants	4,100,000	4,420,000	108
Business and Industry loan guarantees	50,000,000	26,680,000	53
Intermediary relending	8,000,000	8,320,000	104
Water and Waste Water loans	34,080,000	39,840,000	117
Water and Waste Water grants	13,400,000	29,030,000	217
Community Facilities loans	24,700,000	21,570,000	87
Community Facilities guaranteed loans	8,860,000	0	0
Department of Housing and Urban Development			
Community Development block grants	1,900,000	17,750,000	934
Department of Labor			
Job Training Partnership Act—Secretary's Reserve	12,000,000	12,970,000	108
Department of Commerce			
Economic Development Administration	5,000,000	9,930,000	199
Department of the Interior			
Bureau of Land Management	7,770,000	7,580,000	98
Watershed Restoration/Jobs in the Woods			
Fish and Wildlife Service	2,370,000	2,100,000	89
Watershed Restoration/Jobs in the Woods			
Bureau of Indian Affairs	3,000,000	3,000,000	100
Watershed Restoration/Jobs in the Woods			
Environmental Protection Agency			
Clean Water Act Section 319,	5,000,000	5,320,000	106
research grants, nonpoint sources			
Total for the Initiative	**209,450,000**	**215,810,000**	**103**
Other Federal:			
Small Business Administration loan guarantees	Target N/A	169,260,000	N/A

Table 19 – Expenditure for the Initiative fiscal year 1996, by category of assistance, program, and state

Program by category of assistance	Initiative funds available (dollars)	State						Percentage	
		Oregon		Washington		California		*Total dollars*	*of available funds*
		Dollars spent	%	Dollars spent	%	Dollars spent	*%*		
Assistance through the Initiative for workers and families									
Department of Labor—Secretary's Reserve	12,000,000	6,720,000	52	6,250,000	48	0	0	12,970,000	108
Category total	**12,000,000**	**6,720,000**	**52**	**6,250,000**	**48**	**0**	**0**	**12,970,000**	**108**
Assistance through the Initiative for business and industry									
Rural Development									
Rural Business Enterprise grants	4,100,000	2,370,000	54	1,270,000	29	780,000	18	4,420,000	108
Business and Industry loan guarantees	50,000,000	16,110,000	60	1,660,000	6	8,920,000	33	26,690,000	53
Intermediary relending	8,000,000	4,320,000	52	2,400,000	29	1,600,000	19	8,320,000	104
USFS									
Old-Growth Diversification grants	3,000,000	1,150,000	40	1,150,000	40	590,000	20	2,890,000	96
Rural Community Assistance grants	12,760,000	5,230,000	48	3,610,000	33	2,060,000	19	10,900,000	85
Economic Development Administration									
Technical assistance	5,000,000	4,810,000	48	1,070,000	11	4,050,000	41	9,930,000	199
Category total	**82,860,000**	**33,990,000**	**54**	**11,160,000**	**18**	**18,000,000**	**28**	**63,150,000**	**76**
Assistance through the Initiative for communities and infrastructure									
Rural Development									
Water and Waste Water grants	13,400,000	14,300,000	49	10,150,000	35	4,580,000	16	29,030,000	217
Water and Waste Water loans	34,080,000	17,770,000	45	13,970,000	35	8,100,000	20	39,840,000	117
Community Facilities Direct loans	24,700,000	11,820,000	55	260,000	1	9,500,000	44	21,580,000	87
Community Facilities guaranteed loans	8,860,000	0	0	0	0	0	0	0	0
Housing & Urban Development									
Community Development block grants	1,900,000	4,630,000	26	8,410,000	47	4,710,000	27	17,750,000	934
Category total	**82,940,000**	**48,520,000**	**45**	**32,790,000**	**30**	**26,890,000**	**25**	**108,200,000**	**130**
Assistance through the Initiative for ecosystem investment									
USFS—Jobs in the Woods	13,510,000	5,150,000	38	5,040,000	37	3,320,000	25	13,510,000	100
BLM—Jobs in the Woods	7,770,000	6,320,000	83	0	0	1,260,000	17	7,580,000	98
BIA—Jobs in the Woods	3,000,000	0	0	2,720,000	91	280,000	9	3,000,000	100
Fish and Wildlife Service									
Jobs in the Woods	2,370,000	770,000	37	700,000	33	630,000	30	2,100,000	89
EPA									
Ecosystem research, nonpoint sources	5,000,000	2,280,000	43	2,290,000	43	750,000	14	5,320,000	
Category total	**31,650,000**	**14,520,000**	**46**	**10,750,000**	**34**	**6,240,000**	**20**	**31,510,000**	**0**
Total for all programs in the Plan	**209,450,000**	**103,750,000**	**48**	**60,950,000**	**28**	**51,130,000**	**24**	**215,830,000**	**103**

- The Rural Development Water and Waste Water grant program received additional funds for the timber-affected areas, as a result of the agency's Water 2000 Clean Drinking Water Initiative, as well as the Enterprise Community-Empowerment Zone Initiative. As a result, $29.03 million (rather than $13.40 million or +217% of what was expected) was obligated in the timber-affected region.
- The Economic Development Administration had originally cut back its availability of funds to $5 million, but chose to go ahead with many of its projects, consequently awarding $9.93 million or +199%.
- The Rural Development Community Facility Guaranteed Loan program continues to remained an economically unattractive program relative to alternative sources of community financing.

Removing barriers and impediments

By the end of fiscal year 1994, 49 barriers and impediments to effective program delivery had been identified. At that time, 26 barriers had been resolved as requested, 16 remained under consideration, and, for 7, the requested changes had been denied. By early in 1995, all of the unresolved issues had been addressed, though not all had been resolved as requested.

In March 1995, the chairs of the three State Community Economic Revitalization Teams submitted a list of 22 impediments and barriers to the Multi-Agency Command. Seven barriers were resolved as requested within one month. Subsequently, the involved federal agencies worked with both the Multi-Agency Command and regional CERT to respond to or resolve the remaining issues, though several persisted as partially unresolved into the summer of 1996.

For both 1994 and 1995, identified impediments and barriers fall into four broad categories. The categories, along with examples of specific impediments and the associated response are

- Barriers and impediments that require rule changes:

  Impediment. Delays between proposal submission and final approval exasperate both federal and nonfederal participants in the Initiative; for some programs, delays are due to the review and approvals that are required at successively higher organizational levels. In the Business and Industry Guaranteed Loan program administered by the Rural Business and Cooperative Development Service, final approval requires review and final decision in Washington, DC. Participants have proposed that the agency decentralize the decision authority to state offices, thereby bringing the program more into line with the turn-around time for loans guaranteed by the Small Business Administration.

  Agency response. The Rural Business and Cooperative Development Service is issuing new regulations that will streamline the program and replace the Farmers Home Administration regulations that currently govern its use. In the interim, state officials will have increased responsibility for loan approval; a joint national-state emphasis will be placed on pursuing the program as it is currently configured.

- Barriers and impediments addressed with administrative changes:

Impediment. The intent of the Jobs in the Woods program is to provide employment opportunities while carrying out important watershed restoration work. When the program was announced, no statutory or regulatory mechanism was provided whereby federal agencies could adjust federal procedures to favor the region's contractors or favor those contractors who hired local workers, particularly those workers dislocated from the timber industry.

Agency response. Both the Forest Service and Bureau of Land Management requested and were granted waivers of the full and open competition requirements for federal contracting; the waiver was granted by the Secretaries of Agriculture and Interior as a Public Interest Exception for fiscal year 1994, and a comparable waiver was granted again in fiscal years 1995 and 1996. The waiver permits advertising only within the region of the Plan, and permits contracting officers to preferentially award contracts to those whose place of business is within the area covered by the Plan. Congress provided a legislative waiver for contracting in the fiscal year 1997 Interior Appropriations Bill.

- Barriers and impediments addressed through clarification:

Impediment. When the jobs in the Woods program began, unemployed woods workers and others knew little or nothing about federal contracting procedures and regulations. Cash flow problems also plagued potential bidders for Jobs in the Woods contracts, and some complained they did not have the cash necessary to begin the restoration work called for in a contract and could not wait until after the contract was completed to be paid.

Agency response. Some contracting processes were simplified, and special outreach and training sessions were sponsored to educate potential bidders about government contracting procedures. Both the Forest Service and Bureau of Land Management also confirmed that they had conditional authority to advance start-up funds to cooperators in the Jobs in the Woods program.

- Barriers and impediments that require legislative changes:

Impediment. Some rural communities would like to provide worker training and retraining opportunities for those who have jobs or for those who are unemployed for reasons unrelated to the adjustments facing the timber industry. A solution would be to expand the eligibility requirements to participate in worker-retraining programs under the Job Training Partnership Act so that, for example, the existing workforce and unemployed workers not classified as dislocated could participate.

Agency response. The Department of Labor does not have the flexibility to redefine the statutory provisions on eligibility under section 301 (a)(1) of the Act. Because of Congressional interest in making large changes to the nation's worker training laws and policies, a specific change of this type will not be pursued.

Job-Related Effects of the Initiative

The intent of the Initiative is not only to directly employ people, but to provide workers and their families with the skills and support to find longqasting, family-wage jobs, and to assist businesses and communities in providing the economic basis to sustain those jobs. For some

Table 20 – Job-related effects[1] of federal spending in fiscal year 1995, by category of assistance and state

Category of assistance	State			Total
	Oregon	Washington	California	
Assistance to workers and families: job Placements of workers terminating training	449	368	0	817
Assistance to business and industry	5,160	1,730	1,420	8,310
Assistance to communities	1,013	585	401	1,999
Ecosystem investment through Jobs in the Woods	2,361	701	611	3,673
Total for programs in the Initiative	**8,983**	**3,384**	**2,432**	**14,799**
Small Business Administration loan guarantees	723	252	768	1,743
Total for federal spending in the region	**9,706**	**3,636**	**3,200**	**16,542**

[1]Includes worker placement of those terminating training, and short- and long-term jobs retained, created in 1995, and expected to be created after 1995.

programs, a goal of short-term job creation may conflict with the goal of providing assistance to the most severely affected communities. In the long term, investing in those severely affected communities that can still diversify will result in a healthier economy than will investing to speed up growth where the most jobs can be created. No estimates were made of the job-related effects of capacity-building grants awarded by the Economic Development Administration and the Forest Service Rural Community Assistance program, though such grants lay the foundation for further economic development and job creation in communities and larger economic development districts.

Federal and state officials responsible for the different programs in the Initiative estimated that 14,799 job-related effects resulted from federal monies spent during fiscal year 1995 (table 20). An additional 1,743 jobs were associated with the loan guarantees made by the Small Business Administration in the region during the year. Estimates of fiscal year 1996 job-related effects were not available at the time of publication. Such effects include workers finding employment after terminating training programs, estimates of the number of workers whose jobs were saved as a result of federal spending, estimates of the number of job opportunities created in fiscal year 1995, and estimates of the number of job opportunities expected to be created in future years.

For the programs included in the Initiative, 56% of the job-related effects were a result of spending in the programs in the business and industry category of assistance; 25% were in the ecosystem investment category; 14% were in the communities and infrastructure category; and 6% were for those individuals finding employment after terminating training in the workers and families category. More than 61% of the job-,-elated effects of the programs in the Initiative were in Oregon, 23% in Washington, and 16% in California. More than 4,900 job-training opportunities have been created in the region since the announcement of the Plan; 2,706 were enrolled in training as of the end of September 1995; and 1,006 had terminated enrollment (817 or 81% of the terminations had found employment by year's end).

The estimates include both short- and long-term jobs and job opportunities. The jobs resulting from the Jobs in the Woods program are exclusively short-term because the projects awarded to contractors are of short duration. Officials reported that longer-term work was available

through contractors holding multiple Jobs in the Woods projects and completing them sequentially, or through one of the 10 ecosystem worker-training demonstrations that were in place in Oregon and[California in fiscal years 1995 and 1996 (USDI BLM 1996).

Of the totals in table 20 for the programs in the Initiative, 1,786(12% of the total effects) were estimated to be jobs retained or jobs found by workers after worker-training programs; 6,560 (slightly more than 44% of the total) were estimated to be job opportunities created during the fiscal year; and the remaining 6,453 (slightly less than 44% of the total) were jobs expected to be created after fiscal year 1995. Retained jobs are those that were in place at the time of a project's approval and at risk of elimination without the project. Estimates of jobs to be created in future years were often based on the expectations that awardees had of job-related effects, and were spread over time to reflect each project's development; sometimes, up to 10 years will be required before the full potential of a project to provide jobs will be felt.

The method for estimating job-related effects varied by program, with most calculated directly as the sum of estimates made, project-by-project, by the applicant or project contractor. Not all agencies collected data permitting a stratification into jobs-retained, jobs-created, and jobs-to-be-created categories; not all agencies collected data sufficient to determine whether a job was fulltime or of long duration; and the wage or compensation rates associated with job-related effects in most programs could not be determined from the available data.

Estimates for spending in fiscal year 1994 were based on a cruder methodology than the estimates for 1995. More than 1,600 retraining opportunities were in place; 1,940 jobs were associated with spending in the business and industry category of assistance (estimate based on one job per $20,000 spent); 1,600 jobs were associated with spending in the community facility and infrastructure category of assistance (about one job per $40,000 of spending); and 2,200 jobs were provided by the Jobs in the Woods program.

Examples of Projects Funded in Each Assistance Category

Assistance to workers and families

Since the Initiative began in 1994, more than 4,900 worker-training opportunities have been created in the region. Of the 1,006 enrollees completing or leaving the program, 817 had found jobs by the end of September 1995.

Assistance to business and industry

Numerous examples illustrate federal and nonfederal partners combining their resources to provide financial assistance for business investment. In 1994, the Economic Development Administration contributed $365,847, the State of Oregon $50,000, Pacificorp (a regional electrical utility) $122,000, and Rural Development Initiatives (nonprofit) $11,463 to develop a plan reclaim and reuse seven different mill sites formerly used by the wood-products industry. In many small, timber-dependent communities, old mill sites are commonly the only available industrial land, but reclamation difficulties and environmental cleanup complicate their Conversion and reuse. The project includes environmental assessments and wetlands delineations. Preliminary findings have suggested that some sites have minor toxic waste problems, and the

Assistance for Retraining Dislocated Workers

Max Reams spent about 10 years working as a logger in the Oregon woods. It was a lifestyle that fit him well, but when work became scarce he fell on hard times. By the time he entered the Dislocated Worker program, he was near homelessness, his marriage was failing, and he had no other resources than his personal strength and will.

Through the Dislocated Worker Program, he enrolled a Lane Community College in Oregon. He decided that he wanted to pursue a career that would place him in a professional office environment – one that would require development of computer and office administration skills. Max was an excellent student, with a grade point average that never fell below 3.5. He developed a strong interest in law, and focused on classes that would prepare him to become a legal secretary.

By the fall of 1995, Max had moved on to a rewarding job in an attorney's office. His long-term goal is to become a paralegal assistant, with law school itself a possibility. Max faced significant personal problems – he is now divorced and struggling for custody of his children. He has endured severe financial hardships, been traumatized by a death in the family, and survived personal depression. Max attests that the Dislocated Worker Program provided him with the support and encouragement to succeed, and without the assistance he feels that his success might never have happened.

Jeff Murrey is a 43-year-old former millworker with nearly 25 years of experience in the wood products industry. When he lost his job, he was faced with the additional challenges of impending divorce, financial stress, and homelessness. His chances for employment were diminished because he was a school drop-out.

With encouragement and support from his family, he committed to obtaining a commercial driver's license; through the Dislocated Worker Program, he entered a training program at a local truck-driving school. He gained his license, completed the training program, and, as of the end of 1995, had a hiring commitment from Gordon Trucking, one of the most respected employers in the trucking industry.

TEXT BOX 15

sites provide opportunities for both wetlands enhancement and eventual industrial or commercial use. In 1995, the project was continued, and an additional $300,000 in federal and $100,000 in nonfederal monies were contributed to add five more mill sites.

Communities also received financial assistance for diversification and key, strategic investments to support local businesses.

Assistance for improving community infrastructure and facilities

Large capital investments arc typically required to develop water and waste water treatment plants, and other types of community facilities essential to meeting the needs of residents as well as providing a suitable business environment for local firms. In 1995, Riddle, Oregon, with a population of 1,143 and an economic base closely tied to the wood-products industry, received a $2.17 million loan and a $2.33 million gram from the Rural Development Water and Waste Water Disposal programs. The monies provide for renovating and replacing the raw water intake, expanding the existing water treatment plant, constructing two new treated-water storage reservoirs, and improving the pipeline distribution system. The new water system strengthens the community's ability to support both existing and potential business and residences.

Facilities to serve the needs of residents in rural communities have also received sizable awards under the Initiative.

Assistance to Support Business Investment and Expansion

Medford, Oregon. The Wood Manufacturers Cooperative and Technical Training Center will use $240,000 of Forest Service Rural Community Assistance grant and state Regional Strategies monies to create a flexible manufacturing and training network among southern Oregon's approximately 200 small, secondary wood-products producers. As hub of the network, the Wood Center's purpose is to, plan, organize, and market industry training, design services, production services, and business support capabilities. Over the long term, the Wood Center expects to become self-sufficient and to play a major role in assisting small manufacturers to gain access to new wood-products markets, to compete more effectively in domestic and international markets, to create more family-wage jobs, and to strengthen the entrepreneurial skills of the participating business owners. Organizers of this non-profit corporation include owners of small wood-products firms, Rogue Community College, and the Medford Small Business Development Center.

Willamette Valley, Oregon. The availability of financial capital is a common problem confronting businesses in rural areas. Such businesses are at a disadvantage relative to urban businesses because they are typically small and in remote areas. An award of $2 million through the Intermediary Relending program of Rural Development to Valley Development Initiatives will help overcome problems with capital availability in rural Marion, Polk; and Yamhill counties, Oregon. Valley Development Initiatives estimates that by targeting a maximum of $25,000 per full-time equivalent job created or saved, the $2 million loan will create or save between 40 and 100 jobs in the fund's first round of loans for the rural communities in the three-county area. Valley Development Initiatives has initially identified 15 potential small businesses that could benefit from the funds; the credit needs for the businesses total about $1.5 million. In addition to the Intermediary Relending Program loan, Valley Development Initiatives will receive $50,000 from the state Mid-Willamette Regional Strategies Board to provide additional capital for the revolving loan fund.

TEXT BOX 16

Assistance for Infrastructure and Facilities

Marion County, Oregon. More than $2.3 million from five different sources, including an $800,000 loan from the Rural Development Direct Community Facilities Loan program, is funding the construction of a new, two-story, 14,670-square-foot, primary health care center at a centrally located site to house a comprehensive family medical practice, including facilities for dental care and the Women, Infants and Children program. The center primarily serves low-income, and seasonal and migrant agricultural workers. The center is currently operating in temporary quarters in structures not adjacent to one another and not physically or financially suitable for long-term use. The new facility will consolidate services into one location and replace the previous permanent facility, which was destroyed in a 1993 earthquake. Sixty jobs will be saved, and the center will serve a county-wide population of 19,922. The County is one of the most highly dependent on federal timber.

Josephine County, Oregon. Construction of a county courthouse and juvenile detention center complex consisting of three one-story buildings with an area of 17,625 square feet is being made possible by a loan of almost $2 million from the Rural Development Direct Community Facilities Loan program. The buildings will house family court judges, advocates, juvenile department staff, and related services, which are currently housed in a variety of leased buildings at separate locations in Grants Pass. In addition, the complex will include a facility will serve the town of Grants Pass (population 17,488) and Josephine County (population 62,649).

TEXT BOX 17

Ecosystem investment

The watershed work carried out through the Jobs in the Woods program has brought both employment opportunities and much-needed restoration work to the region's prized waterways. The program has also made small, innovative, workforce development projects possible. In 1994, a pilot effort to train dislocated timber workers to become part of the woods' workforce of the future was initiated in Sweet Home, Oregon.

The crew was composed of 11 workers whose backgrounds included timber falling, mill work, operating forest equipment, and seasonal employment with public land management agencies. Candidates were selected based on their certification as dislocated timber workers, interest in future forest employment, willingness to share their existing skills, willingness to learn new skills, ability to work outside in a demanding environment, and commitment to the program.

Partners sponsoring and implementing the program included the Forest Service, Bureau of Land Management, Oregon Department of Forestry, Community Services Consortium, University of Oregon, and the Extension Service through Oregon State University. Enrollees received training in both classroom and field settings, with the curriculum designed to develop well-rounded, knowledgeable, and compatible workers competent in the many skills required for forest ecosystem restoration and management.

Training the Forest Ecosystem Management Workforce Through the Jobs in the Woods Program

The Jobs in the Woods program is intended to provide job opportunities to the region's rural workforce as well as restore watersheds. For five months in the summer and fall of 1994, Jobs in the Woods projects served as on-the-job training opportunities for 10 dislocated timber workers in Sweet Home, Oregon, who were eager to become part of the forest management workforce of the future; a similar effort was undertaken on the Olympic Peninsula in Northwestern Washington. The enrollees spent four days working in the woods to gain practical experience in all aspects of forest ecosystem management and watershed restoration, and a fifth day in the classroom to study forestry, small business development, and safety.

Many public and private groups made the Sweet Home pilot project a success. The project, proceeding under the broad auspices of the Oregon CERT, received support from the University of Oregon, Oregon State University, Northwest Area Foundation, Western Council of Industrial Workers, Southern Willamette Private Industry Council, Community Services Consortium of Lebanon, Forest Service, Bureau of Land Management, Oregon Department of Forestry, and the Oregon Department of Fish and Wildlife.

The program was substantially expanded in 1995, with efforts undertaken in all three states. The lessons learned – primarily the value in integrating workforce development, community development, and forest ecosystem management – serve as the conceptual basis and provide an optimistic incentive for the Natural Resources Partnership proposal currently before the Interagency Committee and regional CERT.

TEXT BOX 18

The Northwest Economic Adjustment Initiative: Observations and Opportunities

The Initiative was conceived as a combination of programs delivered through a partnership of federal, tribal, state, county, and local officials, with additional help from the private sector. Working teams were organized at the state, regional, and national scales to oversee and implement the assistance programs included in the Plan. The federal obligation brought with it local, regional, and national commitments of participation by federal officials.

Observations

The Initiative as a Partnership

Participants have identified advantages, benefits, and problems that result from working together as partners to deliver economic assistance to the region. The Initiative provides opportunities to create new ways of doing business, which were uniformly and enthusiastically endorsed by active participants in the region.

People working together

- The framework for the Initiative brought with it the formal means for federal, state, tribal, and local officials, and the Congressional delegations to work on common problems.
- The Initiative provided a mechanism for attacking and overcoming barriers and red tape, and highlighted the shortcomings of business as usual.

Problems too big for any one agency

The partnership arrangement permitted participants to deal with problems, issues, and opportunities that were beyond the ability of any individual agency to address or solve.

- Organizing the Initiative as a partnership rather than placing the federal government in charge of all assistance was viewed by participants as a practical, efficient arrangement that permitted flexibility and innovation in reaching intended beneficiaries.

- Partnerships present an opportunity for making joint decisions and problem solving. Most but not all federal officials with responsibilities for decisions have been committed to the "ground up" approach of identifying and pursuing local economic-development priorities.
- The Initiative brought with it, and drew from its leadership, a sense of optimism and hope.
- Leadership is important in sustaining the vision of the Initiative's purpose and in confirming a belief in success. A partnership is not an organization with a chain of command, leadership must proceed collaboratively to reinforce the partnership's underlying vision and collective confidence.
- Because of the significant federal role in the Initiative, strong federal leadership must be continually asserted to both confirm its broad public-interest purpose and to ensure the contribution of individual agencies to that broad purpose.

Delivering assistance consumes energy and time

Great energy was expended to deliver assistance as rapidly as possible, but the time required was sometimes too long. Some people viewed the delays as inconsistent with the spirit and intent of the Initiative, but the frequency of meetings among partners was viewed as acceptable, given the significance of the Initiative.

- The Initiative increased program and partnership commitments for some agencies, and such adjustments have strained their capabilities.
- As both the forest management and economic assistance parts of the Plan have been implemented, some participants have been frustrated by a lack of contact and coordination between those involved in forest management and those involved in economic assistance. When the Plan was announced, state and regional CERT members requested that the two groups be kept separate, but several issues have subsequently arisen that are relevant to both groups and that cannot be easily solved by either group acting independently.

Customized to local needs

Through the work of federal and nonfederal partners, available assistance was customized to meet locally identified needs.

- Respect for locally set priorities was viewed as a sound operating principle, and one that was compatible with the philosophy that local people understand local issues better than federal and state officials do.
- Local leadership is fundamental to the success of the Initiative, yet its effectiveness differs from one local area to another. Each state CERT has approached the need for local leadership differently, but each has achieved a remarkable degree of success in developing such capacity. The Regional Strategies and Rural Development Council in Oregon, and the efforts of the Governor's Timber Team in Washington are all examples of prior and concurrent efforts to develop the capacity of local people to lead by deciding on a future appropriate to their individual and collective wishes.
- Technical capacity to carry out economic development work is unevenly appreciated as a necessary condition for local assistance to be effective, and it is unevenly funded. The related issues with which economic-development specialists must deal are numerous and include preparing economic development and job-training plans, applying for grants and loans, working with collaborating state and federal agencies, communicating with other local partners, and monitoring local assistance efforts.
- The partnership arrangement facilitated communication, collaboration, and problem solving among federal agencies, and between federal and nonfederal participants. Federal and state specialists in the participating agencies have reported they have gained invaluable knowledge about the programs and operations of their sister agencies, and that this knowledge will be beneficial to long-term cooperation and effective program delivery.
- The job of outreach to and education of potential recipients and beneficiaries of the different kinds of assistance provided by the Initiative is time consuming and labor intensive yet fundamental to its success. Newsletters,

progress reports prepared by state CERTs, and the teleconference sponsored by the Washington CERT are all examples of successful outreach and public information. Outreach is a necessary element in working with those who are potential beneficiaries of assistance.

- For many, the expectations that came with the initial announcement of the Initiative were unrealistically high. The Initiative was intended to help workers, businesses, and communities make the transition to a new set of federal forest policies, and is neither a jobs-creation nor an income-maintenance program, though it has important short- and long-term consequences for both.

Opportunities

Partnership opportunities could include

- Making interagency and intergovernmental cooperation to promote rural development an established way of doing business.
- Continually reinforcing the serious purpose of the Initiative by the chairs of the state CERTs, regional CERT, and Multi-Agency Command by word and deed. The chairs could actively reinforce the collaborative structure of the partnerships as teams in which confrontational or adversarial behavior is the exception.
- Reaffirming the sense of urgency and valuable social purpose motivating the Initiative. National, state, and local officials in whom the public have confidence and look to for leadership could be publicly visible as champions of the Initiative and demonstrate strength in making the Initiative a success.
- Taking special care to design meaningful meeting agendas, identify unresolved problems that need group attention, and monitor solutions to problems that are being resolved. Officials serving as chairs of the interagency and community teams and committees would have primary responsibility.
- Continuing to develop confidence, experience, and trust in local priorities within the federal government and among nonfederal partners.

- Entrusting one or more federal officials at all scales of the Initiative with the responsibility to represent not just their agency's interests, but the interest of the whole federal government. The designated official would act as an advocate for aggressive participation and effective performance of federal officials and agencies. Such positions of leadership already exist in the co-chairs of the regional CERT and the chair of the Multi-Agency Command, but no comparable position exists at the state CERT scale.
- Increasing efforts by federal officials to overcome the adverse consequences of centralized decision authorities, redundant application and environmental review requirements, and funding and staffing restrictions.
- Collaborating among forest managers and those working in economic assistance benefit problem-solving when issues and problems are relevant to both groups. A proposal for a natural resource partnership forwarded to the President by the three state governors is one means for addressing such issues, if it can be made to realistically address the needs of federal and nonfederal participants.
- Developing local leadership as a continuing responsibility that could be regularly pursued. The partners in the Initiative bear various degrees of responsibility for ensuring the development of leadership to assist workers, businesses, and communities.
- Configuring, funding, and sustaining communications efforts to ensure that those not regularly participating know what is happening and what has been achieved. Additional people, time, and money could sometimes be devoted to making sure that intended beneficiaries receive the information and provide the support they need to take advantage of the Initiative.
- Making funding for local economic-development capacity-the technical expertise to carry out the different tasks required for economic development--predictable, and reliable. Large urban communities can afford a technical staff to help design and implement development plans; many rural communities, particularly smaller ones, cannot, based on their own resources, afford comparable

staff expenses. The Economic Development Administration's technical assistance grants, the Forest Service's Rural Community Assistance program, and various state economic and workforce development funds provide money so that communities can hire specialists or make comparable arrangements to assemble the plans and ideas that will lead to investments in plants, buildings, infrastructure, and community facilities. The indirect payoff of such grants is essential in laying the groundwork for further development work.

- Encouraging officials to remind each other that respect and trust, the foundations of successful partnership, are born of patience and persistence.
- Continuing a similar team approach with federal, state, and local agencies working together after the Initiative expires.

State and Regional CERTs and the National Multi-Agency Command

Observations

The state CERTs have been successful in implementing the day-to-day assistance efforts in the region. Having state CERTs define the affected area (the counties eligible for assistance), decide on organizational ground rules for how they would operate, and conduct outreach to potential recipients worked well. The committees established by the state CERTs have helped participants understand problems and possibilities, and have provided guidance about how the assistance could best be implemented.

- The one-stop-shop approach has simplified access to all of the different kinds of federal and state assistance. Interagency and intergovernmental cooperation within the state CERTs generally worked to accelerate the assistance to the region.
- The "lead agency" approach of assigning responsibility for developing a project proposal on behalf of all participating federal and state agencies works well for many participants.

- The state CERTs serve a valuable role in reaching out to communities and other potential beneficiaries of assistance to educate and inform them about the assistance available within the Initiative. For example, the Washington CERT sponsored a satellite communications teleconference that proved useful and successful in reaching community and economic development leaders in 1994.
- The state CERTs have been successful in identifying and communicating barriers and ways of reducing red tape to the regional CERT and Multi-Agency Command.
- The state CERT meetings held in timber-dependent communities are valuable to both CERT participants and members of affected communities. Local leadership and technical economic development expertise are facilitated by the state CERTs.
- Technical and support staff for CERT activities and operations are important. The most effective state CERTs were adequately staffed; without staff, they could not undertake the breadth of activities and operate at the speed that was possible for a fully staffed CERT.

The Regional CERT

The role and performance of the regional CERT evolved and stabilized between the startup and implementation phases of the Initiative. The Teams coordinated preparation of the Initiative's implementation plan, which provided a sensible blueprint for making the Initiative work. The regional CERT was charged with, but did not play a strong role in ensuring equity across states. Equity across states followed instead from agreements made within the funding agencies and among the states. Finally, the regional CERT served a valuable role in eliminating several key barriers to streamlining the business of the Initiative.

- The regional CERT serves as a forum for exchanging information and identifying problems relevant to all three states. The regional CERT has been working to identify issues to be addressed and problems to be solved on a regional, federal, and nonfederal basis.

	▪ Unlike the forest management component of the Plan and the Regional Ecosystem Office, which provides staff support to the executives of the federal land management agencies, no formal staff structure was developed for the regional CERT at the request of nonfederal representatives, a circumstance that limited activities and effectiveness. Tracking and reporting of program performance across states and for the Initiative as a whole has been a difficult task that has been incompletely accomplished because of the lack of staff commitment beyond those who are members of the regional CERT. ▪ Membership on the regional CERT by local and state officials is viewed as very valuable by federal participants, though some state and local officials no longer feel their participation is worthwhile. Some local officials have found participation to be financially burdensome. ▪ Not all federal representatives on the regional CERT have decision authority--federal membership on the regional CERT is drawn from both senior staff civil servants and federal executives. In contrast, federal executives have played a strong role in the coordinating bodies on the federal forest management side of the Plan.
Multi-Agency Command	The Multi-Agency Command has not, in many circumstances, been able to provide the amount of support to the Initiative that was hoped for. ▪ As the Initiative evolved, the roles of the different federal participants changed, and the responsibilities and expectations for performance for the Multi-Agency Command, regional CERT, and participating agencies and departments became blurred. ▪ Many notable barrier and red tape-removal successes were achieved by the Multi-Agency Command, but others have remained unresolved. For example, the Public Interest Waiver to help target the watershed restoration projects to contractors within the region was achieved through "diligent work by the Multi-Agency Command, which also aggressively served as a clearinghouse for the barriers forwarded to it by the regional CERT and directly by the state CERT chairs. Conversely, reform of regulations to

streamline Rural Development programs, notably the Business and Industry Loan Guarantee program, were slow in coming.

- The Multi-Agency Command has no direct link to the issues and problems that come before the Interagency Steering Committee that oversees the forest management part of the Plan, though the Chair of the Multi-Agency Command did occasionally attend and address the Interagency Steering Committee in 1994.
- Participants think the Working Strategy of the Multi-Agency Command is sensible, but they caution that fulfilling the strategic plan requires that the Multi-Agency Command be composed of policy-making officials—as compared with senior and mid-level staff officials who currently represent some agencies--with the ability to anticipate its needs and carry out its provisions.
- The Multi-Agency Command has not consistently served as a policy-setting body when major administrative and statutory changes were called for as solutions to barriers identified in the region or to operating improvements that could have been made by agency executives.
- The Initiative has provided a framework for reform within the agencies, but from the perspective of federal participants in the field, the Multi-Agency Command has not aggressively pursued the possibilities for innovation and reform that would help program delivery, as well as interagency and intergovernmental collaboration.
- Budget decisions to fulfill the Initiative's financial commitments are in competition with other new and traditional national priorities. Oversight of budget decisions is awkward given that personnel and budget issues are conventionally considered to be within the exclusive purview of individual agencies.
- In 1995 and 1996, the chair of the Multi-Agency Command promoted the need for evaluating the outcomes of the Initiative but was only partially successful in raising the funds necessary to pursue the evaluation. Nonfederal officials have strongly opposed paying for an evaluation from the funds allocated to the region for the Initiative.

Opportunities

Opportunities for the regional and state CERTs and the Multi-Agency Command could include

- Designating a senior federal official to serve as a co-chair for each state CERT and designating a state official to serve as a co-chair for the regional CERT.
- Refining procedural steps and coordination arrangements that encourage "seamless" delivery, eliminate redundancies, and accelerate awards.
- Improving the lead-agency approach by having collaborating agencies share the information provided by applicants on a single application and not requiring applicants to fill out separate applications for each funding agency.
- Continuing to benefit those communities with few resources so they can take advantage of the Initiative through active outreach and technical assistance.
- Encouraging the three states in identifying a common set of federal barriers to effective program delivery and continuing their efforts systematically.
- Funding technical economic-development capacity according to local needs.
- Holding annual meetings of federal and state officials to discuss the operations of the state CERTs and the funding and personnel needs for efficient state CERT operations.
- Redoubling the regional CERT efforts to become more active in identifying and attacking barriers and working with the Multi-Agency Command on finding solutions.
- Affirming that the value of the regional CERT could be enhanced if regional problem solving and issue resolution were further emphasized, in addition to the regional CERT’s already established role as a regional information-sharing forum. A system of tracking problems and decisions so that they are worked on until resolved could complement the regional CERT’s role as a problem-solving body.
- Increasing effectiveness of the regional CERT by devoting more staff and technical resources to its operations.

- Ensuring participation in the regional CERT by local officials where appropriate, by providing travel expenses and related supplemental funding, which could be achieved by chartering the organization under the Federal Advisory Committee Act.
- Increasing effectiveness of the regional CERT through line involvement by all agencies in its activities.
- Using the Multi-Agency Command as the federal government's forum for deciding among and working with competing priorities because it stands in the unique position of advocate and champion of the initiative.
- Confirming the policy and leadership responsibilities of the Multi-Agency Command and reinforcing them through word and action; the recent extension of the *Interagency Memorandum of Understanding* is an example of an event that confirms the administration's commitment to the Initiative. The officials serving on the Multi-Agency Command could act collectively on behalf of the federal government in its relation and obligation to the region. The oversight responsibility carries with it the opportunity to convey a clear sense of what the Initiative is about: the Command could confirm that commitment by all federal officials--not just those directly involved---is expected; demand high-quality performance by deputies and subordinates; assess competing policy demands to decide and act on priority items; and actively resolve competing sets of priorities and philosophies about how the work of the Initiative is to be pursued.
- Emphasizing the barrier-busting role of the Multi-Agency Command. Successful barrier busting requires a commitment of policy-making officials and their staffs to change the way the federal government conducts its business. Success also requires timely, knowledgeable work by staff officials that are not often directly involved with the Initiative. Involvement of officials in the region could also be sought to develop barrier-busting teams for specific issues.

- Expanding the membership of the Multi-Agency Command to formally include the National Performance Review, which is charged with facilitating reinvention in the federal government.
- Evaluating the effectiveness and outcomes of the Initiative, is the responsibility of the Multi-Agency Command, with the participation of officials in the region.

Contribution of Federal Officials

Observations

Federal participants in the region appreciate the collaborative, interagency approach to fulfilling locally identified needs; it leads to innovation, problem solving on a scale exceeding a single agency's mission, and generally better service to the recipients than could be provided by conventional program approaches.

Federal participation

Most but not all federal agencies actively and consistently participated in the state and regional CERTs, and the Multi-Agency Command.

- The contributions of the participating officials, who are in the majority, have been appreciated, but the lack of involvement by nonparticipating members continues to be a source of concern among key federal and nonfederal officials.
- Currently, no easy-to-use mechanism that would enforce the terms of the Interagency Memorandum is available to require participation in the coordinating teams at the state, regional, and national scales of organization.
- The benefits of collaboration are complicated when local federal officials do not have programmatic or decision authority to make awards but must instead depend on centralized decision authority (those who hold regional or national positions) and, therefore, are not directly involved in the Initiative, but influence its effectiveness. Although conventional approaches to program decisions higher in the organization permit agencies to accommodate large-scale, competing priorities, they do not lend themselves to the give-and-take collaboration that makes a partnership work; they tend to slow award decisions; and they reinforce recipients' fears that assistance is unpredictable and bureaucratic.

Federal commitment

The commitment of federal officials varies by agency. In some agencies, participation and leadership are clear agency priorities. Sometimes, however, federal participants in the region are without clear, consistent, and forceful support from their superiors in regional and national positions.

- Strong commitment has been apparent among federal officials working directly with nonfederal partners as representatives of their agencies to state and regional CERTs. Several federal officials in the region have expressed disappointment that their superiors have had little apparent interest in the initiative and have been unconcerned about the effectiveness of the contributions of their respective agencies. Members of the Multi-Agency Command were prompted by the Chair to contact their regional CERT counterpart at least twice a month, but regular communication fell short of expectations for some agencies.
- Participation must be confirmed and encouraged by those who are not directly involved but who provide support or managerial oversight. Competing priorities and respected traditions may subordinate the significance of the Initiative in the minds of those who are not directly involved, and their behavior, which in the extreme may be contrary to the spirit of the Initiative as a new way of doing business and as a Presidential commitment.
- For several agencies, the workload increased dramatically with the announcement of the Initiative, but no or few additional personnel and support resources were made available. As the implementation of the Initiative proceeds, several agencies are establishing large loan and grant portfolios that will require larger workforces than currently permitted, to responsibly monitor and service grant and loan performance.
- Agencies with officials who are physically present in the affected communities or who personally work with potential beneficiaries have earned trust, respect, and appreciation within the region. The Rural Community Assistance Coordinators within the Forest Service and the program specialists in Rural Development, for example, have

- contributed to the stature of their respective agencies by establishing a personal and professional presence in communities to provide direct technical and financial assistance. For some communities, particularly small ones, the Forest Service Community Assistance Coordinator is an ambassador of the federal government, and provides a link to other federal services.

Opportunities

Opportunities for improving the effectiveness of federal officials could include:

- Developing performance standards by which to rate the contributions of all participating and supporting federal officials at the state, regional, and national scales.
- Cross-training federal officials who are responsible for working directly with communities and others to increase their awareness of federal programs for which they are not directly responsible. The purpose of cross-training would be to provide a one-stop information service to improve access to federal programs. Job performance standards to rate officials with responsibility for dealing with nonfederal groups and communities could recognize the importance of acting as a one-stop information resource on behalf of all federal programs.
- Empowering any agency with a physical presence in a community with the authority, support, and funds to carry out the kind of outreach and technical assistance that would make their employees ambassadors of the entire federal government to that community.
- Establishing close ties between officials with decision-making authority and those responsible for program delivery as a necessary condition for effective problem solving and efficient program delivery. Special arrangements within the scope of the Initiative could be made to delegate decision authority to local federal officials.
- Considering participation in the Initiative a dear agency priority, and making effective, constructive leadership a performance element for both those who participate directly and the officials who oversee or support the direct participants.

- Reinforcing the importance of the Initiative at all scales of organization through a continuing, strong commitment by the Administration to the Initiative, and a sustained, unified advocacy of the Initiative could be concurrently communicated to officials who are not directly involved in the affairs of the Initiative, but whose responsibilities have important implications for how their agencies will contribute to its processes and goals.
- Anticipating likely executive decisions needed to ensure appropriate resources are provided.

Assistance to Workers and Families

Observations

One program, the Department of Labor Secretary's national Reserve fund for dislocated worker retraining and adjustment, is included in the Initiative. The Secretary of Labor's Reserve fund has been applied with flexibility to the region's needs. Additional jobs are provided by the business, community, and ecosystem investment program.

- Department of Labor personnel conducted a series of town meetings in each state to solicit advice from affected communities and dislocated workers, and to meet with state and local service providers. The meetings succeeded in bringing federal, state, and local service providers together with enrollees to discuss the effectiveness of the program and ways to overcome both real and perceived barriers.
- The principle needs uncovered during the town meetings were for money to cover transportation and temporary living expenses while workers were in training; for income after unemployment insurance was exhausted so that workers could complete training; for more flexibility to accommodate locally identified opportunities for ecosystem workforce development; and coverage for workers affected by the secondary effects of layoffs in the timber industry. Several problems of lesser scope were also identified.

- The Department of Labor has worked either directly or with service providers to solve the problems identified in the town meetings. For example, the Department of Labor has been providing more funds for living expenses and transportation, and has expanded the scope of its grants to cover workers affected by secondary effects of wood-products layoffs.
- The state CERTs concluded that long delays in announcing grant awards were unnecessary and caused by centralized decision authority. The Department of Labor responded with a promise of an expedited grant-consideration process that has reduced approval time.

Opportunities

Opportunities to assist workers could include

- Pursuing the possibility of making grant decisions in the region for the $12 million committed by the Department of Labor to the Initiative as a way to expedite applications and awards.
- Encouraging regular visits by senior Department of Labor officials like the visit in December 1994 to discuss problems and solutions with workers and training providers.

Assistance to Business and Industry

Observations

Seven programs are included under this category of assistance: the Rural Business Enterprise Grant program, the Intermediary Relending program, and the Business and Industry Loan Guarantee program of Rural Development; the Old-Growth Diversification and Rural Community Assistance programs of the Forest Service; the technical assistance and capacity-building, and infrastructure-investment programs of the Economic Development Administration; and the loan-guarantee programs of the Small Business Administration. The Rural Community Assistance program and the technical and capacity-building program of the Economic Development Administration overlap with the assistance for community and infrastructure development.

Preference for grants

Grant monies have been preferred by recipients over loan and loan-guarantee monies.

- Virtually all of the available grant monies have been spent in each of the grant programs, but less success was initially achieved with the Intermediary Relending and Business and Industry Loan Guarantee programs.
- Federal and state officials have reported that the procedures for using some programs, such as the Business and Industry Loan Guarantee and Intermediary Relending programs, are impediments to effective assistance.
- The working arrangement among federal officials participating on the Oregon CERT is indicative of the possibilities for efficiently combining loan and grant monies: federal officials from funding agencies meet informally to evaluate a community's proposal and the community's ability to repay loans; they then decide how to combine grant and loan monies from different programs to best meet the community's needs and capabilities.

Business and industry attributes

Financial assistance to businesses in rural areas affected by federal forestry has been viewed by some as less effective than assistance to communities, although more than half of the job-related effects in fiscal year 1995 were associated with the programs in the business and industry category of assistance. The reasons for the frustrations reflect a complex set of circumstances that are not easily remedied by adjusting the federal programs themselves.

- In a general sense, business investment is strongly driven by entrepreneurial skill and commercial capital, industry-specific technology, and available labor and other resources playing dominant roles in business investment and success.
- Business success also depends on a knowledgeable workforce and an appropriate public sector with necessary infrastructure in place.
- Circumstances are further complicated by regulatory requirements that discourage the banking industry's development of rural versus urban loan opportunities; the banking industry's real and perceived avoidance of risky or economically unattractive opportunities in hard-pressed

communities; the narrowness of the economic base in some areas and associated difficulties in finding promising business opportunities; and the difficulties in encouraging diversification within the local economic base.

Opportunities

Opportunities for business and industry could include

- Monitoring grant and loan funds continually and reprogramming loan funds to increase grant funds, when circumstances dictate.
- Simplifying the procedures, regulations, and conditions that determine the use of loan and loan guarantee funds to increase the flexibility and usefulness of the programs; federal and nonfederal officials could more aggressively collaborate with representatives from the private sector to pursue an appropriate role for government programs based on local business conditions and opportunities in each state.
- Reviewing and requesting changes in the eligibility requirements of existing programs to make them more useful.
- Affirming the importance of the Small Business Administration's loan guarantee programs as significant in rural areas by identifying an aggressive loan target for the agency in the affected region.
- Expanding the use of the Intermediary Relending Program, where appropriate.
- Maintaining or expanding current commitments to provide local economic-development capacity through actions of the Economic Development Administration and the Forest Service.
- Simplifying the application procedures of the participating agencies so that information is only collected once from an applicant, and reviews and clearances by one agency (such as the lead agency) are accepted as sufficient by another. Legislative or regulatory authorization could be sought for those programs with stringent application requirements.

Assistance to Communities for Infrastructure and Facilities

Observations

Rural Development's Community Facilities Direct and Guaranteed Loans, and Water and Waste Water Disposal Direct Loans and Grants are the programs available under this category of assistance. Communities als0 receive assistance through the Forest Service's Rural Community Assistance program, the Community Development Block Grant program (Department of Housing and Urban Development), and the technical and capacity-building program of the Economic Development Administration, each of which overlaps with the assistance for business and industry.

Community funding

The funds obligated for infrastructure and facilities have substantially increased as a result of the Initiative, and the state CERTs have been instrumental in identifying local opportunities and streamlining assistance.

- The increase in funding has dramatically increased the workload for Rural Development; the loan portfolio will continue to increase and impose additional demands on the federal workforce in future years.
- Only limited use has been made of the Guaranteed Community Facilities Loan program because interest rates associated with the program have not been competitive with other programs and sources of funds.
- Not all communities have had the technical and professional staff to apply for funds to develop infrastructure and facilities. Some small communities have contended that large communities--those communities with an experienced professional planning staff and that have knowledge of assistance programs--are in need of assistance but most likely to receive it.

Priority setting

The state CERTs variously required that priorities for projects be set countywide, signaling the relative importance of community needs.

- Federal officials concerned about efficient use of grant funds by the different programs found county prioritization to be helpful--where it was used and recognized as useful--in reaching their award decisions.

- Setting priorities at the county scale carries with it the advantage that competing community needs can be reconciled by people who are closest to and most likely to be knowledgeable about local circumstances.
- Some disadvantages are that county priorities are likely to be subjective and, therefore, vulnerable to claims of interference and special preference; county officials may lack knowledge about local community needs, so the priority setting could be insensitive to the needs of some communities.
- Some communities would now prefer to have the federal agencies take back the lead in funding projects.

Funding for economic development

Grants by the Economic Development Administration to fund local professional economic development staff and their work, and by the Forest Service Rural Community Assistance program to support studies, plans, and evaluations leading to economic diversification and development, are crucial to small communities and rural areas that, without the grants, would have limited or no ability to pursue economic development.

- Many local, nonfederal partners have viewed these grants and the technical assistance provided by federal officials as fundamental to their success, and have been highly complimentary of the programs and the federal officials who make them available.
- Although these programs directly provide very few immediate job opportunities, they allow communities to lay the groundwork for business expansion and investment; small communities and rural areas may have neither the tradition of providing such services nor the ability to pay for them.
- The measure of success of capacity-building grants is the types of activities they make possible, rather than the number of direct jobs created.

Leveraging funds

The partnership arrangements of the state CERTs have allowed a variety of complex projects to be undertaken by combining funding from more than one source.

- Viewed from the perspective of a single federal program, the combination of funds is equivalent to leveraging scarce dollars.
- The leveraging permits grant monies and the monies from programs with flexible eligibility requirements to be conserved and used for projects that would be difficult to fund in other ways.
- Multiple funding sources can be a burden for recipients if separate applications, reviews, and environmental clearances must be obtained from each funding agency.

Opportunities

Opportunities for communities include

- Anticipating increased workforce requirements within agencies with greater workloads and taking steps to quickly respond to maintain a high degree of program delivery.
- Improving the priority-setting process for local project proposals in each state based on experience.
- Examining the eligibility requirements and application conditions of all federal programs in light of their intended effects on communities and individuals. The state CERT, regional CERT, and Multi-Agency Command structure would facilitate a comprehensive review of eligibility.
- Providing funds to maintain capacity in small communities that otherwise could not afford a professional staff or to provide shared staff for multicounty areas.

Ecosystem Investment

Observations

Watershed restoration through the Jobs in the Woods program is carried out by the Forest Service, Bureau of Land Management, the Bureau of Indian Affairs, and the Fish and Wildlife Service, and collaborating nonfederal partners. The Forest Service and Bureau of Land Management restrict their activities to federal forests, the Bureau of Indian Affairs

undertakes restoration activities to benefit the region's tribes, and the Fish and Wildlife Service concentrates on voluntary, nonregulatory approaches to restoration needs on nonfederal forest lands. The Environmental Protection Agency also contributes to ecosystem investment through Clean Water Act grants and cooperative agreements, and research agreements. The Forest Stewardship and Stewardship Incentive programs administered by the Forest Service are included as elements of the ecosystem investment strategy, though no money has been appropriated to implement the program. Finally, the Natural Resources Conservation Services, with mission responsibilities that parallel the participating land management agencies, is not part of the Initiative, but it is undertaking complementary restoration activities.

Program's momentum

Much progress has been made in implementing the program, and the program's momentum is encouraging. More and more people, both federal agency and other partners, with different perspectives, interests, and skills are participating and have committed themselves to it.

- Strides have been made in creatively addressing complex problems that involve the environment and the issues and possibilities of both workforce and community. Watershed restoration through the Jobs in the Woods program is evolving, as a result of patience and experience.
- Virtually all of the money available to the federal agencies has been spent on restoration activities performed by workers within the region. A problem for the participating federal agencies has been that the professional costs of designing projects and preparing contracts have not always been covered by the funds in the program.
- The program has been the most complex component of the Initiative--it requires simultaneous and innovative consideration of forest ecosystem management' workforce development and employment, community economic needs, interagency coordination (within the federal government), and federal-nonfederal collaboration with relevant partners--and is simultaneously the source of great hope and expectation as well as frustration and disappointment.

- Some people's expectations for the program's significance for employing dislocated timber workers and as a way of revitalizing local economic activity have been incompatible with the program's size (in fiscal year 1994, more than 2,200 jobs of varying duration--an estimated 600 fulltime jobs--were provided; in fiscal year 1995, almost 3,700 jobs were provided).

Environmental and economic goals

The original dual goals of the program--to achieve both favorable environmental and favorable economic and other social outcomes--has been viewed both positively and negatively.

- Despite the program's goals, clear vision or focus for the program has not been agreed to by all people, and disagreement over the program's intent persists. These disagreements have existed both within the federal government and between federal and nonfederal participants.
- Monitoring for program effectiveness, the ability to measure the effects of the program on both the environment and the economy, and the feedback of monitoring to policy and managerial judgment have not been developed well.
- The Forest Stewardship and Stewardship Incentive programs have been unfunded. Therefore, the type of management activities that could be undertaken on nonindustrially owned private forest land have not been done, except with the limited funds that have been available through a small base program not included in the Initiative. The programs have substantial environmental and economic benefit with limited commitment of public monies, and they are an attractive means to increase short- and long-term timber supply and other resource benefits from nonindustrial forests.
- The Environmental Protection Agency components of the program have been based on existing base funds in the region and emphasize watershed analyses, research, and technical assessments. A/though the agency's grants and agreements have been important parts of an environmental conservation strategy, they have not been intended to

provide jobs. Further, the agency's financial commitment represents the dedication of funds already allocated to the region, and not an incremental addition to the agency's resources.

Opportunities

Ecosystem investment opportunities could include

- Improving the link between the economic and resource components of the Plan by having federal and nonfederal officials working in each component jointly consider the possibilities for achieving both positive environmental and positive economic and employment outcomes. Joint consideration implies several complementary steps: the officials could clarify common outcomes and how they could be reached; policy makers could confirm that the combined outcomes are both desirable and expected of managers; flexibility in how outcomes are to be achieved in the woods could be built into the planning for the program's implementation; and new tools, such as "stewardship contracting," could be developed to simultaneously move ahead in achieving environmental, social, and economic objectives.
- Taking steps to ensure that the benefits of the program as a new, sensible way of doing business are retained after the Initiative ends.
- Expanding the program to encompass more than watershed restoration and to include nonfederal forest lands in a voluntary, nonregulatory approach toward providing a substantial source of family-wage job opportunities for many rural communities in the region.
- Adding the Natural Resources Conservation Service to the list of participating agencies.
- Proceeding simultaneously and systematically with monitoring protocols, measurement procedures, and interpretation of outcomes to benefit policy formulation and decisions by managers.
- Funding the Forest Stewardship and Stewardship Incentive programs and using them to demonstrate and encourage conservation on nonindustrial private forest lands. The Stewardship and Stewardship Incentive programs could

complement the watershed restoration work by demonstrating innovative approaches to conservation on upland as well as riparian areas on nonindustrial private forest land.

- Clarifying the intent and funding of Environmental Protection Agency's programs as a component of the ecosystem investment category of assistance.

Eliminating Barriers

Observations

The easy barriers to remove were those requiring administrative changes within an agency. Eliminating barriers requiring legislation, reform of agency operating and implementing regulations, and policy decisions were slow in coming or have not been resolved.

Ease of removal

- The existing programs haven't always fit well with local needs--their particular authorizing legislation and implementing regulations have provided unanticipated barriers.
- The Multi-Agency Command has played a varied role in overcoming these kinds of barriers, with some timely successes, some slow-to-materialize successes, and some failures.
- Barriers at one scale of an agency's operations have not always been viewed as a barrier at a different scale, and some officials in the region have been frustrated by a real or perceived lack of involvement by their Washington, DC, counterparts in overcoming such barriers. Barriers to interagency cooperation and collaboration, the resolution of which would greatly increase effectiveness, have not always been vigorously pursued.

Other barriers

Red tape was not the only kind of barrier to affect the Initiative.

- The amount and quality of assistance in each program and the mix between loan and grant funds was initially judged adequate by some people but inadequate by others. No mechanism was adopted to systematically review needs and adjust the programs based on changing conditions and insight born of experience, whichas supported the

view that grant funds have been easier to tailor to local needs and have been more favorably viewed by communities than have their loan and loan guarantee counterparts.

- The actual performance by federal agencies in making funds available to the region varied.
- Links to federal programs outside the purview of the Initiative have been poorly developed and inadequately understood. The focus of the Initiative has been the funding commitments listed in the Interagency Memorandum of Understanding.

Opportunities

Opportunities for removing barriers and red tape could include

- Recommitting the state and regional CERTs and the Multi-Agency Command to working together to identify, agree upon, and aggressively attack barriers to program effectiveness. The National Performance Review could be a valuable ally. The Vice President's Hammer Award was presented to the regional CERT for its work in reinventing government in 1994. Further collaboration may be warranted, particularly where agencies refuse to change current ways of doing business or are stymied by delay.
- Reviewing and adjusting financial commitments as a regular management responsibility of policy-making federal officials, who could also adjust programs to improve the quality of the Initiative in meeting the region's varied needs.
- Viewing the Interagency Memorandum as an individual agency's commitment to fulfill the promises of the Initiative; allowing diversion of funds for other purposes and in response to other priorities could be resisted.
- Developing a structure to facilitate understanding and coordination with other federal programs (such as the Empowerment Zone and Enterprise Community program) and funds that could assist those affected by reductions in federal timber supply within the region. For example, federal programs to promote affordable rural housing are at work in the area covered by the Initiative, but are not being deliberately coordinated with the community infrastructure programs in the Initiative.

PAYMENTS TO COUNTIES

Payments made by the federal-based revenues from the sale of timber and other commodities and services are an important source of funds for local governments. Historically, 25% of gross timber receipts from the sale of National Forest timber and 50% of timber receipts for the Oregon and California Railroad and Coos Bay Wagon Road lands have been returned to counties as compensation for payments foregone by not having the different lands and associated resources in private forest ownership. By law (Public Law 60-136 as amended), payments from the National Forests are for public schools and roads, with the state legislatures deciding on the actual division of funds; payments received from the Oregon and California Railroad and Coos Bay Wagon Road lands can be used for any purpose. Portions of gross receipts from other natural resources, such as mineral leasing, grazing permits, and receipts from the public domain lands, have also been returned to the counties, though those amounts are minor compared to timber receipts in the region.

Counties also receive formula-determined payments in lieu of taxes, which are based on the amount of federal land in a county. These payments are funded directly through Congressional appropriations, all counties in the nation that have eligible federal land are entitled to payment, and the formula on which it is based was amended by Congress in 1994 to provide increases to cover inflation (Schuster 1996). Congress appropriated funds to cover 77% of the total amount due nationwide in fiscal year 1995. The payments in lieu of taxes to the counties included in the Plan were

State	1994	1995	1996
	Dollars	*Dollars*	*Dollars*
Washington	1,006,501	3,882,899	1,674,898
Oregon	1,279,768	1,117,946	1,892,801
California	2,239,652	1,928,475	1,851,337

In recent years, local governments in the region have received more than $200 million per year from revenue sharing and payments in lieu of taxes (figure 19). Since fiscal year 1991, legislatively determined safety nets have been in place on yearly appropriations to lessen the effects on local government resulting from changes in federal timber supply and accompanying reductions in timber receipts.

The Safety Net

The current safety net, which was proposed as an element of the Northwest Forest Plan, was included in the Omnibus Budget Reconciliation Act (1993); it began to affect payments in fiscal year 1994. For fiscal years 1994 to 1998, the Act guarantees an annually declining percentage of the average of payments made between fiscal years 1986 to 1990; payments are

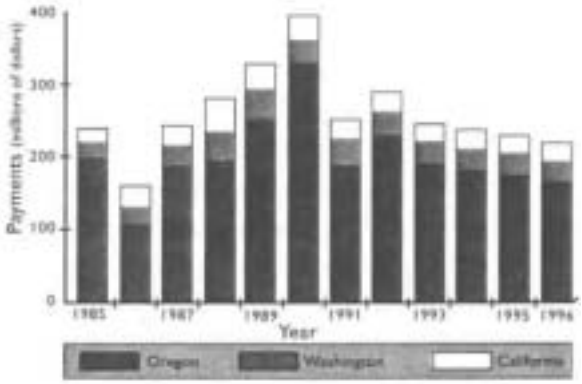

Figure 19 – Payments to counties in the region, 1985-96

independent of, and may exceed actual gross receipts. For fiscal years 1999 through 2003, the Act guarantees that county payments will be the greater of the revenue-sharing percentage applied to actual gross receipts or the year's percentage from the Budget Reconciliation Act. The percentage from the Budget Reconciliation Act declines annually and is applied to the average receipts for fiscal years 1986 through 1990, which were nearly record harvest years for the decade. The guaranteed percentage of payments, based on the average of payments made from 1986 to 1990, decreases 3%per year as follows:

Fiscal year	Guaranteed percentage
1994	85
1995	82
1996	79
1997	76
1998	73
1999	70
2000	67
2001	64
2002	61
2003	58

Actions to Date

More than $233 million was paid to the region's counties in fiscal year 1994--an amount equal to 85% of payments made annually between 1986 and 1990--payments in fiscal year 1995 were in excess of $205 million. Payments in 1996 were in excess of $207 million. By comparison, slightly more than $240 million was paid to counties in fiscal year 1993.

The safety net makes a substantial difference over what would otherwise be paid if amounts were based on federal receipts. Using the National Forests of Oregon and Washington as an example, more than $101 million was paid to counties in 1994, but actual receipts would have returned slightly more than $38 million. The safety net, therefore, provided an increment of $63 million to the affected region. Similarly, forests in western Oregon managed by the Bureau of Land Management would have provided $30 million in 1994 if the payments had been based exclusively on actual receipts; with the safety net, however, the total payments amounted to $79 million.

For most but not all counties in the area covered by the Plan, payments in lieu of taxes are substantially less than the revenue sharing monies provided by the safety net. Because payments in lieu of taxes are constrained by prior year payments from revenue-sharing sources and the safety net, payments in lieu of taxes may increase for some counties as prior-year payments decline. The increases, however, would not usually offset the declines in safety net or revenue-sharing monies, and the increases would be subject to Congressional appropriations. In 1995, Congress appropriated monies to fund 77% of the nation's liability for payments in lieu of taxes.

Payments to Counties: Observations and Opportunities

Payments to Counties

Observations

Payments to counties rival in total amount the other types of economic assistance coming to the region as a part of the Plan. Because of restrictions placed on the use of funds in many of the programs included in the Initiative, they are not direct substitutes for the funds received as payments to counties. In future years, payments to counties are likely to decline so that they are below current or historical totals.

No agreed-upon mechanism has been identified for deciding how the federal government will contribute to economic vitality in affected counties--as it has through payments to counties--after the safety net expires.

The traditional mechanism of sharing receipts may not provide funds approaching historical totals, and no new mechanism has been developed to decide how federal funding should be determined.

The importance of federal lands and their use as they relate to local economic activity and the provision of social services and infrastructure is incompletely understood.

Opportunities

Payment issues opportunities could include

- Joining federal (both the executive and legislative branches) with state, county, and local governments to build an understanding of the options for future federal payments because they all have a stake in future payments to counties. They could work together to develop a process for achieving fairness and equity. A subcommittee of the regional CERT was beginning such a task as this report was being prepared, and their task could be made a top priority.
- Evaluating systematically and with cooperation among federal, state, county, and local officials how local government services and infrastructure are linked to federal forestry and other (nonfederal) sources of funds.

ECONOMIC ASSISTANCE UNDER THE PLAN: CHANGES IN LOG EXPORT POLICIES

Log exports have been steadily declining since recent highs were reached in 1988; in 1994, they totaled slightly more than 1.5 billion board feet (figure 20). Several reasons account for the decline in log exports. Increases in domestic stumpage prices have made domestic processing a more competitive alternative to log export, and the removal of tax incentives for Foreign Sales Corporations to export logs has intensified this advantage in favor of domestic processing. The Forest Resources Conservation and Shortage Relief Act of 1990 has also affected exports, particularly from state-owned forests. The Act, implemented in 1991 permanently prohibited exports of all federal timber and further restricted the export of timber sold from state and local government lands. Finally, some of the decline is due to competition from other nations seeking to increase their log exports.

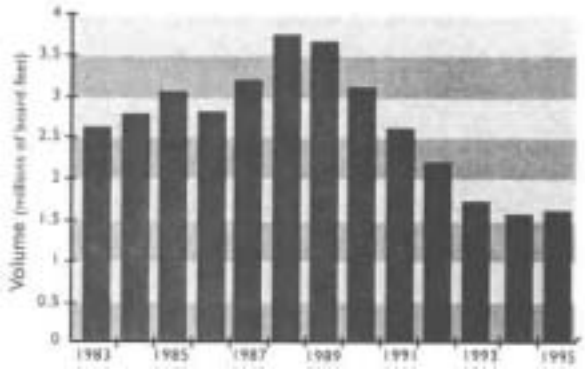

Figure 20-Volume of logs exported from Seattle, Columbia-Snake, and San Francisco Customs Districts, 1983-95.

Provisions were included in the Omnibus Budget Reconciliation Act (1993) that amended the Internal Revenue Service Code by removing the tax exemption incentives for foreign sales corporations to export raw (unprocessed) logs.

ECONOMIC ASSISTANCE UNDER THE PLAN: ASSISTANCE TO SMALL BUSINESSES AND SECONDARY MANUFACTURING IN THE WOOD-PRODUCTS INDUSTRY

Small businesses provide significant employment opportunities in the logging, primary manufacturing, and secondary manufacturing sectors of the timber industry. Like their counterparts in other industries, small businesses in the timber industry face significant challenges to develop technology, exchange information, and obtain financial capital. These difficulties are related to firm size and are complicated by rural location. Additionally, timber availability and changes in federal timber supply may disproportionately affect the competitiveness and even the survival of small firms within the region.

The direct comparison of employment in small businesses with large businesses is complicated by a lack of suitable data. An indirect comparison of small and large firms can be made, however, from data showing the number of establishments employing different numbers of workers in the logging, primary manufacturing, and secondary manufacturing sectors. The definition of an establishment differs from the definition of a firm or business: an establishment is a physical place where work is conducted, bur a firm or business is a legal entity that may include more than

one establishment. Small firms typically own a single establishment, and the largest firms own multiple establishments to capture economic advantages of scale, transportation, raw material availability, market access, political structure, and social and cultural customs.

The number of establishments in different employment size-classes are summarized (table 21) by state for logging, sawmills and planing mills, plywood and veneer, and the secondary manufacturing sectors.

Table 21 – Number of establishments[1] in the counties covered by the Northwest Forest Plan, by state, industrial sector, and number of employees, 1991

State Industrial sector	Number of establishments 1 – 19 Employees	 20 – 99 Employees	 100+ Employees
Washington			
Logging	855	19	6
Sawmills and planing mills	112	25	28
Softwood plywood and veneer	6	1	11
Secondary sector	362	45	19
Oregon			
Logging	1,088	18	8
Sawmills and planing mills	147	35	44
Softwood plywood and veneer	25	7	32
Secondary sector	246	40	36
California			
Logging	352	8	2
Sawmills and planing mills	72	10	32
Softwood plywood and veneer	0	0	2
Secondary sector	214	23	19
Total			
Logging	2,295	45	16
Sawmills and planing mills	331	70	104
Softwood plywood and veneer	31	8	45
Secondary sector	822	108	74

[1] Establishment is a physical place of work; a firm may own more than one establishment.

Source: Compiled from Bureau of the Census, County Business Patterns, 199 I, by Paul Polzin, Bureau of Business and Economic Research, University of Montana, Missoula.

Small Businesses and Federal Timber Supply

Competition is particularly intense for those small and small-to-medium primary manufacturers that have relied heavily on federal timber to manufacture commodity products. Special provisions are available to make federal timber preferentially available to small businesses. The Small Business Timber Sale Set-Aside Program was established to provide qualified small-business timber purchasers (those with 500 or fewer employees) an opportunity to secure a “fair proportion" of the federal timber-sale volume. Every 6 months, federal land management agencies and the Small Business Administration determine whether small businesses have purchased their

prescribed share of the timber offered through the open sale program (in which firms of all sizes may bid on federal timber) during the preceding 6-month period. If small businesses have not purchased their share, the Set-Aside Program “triggers" and certain sales are set aside for preferential bidding by qualified small businesses. The set-aside process continues until small businesses purchase enough timber volume to satisfy their share deficit, at which time the full timber-sale program returns to open competition.

During federal fiscal years 1988 to 1993, 71% of the National Forest volume in Oregon and Washington, 41% of the National Forest volume in California, and 59% of the Bureau of Land Management volume in western Oregon was sold to small businesses. During these years, small businesses successfully purchased a relatively constant proportion of federal timber. The Set-Aside Program was instrumental in helping small businesses maintain their share of timber-sale purchases, and more than 607.3 million board feet of timber were sold under its provisions. This total included 326.4 mmbf on the National Forests in Oregon and Washington, 134.7 mmbf on the National Forests in California, and 146.2 mmbf on the Bureau of Land Management Districts in Oregon. Despite the supply restrictions that resulted from the federal timber-sale injunctions, small businesses generally continued to purchase their historical shares of a dramatically reduced volume. The purchase of historical shares, however, masks the very real pressures that have been put on some small firms because of the reductions in absolute quantities of available federal timber.

The local effects of the reduced federal timber supply on small businesses have been felt across the region. For example, data for the five Bureau of Land Management Districts in western Oregon show how the total volume sold differed between the 3-year period from 1988 to 1990 and the 3-year period from 1991 to 1993 (table 22). These Bureau of Land Management figures are typical of the region. They show absolute volumes declining sharply and reductions in purchases felt by both large and small businesses. The changes in small-business shares have been uneven across the region, with increases in some Districts and decreases in others. The significant reductions in the absolute quantity available for purchase suggests intensified competition for available timber, and a corresponding increase in the uncertainty surrounding the prospective survival and prosperity of existing firms.

Table 22 – Total volumes sold to all purchasers and total volumes sold to small businesses in two 3-year periods, by western Oregon Bureau of Land Management Districts

BLM District	Period: 10/I/87 - 9/30/90			Period: 10/I/90 - 9/30/93		
	Total sale volume	Sold to small businesses		Total sale Volume	Sold to small businesses	
	Mmbf	Mmbf	Percent	Mmbf	Mmbf	Percent
Salem	642.1	474.4	73.8	125.9	108.7	86.3
Eugene	508.0	203.1	40.0	144.0	120.2	83.5
Roseburg	601.3	264.4	44.0	119.7	9.5	83.1
Medford	552.0	329.4	59.7	79.3	32.0	40.3
Coos Bay	596.4	348.5	58.4	88.5	58.6	66.2

Source: Bureau of Land Management.

Secondary Manufacturing in the Timber Industry

The secondary manufacturing industries are diverse, producing a wide variety of specialty products that are sold regionally, domestically, and internationally. The secondary sector's growth has been beneficial to rural, timber-dependent areas, though some of the sector's industries are concentrated in metropolitan areas. The region's comparative advantage in primary-wood products manufacturing spills over, though not uniformly, into a regional competitive advantage in industries that make up the secondary sector.

Secondary manufacturing industries face many of the same difficulties that small- and medium- sized manufacturers in other industries face, including those in the primary wood-products manufacturing sector: difficulties with higher costs in complying with regulatory requirements; technology transfer and new product development; a lack of worker training support; intra industry communication; expert counsel and advice; capital availability; and raw material availability. Small firm size, rural locations for some of the sector's industries, and the specialty nature of the typical firm's products complicate the outlook for the sector. On the bright side, demand for many products is healthy, the prospects for domestic and international sales growth is promising, and many public, private, and nonprofit organizations exist to serve the sector's needs.

Actions to Date

The Initiative has been the vehicle to identify small business and secondary manufacturing proposals specific to individual firms and local areas. Support to increase local capital availability has been carried out under the Intermediary Relending authority of Rural Economic and Community Development and capacity-building efforts by the Economic Development Administration and the Forest Service, and the Old-Growth Diversification programs administered by the states through the Forest Service. Several proposals for technology and business development in the wood-products industry have also been funded by these agencies. The Small Business Administration has intensified loan-guarantee processing in the region, which has resulted in loans of $162 million in fiscal year 1994 and $164 million in 1995. The Small Business Administration has also worked with local partners to promote the development of Small Business Development Centers as one-stop locations for small business advice, counsel, and services of all kinds.

Many of the difficulties in technical and business support and capital availability have been addressed by the proposals funded through the Initiative. For example, Rural Economic and Community Development's Intermediary Relending program has increased the amount of capital available for rural investment, direct grants by the Economic Development Administration have increased the number of economic development specialists in rural economic development districts, direct grants and loans from the Forest Service's Old-Growth Diversification program have made millions of dollars available for business expansion and community diversification, and the Small Business Administration's Small Business Development Center program has become an important resource for those businesses needing technical and consulting advice.

Several innovative technology development and training efforts to help the logging and forestry services/restoration sectors, which are largely small businesses, have been established and some have received support through the Initiative.

Finally, a federal interagency study group was convened by the Administration to develop options to strengthen small businesses and secondary manufacturing. An internal report prepared by the study group identified options to overcome problems with raw material availability, address technical and business support difficulties, resolve capital availability problems, and create new forest-based enterprises. The report was not finalized because of concerns about potential conflicts resulting from commitments associated with the General Agreement on Tariffs and Trade (GATT) and a lack of agreement within the wood-products industry about a suitable course of action for adjusting the Small Business Timber Sale Set-Aside Program to account for reduced federal timber supply and its effects on small timber purchasers.

Training the Next Generation of Loggers at the Forestry Training Center

In mid-1995, the Forestry Training Center, headquartered in Port Angeles, Washington, conducted its first training course to prepare the next generation of loggers for work in the woods of the region. These loggers, and those to be trained in future years, will be responsible for conduction intensive forest management operations in second-growth forests in an environmentally responsible manner. In the words of the Center's organizers: "The Center bridges the gap between modern forest management, evolving technology, and jobs in the forest products economy of the 21st century."

This Center is incorporated as a private, nonprofit corporation, closely associated with the University of Washington College of Forest Resources and the Peninsula Community College. Its board is composed of representatives of the logging industry, private timber-owning companies, federal and state land-management agencies, organized labor, and state workforce development agencies; it has received funding from private and public sources, including funds available through the Forest Service as a part of the Initiative.

The Center is the only one of its kind in the United States. It will bring the world's latest logging technologies to the region and provide land owners and logging companies with a workforce that is trained in the use of those technologies. On-the-job experience is provided as an integral component of the training program, making its graduates instantly productive and profitable. The result will be a new source of family-wage jobs, profitable access to the region's abundant supply of second-growth timber, and environmentally sensitive operations to protect and conserve the region's forests.

TEXT BOX 19

Assistance to Small Business and Secondary Manufacturing: Observations and Opportunities

Assistance to Small Businesses and Secondary Manufacturing

Observations

Concerted efforts have been undertaken within the Initiative to provide financial capital and business assistance to rural businesses. Efforts are also underway to develop the technologies and workforce skills that will support the competitiveness of both the logging and forest management workforces, though the links to the economic assistance components of the Plan are incompletely developed.

The Initiative has addressed small-business and secondary-manufacturing opportunities as they have been developed through the state CERTs.

- Support to small businesses has been intensified by the Small Business Administration through the Small Business Development Centers and several special outreach efforts.
- The availability of capital in rural areas has increased through several programs--for example, the Intermediary Relending program of Rural Economic and Community Development.

Timber supply problems related to small business preferences and federal timber sales have not been addressed.

Comprehensive, regionwide approaches to technology development and dissemination in logging, forestry services, and ecosystem restoration have been slow to develop

A comprehensive strategy and regionwide effort to fulfill the President’s original promise to help small businesses and secondary manufacturers has not been developed.

Opportunities

Assistance to small businesses and secondary manufacturers opportunities could include

- Reviewing the Small Business Set-Aside program administered by the Forest Service, Bureau of Land Management, and Small Business Administration to identify where adjustments or modifications in the program would improve its effectiveness, given current conditions in the timber industry and the federal supply situation under the Plan.
- Studying, updating, and releasing to the public the unreleased options developed by the federal interagency team on small business and secondary manufacturing as a means to further promote these industries.
- Developing systematic, integrated approaches to starting new, forest-based enterprises; some inspired efforts have provided encouragement that a coordinated regional approach could benefit the region's small businesses. Possibilities could include intensified coordination with existing efforts, such as the Northwest Center for Sustainable Resources (a consortium of junior colleges providing technical training in several environmental sciences), the Forestry Training Center (training for the next century's logging industry), the forest management workforce training through the Jobs in the Woods program, and the region's forestry schools, colleges, and research institutions.

CHAPTER 7

WHAT WE HAVE LEARNED

A REGION IN TRANSITION

The Pacific Northwest and northern California is a region in transition. An unprecedented number of people are moving here from outside the region; urban and suburban growth substantially exceeds that of rural areas; high technology industries are becoming as economically powerful as forest industries; and the region's citizens are placing at least as much value on the biological benefits of water quality, native fish populations, and the remaining old-growth forests as they have for decades on the economic benefits that forest harvest and use has provided.

The results of these and many other changes are often viewed in black and white, but—up close---they take on shades of gray. The changes in people's perspectives about forest management require urgent and difficult choices to be made that will immediately affect the region's fishers, loggers, tourists, communities, and forests. The Northwest Forest Plan is about making these difficult choices and making them today.

The Plan lowers the Northwest federal timber-harvest rates and protects late-successional and old-growth forests, so that in the future, more timber can be harvested and more old-growth habitat provided. The amounts of late-successional and old-growth habitat and timber harvest are expected t° rise after the next decade, as habitat grows back and second-growth forests reach an age where they can be economically harvested.

After the Plan's two years of implementation, people are just beginning to learn about how it has affected the region. In this report, details have been provided on what people have observed, and we have highlighted opportunities for improving forest management and economic development in the region. Three themes stand out: agency coordination, ecosystem-based forest management, and movement toward a new equilibrium between the economy and the environment. Below are some of the lessons learned that could be useful in other ecosystem approaches that may be undertaken.

GOVERNMENT AGENCIES CAN WORK TOGETHER

Government can better serve the citizens, and meet their diverse demands, by changing the way they produce goods and services.

- Agencies working together allow individual agencies to be more responsive and efficient in meeting people's expectations about forest management and economic assistance.
- Without legislative reform, new organizations and processes may have to be established to manage and coordinate existing organizations and processes.
- Organizations and processes that coordinate people's efforts can dramatically improve relations within and between agencies to create unified positions that incorporate the best professional perspectives each agency has to offer.

- Professional and interagency conflict is inevitable. Successful partnerships should be measured by the ability of agency representatives with different professional and organizational mandates to manage their conflict constructively, so--though strong disagreements may remain—a shared outcome results.
- Agency resources--human, technical, and financial----can be integrated and shared in ways that create better management decisions, leading to more efficient use of federal funds, and the ability to accomplish more.
- Representatives from local, state, tribal, and federal governments can come together with nongovernmental representatives to help interpret and apply federal laws, policies, and regulations at regional, provincial (or river basin), and local watershed scales.
- Bringing the diversity of values and management objectives among federal, state, tribal, nonprofit, and private forestry organizations together fosters creative thinking and can lead to more effective management than if individual perspectives are independently forwarded.

People expect government agencies to work as one instead of separately. They also expect to be allowed to have a say about how federally managed resources are being used. The Plan's strategies form a foundation for building trust among all participating parties, lead to better and more unified decisions, and help manage the inevitable conflicts.

The Northwest Forest Plan directs the agencies to work together and sets up some new organizations and processes that are allowing it to happen. But this new way of operating is not without tradeoffs. The time and energy put into coordination and partnering frustrates both those in and outside of government. Successful partnerships can make decisions that create long-term agreements, but much time and energy can be consumed in making those decisions. Successful coordination assures that one agency's decisions can move forward without being held up by another, but it requires individual agency professionals to look beyond their own mission and culture, to their broader, long-term goals.

Reinventing government is not an end, but a means to an end. If government works together and with the public they are entrusted to serve, the region will see more old-growth habitat, more products, and more efficient assistance to displaced timber workers.

AN ECOSYSTEM APPROACH CAN WORK

Developing and implementing an ecosystem approach toward resource management can work.

- The nation's environmental laws can be integrated, but limitations caused by independently authorized environmental statutes can lead to inefficient use of staff and financial resources.
- Science can provide the basis for decisions, but many policy decisions cannot be made by science alone. Any science-based analysis must be accompanied by a strong management overview to assure that people's values and goals are adequately addressed and that science-based management tools can be readily applied on the ground.
- Watersheds and late-successional forests can be maintained and restored, but the rules for doing so should be further refined to allow better integration of environmental protection with both commodity and noncommodity uses.

- Recognizing the economic consequences--pro and con---of a new ecosystem approach is as important as recognizing new management tools. Economic assistance programs can provide much-needed technical and financial assistance to workers, businesses, and communities that are affected by reductions in federal timber harvest. These programs, where possible, should be instituted three to five years before federal timber harvest targets are reduced.
- Many budget, personnel, contracting, procurement and other forest management support processes are not congruent with the new ecosystem approach. Any ecosystem effort must make implementation planning an equal partner with scientific management strategies.

The Northwest Forest Plan represents one of the first ecosystem approaches to be applied at a large, regional scale. Like an ecosystem, the approach is necessarily complex, so much so that it is difficult to describe just how comprehensive it attempts to be.

Implementing the Plan has been slowed for a variety of reasons. The federal agencies have had to essentially start from scratch, with an array of new assignments, structures, and processes. They have had to work through historical differences and establish new ways of interacting. The 1994 and 1996 fire seasons diverted staff and attention away from implementing the Plan during that first crucial year, and funding and staff had been reduced across the board to help balance the budget. The Plan's new requirements force the agencies to look closely at all the effects their management actions have on the region's forests and waterways.

For these and other reasons, assuring that the Northwest Forest Plan is being implemented in ways that keep land management actions from being shut down has taken time, and so has assuring that the forests can continue to provide a stable flow of the goods and services people need and want. A decade---or more---may be needed to refine the Plan as we learn more about ecosystem management, and to measure its economic, social, and ecological effects. But the agencies--with help from the states, local governments, tribes, and interested citizens--are off to a measurable start, as this report reflects, in assuring that the Plan's commitments are met and that needed improvements to the Plan are timely and efficient.

THE ECONOMY AND THE ENVIRONMENT CAN REACH A NEW EQUILIBRIUM

In a polarized social environment, achieving a middle ground requires decision makers to achieve a new equilibrium between the mix of environmental and economic forest benefits across various ownerships.

- Federal lands, with their mix of successional stages and public interest mandates, can provide the best opportunity to contribute environmental benefits that are not or cannot be found on nonfederal lands.
- Recognizing, respecting, and integrating the various economic and environmental objectives of adjacent nonfederal land owners provides excellent opportunities for integrating property rights with environmental responsibilities.
- Multiple economic uses of federal forests can continue, though at lower rates than in the past, where sustainability is based on protecting the habitat of many, rather than single species.

- Even though regional economic trends may be very positive and job displacements have been fewer than many predicted, changes in federal forest management--especially changes in timber supply--have hurt many individuals, businesses, and communities. These effects are especially acute in rural communities far from major transportation corridors.
- Integrating environmental and economic objectives may require short-term tradeoffs, which often create economic and environmental gains and losses.

Under the best of circumstances, making decisions that attempt to integrate economic and environmental objectives is difficult and controversial. This difficulty was exacerbated in the region because of the strong differences that had built up over many years and culminated in a public policy no-man's-land where everybody had a different proposal but was unwilling to make the compromises necessary to reach a solution.

The Plan takes a comprehensive, multiownership look at integrating forestry and economic assistance. Nonetheless, many people measure successful integration only by how many federal trees will be cut or how many will be protected. For those who depend on federal timber sales, the Plan's 75% reduction in federal timber supply is too large. For those who believe that all of the remaining late-successional and old-growth forests should be protected, the Plan's 80% protection of these forests is too small. Where people stand on integrating the economy and the environment depends on where they sit. The more people look beyond single measures of integration, the more opportunities will arise to develop new ways to meet what are, for some people, incompatible goals.

EPILOGUE

Although many economic and environmental outputs under the Plan can be assessed at this interim state, the Plan's many benefits and the many challenges that still exist must also be assessed over time. Perhaps the largest challenge is the ongoing conflict between those who are not happy with the balance prescribed by the Plan. Some of these people are critical because they hold personal, ideological, and political convictions; others are frustrated by coping with the uncertainty of an industry and forest in transition.

Maybe no plan dealing with such complex and emotional issues can satisfy everybody's expectations or eliminate the chasm between polarized positions. But the Northwest Forest Plan offers a beginning that many people are willing to accept--people who are sitting down together and working out their differences, nonfederal land owners working with the federal government to develop management plans that protect their economic and environmental interests, and federal natural-resource professionals giving it their all under trying circumstances to meet their commitments to manage, protect, and restore Northwest forests.

The Northwest Forest Plan is a plan in progress. It is designed to be adaptable, to foster consideration of new information from science and on-the-ground experience and to be responsive to the needs and wants of the citizen-owners of these forests. If the region remains polarized, the best that resource professionals can do is make the tough decisions. For the Plan to continue to grow, the natural-resource professionals need support and constructive criticism from those people who are most interested in and knowledgeable about the region's forests. Together, we can continue to develop the Plan to meet the needs of a new century.

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APPENDIX A

THE FOREST PLAN: FOR A SUSTAINABLE ECONOMY AND A SUSTAINABLE ENVIRONMENT

THE FOREST PLAN

FOR A SUSTAINABLE ECONOMY AND A SUSTAINABLE ENVIRONMENT

PRESIDENT WILLIAM J. CLINTON
VICE PRESIDENT ALBERT GORE, JR.

July 1, 1993
Washington, DC

THE FOREST PLAN: FOR A SUSTAINABLE ECONOMY AND A SUSTAINABLE ENVIRONMENT

President Clinton's Forest Plan for a Sustainable Economy and a Sustainable Environment is a comprehensive and innovative blueprint for forest management, economic development, and agency coordination aimed at strengthening the long-term economic and environmental health of the region. For too long, contradictory policies from feuding agencies have blocked progress, creating uncertainty, confusion, controversy, and pain throughout the region. President Clinton's plan reflects his commitment to break the gridlock with a courageous, new approach that balances
economic and environmental concerns.

The Forest plan provides:

- A sustainable harvest that will allow timber sales and logging based on a scientifically sound and legally responsible plan, improving forest management and ending the confusion and uncertainty of past policies;
- New economic assistance to help local workers, businesses and communities to strengthen the region's economy, create family-wage jobs, offer new economic opportunities and ensure the region's long-term economic health, confronting economic issues ignored by past Administrations;
- An innovative, new approach to environmental protection focusing on key water supplies and valuable old-growth forests, that will once again base forest management on science and a respect for existing law;
- A comprehensive system of old-growth reserves to protect old-growth ecosystems;
- New opportunities for people in the region to participate in decisions regarding management of the nation's forests for the economic and environmental benefits they provide and to help plan for their future;
- Improved coordination among federal agencies responsible for managing federal lands, ensuring that federal agencies will work together with state and local officials, with tribes, and with private landowners for the best interests of people and communities in the region, instead of working against each other, undermining the law and creating gridlock.

BACKGROUND

On April 2 in Portland, Oregon, President Clinton convened the Forest Conference as the first step toward a balanced and comprehensive policy that would recognize the importance of the forests and timber to the economy and jobs in the region and recognize the importance of America's old-growth forests, and the rivers and streams and wildlife that are so much a part of America's national heritage and the region's natural treasures.

The Forest Conference fulfilled a commitment President Clinton made to the people of the Pacific Northwest and northern California to break the gridlock, which has blocked progress on these issues, by designing a comprehensive, innovative, and balanced plan for the region's long-term economic and environmental health.

"The most important thing we can do," President Clinton said in opening the conference, "is to admit, all of us to each other, that there are no simple or easy answers. This is not about choosing between jobs and the environment, but about recognizing the importance of both and recognizing that virtually everyone here and everyone in this region cares about both."

At the Forest Conference, the President, the Vice President, key members of the Cabinet and other top Administration officials talked with people from throughout the region representing a broad range of views and perspectives--many of them adversaries who had spent more time fighting each other than working together. The Forest Conference provided a first-hand understanding of these issues and how the people in the region have been and will be affected.

At the close of the Forest Conference, President Clinton directed his Cabinet to action with five fundamental principles to guide them. President Clinton said

- First, we must never forget the human and economic dimensions of these problems. Where sound management policies can preserve the health of forest lands, sales should go forward. Where this requirement cannot be met, we need to do our best to offer new economic opportunities for year-round, high-wage, high-skill jobs.
- Second, as we craft a plan, we need to protect the long-term health of our forests, our wildlife, and our waterways. They are.., a gift from God and we hold them in our trust for future generations.
- Third, our efforts must be, insofar as we are wise enough to know it, scientifically sound, ecologically credible, and legally responsible.
- Fourth, the plan should produce a predictable and sustainable level of timber sales and non-timber resources that will not destroy our forest environment.
- Fifth, to achieve these goals, we will do our best to make the federal government work together and work for you. We may make mistakes but we will try to end the gridlock within the federal government and we will insist on collaboration, not confrontation.

Three working groups were established immediately after the Forest Conference: Ecosystem Management Assessment, to focus on forest management; Labor and Community Assistance, to focus on economic development; and Agency Coordination, to focus on how federal agencies work together. These working groups were comprised of scientists and experts from across the agencies involved (the Department of Agriculture, Interior, Commerce, and Labor, as well as the Environmental Protection Agency, the White House Office on Environmental Policy, the National Economic Council, the Office of Science and Technology Policy, the Office of the U. S. Trade Representatives, the Council of Economic Advisors, the Office of Management and Budget, and the Domestic Policy Council). They conducted exhaustive research and analysis and met with a wide range of groups and individuals from a broad range of perspectives before issuing their reports to the White House on June 2. It is their work, and the ideas and opinions of the scores of people they consulted, that provide the foundation for the President's *Forest Plan for a Sustainable Economy and a Sustainable Environment.*

Forest Management

The President's Forest Management Plan offers an innovative new approach which uses key watersheds as its basic building blocks and offers new possibilities for environmental and scientific research through the creation of Adaptive Management Areas.

Recently, forest management proposals have been driven either by an approach based on, protecting areas inhabited by specific species, such as the spotted owl or marbled murrelet, or by an approach based on protecting a specific type of forest.

The President's plan offers a different approach, based on sound science and a commitment to existing law, which is built around identifying and protecting key watersheds and old-growth forests. Such an approach takes great steps to protect the region's drinking water and represents an obvious and essential step toward restoring a healthy salmon industry. It protects threatened species, such as the northern spotted owl and the marble murrelet, scores of other species (including fish now considered "at risk" under the law), as well as the most valuable old-growth forests.

Ten Adaptive Management Areas provide opportunities for federal, state, and local officials, industry, community, and environmental organizations, tribes, and others to work together to develop innovative management approaches, such as the Applegate Project and the Douglas Project in Oregon and the Hayfork Adaptive Management Area in Northern California. These areas provide for intensive experimentation and innovation to demonstrate new ways to achieve ecological, economic, and social objectives and allow for local involvement. A rigorous monitoring and research program will ensure the development and analysis of scientific data to assess the effectiveness and impact of the approaches.

Key elements of the President's plan include:

- Watersheds as the fundamental building block.
- Reserve areas based on watershed and old-growth that include the most valuable old-growth forests and designated conservation areas to protect specific species. Only very limited activities would be permitted in the reserves, including salvage and thinning where the primary objective of that salvage and thinning is to accelerate the development of old-growth conditions.
- Ten Adaptive Management Areas of 78,000-380,000 acres each for intensive ecological experimentation and social innovation to develop and demonstrate new ways to integrate ecological and economic objectives and allow for local involvement in defining the future.
- The development of the new rule from the Fish and Wildlife Service to ease restrictions on timber harvest from certain nonfederal lands (modifying what have been known as "owl circles"), which is possible because the President's plan improves management of federal lands, and encouraging private companies to commit the timber released by these changes to processing in domestic mills.
- Federal assistance to bring to market backlogged timber sales from Indian reservations.

The President will submit his forest management plan to the court and will do everything possible to resolve the legal challenges and lift the injunctions that have stopped timber sales so that both the Forest Service and the Bureau of Land Management can implement a sale planning and preparation program as quickly as possible. He is asking the Secretaries of Agriculture and Interior to take any

other available actions consistent with our legal obligations to revive the timber sale program.

And, because the President believes the workers, businesses, and communities in the region need help as quickly as possible, the President is directing his Cabinet to work with all those who share his determination to resolve these issues in a fair and balanced way to develop the most effective means to implement this plan and move timber sales forward as quickly as possible.

Harvest levels in the President's plan take into account the fact that previous Forest Service management plans have significantly overestimated the amount of timber available for harvest every year, presenting unrealistically high harvest levels that cannot be sustained even under existing forest management plans. The President's plan provides for a sustainable timber harvest of 1.2 billion board feet annually on the spotted owl forests. In addition, the expected release of sales stopped by injunction, steps to move timber from Indian lands, and other measures are expected to increase that figure as the program is implemented.

The President's Forest Plan focuses on management strategies to resolve the long-standing court challenges over management of the spotted owl and old-growth forests on the west side of the Cascade Mountains. Management of the east-side forests will need to focus on restoring the health of the forest ecosystems impacted by poor management practices of the past.

The President is directing the Forest Service to develop a scientifically sound and ecosystem based strategy for management of the east-side forests. This strategy should be based on the forest health study recently completed by agency scientists as well as other studies. Consistent with this strategy, the President also is directing the agency to accelerate efforts to prepare timber sales to harvest dead and dying timber in the east side.

ECONOMIC DEVELOPMENT

Unlike his predecessors, President Clinton recognizes that the Northwest forest crisis involved important economic and social as well as environmental concerns. Recognizing the importance of timber and forests to the economy and jobs in the region is central to the President's *Forest Plan for a Sustainable Economy and a Sustainable Environment.*

The President's plan will provide immediate and critical support for economic adjustment and diversity in the region, including expanding funding for business development, economic planning, infrastructure development, and worker retraining to help build a foundation for long-term economic strength and environmental health. The President's plan will help existing companies grow and attract new businesses. It will add more jobs for the timber harvested by encouraging value-added manufacturing and help those workers and those communities who rely on a future in wood.

The plan will provide $270 million in new funding for fiscal yeast 1994--$1.2 billion over five years -- including a new Northwest Economic Adjustment Fund. While estimates indicate that the forest plan will directly impact 6,000 jobs in 1994, the plan would create more than 8,000 jobs and fund 5,400 additional retraining opportunities.

Key elements of the President's plan include:

For workers and families, increased funding under the Job Training Partnership Act for job-search assistance, retraining, and relocation; overall a 110% increase in funding from $20.2 million to $42 million;

- A three-part strategy for business development in the Pacific Northwest and Northern California, including improved access to capital, expanded technical assistance, and enhanced access to domestic and international markets; overall, a 47% increase in funding from $163 million to $239.7 million;
- For communities, established levels of financial assistance to timber counties, replacing the roller coaster of payments tied to timber harvests with a reliable schedule of payments, creating a sound fiscal environment for county governments, businesses, and financial institutions; strengthening community capacity to plan for economic development and diversification, and improving the infrastructure needed for such development through Community Development Block Grant lending, Rural Development Administration community facilities, and the RDA Water/Wastewater Program; overall, a 25% increase in funding from $298.6 million to $373.6 million;
- To protect the environment and create jobs, investments in watershed maintenance, ecosystem restoration and research, environmental monitoring and forest stewardship, all of which will improve water quality and increase salmon stocks to avoid listing of salmon species under the Endangered Species Act and to improve commercial fishing; in addition, forest stewardship will be expanded to help small landowners manage their forests; overall, a 19% increase in funding from $438.2 million to $519.8 million.
- Support for the elimination of tax incentives for the export of raw logs, and the President is directing his cabinet to study effective ways to make it more difficult for companies to avoid export limitations on raw logs.
- Directing his Cabinet to identify and implement, in a priority manner, the best ways to strengthen small businesses and secondary manufacturing in the wood-products industry, including a review of increasing the supply of federal timber set aside for small businesses and possible preferences for bidders who contract for domestic secondary processing. The President also is directing his Administration to encourage improved and effective community partnerships to bring together those with different perspectives on forest management. (Secondary manufacturing generates from 4 times to 25 times more jobs per billion board feet than primary manufacturing.)

The Northwest Economic Adjustment Initiative would be implemented through an innovative partnership among state, local, and federal agencies, as well as community and business leaders, to help local families and workers caught in the middle of this crisis. The President is directing that federal agencies implement this innovative approach to economic adjustment by creating a unified management system that will bring the various agency efforts in each state together into a single team. This will coordinate the related activities of federal, state, and local agencies and provide a unified point of contact and procedures for workers, firms, and local communities. ”

The President’s proposal, supported by Governor Barbara Roberts of Oregon and Governor Mike Lowry of Washington, represents a comprehensive experiment in "reinventing government," improving the way the government works to make it more responsive, more effective, and

more efficient. The plan calls for replacing restrictions on the use of federal funds with performance-based measures, making new use of leveraged private resources, and creating new processes and institutions responsive to local needs and priorities.

The President's plan provides a substantial infusion of new federal assistance through innovative programs to both provide economic relief to timber communities as soon as possible and to encourage long-term economic development and diversification.

AGENCY COORDINATION

Too often in the past, different federal agencies have acted in isolation or even at cross purposes in managing federal forest lands in the Pacific Northwest and Northern California. Instead of working to confront existing problems, they have contributed to them, creating confusion and controversy. At the Forest Conference, President Clinton made clear "We will insist on collaboration, not confrontation."

Because of the President's clear direction to improve interagency coordination, an entire working group was created to focus on these issues. In addition, throughout this process, an inter-agency approach, involving the key federal agencies, has been in use. The implementation of a new forest management strategy provides the ideal opportunity to correct past practices and improve interagency cooperation and, in the process, forest management.

The President's plan will improve inter-agency coordination by:

- Creating a new focus for forest planning based on watersheds and "physiographic provinces" that base management on the unique ecology of each region;
- Immediately creating a new interagency Geographic Information System data base to allow land management and resource agencies to coordinate their efforts in the collection and development of research and data;
- Creating provincial-level teams that would develop analyses for physiographic provinces and particularly watersheds. These teams would include the relevant federal agencies, state officials and tribes and, when individual watersheds are analyzed, the objective would be to involve all affected parties in discussions on biological, timber, community, and other needs. An Interagency Executive Committee would coordinate and provide direction for the work of the provincial teams;
- Revising the consultation process under the Endangered Species Act to emphasize an integrated ecosystem approach that would include the Fish and Wildlife Service and the National Marine Fisheries Service early in the process. The views of these agencies can be made known when the land management agencies begin to develop their plans for a particular area, instead of later in the planning process as is now the case. It would also involve the use, where appropriate, of regional consultations.

CONCLUSION

The President's Forest *Plan for a Sustainable Economy and a Sustainable Environment* represents a comprehensive, innovative, and balanced approach to economic and environmental challenges facing the region. It is the result of extensive research, analysis, and cooperation among federal agencies and extensive discussions with a wide range of individuals and groups including business, labor, environmentalists, tribes, community groups, and members of Congress. The President and his entire Administration intend to continue to seek the support and opinions of these groups to implement this plan and break the gridlock that has blocked progress on these issues.

As the President said at the close of the Forest Conference, "If we don't give up or give in to deadlock or divisiveness or despair, I think we can build a more prosperous and a more secure future for our communities and for our children." This Forest Plan is an important step toward that future.

APPENDIX B

MEETING PRESIDENTIAL COMMITMENTS

Summaries of President Clinton's actual commitments, printed in bold type, are as they appeared on July 1, 1993 (see appendix A). Below each commitment are brief summaries of what has been done to meet that commitment over the last three years.

AGENCY COORDINATION AND PUBLIC PARTICIPATION

Establish an Interagency Executive Committee to coordinate and provide direction for the work of provincial teams.

A Regional Interagency Executive Committee of 11 federal agency directors and an Intergovernmental Advisory Committee consisting of state, county, and tribal representatives from Oregon, Washington, and northern California were established. The committees, which continue to meet monthly, are staffed by the interagency, interdisciplinary, Regional Ecosystem Office. These committees work to provide unified direction to the field on implementing the Plan. The Advisory Committee is chartered under the Federal Advisory Committee Act.

An Interagency Steering Committee in Washington, DC, responds to requests for assistance from the region and provides policy guidance when needed. The Committee is chaired by the Chair of the Council on Environmental Quality and includes subcabinet officials, who oversee the land management and regulatory agencies responsible for Plan implementation.

Create a new focus for forest planning, based on watersheds and physiographic provinces that base management on the unique ecology of each subregion.

The Plan recognizes that watersheds should serve as the fundamental geographical unit for managing forests within the region. Each agency supports the watershed approach in the context of its own mission. Twelve physiographic provinces were established to recognize that different parts of the region have different ecological and social characteristics.

Create a new interagency geographic information system data base to allow agencies to coordinate their efforts.

An Interorganization Resource Information Coordinating Council is developing a standardized information system for federal, state, and local government representatives and the public. The Council has developed common standards for defining vegetation and is now seeking to standardize natural resource data bases.

Create provincial teams that would develop analyses for physiographic provinces and particular watersheds.

Twelve Provincial Interagency Executive Committees composed of up to 10 representatives from responsible agencies are meeting regularly, advised by Provincial Advisory Committees that include up to 19 representatives from nongovernmental organizations; industries such as fishing,

timber, and recreation; the public at large; and state, local, and tribal governments. The advisory committees, chartered under the Federal Advisory Committee Act, help guide Plan implementation based on their province's unique ecological, economic, and social characteristics.

Revise the consultation process under the Endangered Species Act.

Management and regulatory agencies jointly developed and adopted a streamlined consultation process for timber sales and other projects. The process is initiated locally by an interagency team. If disagreements cannot be resolved, they are progressively elevated to the forest, regional, or national level. The agencies have consulted on hundreds of projects since the Plan was released. The time necessary for consultation has been reduced by 70%, averaging 34 days compared to 114 days in the past.

Implement the Northwest Economic Adjustment Initiative through an innovative partnership among local, state, and federal agencies, as well as community and business leaders.

State Community Economic Revitalization Teams were established in northern California, Oregon, and Washington to define and share information on implementing the Initiative in their state. The Teams, each chaired by a representative appointed by the Governor, developed individual plans for implementing the Initiative. All Teams include federal, state, local, and tribal representatives; the Oregon and Washington teams also include members of the public.

A Regional Community Economic Revitalization Team resolves regionwide barriers to delivering more effective economic assistance; shares information; and provides a conduit between the region and Washington, DC. The regional team includes federal, state, local, and tribal representatives from each state team and is co-chaired by two regional federal agency officials.

A Multi-Agency Command in Washington, DC, responds to state and regional requests for improved economic assistance programs. The Command is chaired by the Department of Agriculture's Under Secretary of Rural Development and includes officials who oversee federal assistance programs for workers, businesses, and communities.

Replace restrictions on the use of federal funds with performance-based measures, making use of leveraged private resources, and creating new processes and institutions responsive to local needs and priorities.

An emphasis on outcome or performance-based measures of effectiveness drives both the economic assistance effort and the delivery mechanisms for the participating federal programs. The Northwest Economic Adjustment Initiative is aimed at providing assistance so that workers, businesses, and communities will have the capacity to determine their own futures. The Community Revitalization Teams that implement the Initiative in each state play key roles because they require that priorities for local proposals be set by each county, and they attack complex but valuable development and assistance options by simplifying the application process and coordinating multiple funding sources. Finally, the criteria for federal assistance are evolving in the direction of outcome-based measures of priority and effectiveness.

NATURAL RESOURCE MANAGEMENT

Develop the Plan based on sound science and a commitment to existing law.

The Northwest Forest Plan is supported by a strong scientific foundation that was established by the Forest Ecosystem Management Assessment Team. The Team brought more than 600 regional scientists and technical experts together to develop multispecies and multiresource management alternatives.

The Team was directed to develop management options in the context of existing environmental laws. Most scientists who worked on the Plan believed that eight of the ten options they developed complied with current law. The Administration's preferred alternative has been repeatedly upheld by the courts against challenges to its development and implementation.

The Plan's Approach

The Plan takes steps to:

Protect drinking water.

Full implementation of the Plan's Aquatic Conservation strategy--outlined below -- will maintain and improve water quality. Riparian reserves in particular will help protect water bodies, minimizing the potential for problems with sediment and, and nonpoint-source pollution.

Restore a healthy salmon industry.

Full implementation of the Plan's Aquatic Conservation Strategy--outlined below -- will maintain and restore federal habitat west of the Cascade Range in a manner that is expected to provide an 80% or greater likelihood that salmon populations of sufficient quality and distribution will persist. Note, however, that federal forest practices are just one aspect of restoring salmon stocks throughout the region. Federal habitat conservation must be complemented with other management actions on fishing, hatcheries, and hydropower.

Protect threatened species.

The Fish and Wildlife Service stated in their biological opinion that the Plan is not likely to jeopardize the continued existence of any listed species or result in the destruction of any habitat of those species. The National Marine Fisheries Service concurred with this opinion, though they had not listed any species at that time.

Protect the most valuable old-growth forests.

Thousands of plant and animal species live in late-successional forests, a term that includes old-growth forests. The Plan protects 80% of the remaining late-successional forests, and is expected to provide an 80% or greater likelihood that habitat of sufficient quality, distribution, and abundance to allow old-growth forests to stabilize will be well distributed across federal lands over the next century.

Key Ecological Elements

Consider watersheds as the fundamental building block.

An Aquatic Conservation Strategy focuses resource protection and management activities on watersheds. It also provides a positive basis from which regulatory and management agencies can work through differences, allows the information from which each agency makes decisions to be standardized, and provides regulatory agencies greater confidence in approving management actions. The Strategy has four parts: riparian reserves, key watersheds, watershed analysis, and watershed restoration.

Riparian reserves

Riparian reserves will be managed to maintain and restore streams and the forest-based species that depend on them. The reserves include the transition zone between a water body and upslope areas, and range from 100 to 300 feet wide, depending on their value to fish and water quality. The reserves may be adjusted through the National Environmental Policy Act process after a watershed analysis is completed. Riparian reserves are currently being universally applied across the region.

Key watersheds

A system of 143 key watersheds is designed to ensure that high-quality habitat is widely distributed across the landscape to conserve and restore at-risk fish stocks. An additional 21 key watersheds will maintain sources of high-quality water.

Watershed analysis

lnteragency teams are systematically characterizing the aquatic, riparian, terrestrial, and human features of key watersheds. This information is used to guide management activities, plan and monitor programs, refine riparian reserve boundaries, and identify potential restoration projects. In July 1995, the management and regulatory agencies prepared and released direction for preparing watershed analysis, *Ecosystem Analysis at the Watershed Scale: The Revised Federal Guide for Watershed Analysis.*

In 1994 and 1995, the agencies completed watershed analyses on more than 8 million acres, which represents more than 51% of the land in matrix, adaptive management areas, and late-successional reserves. Federal agencies completed analyses on about 32 million acres in fiscal year 1996 and plan to complete 2.5 million acres in fiscal year 1997. The Federal Guide will continue to be adjusted, as necessary, with knowledge gained as more analyses are completed.

Watershed restoration

Watershed restoration is intended to meet the dual goals of watershed health and economic health by providing meaningful, family-wage jobs for rural, forest-dependent workers and restoring the region’s aquatic, riparian, nd terrestrial habitats. Together, the management and regulatory agencies prepared and released the *Interagency Watershed Restoration Strategy for Fiscal Year 1994* in December 1993 to guide design and selection of watershed restoration projects.

Based on restoration and analysis experiences in fiscal year 1994, an interagency working

group revised the *Interagency Watershed Restoration Strategy* in October 1994. It was distributed to the agencies for implementation in fiscal year 1995 and beyond. Key features of the Strategy include a preliminary process for watershed restoration assessment that coordinates restoration efforts with other agencies, the state Community Economic Revitalization Teams, and other public stakeholders.

The agencies also streamlined the consultation process for meeting Endangered Species Act requirements. The improved process will allow restoration projects to provide jobs from June through December, which begins to meet the goal of providing year-round employment opportunities.

With agency contracts and personnel, the Forest Service, Bureau of Land Management, Fish and Wildlife Service, Bureau of Indian Affairs, and Environmental Protection Agency contributed $19.8 million of restoration work in the Plan area in fiscal year 1994, more than $32 million in fiscal year 1995, and $31.7 million in 1996 to complete more than 1,600 contracts or projects.

Establish reserve areas based on watersheds and old growth, with very limited management activities (such as salvage and thinning to accelerate old-growth conditions) permitted.

The reserve areas allocated in the Plan include the following designations:

Congressionally reserved areas: 7.3 million acres or 30% of the federal land. These lands have been reserved by acts of Congress for specific land allocations, such as Wilderness Areas, Wild and Scenic Rivers, and National Parks.

Late-successional reserves: 7.4 million acres or 30% of the federal land. These reserves, combined with the other allocations and standards and guidelines, are designed to restore a functional, interactive, late-successional and old-growth forest ecosystem over time. They also serve as habitat for terrestrial and aquatic species that depend on these old-growth characteristics. Not all of the reserves are currently in old-growth condition; some silvicultural treatment is allowed to enhance their development in stands less than 80 years old and where fire played a dominant role in their development.

Managed late-successional reserves: 100,000 acres or 1% of the federal land. These lands are either mapped to protect areas where spotted owls are known to exist, or they are unmapped protection buffers. Protection buffers are designed to protect certain rare and local species.

Riparian reserves: 2.6 million acres or 11% of the federal land (acreage subject to change after watershed analysis). Riparian reserves are areas along all streams, wetlands, ponds, and lakes and unstable and potentially unstable lands vital to protecting and enhancing the resources that depend on the unique characteristics of riparian areas. Riparian reserve acreage is calculated after all other areas have been designated. As a result, the acreage shown reflects only that portion of riparian reserves that is interspersed through the matrix.

Other designated areas are as follows:

Administratively withdrawn areas: 1.5 million acres or 6% of the federal land. These areas are identified in current Forest and District plans and include some recreation and visual areas, back country; and other areas where management emphasis does not indude scheduled timber harvest.

Adaptive management areas: 1.5 million acres or 6% of the federal land. Ten areas were identified for developing and testing innovative management approaches to integrate and achieve ecological, economic, and other social and community objectives. Each Area has a different emphasis, such as maximizing the amount of late-successional forests, improving riparian conditions through silvicultural treatments, or maintaining a predictable flow of harvestable timber and other forest products; all of the Areas consider learning a principal product of their adaptive management activities.

Matrix land: 4.0 million acres or 16% of the federal land. The matrix includes all federal lands not falling within one of the other categories. Most of the scheduled timber harvest will be from matrix lands.

Establish 10 adaptive management areas for testing new ways to integrate biological and social benefits in the future.

Ten Adaptive Management Areas were established throughout the region. In 1994, the Areas generally concentrated on watershed restoration projects, timber-sale planning, or increasing public participation in developing Area plans. In addition to the Hayfork and Applegate Areas, which had active public groups participating before the Plan was applied and that were adopted as a part of the Plan, seven other Areas created public and governmental participation opportunities through field trips, information exchanges, and other activities.

In 1994, litigation related to the Federal Advisory Committee Act raised issues that significantly slowed the pace at which the Adaptive Management Areas were able to move forward. More specifically, many of the Areas started preparing Plans, but the government's need to pull out of Area groups for four months, until compliance with new legal standards could be sorted out, slowed initial planning efforts. In addition, managers were not provided as much flexibility to experiment in Areas a, originally intended because of changes between the draft and final Plans.

Accomplishments in 1995 are spread across a range of actions, such as timber sales, special forest products, restoration projects, ongoing research projects, and planning. Some Areas have accomplished a great deal, and others have not, depending on the amount of interest in each Area and other factors. Strategic plans and socioeconomic assessments of the communities have been initiated or completed in seven Areas. All Areas have had field trips for community members so that stakeholders could look at current management activities and discuss the types of activities that should be planned in the future. Several new partnerships were formed with school districts, counties, and local colleges.

One of the major accomplishments was the amount of coordination and communication among all parties. Excellent communication tools were developed, from community educational newsletters and electronic bulletin boards, to improved decision documents between agencies. Use of these new tools has increased the sharing of information within and between communities and agencies and allowed better targeting of citizen-suggested proposals.

In some instances, approvals for projects with experimental management approaches have been slow.

Draft a new rule to ease restrictions on timber harvest from certain nonfederal lands because of improved management of federal lands.

The federal forest management conservation strategy serves as the foundation for improving relations between federal managers and nonfederal land owners. More specifically, protections on federal lands let Fish and Wildlife Service and National Marine Fisheries Service make better use of the Endangered Species Act's provisions that allow more flexible management on nonfederal lands. These management actions take two forms: habitat conservation plans and the 4(d) rule.

Habitat conservation plans

Habitat conservation plans are the means by which private land owners may provide for the conservation of listed species and still manage their lands to meet their own objectives. Twenty-four habitat conservation plans (or take-avoidance plans) related to timber harvest have been signed as of August 1996, covering more than 1,756,000 nonfederal acres. Another 56 habitat conservation plans are being prepared, under negotiation, or being considered, covering nearly 7.5 million nonfederal acres.

The 4(d) rule

Section 4(d) of the Endangered Species Act authorizes the Secretary of the Interior to relieve prohibitions on threatened species by rulemaking. A notice of intent to issue a proposed 4(d) rule to replace the blanket prohibition against incidental take of spotted owls was distributed in late 1993. A Draft Environmental Alternatives Analysis containing a preferred alternative was released in December 1995 for a 45-day comment period, along with an extended concurrent comment period on the proposed 4(d) rule for the owl, published in the Federal Register February 17, 1995. In response to public comment, the comment period was extended through the end of May 1996. The preferred alternative includes an exemption from previous restrictions for land owners with 80 acres or less; options for protecting spotted owl sites for land owners with more than 80 acres; a safe-harbor provision that states that nonfederal land owners will not be prosecuted for any incidental take as long as they comply with the rule; and a sunset feature for designated areas.

Encourage private timber companies to commit the timber released by these changes to processing in domestic mills.

No progress has been made on this commitment.

Establish monitoring and research programs to assess the effects and effectiveness of management approaches.

An interagency Research and Monitoring Committee composed of research representatives from the Forest Service, the Environmental Protection Agency, and the National Biological Service has been directed to develop a monitoring program that reviews agency implementation of the standards and guidelines and the effectiveness and validity of those guidelines.

This effort and those described below, supplement the monitoring by the land management agencies pursuant to the relevant provisions of their land management statutes.

Implementation monitoring

Implementation monitoring began in 1996. The major principles of the approach are to determine the degree of compliance with all standards and guidelines for all projects and activities; evaluate projects at various stages (for example, for timber sales, this evaluation could include design, layout, and harvest); integrate with existing agency tracking systems to identify projects and activities for monitoring; categorize and set priorities for projects and activities to facilitate variable amounts of sampling and review efforts; and assess and report results, based on a statistical approach that provides provincial and regional summaries.

The agencies have initiated a pilot effort to conduct reviews of a statistically valid sample of fiscal year 1994 and 1995 timber sales. They expect their first report to be completed by early 1997. Interagency review teams will be used, and opportunities for participation by provincial advisory committee members and other members of the public will be developed. These reviews will determine compliance with relevant standards and guidelines by examining project documentation and field visits. The report will also include recommendations for the further development and expansion of the fiscal year 1997 implementation monitoring efforts into the other relevant projects and activities.

Effectiveness monitoring

Effectiveness monitoring evaluates whether the management plan achieved the desired goals. In August 1995, the interagency Research and Monitoring Committee released a draft effectiveness-monitoring plan. The draft plan focuses on species, habitat, or both, for five emphasis areas: late-successional and old-growth forests, northern spotted owl, marbled murrelet, survey-and manage species, and riparian and aquatic habitat. These areas are currently high priority for the agencies and the first step in effectiveness monitoring, with more issues to be included as the process is refined. The agencies are revising the draft plan and intend to complete it by the end of fiscal year 1996, for use in the fiscal year 1997 field season.

Validation monitoring

Validation monitoring determines if cause-and-effect relations exist between management activities and the indicators or resources being managed. It determines whether the underlying management assumptions are correct. Validation monitoring will be closely tied to the research plan, which will be completed in late 1996.

Timber Harvest

Submit the Northwest Forest Plan to the Court and resolve the legal challenges.

The Record of Decision, which codified the final federal forest management plan on April 13, 1994, was immediately submitted to judges Dwyer, Jones, and Fry, with a request to lift their injunctions. Within two months, all three injunctions had been lifted.

Litigation on whether the Bureau of Land Management could proceed on some of their older sales was not completed until January 1995. The region’s forestry programs have been free to operate under the Forest Plan since May 1994.

Although the Plan continued to be implemented, eight lawsuits were filed that challenged it on its merits and the manner in which it was developed. After the Plan was upheld by Judge Dwyer and in the Ninth Circuit Court of

Appeals, environmental groups have challenged individual agency actions four times. The federal government has prevailed on eight cases and their appeals, negotiated one case, and lost one case. Two cases that were stayed were eventually dismissed in deference to previous decisions on the Plan. This summary does not reflect challenges based on salvage provisions of the 1995 Rescissions Act.

Move timber sales forward as quickly as possible.

Reestablishing a stable and predictable timber-sale program after it was virtually baited for three years has been extremely difficult for the agencies and has taken longer than many expected. The difficulty was compounded by the 1994 fire season, which rook staff away from preparing timber sales during that crucial first year after the injunctions had been lifted; an ongoing reduction in staff to reduce the deficit; the complex requirements of the Plan; and a 17-day furlough caused by the budget impasse over the fiscal year 1996 Interior and Related Appropriations Bill.

Nonetheless, as summarized below, the agencies developed a three-year plan in 1994 for meeting their timber commitments and have undertaken severed steps to move as quickly as possible. These steps include developing a streamlined process that has reduced consultation time under the Endangered Species Act by 70%; batching timber sales for consultation; establishing an interim watershed analysis compliance process; and phasing in the implementation of the survey and management requirements.

The three-year ratchet-up period has assured compliance with the Plan, thus reducing the likelihood of being enjoined again. The fiscal year 1994, 1995, and 1996 timber-sale programs moved forward without a single injunction on a management activity. Note, however, that the timber-sale program was covered by sufficiency language for the final two months of fiscal year 1995 and throughout fiscal year 1996. The language prohibited public appeals and limited the likelihood that citizens would prevail on any legal challenge based on compliance with federal environmental law.

Provide for a sustainable timber-sale program of 1.2 billion board feet.

The draft Northwest Forest Plan forest management plan committed to offering an average of 1.2 billion board feet (bbf) annually for 10 years. As a result of public comment and further analysis, the figure was adjusted to 1.1 bbf in the Final Environmental Impact Statement.

The injunction on regional timber sales was lifted eight months into fiscal year 1994. In the remaining four months, the agencies offered 241 mmbf of timber sales. With the timber-sale program virtually shut down for three years, the agencies said that it would take three years to ratchet back up to meet tile 1.1 bbf target. They committed to offering 660 mmbf of the probable sale quantity in 1995, 880 mmbf in 1996, and 1.1 bbf in 1997. The volume actually offered is summarized by agency below.

Volume offered in fiscal years 1994, 1995, and 1996 (mmbf)

Agency	FY 1994	FY 1995	FY 1996	Total
Forest Service				
Oregon and Washington	156	393	516	1,065
N. California	67	100	167	334
Subtotal	223	493	683	1,399
Bureau of Land Management	18	127	190	335
Total	241	620	873	1,734

The Forest Service estimates that, of this amount, 77% was saw timber; 14% was pulp and other non-saw-timber products; 5% was posts, poles, and pilings; 7% was fuel wood; and 1.5% was cull material. The Bureau of Land Management lists only saw timber when reporting volume offered.

Assist tribes in bringing backlogged timber to market.

No funds were requested or appropriated to meet this commitment in fiscal year 1994.

In fiscal year 1995, the budget included $1.5 million to initiate tribal harvest of backlogged timber. The goal was to harvest 40 to 60 mmbf of backlogged timber in fiscal year 1995. The Bureau of Indian Affairs had concerns about meeting this goal because of the late distribution of funds, the need to prepare environmental documents, and staffing problems. Eight of the twelve Bureau of Indian Affair's field offices produced 34.5 mmbf of additional timber volume in fiscal year 1995. The remaining four areas did not produce any backlogged volume in fiscal year 1995. The offices offered 50 mmbf in 1996.

East-Side Ecosystem Strategy

Direct the Forest Service to develop a scientifically sound, ecosystem-based strategy for managing east-side forests.

The Forest Service and Bureau of Land Management established three interagency, interdisciplinary teams to develop an ecosystem strategy for east-side forests: two EIS teams and a Science Integration Team. The Science Integration Team will have three major products: a scientific framework for ecosystem management in the interior Columbia River basin, a scientific assessment to characterize and assess ecosystem, economic, social, and other processes and functions, and the effects of implementing the alternatives developed by the environmental impact statement teams.

The two EIS teams are using the information developed by the Science Team to draft two environmental impact statements; one for federal lands in Oregon and Washington east of the Cascade Range and one for federal lands in Idaho, Montana, Utah, and Nevada that are in the Upper Columbia River basin. The two teams undertook an intensive public participation process as they developed the alternatives. The teams are collaborating to assure that the final alternatives will reflect the entire interior Columbia River basin. The selected alternatives will replace various interim management measures now in place and will be used to guide the management of the federal lands in the interior Columbia River basin.

Accelerate efforts to prepare timber sales to harvest dead and dying timber on the east side.

In 1994 and 1995, the Forest Service continued to emphasize forest health for timber stands on the east side by implementing interim environmental "screens" for aquatic and terrestrial species that would guide where effective actions could be taken. The screening process allowed the agency to move forward with treating overstocked fir stands, which are susceptible to attacks from insects and disease and increased fire risks, while assuring environmental protections were in place pending completion of the east-side assessment. The regulatory and management agencies signed a memorandum of understanding that streamlined consultation processes to help put sales

on the market more quickly. As a result, the Forest Service offered about 660 mmbf in fiscal years 1994 and 1995, 483 mmbf in 1996, and the screens had a greater effect on harvesting dead and dying timber than originally expected. Historically, the east-side forests provided about 1 bbf annually. The Interior Columbia Basin Ecosystem Management Project will provide the basis for management decisions and update the interim environmental screens used to prepare sales.

ECONOMIC DEVELOPMENT

Provide immediate support for economic adjustment and diversification in the region.

Within six months after the President's announcement, the Plan's economic development programs were up and running. In 1994, more than $248 million was initially made available; working as partners, federal, tribal, state, and local officials were quickly able to find uses for more than $126 million in loans and grants. In 1995, with a fully operational set of teams to deliver assistance, $217 million of the $268 million available reached workers and families, businesses, and communities through loans and grants. In 1996, more than $215 million was distributed.

Provide $270 million in new funding for fiscal year 1994.

The Plan was announced eight months into fiscal year 1993. Instead of reprogramming existing funds, many of which were obligated or spent, the Administration proposed that the fiscal year 1994 appropriations bills be modified to reflect the Plan's economic assistance spending priorities. Almost $280 million was proposed to Congress in fiscal year 1994, and more than $256 million was made available. In an effort to increase the amount of grant dollars available to the region, some loan dollars were subsequently converted, and slightly more than $248 million was ultimately available. Of that amount, about $155 million of discretionary funds was appropriated to the region. The remaining $93 million came from funds already in the region that could be diverted for priority use to implementing the economic assistance components of the Plan.

Provide $1.2 billion over five years.

In addition to the fiscal year 1994 funding, the Administration proposed and Congress appropriated $268 million for fiscal year 1995. For fiscal year 1996, the Administration proposed $267 million and Congress appropriated $210 million. The Administration's fiscal year 1997 budget included $260 million.

The Administration recently renewed its commitment to the Northwest Economic Adjustment Initiative by approving an amended memorandum of understanding for 1997 and 1998 and associated funding commitments, which, though subject to appropriations, puts the Administration on track to make more than $1.2 billion available over five years.

Create more than 8,000 jobs and fund 5,400 additional retraining opportunities in fiscal year 1994.

An estimated 5,700 jobs were to have been provided in the region in fiscal year 1994 as a result of the $126 million in assistance that actually reached the region through the Northwest Economic Adjustment Initiative. These estimates include both full- and part-time jobs maintained (or not lost) as a result of the economic assistance provided in the Northwest Forest Plan, jobs that were newly created, and job opportunities that were expected to be translated into actual jobs as projects were

completed. More than 1,600 additional retraining opportunities were created in fiscal year 1994. Job figures for the more than $220 million spent in fiscal year 1995 were more carefully estimated, with 1,786 jobs retained or jobs found by workers completing training, 6,560 jobs created in fiscal year 1995, and 6,453 jobs expected to be created in future years. An additional 1,743 jobs were estimated to be a result of loan guarantees made in timber-affected counties by the Small Business Administration. Job estimates for 1996 are not yet available

No direct observations were made on the effects that $233 million in county payments had on job retention and creation, but estimates that used broad averages for public investments conservatively suggest that some 6,000 jobs would have been maintained or created had the monies reached the region in conventional business and community-development programs.

Increase funding under the Job Training Partnership Act for Job Search Assistance, Retraining, and Relocation--a 110% Increase From $20.2 to $42 million.

Assistance available to workers and families increased much more than the President's original statement reflected, mainly in the formula grants to the states; Washington's went from $6 to $21 million, Oregon's from $4 to $11 million, and California's from $59 to $209 million. The formula funds were further distributed within states partly by substate formula and partly at the discretion of the state's Governor. More than $12 million of the Secretary of Labor's Reserve funds were also made available annually to help dislocated timber workers by augmenting formula funds. In fiscal year 1994, $8.4 million were used; in fiscal year 1995, awards exceeded the $12 million target, reaching $19 million. In fiscal year 1996, close to $13 million were awarded.

Business Assistance

Implement a three-part strategy for business development, including access to capital, technical assistance, and access to markets, and increase funding.

Improved access to capital

More than $28 million came to the region in fiscal year 1994 to promote rural business investment. The total includes $6.6 million in grants to public and nonprofit organizations to finance small-business investment; $5.5 million in low-interest loans to nonprofit organizations to establish revolving loan funds for business and community development in rural areas; $6.3 million in grants to the states to promote investment, technical assistance, and market access primarily for the wood-products industry; and $10 million in grants to communities and other nonprofit groups for community development to support economic diversification. In fiscal year 1995, more than $46 million, reached the region in these same programs; in fiscal year 1996, $63 million was distributed.

Expanded technical assistance

The Small Business Development Center program was intensified and promoted as a means for providing assistance to small businesses in rural areas. Technical assistance--including feasibility, marketing, strategic planning, and implementation planning--were supported and funded by grants from the Economic Development Administration. Refocusing agency missions intensified the outreach and direct assistance to communities not otherwise accustomed to working with

public economic development programs and agencies. For example, Forest Service professional staff, living and working in timber-dependent communities, provided valuable technical assistance that is hard to quantify but frequently mentioned as highly beneficial.

Enhanced access to domestic and international markets

The region's industries have substantially benefited from a concerted drive to achieve the goal of freer world trade on a reciprocal basis. Bilateral agreements, such as those between the United States and Japan or China, open the door to increased exports of wood products manufactured in this country. Regional agreements, such as the North American Free Trade Agreement, and worldwide agreements, such as the Uruguay Round of the General Agreement on Tariffs and Trade, increase access to worldwide markets.

Increase funding 47% from $163 million to $239.7 million.

Available funding increased 43%--to $231.5 million--through appropriations and authorizations in eight different programs in 1994. Reprogramming from loan to grant programs slightly increased the total, and $197.75 million ultimately reached the region. In addition to the programs mentioned above, the total spent included $164 million in loan guarantees to small businesses, and $2 million for forest research.

Community Assistance

Establish financial assistance to timber counties, replacing the roller coaster payments tied to timber harvests with a reliable schedule of payments.

At the Administration's request, Congress worked to decouple the payments to counties from federal timber receipts in The Omnibus Budget Reconciliation Act of 1993, and instead substituted a fixed-payment schedule calling for 85% of the five-year average payments for fiscal years 1986-90 to be paid in fiscal year 1994; the annual payment is scheduled to decline 3% per year until 2003, reaching 58% of the five-year, 1986-90 average.

Improve the infrastructure needed for community capacity development through Community Development Block Grant lending, Rural Development Administration's Community Facilities, and Water and Waste-Water Program.

In fiscal year 1994, $1.9 million were made available and spent for rural housing for low- and medium-income residents and rural economic development activities; $32 million was made available for investments in community facilities, and $5.6 million was used in affected communities; and $87 million were made available for construction and improvements in drinking water and waste-water facilities' with $39.9 million used. In fiscal year 1995, $116 million of an available $135 million was put to community-related uses. In fiscal year 1996, more than $108 million were used.

Increase funding 25% from $298.6 million to $373.6 million.

In fiscal year 1994, $374.6 million was made available to the region through appropriations. After reprogramming to increase grant funds available to encourage business investment, and after redirection to provide funds for California earthquake relief, the total had fallen slightly to

$365.03 million. More than $324 million actually reached the region. In addition to the amounts listed in the previous paragraph, the amount used included $233 million in payments to counties, and $7.5 million in planning and infrastructure grants.

Ecosystem Investments

Protect the environment and create jobs, by investing in restoration, research, and stewardship

Watershed maintenance and ecosystem restoration

Concerted efforts were made to conduct watershed analysis, identify watershed restoration needs, and implement the Jobs in the Woods program to restore the region's watersheds. In fiscal year 1994, more than $46 million was proposed for the Jobs in the Woods program; $27 million was actually appropriated and spent. The Environmental Protection Agency spent $5 million for research and grants programs under the Clean Water Act. More than 2,200 private-sector workers had full- or part-time jobs through more than 600 contracts restoring the region's watersheds through the Jobs in the Woods program. Contractors reported that between 400 and 500 of their workers were displaced timber-industry workers; wages paid ranged between $12 and $26 per hour. In 1995, more than $35 million was appropriated and spent; almost 3,700 jobs were created. In 1996, more than $31 million was spent.

Research

An additional $5 million was proposed for watershed restoration research in programs administered by the Environmental Protection Agency.

Forest stewardship

The Forest Service's Forest Stewardship and Stewardship incentives programs provide financial and technical forestry assistance to nonfederal land owners to improve the condition of forests while increasing the supply of timber from nonfederal lands. Four million dollars was proposed to be spent on the program, but it was not funded by Congress.

Increase funding 19% from $438.2 to $519.8 million.

In fiscal year 1994, $82 million was made available through appropriations, representing a 19% increase in funding.

Support elimination of tax incentives for the export of raw logs and study effective ways to make avoiding export limitations on raw logs more difficult for companies.

At the Administration's request, provisions were included in the Omnibus Budget Reconciliation Act of 1993 that amended the Internal Revenue Service Code by removing the tax exemption incentives for foreign sales corporations to export raw (unprocessed) logs. The prospective savings to the U.S. Treasury were the basis for maintaining the payments to counties at amounts exceeding the funds expected to be derived from federal timber sales.

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Identify and implement the best ways to strengthen small businesses and secondary manufacturing in the wood-products industry, including a review of increasing the supply of federal timber set aside for small businesses and possible preferences for bidders who contract for domestic secondary processing.

A study group was convened to prepare policy alternatives to fulfill this goal; the group drafted a report exploring those possibilities, but the report was not completed because of concerns and issues related to the North America Free Trade Agreement and General Agreement on Tariffs and Trade. Instead, State Community Revitalization Teams federal and nonfederal officials, working as partners--were able to identify and pursue business-related proposals prepared locally in the region. The Community Economic Revitalization Teams were able to intensify the Small Business Development Centers, the Small Business Administration guaranteed more than $164 million in loans in the region, more than $28 million reached the region to promote business investment in rural areas, and grants were made to support the development of new technologies, training programs, and collaborative marketing for small businesses in the wood-products industry.

Tuchmann, E. Thomas; Connaughton, Kent P..; Freedman, Lisa E.; Moriwaki, Clarence B. 1996.The Northwest Forest Plan: A report to the President and Congress. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 253 p.

The Northwest Forest Plan is a comprehensive design for managing federal forests; providing economic assistance to hard-pressed workers, businesses, and communities; and coordinating the activities and responsibilities of federal agencies state, local, and tribal governments in western Oregon, western Washington, and northern California. The Plan, announced in July of 1993, is a direct outgrowth of the Forest Conference held in Portland, Oregon, in April 1993; it was intended to break the impasse that had brought federal timber sales to a standstill in the region of the northern sported owl. The interagency and intergovernmental component makes the Plan a model of government reinvention through streamlining, coordinating, developing partnerships, and collaborative decision making. The forest ecosystem management component includes regionwide federal land allocations and strategies for conserving aquatic resources, managing forests, planning timber sales, harvesting timber, using adaptive management, and protecting sensitive species on nonfederal forestlands. The economic assistance component is intended to give the workers and their families, businesses, counties, and communities affected by changes in federal forest policies the opportunity to adjust and prepare themselves for a prosperous, sustainable future. Much has been learned since the Plan was unveiled in July of 1993, and this report reviews accomplishments, develops observations on implementation, and identifies opportunities for further progress.

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